Catalytic Strategies for Socially Transformative Leadership:
Leadership Principles, Strategies and Examples

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Abstract

Transformative leadership is the process of consciously accelerating the evolution of global society. This paper provides an overview of initial research findings of the project on Global Leadership in the 21st century (GL21) initiated by WAAS in collaboration with the United Nations Office at Geneva, preparatory to a major conference at UNOG on October 27-28, 2020. The objective of GL21 is to identify fundamental principles of social transformation that can be consciously applied to accelerate progress on addressing global challenges and opportunities and to illustrate these principles by citing successful instances of significant transformative achievements in different fields of activity at the local, national and global level. GL21 is examining past and recent achievements of social transformation related to peace and disarmament, governance and human rights, economy and the environment, business and finance, the application of science and technology for social progress, global governance and rule of law, education and wellbeing. Through this project WAAS and UNOG seek to learn from humanity's collective experience and convert that experience into codified principles of knowledge which can be more consciously and systematically applied in different fields and issues to accelerate global social evolution. The principles and examples cited in this paper are not new or unknown. Nor do they represent a complete and comprehensive approach to accelerating global progress. Each sheds light on a different aspect, dimension or element of a greater whole, steps and stages in the process of human accomplishment and social transformation. We may recognize each of them and know that we already know it. But in most cases we have not assembled the pieces mentally or fully understood their interrelationships with one another to form a knowledge of the whole process of social transformation or fully converted the rich knowledge they contain into powerful mental and practical instruments for universal application. The goal of GL21 is to forge a

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wider conception of the process of social transformation, to assemble a universal toolbox of effective, proven strategies and catalysts, and to illustrate how they can be applied to break the leadership logjam which presently prevents and retards global progress. Taken together we believe they confirm the premise that rapid, radical global progress on addressing the greatest challenges confronting humanity is possible here and now. Project GL21 examines many different types of leadership, of which outstanding individual personalities are the archetypal conception but not the only form. Effective leadership always transcends the actions of any one individual or small group. Leadership is a living social process that encompasses the whole society in which and on which it acts. It may be initiated by idealistic individuals, inspired by lofty ideas and values, and empowered by innovative organizations, but transformative leadership sooner or later influences the actions of a great many people and organizations and spreads until it becomes a broad-based social movement and eventually becomes institutionalized in the customs and culture of society. Outstanding individual leaders and the broad-based social movements are two complementary ends of the leadership spectrum. This paper examines the role of many different component elements, stages and instruments of the process of socially transformative leadership.

Part I: The Evolutionary Context

Humanity has seen countless social transformations. From the time the hunter-gatherer discovered agriculture and human settlements developed, more and more complex and powerful social organizations have evolved, and society has evolved in the process. The common thread running through all these evolutionary stages is the compelling force of human aspiration. In each and every stage and movement—be it the call for end to slavery, right to education, climate control or end to war—the collective aspiration of humanity has been the fundamental driver for all human accomplishment.

The individual is the catalyst of social change. Society evolves when the collective is awakened and aspires for change. The individual is the conscious peak of the collective through whom that awakening and aspiration manifest. The individual gives conscious expression to new ideas and initiatives which then spread slowly or rapidly, hesitantly or enthusiastically, until they are recognized, embraced, imitated, disseminated and eventually accepted and assimilated by the institutions and culture of society as a whole. The role of the individual is to awaken and release social energies and innovate new forms of organization to realize them. The symbolic act of a single individual can act as a catalyst to expedite the progress of the whole society, as Rosa Parks did by refusing to give up her seat on the bus to a white passenger in Montgomery, Alabama and Greta Thunberg did by her Friday protests before the Swedish Parliament. These representative individuals voice the aspiration of millions of people.

When growing public awareness of these symbolic acts is recognized, accepted and enthusiastically endorsed by sufficient numbers, it can unleash enormous energy and initiative. When that energy and initiative are organized, they acquire social power for transformative change. When the call for change crosses a tipping point, the movement

spreads rapidly, is systematically promoted, institutionalized by public policies and formalized by legislative initiatives. Thus, law is codified social consciousness.

The global movement that led to the revival of the ozone layer is a case in point. Major landmarks in the environmental movement have often followed major disasters such as the Three Mile Island, Chernobyl, the Bhopal tragedy and Valdez oil spill. They have also been catalyzed by the tangible impact of environmental threats on human health and wellbeing, such as the impact of smog in Los Angeles on early efforts to control urban air pollution. Landmark change in the past has almost always been initiated by civil society movements and only later incorporated in public policies.[1] In some cases the civil society initiative has come from local communities and NGOs. In others it has emanated from scientific research promoted by national academies. When the US National Academy of Sciences reported in 1974 that chlorofluorocarbons (CFC) were connected to the thinning of the ozone layer, it initiated a multistage process which gained widespread attention through the media, acquired support from the medical profession, public health officials, educators and research institutions, and altered the behavior of concerned corporations, investors and financial markets.

Eventually this process led the US government to ban CFC in aerosol sprays. But even before the legislation was passed, Americans had drastically reduced the use of aerosols containing CFC, leading to a halving of sales. Governments, industries and corporations only prioritized environmental concerns after society had come to expect and demand them. Through the media, public education plays a critical role in shaping public thought and influencing policy. Environmental science eventually infiltrated school curricula worldwide. Extensive media campaigns by environmentalists led to faster, effective dissemination of information to greater numbers of people. The detection of the ozone hole in 1982, and the media highlight of incidents of skin cancer and other illnesses heightened public concern. In the face of greater scientific evidence and public pressure, governments began to give up their defense of the CFC industry. Green parties that were founded in the 1970s became globally united and stronger in the following decades. They started participating in the political process and becoming part of governing coalitions in several countries. They contributed to making public policy more sustainable. NGOs began working in concert with scientific bodies and national governments. A scientific institute in Germany developed an ozone-safe refrigerant, and the NGO Greenpeace supported it and went on to win the 1997 UNEP award for its championing of the cause. After over a decade of public activism, support from educational and scientific institutions, media campaigns and concerted action by NGOs and IGOs, in 1987, the Montreal Protocol, an international treaty to protect the ozone layer by phasing out substances that lead to its depletion, was agreed on and later ratified by 196 countries and the EU. Ozone levels have since recovered, and NASA reported in 2019 that the ozone hole had become the smallest ever since it was discovered in 1982.

The recovery of the ozone layer has been a successful movement, but it is one movement within the larger ongoing movement of climate change. *With a much larger number of NGOs today than ever before in history, higher levels of education, and faster, more effective ways*

for disseminating information, faster, vaster, and more powerful catalytic transformations are possible than ever before.

> *"Transformational leadership begins with the assertion of a new vision, value or ideal that often appears unrealistic or unachievable, yet over the course of time becomes a rallying call and catalyst for radical change."*

Social movements have their origin in the distant past and their inevitable consequences will continue long into the future even when the immediate result does not appear significant. The Occupy Wall Street (OWS) movement of 2011 seemed like a sudden burst of energy that lasted six weeks and disappeared without a trace. But the gathering of a thousand people in New York spread to 82 countries and involved over a thousand occupations because it was part of a much larger evolutionary movement. OWS was a result of the rising inequality in American society since the 1970s that was brought into sharp relief by the financial crisis of 2007-09, and was inspired by the Arab Spring and the anti-austerity protests in Europe. But it also has a 'prehistory'. Its influence stretches back to Beijing in 1989 and Prague in 1968.[2] Similarly, its impact did not end with the eviction of the protestors in New York in the winter of 2011. It has resulted in greater activism in civil society, opened up discussion on inequality and corporate culture worldwide, and set the stage for other actors and social forces to take over. Much of the work that shapes human progress takes place during what appears to be long intervals of inactivity that fill the space between the shorter moments of impactful activism.[3]

A remarkable success in impactful activism is the story of Jody Williams and the International Campaign to Ban Landmines (ICBL) that resulted in the signing of a legally binding international treaty banning the production and sale of anti-personnel landmines. It is a dramatic instance of a social movement that transformed the rules of warfare around the world. ICBL started as a coalition of 6 NGOs in 1992 which jointly agreed to launch a campaign to ban landmines. It joined hands with an aspiring committed individual, Jody Williams, who headed the campaign. ICBL established an egalitarian, consensus-based decision structure which provided every member autonomy of action combined with a role in group decisions and a sense of ownership in the campaign. ICBL launched the 'First Forty' campaign, pressing governments to be among the first forty nations to ratify the treaty banning landmines, and thus contribute to its rapid implementation. This campaign induced several governments to act quickly to become a part of that special group. Media campaigns were launched. Clear, concise information was made available. Every individual member of the campaign communicated clearly and consistently, thus gaining the attention and confidence of people, governments, media and other actors.

The movement employed the media very effectively to make landmine victims the face of the campaign. One survivor carried the Olympic torch into the stadium during the opening

ceremony of the Winter Olympics in Japan in 1998. Princess Diana spurred the campaign with photos in the international media of her walking across a minefield in heavily landmine-contaminated Angola.

With greater visibility and support, more NGOs, governments, religious leaders and private actors joined the cause of ICBL. The campaign grew from 6 NGOs to 1200 organizations in 80 countries in six years. Governments started agreeing unilaterally to destroy their stockpile and support the call for a total ban. A stigmatization campaign was launched against manufacturers who did not voluntarily give up producing the weapons, in some cases supported by organizing the company's own workers. As 122 nations signed the Mine Ban Treaty in Ottawa in 1997 banning the use, production and sale of anti-personnel mines, Jody Williams and ICBL were awarded the Nobel Peace Prize, for starting a process that in 6 years transformed a vision into a concrete reality. With continued activism, the treaty became binding international law in 1999. *The banning of anti-personnel mines was a narrowly focused, but major achievement. It demonstrated that concerted, well-coordinated actions by NGOs could alter both the law and public attitude toward deeply entrenched military practices. The process by which it was achieved offers important ideas for all efforts to promote rapid global social transformation.*

1. The Power of Ideas—converting high values into practical reality

Ideas have power—especially when they affirm universal human values and when they are accepted and endorsed by large numbers of people. The initial expression of an idea may appear utopian, but once enunciated it tends to grow in intensity and spread until it takes root in the mind of humanity and begins to bear fruit. Transformational leadership begins with the assertion of a new vision, value or ideal that often appears unrealistic or unachievable, yet over the course of time becomes a rallying call and catalyst for radical change. In the past, that course of time was often centuries. In the 20th century it was abridged to decades. More recently there have been instances of such sudden transformation that it has taken the entire world by surprise, including those who most ardently sought it.

Today many people take their fundamental human rights for granted and assume that the inherent rights of every individual are self-evident. But this has not always been the case and is still far from universally true even today. The origin of human rights can be traced back to the time of Cyrus, the Great in ancient Babylon and the Magna Carta in England. Until then the rights of each human being were limited to those of members of the group to which they belonged; they did not accrue to individuals in their own right. It is only during the past four centuries that the idea of inalienable and universal individual rights began to gain widespread prevalence. In ancient Greece and Rome, citizens could be bought and sold as slaves if they were unable to pay their debts or were captured in war. It was only in the 17th century that the countries of Europe began to abolish the right of people to own other human beings as slave property. Later these countries affirmed the rights of the slaves themselves and began to ban commercially profitable slave trade outside the country. Still later, slavery was abolished in their overseas colonies. In 1776 America's Declaration of Independence proclaimed the right to life, liberty and the pursuit of happiness, but these rights were fully

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accorded only to property-owning male citizens and did not apply to women or black slaves. The US constitution of 1789 specifically included provisions acknowledging the legality of slavery. The more recent history is too well known to require recollection. The idea of equal rights for women has a similar but far more recent history. Until 1882 the wealth and property of English women were legally transferred to their husbands immediately upon marriage and their legal identity ceased to exist. It is only in the 20th century that most democracies accorded equal voting rights to all women, e.g. 1922 in USA, 1928 in UK, and only 1991 in all parts of Switzerland.

In this context, the adoption of the Universal Declaration of Human Rights in 1948 signifies a momentous event in human history. For the first time 48 nations of the world joined together to adopt 30 articles affirming fundamental human rights. Yet it is important to note that the 48 nations which signed the Declaration did not adopt the UDHR as a legally binding treaty. The other ten nations either abstained or did not sign. The failure to accord the UDHR legal status was conscious and intentional, because the principle of enforceable individual rights was still too controversial and suspect. Member states refused to give UDHR the force of law for fear its provisions might be applied to challenge their own policies and internal functioning, even in 'democratic' nations. In the years that followed its adoption, UDHR was cited with increasing frequency in the UN General Assembly and outside it to justify and support policy measures, resolutions, judicial decisions and national conduct. Then in 1976 the UDHR and two subsequent documents were combined to constitute the International Bill of Human Rights and acquired legal force when a sufficient number of nations had ratified it. Since then, the idea of inalienable, universal rights has become a living and powerful ruling principle in human affairs.

Where did that power come from and how was it acquired? It came from the evolving collective consciousness of humanity exercising its influence over the thought and action of the global community. Its emergence marks the awakening of conscious mind in subconscious society, the abrupt intrusion of the light of reason and spiritual values into the shadowy realm of possessive power of the crude, rude rule of force, power and violence. Since then the power and influence of human rights have surged forth from the darkness of history until it has become a force of light for all other forms of power to reckon with. Then in 2015 these universally recognized human rights took on a concrete, specific, actionable form as the 17 Sustainable Development Goals adopted by 193 member nations of the UN. Today the SDGs are guiding decision-making by governments, businesses and civil society organizations around the world. They are being taught in schools and colleges in every country. Progress on achieving them is being measured and monitored. Financial resources are being invested to realize them on an unprecedented scale. Implementation lags behind the dates set in Agenda 2030, yet efforts to accelerate progress persist. The SDGs represent tangible evidence of the power of ideas to change the world.

Ideas and values have power in the measure humanity accepts and endorses them. The idea of equality for women, blacks, religious and other minorities has become a real force. Tracing the historical process from the first formulation of universal values to their

progressive embodiment in laws, institutions (e.g. international conventions, humanitarian law, human rights commissions, NGOs such as Amnesty International, and countless other forms), policies (e.g. racial integration and equality), rules (equal pay for women), targets, strategies, policies and programs reveals the process of converting distant ideals into concrete practical reality. The public awakening of environmental consciousness in response to air pollution in Los Angeles and New York City in the 1960s eventually led to the rise of environmental groups and movements around the world; local, state, national and international organizations backed by law; global standards, quantitative measures and monitoring systems; laws governing every major source of pollution; development of an endless array of new technologies; value-based investment guidelines such as SRI and ESG, and so much more.

Acts such as these are not new to humanity. But their speed, reach and power have vastly multiplied. What once took centuries can now be accomplished in weeks and months. It takes great patience and research to trace the history of the movement for the abolition of slavery in Europe in the 18th century, to observe its gradual extension to a ban on the lucrative slave trade which brought immense wealth from slave-worked mines and plantations in distant colonies, to the complete abolition of these practices at first in the home countries and only much later in their colonies. And still more than a century after the awakening of reason and justice began, it required the bitter violence of the American Civil War to forge the 14th Amendment to the US Constitution, and then another long century before the Civil Rights Movement could convert democratic values into practical action through the integration of schools and anti-discrimination laws in America. Only then the call for justice could unleash the anti-Apartheid movement and countless other steps and stages in the reluctant awakening of humanity to principles of freedom, justice and equity proclaimed centuries earlier. And out of these dim early advances, the process has gradually spread and repeated with ever greater speed and intensity to proclaim the rights of women, minorities, labor, children, and countless other social movements of the last two centuries.

Today words and values travel far faster and farther than ever before. The soil of human consciousness is more fertile and receptive today. The quiet words of a 15-year-old school girl named Greta Thunberg proclaimed the rights of future generations to be heard and honored among the clamor of humanity's present desires. Her voice reached out with a mission and message to other school-age children, spreading like wildfire through the media and social networks around the world within a few days and sparked a global social movement within a few weeks. Her soft words carry power to awaken minds and stir hearts to action. The slow and difficult-to-arouse voice of human conscience resonates and reverberates in other minds and hearts until the whole world begins to listen to reason for the first time. It reminds us that we cannot afford to continue to place our faith in institutions of governance controlled by vested interests, deaf or immune to changes in public conscience. Nor can we continue to blindly submit to them in helpless passivity and dependence. The awakening global public conscience represents the collective consciousness of humanity. Transformational leadership arises either in the form of new people or from those who recognize and embrace the rising social consciousness of those they lead.

The leadership of the future will come in many different forms—some individual, some organizational and some in the form of unifying values and elevating ideas. All other forms of leadership are subject to inherent limits defined by their origin, culture, and circumstances. Ideals alone can truly express universal values in a manner that is all-inclusive. The world today needs the leadership of transformative ideas that lead to effective action.

We know all these facts, but their immense significance remains blurred by the dullness of pious repetition. The process of their emergence remains largely hidden from view. Tracing and documenting the various steps and stages in the process of converting higher values into practical reality in different fields will enable us to arrive at a general blueprint or tool box that can be applied to identify the missing links and steps that retard the process in many current efforts to alter the course of global society. We need to enlighten our minds and fortify our will with the deep conviction that values have the power to transform the world. Today they have greater power than ever before.

2. The Social Process—the evolution from violence to social power

The history of human evolution traces the gradual evolution of our collective capacity to mobilize human energies for accomplishment. All human accomplishment is the result of human energies released and expressed in action. But for that energy to accomplish, it must first be focused and directed as purposeful Force. That Force must be harnessed, channeled and converted into Power. That Power must be expressed in action with knowledge and skill. This formula underlies the Physics of social accomplishment, growth, development, evolution and transformation.

Throughout history a great portion of that energy was expressed physically in violent conflict, warfare and conquest over other people. During the past five centuries and most dramatically after 1950, mutually beneficial trade through cooperative social interaction increasingly replaced physical violence as the principal mode of relationship between societies. Unlike the empires of ancient times, the empires of the 19th century were predominantly commercial in nature and intended to enhance economic power rather than military force. Increasingly countries channeled their energies into productive economic activities rather than wars of conquest. Prospering nations acquired a vested interest in maintaining peaceful, harmonious relations with other societies. Violence gradually subsided, only to erupt in two horrendous world wars, as if reminding humanity of the cost of reverting to force of arms as the principal mode of national power. Only then did humanity come together to establish the United Nations in a global effort to prevent and outlaw wars between nation-states.

The global media are so filled with daily reports of violence around the world that many citizens conclude the world is getting more violent than ever before. Never before did we have the capacity to study, monitor and broadcast news of violence around the world 24 hours a day. Violence has come to be regarded as the exception rather than the general rule of human relations, so today we consider as abnormal and unacceptable occurrences which were regarded as commonplace in earlier periods. In spite of appearances, research supports the view that the world is a safer place than at any other time in history.[4] Many

factors account for the dramatic reduction in rates of violence. Among these are the creation of nation-states, which safeguard the lives of their own citizens against crime and foreign threats; the spread of democracy and rule of law, which have replaced mob rule with rights and justice; global commerce, which has replaced imperial conquest with mutually beneficial economic exchange—Nixon's trip to China opening up what has become the world's largest single trading partnership between erstwhile enemy nations—universal education, which fosters the development of well-informed citizens; the increasing influence of women and feminine values in global society; the rise of mass media disseminating information rapidly and sensitizing the global public to even small acts of violence; the increasing voice of the individual in national and global affairs through greater recognition of human rights; more sensitive public opinion, and the recent extension of internet usage and social networks to nearly 60% of the world population.[*]

Today humanity has awoken to the destructive violence of rapacious economic activities on the livelihoods of less developed communities and on humanity's physical and biological environment. The costs of both in terms of political, social and economic insecurity are immeasurable, but the impact of the recent flood of refugees from war, famine and ecological disasters provides sufficiently compelling evidence that violence of any type threatens the welfare and wellbeing of the whole world. Like the beneficiaries of violent conflict, the beneficiaries of predatory actions against the economically weak and the environment ignore or resist change as far as possible, but the ultimate necessity of abandoning violence for peaceful and sustainable planetary relations is irrefutable and self-evident. The transition from war to peaceful forms of human relationships is one expression of the process driving social evolution. This same evolutionary process is behind the transition from other forms of social domination and exercise of power.

The sublimation of physical energies for productive purposes and their channeling through mutually-beneficial, increasingly organized and technologically sophisticated economic and commercial relations supported by negotiated treaties and principles of lawful conduct are important stages in the process of social evolution. The age of physical warfare is drawing to a close, but the urge for domination and exercise of power by some human beings over others is far from exhausted. Only, the forms of power have largely shifted from military subjugation and political dominance to economic and financial supremacy. In recent times, the role of money has become the ubiquitous instrument for monopolizing other forms of social power.

Each successive stage of this evolutionary transition in the past has refined, organized and utilized available human energies more effectively than before, eliminating the unconscionable waste and destructiveness of war, the inefficiency and wastefulness of unorganized economic activity, the injustice of colonial imperialism and widening social inequality. The only possible means for further social evolution—short of violent revolution—is the further sublimation of human energies to universal principles of freedom, justice and equity. This defines the next stage of collective evolutionary transition now in process and presents itself in the form

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[*] https://www.statista.com/statistics/617136/digital-population-worldwide/

of the greatest challenges confronting humanity today. The once immovable force of blind, intransigent human possessiveness and greed now shows signs of giving way. India's non-violent Independence Movement and the anti-Apartheid movement in South Africa were unprecedented events in world history. But neither of them prepared the world for the speed and magnitude of the social transformation which so suddenly and pervasively swept through Eastern Europe in 1989-90, leading to the fall of the Berlin Wall, the peaceful collapse of communist regimes in one country after another, the end of Soviet imperial domination, the end of the Cold War and the reunification of Germany—all within the space of two years.

The process repeated in what became known as the Arab Spring of the 2010s. Up to this point, social movements had to rely largely on word of mouth as the principal means of communication and coordination, especially in countries where the official media were rigidly controlled. But all that changed after the power of social media was put in the hands of every citizen with a cell phone and became ubiquitous. Revolution began in Tunisia in 2011 with a protest against oppressive government and low standards of living and then quickly spread to Libya, Egypt, Yemen, Syria and Bahrain, where either the regime was toppled or major uprisings and social violence occurred. Sustained street demonstrations also took place in Morocco, Iraq, Algeria, Iranian Khuzestan, Lebanon, Jordan, Kuwait, Oman and Sudan. Some of these protests degenerated into violent revolution and civil war, but their originating spirit and transformative power issued from public protests rather than armies and weaponry. Recent uprisings in Sudan and Algeria show that the conditions that started the Arab Spring are not going away and political movements against authoritarianism and exploitation are still occurring. The multiple uprisings and protest movements of 2019 in Algeria, Sudan, Iraq, Lebanon and Egypt have been seen as a continuation of the Arab Spring.

Perhaps even more dramatic was the power of public resistance in Hong Kong in 2019 to the imposition of extradition treaty with mainland China, which was widely perceived as an encroachment on Hong Kong's autonomy and the rights of its citizens. While the world waited with baited breath for an inevitable military response from China to the provocation of public protests and violence on the island, none came and the protesters achieved their immediate demands.

These anecdotes from history highlight the general direction in which humanity has been moving for centuries, which has gained greater momentum in recent decades. They point to the possibility of even faster and more peaceful transitions from the power of violence to the power of universal human values in the coming years—a possibility that reveals the potential for more sudden and rapid advances which now appear achievable only in some distant future. Awareness of that possibility is a form of knowledge with the power to awaken human aspirations and release social energies to accelerate global progress.

3. From Power to Wellbeing—the values revolution in business and finance

The end of the Cold War, which was marked by the collapse of communism, was celebrated by many as the ultimate victory of capitalism. The globalization of trade after

1990 generated an unregulated playing field for multinational corporations and hedge funds, a wild west global casino for speculative investments, a refuge for offshore tax evasion, a license for unrestricted assertion of shareholder value, limitless accumulation, ruthless and often senseless mergers and acquisitions, and rising levels of inequality with the deeply entrenched and politically fortified fossil fuel industry thrown into the mix, and capped by predatory state capitalism and the violent hegemony of resurgent trade wars. The multibillion dollar bail out of Wall Street financial institutions following the 2008 financial crisis, the rapid dismemberment of legislation designed to prevent its recurrence, and the resurgence of Big Oil in America were interpreted as clear signs that this combination of forces was destined to dictate the rules of power in the 21st century.

"The aberration of neoliberal economic theory has proved as irrational and unsustainable as so many other flawed orthodoxies. Neoliberal capitalism has no greater legitimacy than authoritarian communism and its end will be the same."

Yet even as the forces of neoliberal capitalism were reaching their acme, early signs appeared that their days were numbered and already in decline. Even before the collapse of communism, powerful new ideas began to emerge in the West under the rubric of corporate social responsibility (CSR), socially responsible investing (SRI), for-benefit corporations (B-corps), impact investing and more recently environmental, social and governance (ESG) investing. The origins of SRI in the US date back to the late 1700s when religious investors decided they would not invest in companies engaging in alcohol, tobacco and gambling. It was reborn in the 1960s when those opposing the Vietnam War and the nuclear arms race blacklisted investments in the military-industrial complex. In the 1970s the first efforts were born to curtail investment in businesses damaging the environment. In the 1980s anti-apartheid disinvestment gained prominence. SRI and Impact Investing gained momentum through the 1990s and 2000s, but some of these impact funds led to greenwashing and remained too small in total value to influence mainstream business.

But over the past year or two since the Trump administration reaffirmed commitment to neoliberalism and fossil fuels, the reaction against the status quo has suddenly swelled into a global movement of unprecedented magnitude and power. Today upwards of $36 trillion is being managed under various forms of impact investing. In April 2019 International Finance Corporation (IFC) spearheaded the formulation of Operating Principles for Impact Management, which has already been accepted by more than 80 asset managers and owners. Over the past 18 months many of the world's largest retail and investment banks have announced their own sustainable finance initiatives, signaling new market opportunities and ways of doing business. Then in January 2020, after years of apparent indifference or denial, BlackRock*, the world's largest investment management company with upwards of $7 trillion

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* https://www.blackrock.com/us/individual/larry-fink-ceo-letter

in resources, acknowledged that the world is on the verge of a fundamental reshaping of finance which will result in a significant reallocation of capital. BlackRock announced a number of initiatives to place sustainability at the center of its investment approach, including measures to reduce dependence on fossil fuels and strengthening its commitment to sustainability and transparency in investment activities.[5] The premise behind this announcement is what some impact investors have been claiming for decades: sustainability reduces risks. Moreover, it acknowledges the fact that when financial metrics are adjusted to reflect real contribution to the economy and society, many high value corporations are destroying more wealth than they are creating.

BlackRock's announcement is not merely a temporary blip on the radar screen. It is more like a final concession by established powers that things are inevitably and irreversibly changing and will never be the same. Nor is this the only significant sign of that change. In 2019, the Business Roundtable convened a meeting of the CEOs of 181 of the world's largest corporations, to adopt a joint Statement on the Purpose of a Corporation, publicly committing its members to create economic opportunity for all of their stakeholders: customers, employees, suppliers, communities and shareholders. The Statement represents a rejection of the obligation of firms to maximize short-term shareholder value. It signifies the recognition that climate change related governance issues and human values are dramatically shifting the long-term business environment.

As if to confirm that these are not mirages, artefacts or mere blips on the screen, in January 2020 the World Economic Forum released the "Davos Manifesto 2020: The Universal Purpose of a Company in the Fourth Industrial Revolution". The Manifesto affirms what common-sense has always understood. Businesses are first and foremost social organizations intended to serve the needs of society and the wellbeing of humanity. Their specialized functions may be economic and commercial, but they have always played a greater role and have a wider responsibility. The Manifesto states: "The purpose of a company is to engage all its stakeholders in shared and sustained value creation. In creating such value, a company serves not only its shareholders, but all its stakeholders—employees, customers, suppliers, local communities and society at large. The best way to understand and harmonize the divergent interests of all stakeholders is through a shared commitment to policies and decisions that strengthen the long-term prosperity of a company."[6] The aberration of neoliberal economic theory has proved as irrational and unsustainable as so many other flawed orthodoxies. Neoliberal capitalism has no greater legitimacy than authoritarian communism and its end will be the same.

A few days after the Davos Manifesto, WEF announced the first Business Playbook, an exponential climate emergency action plan produced by leading experts and business stakeholders, providing a framework for all companies to reach net-zero emissions rapidly through the adoption of an exponential trajectory of at least halving their greenhouse gas emissions every decade to approach net zero by 2050, and integrating climate action in their business strategy. The initiative is supported by the International Chamber of Commerce (ICC)—the institutional representative of more than 45 million companies, the World Business Council for Sustainable Development (WBCSD), Ericsson, IKEA, Scania, Telia

Company, The World Wide Fund for Nature (WWF), Skanska, the Potsdam Institute for Climate Impact Research and many additional partners and contributors. The 1.5 °C Playbook is a spin-off from the world-leading Exponential Roadmap initiative. It guides companies and organizations of all sizes on exponential climate action, and helps them align with the 1.5 °C ambition. It is a concrete tool to facilitate the first step of halving emissions, which is grounded in the latest science. Focused on simplicity and speed, the Playbook is aimed at helping the global economy to achieve the goals of the Paris Agreement.[7] Other recent developments include the announcement by Amazon declaring aggressive goals to fight climate change, including achieving the Paris climate agreement's objectives ten years early and using 100 percent renewable energy by 2030.

Viewed superficially recent pronouncements may be regarded as mere empty words designed to placate the masses. But viewed historically, they reflect a clear, inevitable evolutionary direction and intention. The intention here is not to announce any premature celebration of final victory. It is rather to lift the mantel of apparent helplessness and hopelessness that so often prevent human beings from lifting their submission to the instruments they have themselves created. These initiatives are signs of the times—signs of a social tipping point discussed elsewhere in this article. The values of the Millennial generation who are inheriting the world's wealth and assuming leadership positions in business and government are not those of their parents or earlier generations. They feel a sense of ambiguity and uncertainty about the future that compels them to question, rethink and demand a change of course. However powerful the entrenched social forces, the social consciousness that accepts and sanctions is the ultimate determinant of social evolution. Not even authoritarian communism could long withstand that force. The signs today may appear as tentative as were those in the mid-1980s when virtually no one foresaw the momentous changes that would unfold within a few years. This perspective is not a prediction or prophesy of what will happen, but rather a call to leadership and action to pull down the walls that block humanity's pathway to a better future. Climate change is not the only thing that is accelerated. Our collective capacity for humanity is too—perhaps not as fast as we need for it or wish for it to, but faster than ever before and capable of acceleration as surely as global warming is accelerating. By means of floods, fires, rising sea levels and the latest pandemic, the planet is compelling humanity to become conscious and address issues it has long preferred to ignore. As in the past, humanity tends to rely too much on the pressure of threats than the opportunities offered by consciously embracing higher values, knowledge and consciousness.

Part II: Levels of Leadership

4. From Individual Leaders to Global Social Movements

Where are the leaders we need? The environmental movement had a very modest beginning and took decades to gain momentum. It was born out of the air pollution in Los Angeles and New York City as a result of rapid growth in the 1960s, the beginning of municipal recycling practices in California, publication of the Club of Rome's *Limits to Growth,* the UN

Conference on the Human Environment in Stockholm in 1972 organized by WAAS Fellow Maurice Strong, the Brundtland Commission and the contributions of countless other social thinkers, scientists, organizations and activists. Yet today a great many feel disheartened by the obvious lack of effective environmental leadership at the global level. Leadership is missing in many other fields as well. With the aging of Gorbachev, the nuclear disarmament movement no longer has a prominent spokesman. The EU, which prior to 2008 offered such promise as a model for overcoming the blatant limitations of the nation-state, has lost its sheen and appeal to many of its own member states and citizens. Even so, the European Commission's new President Ursula von der Leyen has articulated the widespread aspiration in many EU countries for the "Green Deal" to direct post-COVID-19 stimulus funds to be invested in the future, post-fossilized sustainable economy.

Feminism has been one of the most powerful, ubiquitous and effective social movements of the last century. It has provided the framework and seeded grass roots initiatives for the advancement of women and girls around the globe. It began in the distant past when a few spirited women defied social conventions by exposing, questioning and disrupting social norms that oppressed them. Mary Wollstonecraft, who published what was perhaps the first feminist manifesto, *A Vindication of the Rights of Woman*, in 1792, Sojourner Truth who advocated civil rights and abolition, Emmeline Pankhurst who was a key leader in the women's suffrage movement, and Simone de Beauvoir who attacked the idea that women belonged in passive roles were early feminists who awakened the masses. These efforts have eventually improved access for girls and women to education, health care, voting, reproductive freedom, freedom from sexual abuse, workers' rights such as family leave, etc. It has resulted in a cultural shift that has touched societies around the world. Even in peace-keeping, women became more prominent. Eleanor Roosevelt, a former First Lady of the USA, became the public voice and inspiring leader of the movement that led to the Universal Declaration of Human Rights in 1948. The movement for gender equality has no central leadership. It is coordinated by a simple but compelling idea—women and men are equal and must be afforded the same rights and privileges.

The retreat from multilateralism is disconcerting and demoralizing to those who perceive the threat of a return to Cold War competitive nationalism and those who believe in the inevitability of collective human action to forge our common future. The missed opportunities that appeared at the end of the Cold War have been a great source of disappointment and disillusionment. It is clear we could have done better. We look for reassuring signs or a savior. The hope that America might play that role for the benefit of all vanishes even among Americans wedded to global idealism. The world is confronted by a leadership challenge at the global level where we look for and desperately need them. The reactionary resurgence of nationalism offers absolutely no answers, safeguards or promises. The logic of history compels us to reach beyond the failed myth of national sovereignty to evolve effective instruments of global governance.

Today humanity looks on helplessly and hopelessly to our leaders at the national level to show the way. Rarely have they ever done so except at extreme moments when new people were propelled into positions of leadership. America's founders were rebels and leaders of

revolution. Slavery was abolished by a man born in a log cabin. Churchill was a political outsider spurned for years by his own party until no one else had the courage or energy to lead. The leaders of tomorrow will not come from the establishment. They will come from the people or by those who represent the values and aspirations of the people, not those of the establishment.

The example of a Swedish school girl who refused to go to school awakening a global movement of millions of children is only a single example of a phenomenon that is multiplying around the world. Leadership has always begun with the individual. All social change begins in the minds and hearts of one or a few individuals who embody higher values and aspirations of the society. It is significant that the new leadership emerges in a new generation that does not think or feel like its elders. They do not remember the Cold War or the arms race. They are not consumed by competitive nationalism.

Faith has been lost in the hope that a nation or group of nations will lead humanity forward. At the same time we are reminded that it has always been individuals and small groups who formed the kernel for creative leadership. Social movements are not launched by governments or global institutions. They have always been launched by individuals, small groups and catalytic organizations whose voice and influence gradually grew in intensity and power to the point where they could no longer be ignored by the entrenched political parties and vested interests, which were compelled to act and eventually embrace the emerging social values. All the great steps and stages in the long march and trail of victories of the environmental movement began with the people—with individuals, small groups, local organizations and local governments—which embraced new ideas and values and demanded change. Among the world's largest corporations—Amazon, Apple, Facebook, Google, Microsoft—most were founded by youngsters, a single individual or small group, several were born in garages, often with little or no resources.

5. Organizational Leadership—Sierra Club and Beyond Coal

New ideas originate in the minds of farsighted individuals. The founders of Club of Rome formed a small, informal group which published *Limits to Growth* to challenge the conventional wisdom about economic growth. But the power of individuals is always severely limited, even when they gather en masse. The energy of individuals becomes powerful only when it is harnessed and channeled through the instrumentation of organizations. Organizations are the means for gathering, directing, and coordinating the energies and actions of countless individuals for specific purposes.

One individual, Garry Davis, a US Air Force pilot in World War 2, must be remembered as an outstanding example of global leader. Davis, shocked at the carnage of war and his own role in bombing civilians, renounced his US citizenship and declared himself "stateless" and a citizen of the world. Against huge opposition, Davis founded World Citizen, with the encouragement of Eleanor Roosevelt, and this organization began issuing the now familiar World Citizen Passports, which are today stamped and routinely recognized in many countries. Arthur Kanegis, the producer of the documentary on the

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extraordinary life of Garry Davis, has produced a documentary of this achievement as a compelling example of the power of leadership.

Organizations evolve with the evolution of society. They have evolved from the local and national level to the global level, from physical places to meet and work together into virtual organizations such as social networking groups. One of the most revolutionary developments of organization in recent times is the proliferation of non-governmental organizations or NGOs. Though NGOs have long existed, their growth over the last two decades has been nothing short of incredible. From an estimated 28,000 NGOs in the whole world at the beginning of the 21st century, today there are approximately about 10 million, representing a 350-fold multiplication in a mere 20 years.[8] This phenomenal growth represents a new phase in global society in which individuals no longer relate to one another primarily through government, commercial and religious organizations. They are able to interrelate, associate, and act together on virtually an unlimited range of common interests and objectives over vast distances in space and time. While the subjects vary enormously, they include groups dedicated to improving every aspect of individual, local, national and global life—political, economic, social, cultural, psychological, ecological and spiritual. There is a new game in town that is changing the rules of how societies grow, develop and evolve.

All social change begins with individuals who think, feel or act differently. The power of individuals multiplies when they join together. It grows exponentially when they organize for collective action. Carl Pope, former Executive Director of the Sierra Club, narrates how the Sierra Club convened a meeting of 100 club leaders in Tucson to decide on a collective strategy to address the climate challenge. The result was a decision to challenge the Bush administration's energy strategy of establishing 150 new coal-fired power plants. Following initial success at the local level, the effort spread nationwide and ultimately resulted in cancelling plans for 80 percent of the new plants with combined generation of 100,000 megawatts in spite of opposition from federal authorities demonstrating that coal power was an idea whose time was over.

Organizations of all sizes and varieties represent the intermediate links between pioneering individual leaders and the social collective. At a WAAS roundtable in St. Augustine hosted by Ethical Markets Media, a certified B. Corp., the dynamic former mayor of this tiny tourist town, Nancy Shaver, testified to the importance of local support for measures to address the climate threat and the value of collaboration among the leaders of municipalities and cities all over Florida to challenge the denial and indifference of state and national officials.*

6. The Return of the City– from national paralysis to local activism

Our problems are no longer local or even national, so we need to foster social movements that transcend national boundaries and are global in reach. But in the absence of effective national governments and adequate support for multilateralism, we must look elsewhere. Throughout history, the greatest contributions to civilization came from small groupings such as the tiny kingdoms of ancient India and Greece, and the city states of renaissance Italy

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* See https://www.worldacademy.org/conferences/future-democracy-nov-2018

and Germany. Civilization, innovation, creativity, ideas and culture thrive in small groups where individuals have an active say in the management of their schools and communities and governance of their lives. City walls, markets, education, and recourse to legal justice were among the first types of public goods which cities provided to their citizens.

For centuries cities were places where people traveled to see the wonders of the world—the work of famous artists and performers, majestic cathedrals, great universities, the latest technological inventions and modern conveniences. All innovation and creativity gravitates to the cities and thrives in the concentrated intensity of the metropolis. In more recent times, the havens of creativity have been cities and small concentrated regions such as Silicon Valley, which grew from an obscure rural community into global prominence due to the concentrated gathering of creative individuals, small firms, universities and research institutes. Therefore, it should not be surprising to discover that the real sources of new thinking, vision, dynamism and initiative are coming today from cities rather than from the distant parliaments and government bureaucracies that govern nation-states. The city is recovering its role as the dynamic engine for social change.

The global and national leadership vacuum has given powerful momentum to the emergence of leadership at other levels of global society. Ironically, 'leaders' such as Trump are contributing to this process. Over the past three years he has done more to awaken and call forth leadership from other levels of American society than at any time since the 1960s. Those leaders come in many forms: District and Federal Judges who overturn and obstruct the implementation of Presidential Orders; Sanctuary Cities which refuse to follow the lead or obey the rules established by the all-powerful Federal Government. State governments which invoke the principle of states-rights with a clamor for independence not heard since the Civil War.

All the research on social transformation traces radical change to movements that modestly start from below and grow in momentum until entrenched powers are compelled to recognize and follow their lead. It happened in the 1960s when citizen action in New York City supported similar action in Los Angeles, forcing environmental legislation in California which set the standards for air quality, emissions and pollution control nationwide.

Now these pearls of civilization are beginning to string themselves together in a manner never witnessed before. When the US refused to ratify the Kyoto Protocol, hundreds of cities across the country pledged to meet and exceed the carbon admission targets outlined in the agreement. Within a year, 40 cities established the C40 Cities Climate Leadership Group. Within seven years the number grew to 90 cities representing 25% of global GDP. California adopted a plan to cut state greenhouse gases by 25% in 15 years. After Trump pulled the US out of the Paris Agreement, a bottom up effort called "America's Pledge" was launched in California to meet America's commitment to the Paris goals. Eventually the movement spread to more than 2500 US cities, business and other institutions which in combination represent the third largest economy in the world.[9] The We Are Still In movement spawned LEAD, the latest effort to pressure the US Congress on its Green New Deal Resolution.

In the US a network of cities and corporations first launched by Michael Bloomberg when he was mayor of NY is on track to achieve clean energy standards without requiring leadership from the US Government. The Global Covenant of Mayors for Climate and Energy now includes 7000 cities in 112 countries committed to publicly measuring and reporting their carbon emissions using a standard measurement system. The Delta Cities Network is one of many other examples. It connects places such as New Orleans, Ho Chi Minh City and Rotterdam to exchange experience, information and technologies for addressing the problems of rising sea level and other challenges unique to low lying coastal communities.[10]

It is time to restore the status of cities which long predate the founding of empires and modern nation-states. Cities are hotbeds of innovation and social evolution which can play a far more active and progressive role leading the changes needed to address global social challenges. Devolving more power to cities can be one of the most effective leadership strategies for filling the leadership vacuum in national politics.[11]

7. Youth Movements Come of Age

"Youthquake" is the term used by *Time* Magazine to describe the revolutionary changes that are already taking place and are bound to accelerate as more and more of the world's youth after 1980 reach adulthood. This is a generation with very different political views than those in power and it is the first network generation that is globally interconnected as none before it. Some have already entered politics and positions of influence such as US Congress woman Alexandria Ocasio-Cortez, one of 20 Millennials elected to Congress in 2018. Surveys show this generation in America is markedly more liberal, earning less, heavily burdened with student debt, sympathetic to socialism and far more concerned about environmental issues than those who came before them. They are far more likely to found, and join "leaderless" social movements like Occupy Wall Street and Black Lives Matter, demanding systemic overhauls to fix structural inequality and institutional racism.

And America is not the only one turning to more youthful leaders. Three years ago New Zealand elected Jacinda Ardern, born in 1980, as Prime Minister. About the same time Sebastian Kurz was elected the youngest Chancellor in Austrian history at age 31. Last year Finland elected Sanna Marin, born in 1985, as Prime Minister and the world's youngest serving state leader. Ukraine's Prime Minister Oleksiy Honcharuk is 35 and El Salvador's President Nayib Bukele is 38. Though young, most came of age after the 2008 financial crisis and have witnessed the rising inequality, polarization of society and retreat from democracy and multilateralism that have followed. Youth today are more educated, socially aware, globally conscious and concerned about the future than ever before. They resonate with the charge of Greta Thunberg to their elders: "How dare you?"

Since 2012 the global population under 30 years of age has been rising rapidly and today it accounts for more than half of the 7.5 billion people on the planet. Young leaders raising their voices have become a force across the globe, in areas ranging from climate to human rights, corruption to freedom from arbitrary authority, education and employment. In the past few years, they have been at the forefront of movements on every continent, from high schools in Sweden and campuses in Hong Kong to the streets of Santiago, where protests

were triggered in part by a social-media campaign by middle-school students, to Antarctica, where a group of scientists joined the global climate strike brandishing slogans like "rise before the sea level does!" Around the world we find the youth of the world proclaiming their rights and acquiring power to influence the future of the whole world.[12]

The Fridays for the Future (FFF) movement launched by Greta Thunberg's protest against climate change in August 2018 converted millions of school children on all continents into agents of social transformation. The Global Week of Climate Action organized by FFF in September 2019 was probably the largest climate strike in history involving 4 million people in 4500 events in 150 countries. Presently FFF is conducting about 2500 events per week in nearly 1700 cities in 150 countries around the world. Within 15 months from its founding, representatives of the movement still in their teens were addressing elite conferences and prominent television programs, and testifying before national parliaments, the United Nations General Assembly and the World Economic Forum. FFF also inspired celebrity Jane Fonda to launch Fire Drill Fridays, and court arrest while picketing the US Congress. While national politicians remained submissive to the economic and political power of oil and coal, their children were cross examining their motives at home, challenging their conduct in the classroom and protesting their conduct on the global media. As one leading climate scientist put it, youth have accomplished more in a few months than tens of thousands of climate scientists have achieved in the past decade. Although there is truth in this statement, it might be more accurate to say that the world's youth heard and believed what climate scientists have discovered and mobilized their influence to support effective action. Though it may be too early at the time of this writing to declare total victory, it is very significant that BlackRock and other investment management firms have clearly understood the writing on the wall and are already taking action to accommodate the radically different views of the next generation of investors who will soon come to dominate the world and inherit the earth.

8. Academia

Catalytic transformations need effective leadership, and effective leadership must be based on knowledge. In order to generate knowledge in these information-surplus times, effective structures and management of knowledge generation are essential. Academies consisting of universities, research institutes, professional associations and knowledge-sector NGOs are leaders in thought, collective wisdom and social power.[13]

Academies are vital institutions that have the credibility to foster both policy makers and the public with the knowledge needed to formulate policies and take decisions. Advanced communication technology and collaborative online tools make it much easier to work together. When academies network at the international level, their unified voice can have a great impact at the global level. Research on treatment of COVID-19 has made it amply clear that global co-operation and knowledge sharing are essential for human survival. Scientist Jamie Metzl, author of *Hacking Darwin* (2019), who served on US President Obama's National Security Council and is an advisor to the World Health Organization, has launched a global civic movement: ONE SHARED WORLD, promoting a Declaration of Interdependence (See www.onesharedworld.us).

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The InterAcademy Partnership (IAP), a global network of over 30,000 scientists in more than 140 regional, national and global science academies worldwide, plays the vital role providing evidence-based solutions to the world's greatest challenges. Its reports and recommendations prepared by the world's leading scientists are independent, authoritative and reliable sources of policy advice. It contributes to global policy debates. Its connections with national governments and IGOs enable it to directly impact decision making and achieve critical development goals. IAP has advanced science diplomacy by bringing national academies and regional networks to address global problems.

IAP has developed a practical program of action to fight deforestation. It released its Communique on Tropical Forest at the 2019 United Nations Climate Change Conference, COP25. This document outlines a set of necessary measures aimed at protecting forests worldwide and fighting climate change. The high visibility of COP25 combined with the authority of a consortium of national academies can build momentum for action before the COP26 Conference in Glasgow, when the parties to the Paris Agreement are expected to report on the progress they have made since 2015.

In the wake of the spread of the Coronavirus, the IAP Communiqué on the COVID-19 pandemic has called for concerted action to aid and accelerate research and its outputs for the global public good. IAP has been supporting interdisciplinary research in epidemic preparedness, providing evidence-based scientific advice on the outbreak to government and other stakeholders, and seeking to initiate collaboration globally to tackle the coronavirus. Its efforts have contributed to countering the spread of fake news and misinformation. Many IAP member academies too play their own part in national or regional initiatives. This results in greater dissemination of knowledge in local languages specific to the local context.

9. University Networks

When WAAS was founded in 1960, one of its goals was to become 'an informal world university'. It was a time when the Cold War was in full swing, the world was divided into enemy camps, international air travel was infrequent and expensive, television viewing was mainly confined to North America and Western Europe and programming was limited, and the written or printed word was the principal means for communication. Until then universities situated around the world operated as islands of knowledge separated from one another by distance, language and impediments to communication and movement. Until the end of the Cold War, exchange and cooperation between universities in different parts of the world were further hampered by political barriers and constraints on the free flow of information and exchange of scholars.

Today conditions are radically different. All the world's universities are linked together by a common information system, a global library of intellectual resources, an instantaneous communication network for exchange of ideas and information, a global system of faculty and student exchanges, and a growing number of students studying abroad. The number of students studying outside their home country, which was 2.5 million in 2009, is expected to reach 7 million in 2020. China alone has more than 700,000 students studying overseas.

But in addition to various types of exchange between universities, today universities around the world are joining together to form effective networks for action on critical problems confronting humanity. The International Network of Universities (INU) is a global consortium comprised of higher education institutions that actively seek international partnerships and experiences, create innovative programming and delivery methods, and embrace the internationalization movement. The Worldwide Universities Network (WUN) is a leading global higher education and research network made up of 23 universities, spanning 13 countries on six continents. The International Association of Universities (IAU) brings together institutions from 130 nations.

"Development is a process, not a program."

The Sustainable Development Solutions Network (SDSN) was established under the auspices of the UN in 2012 to mobilize global scientific and technological expertise to promote practical solutions for sustainable development, including the implementation of the Sustainable Development Goals (SDGs) and the Paris Climate Agreement. SDSN includes universities from every continent around the world, eight national networks and seven regional networks exchanging research findings and coordinating their work to address specific issues.

WAAS founded the World University Consortium (WUC) in 2013 in collaboration with leading international organizations to promote the quality higher education for the whole world. The vision of WUC is to evolve and promote the development of accessible, affordable, quality higher education for all based on a human-centered approach that shifts the emphasis from specialized expertise to contextualized knowledge within a trans-disciplinary conceptual framework reflecting the complexity and integration of the real world, from teaching mastery of a field of knowledge to learning that enhances the capacity of students to think and discover knowledge for themselves, from theoretical mastery to acquisition of knowledge, skills and values relevant to each individual's personal development and career—an educational system better suited to develop the full potentials of social personality and individuality for productive engagement, social welfare and psychological well-being. As part of the UNOG-WAAS Global Leadership project, WUC and WAAS are now collaborating to develop university-level programs on global leadership targeting executives in international organizations, national governments, business and civil society. The programs aim to enhance understanding of global challenges and effective strategies for building a harmonious, progressive global community. Special emphasis will be placed on the roles and responsibilities of each of the stakeholders in this process.

10. Boundary-Crossing Organizations

Many of the institutions responsible for addressing the challenges confronting humanity today were never intended for the role now expected of them. The UN, World Bank, national governments, corporations, research universities, the media, and other actors who support progress were never designed or organized to think or act together. Most university courses

still impart abstract knowledge within narrow disciplinary boundaries that is far removed from the complex realities of the real world.

The Gates Foundation is fostering a diverse network of organizations that is making extraordinary progress on vaccine development and childhood immunizations in under-developed countries. Boundary crossing organizations such as Bloomberg Philanthropies and the Gates Foundation demonstrate the capacity for refined thinking about "public goods" as developed in several books by UNDP economist Inge Kaul and the limitations of thinking about "governments" as a logical and realistic solution to problems. Efforts by organizations like these have generated innovative approaches to social change that can be imitated and replicated around the world in many different fields.

The World Health Organization (WHO) is an immensely successful border-crossing organization that has been instrumental in eradicating several dreaded diseases globally, apart from managing local outbreaks of diseases and coordinating surveillance, information sharing and relief across regions. In 1967 smallpox infected 15 million people and killed 2 million of them. But in the following decade a global campaign of smallpox vaccination was so successful, that in 1979 the World Health Organization declared that smallpox had been completely eradicated. In 2019 not a single person was either infected or killed by smallpox.[14] In collaboration with other global organizations such as UNICEF, the Red Cross, Rotary International and others, it repeated the success with polio, leading the largest public health initiative in history. The Global Polio Eradication Initiative has brought down the number of cases from 350,000 across 125 endemic countries in 1988 to less than 200 restricted to a few countries.

11. Integrating Research, Policy-making and Implementation—multi-stakeholder networks

A detailed study of the history of the last two centuries confirms that outstanding developmental achievements are the result of a social process, and only to a very limited extent that of government programs. Government policies and programs certainly matter, but development is accomplished by the initiative and active participation of society as a whole. Development is a process, not a program. One example was the successful citizen action which led to the US government's Office of Technology Assessment (OTA), set up in 1974 to assess the likely future impacts of technologies developed for profit in the private sector and how they might impact other groups, society and the environment. Forty countries have adopted this model. Although OTA was shut down in 1996, its path-breaking approach is still applied and its trendsetting reports remain available from the University of Florida Press.[15]

Structural barriers are a major impediment to effective leadership in addressing global social challenges. The barriers include disciplinary barriers separating different fields of expertise in academia, government, business and civil society. There are also barriers separating research institutions from policy-making institutions, implementation agencies

and society. In spite of the enormous global research infrastructure and investment in science and technology, many problems remain unsolved due to these institutional gaps. Closing these gaps can leverage and multiply the speed and effectiveness of translating new knowledge into socially beneficial results.

The complex, multidimensional challenges confronting humanity today are global in scope and inextricably interlinked. They defy effective solution at the national level by fragmented, piecemeal policies based on partial, outmoded concepts. Discipline-specific research and knowledge are most often inadequate to address the complexity of these interdependences. Even in cases where multidisciplinary research formulates comprehensive solutions, it passes through specialized policy-making institutions that give greatest emphasis to actions within their area of authority and neglect those for which other agencies are responsible. Systems approaches and futures research methods, including scenarios, are finally being adopted by economists.

WAAS advocates development of new types of institution to address these barriers. It has called for establishment of multi-stakeholder, multi-sectoral networks of academic, governmental, business and civil society organizations bringing together multidisciplinary teams of researchers, policy-makers and implementing organizations to work in concert on comprehensive, integrated solutions that address all dimensions of the issue and at all stages from conception to implementation. The work of these agencies should include broad knowledge of social transformation processes and strategies as well as the technical, economic, political, legal, social and cultural dimensions relevant to each specific issue. Formulation of such an integrated approach is one of the objectives of the UNOG-WAAS Global Leadership project. Existing institutions such as the Center for Research and Interdisciplinarity in Paris already possess some of the needed attributes of this model, which can be further developed and replicated.

These institutions should be designed to bridge the prevailing gaps between academic research, public policy, business and civil society —between piecemeal, fragmented, sectoral approaches and between uncoordinated national initiatives. The objective is to combine knowledge generation with social effectiveness to accelerate the evolution of national and global society. The primary focus of its research will be on the process by which society mobilizes itself to effectuate socially desirable goals such as the SDGs. The efficacy of the institution should be judged by the social impact it achieves. The underlying and ultimate aim is to formulate measures that will release and harness the social energies of countless individuals and organizations to accelerate the course of social development. The overall strategy is to unify research, education, policy-making, action and impact.

12. Global Citizen Movements—the Network of Networks

Organizations are the backbone of every successful social achievement—from the abolition of land mines and smallpox to the protection of human rights and the environment. In most cases these organizations remain small and unconnected with one another. Some learn to collaborate with others to multiply their force. In a few cases they have grown and expanded from the

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local to the national or global level. The International Campaign to Ban Landmines (ICBL) started as a coalition of six non-governmental organizations with similar objectives. Over time it grew into a global network that included groups working on women, children, veterans, religious groups, the environment, human rights, arms control, peace and development— working locally, nationally and internationally to eradicate antipersonnel landmines.

The success of ICBL led to the growth of other networks of organizations, such as The International Campaign to Abolish Nuclear Weapons (ICAN), founded in 2007, which now has 541 partner organizations in 103 countries. ICAN received the Nobel Peace Prize in 2017 for its contribution to the Treaty on the Prohibition of Nuclear Weapons (TPNW), which was adopted by the United Nations General Assembly by a vote of 122-1. ICBL and ICAN are striking examples of the power of organizations when they overcome their separate identities and merge forces for a common goal to build a network of networks with reach and power exponentially greater than the sum of its parts.

Thus far, these networks have been limited to those focused on a single issue. But in most cases there is a strong overlap and interdependence between the actions needed to address issues which are commonly regarded as separate and independent. For example, meeting the air quality control objectives of the climate movement could be rendered virtually impossible if one or a few nuclear weapons were ever detonated in the atmosphere. Abolition of nuclear weapons is essential to achieve virtually all of the SDGs and there are strong grounds for diverse organizations to join global networks with a common cause. Instead of arguing which objective is more urgent or important than the rest, it may be far more productive to recognize that progress on any of them is a step toward progress on all, just as civil rights for black Americans became a catalyst for the rights of women, the disabled and other minorities.

The ultimate network of networks would be what Paul Raskin and his associates at Great Transition Initiative (GTI) refer to as a Global Citizens Movement for effecting the rapid and dramatic changes needed today. "Catalyzing a global citizens movement will require a campaign that evolves and spreads across regions and issues in 'widening circles.' A critical requirement is that it is able to foster a sense of common purpose and promote coordination without compromising the essential autonomy of its allied organizations, which is the source of its vitality and expansiveness." [16]

Part III: Institutional Forms of Leadership

13. Numbers Count—Green Accounting

Purpose is powerful. A change of purpose can be revolutionary. But for a change of purpose to acquire effective power to change the world, it has to be translated into concrete actions. No Words, only Acts. The process of converting abstract intention into practical action involves many stages, of which the capacity to quantify and measure the change desired is one of the most important. Metrics matter. The spread of double-entry bookkeeping is widely credited with the dramatic spread of the commercial revolution in Europe during the 15th century. That invention made it possible for business people to accurately measure

the profitability of commercial transactions. Inventing new methods of accounting today is of even greater importance.

For decades it has been known that Gross Domestic Product or GDP is a poor and "grossly distorted" measure of national economic activity.[17] Among its many deficiencies, it fails to distinguish activities that promote human welfare such as food production, housing and education from destructive activities such as war, natural calamities and epidemic diseases. It also fails to distinguish economic activities which create jobs and equitably distribute incomes from those which eliminate jobs and benefit only a small portion of the population. It fails to take into account the cost of environmental degradation, the exhaustion of non-renewable resources and the rising existential threat posed by climate change. Over the last few decades more than 1000 alternative measures have been created and tested to replace this grossly distorting measure with one or more that far more accurately measure what is really important—the actual impact of human economic activity on sustainable human welfare and wellbeing. Still GDP prevails and so does the blind insistence on maximizing economic growth regardless of its impact on human beings and the planet. That's how important the numbers are. In 2003, Brazil hosted the First International Conference on Implementing Indicators of Sustainability & Quality of Life in Curitiba. In 2007, the European Commission launched its "BEYOND GDP" initiative. (See www.beyond-gdp.eu)

Six centuries after the adoption of double-entry bookkeeping revolutionized commerce in Europe, new accounting methods are behind the revolution in Impact Investing which is transforming where and how money is flowing in global financial markets today. Private and public finance can play essential leadership roles in altering the future of global society by shifting the emphasis away from fossil fuels and other energy-intensive, polluting technologies to clean, energy-efficient, renewable energy technologies, and in many other ways. But achieving a rapid shift in energy investments, policies and practices is only likely to happen if they are supported by new metrics which make informed investment decision-making possible.

The Green Transition Scoreboard® (GTS) developed by Ethical Markets Media tracks the technological revolution which is moving the economy toward a cleaner, greener, sustainable future. It provides a comprehensive operational definition of a green economy and a framework for measuring progress toward it. GTS includes only selected companies and technologies with long-term criteria of sustainability. Other measures include Calvert, Pax World, Domini, and the Council on Economic Priorities, which offer new metrics for ESG evaluation. Research conducted 20 years ago by Innovest Strategic Value Advisers, the largest ESG research firm before it was purchased by Morgan Stanley Capital International (MSCI) in 2010, helped to pioneer positive screening by providing best-in-class ESG ratings. In nearly all sectors, sustainability leaders, taken as a group, outperformed laggards by 300 to 3000 basis points per year.[18]

Building on these new quantitative measures, United Nations Environment Programme Finance Initiative (UNEP FI) was launched, which is a partnership between UNEP and the global financial sector to mobilize private sector finance for sustainable development. UNEP

FI supports global finance sector principles to catalyze integration of sustainability into financial market practice. UNEP FI has created or co-created three highly successful sets of financial principles. Principles for Responsible Banking (PRB), a framework launched in September 2019, involves 130 banks holding $47 trillion in assets, or a third of the global banking sector. Its Principles for Responsible Investment (PRI) are now applied by half of the world's institutional investors (USD 83 trillion).

These important developments are concrete steps in the right direction, but there is still more that needs to be done. The behavior of businesses is powerfully influenced by economic and political factors which will continue to generate adverse decisions and impacts until the total system's environment is altered. Nearly all corporate sustainability and SRI strategies focus on changing companies but it has been estimated that companies can voluntarily mitigate about 20 percent of the short-term and long-term, tangible and intangible, negative environmental and social impacts in a profit-neutral or profit-enhancing manner. Flawed systems are the root causes of the major challenges addressed by the UN Sustainable Development Goals (SDGs).

System Change Investing (SCI)[19] is a total system approach that focuses on changing the underlying systems and addressing the root causes which encourage harmful corporate behaviour, instead of focusing on symptoms (environmental, social, economic problems). The corporate and financial sectors are among the most powerful segments of society. They are largely controlled by investing. SCI uses this powerful lever to drive capitalism reform and other systemic solutions to major challenges.[20] SCI can utilize all the successful strategies and insights about how to change investment decisions gained from SRI and ESM to address the flawed systems which presently undermine efforts to transform investing.

SCI is powerful and relatively easy to implement, and provides a practical and profitable way to engage the corporate and financial sectors in system change. Its ease of implementation is because it involves indirect instead of direct system change, and it is based on widely adopted practices. Changing economic and political systems is complex. SCI does not do this directly. Instead, it strongly incentivizes companies and investors to do so. It also builds on existing corporate and financial practices such as SRI and corporate sustainability that have become mainstream over the past 20 years. The approach identifies systemic risks and opportunities that are not assessed by traditional financial and ESG analysis. SCI ratings also provide strong indicators of management quality, intangible value and stock market potential. The method has strong potential to increase investment returns.

14. Making Markets work for Us—the power of reliable information

In our haste to overcome the limitations of national government inaction and commercial profit motives, it is important not to overlook the enormous untapped potential of the market to address global challenges. Regardless of our economic persuasions, markets rank alongside language, money and the internet as one of the most productive human inventions of all time. All four are powerful networking instruments for promoting mutually beneficial relationships between people over huge distances in space and time. Most of the serious

problems with today's markets arise from the way they are being used rather than inherent deficiencies in the concept of competitive enterprise. As Michael Bloomberg and Carl Pope explain in *Climate of Hope* and Tomas Bjorkman points out in the *The Market Myth,* there are many ways available to far better align the operation of markets with sustainable economies and human wellbeing.

Markets can become leaders in solving problems instead of creating or aggravating them as is too often the case today. Benefit Corporations now charter rigorously certified companies focusing on public benefit and all stakeholders, and have become a new badge of honor. The Impact Investing movement is an example of leadership in changing how markets work. When investors have access to reliable information and truly understand the consequences of their investment decisions, the same markets that presently undermine effective action become powerful instruments for solving problems. The same impact is evidenced when consumers understand the true consequences of their purchasing decisions, as in the growing preference for organic foods and manufactures produced without exploitation of underpaid or child labor.

There are many prevailing myths of the market that retard effective leadership and decision-making. The widespread belief that fossil fuels are still the most cost-effective solution to meet the world's energy needs prevails only due to public ignorance of the enormous subsidies paid to fossil fuel producers which contribute massively to climate change while slowing down energy innovation, depleting natural resources and imposing huge health costs on communities. These subsidies prevent the market from making intelligent leadership decisions to change course based on the real competitive advantage of cleaner forms of energy. The same applies to agricultural subsidies paid to large corporate food producers.

Increasing transparency is another way to improve the wisdom of markets. Transparency requires reliable data and reliable data on the contributions of business to climate change has been hard to come by. In recent years this has been changing. The climate disclosure task force of the Financial Stability Board, the US Sustainability Accounting Standards Board and Bloomberg New Energy Finance are providing the transparency needed to drive changes in energy markets. Reliable information can be an inspirational leader. The Task Force on Climate-related Financial Disclosures (TCFD) calls for this disclosure to become mandatory by COP 26 in 2021. This will accelerate the slide in fossil fuel stock prices.

These are only a few of the ways in which markets can be converted into leaders that serve and save rather than threaten and destroy. Eliminating the unnecessary monopolistic privileges many companies enjoy, such as exclusive rights to run electrical wires through neighborhoods and the long-term patents given to corporations based on government funded research can make markets serve society as they were always intended to do. Economists have identified a long list of rent-seeking activities that enable businesses to acquire special benefits without paying for them. Citizens value their freedom of choice and tend to view markets as beneficial. Instead of being tied up in long-standing ideological disputes, exposing market failures and unfair practices is more likely to sway public opinion than attacking the institution of market itself.

15. Information and Media

Throughout most of history, reliable information has been scarce, difficult to acquire and largely inaccurate. Before the invention of the printing press, handwritten books were so scarce and precious that they were chained to library shelves. Literacy was a rare endowment, and those who could simply read and write were considered genius. Before the first printed newspapers, news was mostly transmitted by word of mouth through rumor and gossip, subject to various interpretations and distortions. Until the invention of the telegraph, news travelled for weeks between Europe and America by ship. Even after the advent of newspapers, telegraph, radio and television, the range of viewpoints accessible to citizens was narrow and commonly mistaken for the whole truth. Until the advent of cable news in America, the American public obtained almost all their information from local newspapers supplied by information from the same two or three national news bureaus and three major network TV stations reporting near-identical information.

Today with faster and better communication technology, information is far more readily available to us than ever before. Internet and cell phones have made it possible for every individual not only to access information but also to broadcast his or her views. It leads to misinformation and false propaganda too on the one side, but on the other, we are also more conscious of the bias and distortion that colour the information we receive compared to times in the past when the public assumed all news information was objective and impartial.

New forms of media such as digital and social media have played vital roles in movements such as the Arab Spring, Occupy Wall Street, Fridays for the Future and Me Too movements. New and traditional media can serve as complementary forces that reinforce each other for local and global communication services. There have been some remarkable advancements in the dissemination of information and the use of media in recent times.

The UN system has established good and reliable information sources, and UN agencies have broken stories and projected important information on a global basis. Web-based podcasts are rediscovering the intrinsic value of radio broadcasting that is uncensored and value-based. Journals and newspapers today support social causes and raise awareness among people. Investigative journalism such as *Washington Post*'s breaking of the Watergate story unveils truth, counters government-sponsored propaganda and provides alternative perspectives. Self-publishing both on the internet and outside is breaking the monopoly of large publishing houses to determine what we read.

Access to reliable, unbiased information is critical today, as humanity faces an existential threat. History shows that real protection from a pandemic comes from sharing reliable scientific information globally.[21] COVID-19 needs to be urgently addressed, but the issue of climate change is perhaps a far greater challenge.

The Intergovernmental Panel on Climate Change (IPCC) is a strikingly successful example of an international organization that provides the latest, most authoritative scientific information on climate change to national policy makers, researchers, NGOs, educators and the general public around the world IPCC prepares assessments on all aspects of climate

change and its impacts, with a view of formulating realistic response strategies. It provides policymakers with regular scientific assessments on climate change, its implications and potential future risks. It puts forward adaptation and mitigation options based on which decisions can be taken.

IPCC has become the leading international authority on climate change. The scientific evidence brought up by the first IPCC Assessment Report of 1990 underlined the importance of climate change as a challenge requiring international cooperation to tackle its consequences. It therefore played a decisive role in the creation of the United Nations Framework Convention on Climate Change (UNFCCC), the key international treaty to reduce global warming and cope with the consequences of climate change. Its Second Assessment Report of 1995 provided important material drawn on by negotiators in the run-up to adoption of the Kyoto Protocol in 1997. The IPCC's landmark Fifth Assessment Report marked a turning point for the field of climate change, and provided a clear and up to date view of the current state of scientific knowledge relevant to climate change. It was a critical scientific input into UNFCCC's landmark Paris Agreement in 2015. In 2007, IPCC and Al Gore were awarded the Nobel Peace Prize "*for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change*".

Part IV: Leadership in Thought

16. Leadership in Values

As in the pre-COVID-19 world, but definitely in the post-COVID-19 one, values-based education, leadership and global functioning are necessary to avoid an existential crisis. Values are real wisdom and power, they have practical value. Just as physical skills are the channels through which physical energy is directed so that it produces results, values play a similar role at the psychological level.

The United Nations' Universal Declaration of Human Rights (UDHR) that proclaimed the rights of each individual human being is a milestone in human history. It marked the first time when the fundamental human rights of very human being were universally acknowledged. Since then the principles set forth in UDHR have been translated into laws, policies, standards and practices by governments, educational institutions, corporations and civil society around the world in countless ways.

For example, in 2014 WAAS, WUC, and some WUC charter members endorsed the Poznan Declaration, a formal statement aimed at mainstreaming ethics and anti-corruption in higher education adopted by the member universities of the Compostela Group of Universities.* The declaration identified major challenges faced today in promoting good government, ethical business and individual behavior. Recognizing universities' potential and responsibility in shaping the moral contours of society for the better, it called upon

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* http://web.gcompostela.org/wp-content/uploads/2020/01/ENThe_Poznan_Declaration-1.pdf

institutions of higher education to shoulder their role as key agents of change and listed several strategies for implementing the change.

17. Integral Complexity and Science-based Rapid Learning Networks

New forms and strategies for education are needed at all levels and in all fields. Rapid social transformation requires continuous and rapid change in the way we think and act. Education is the instrument humanity has forged to pass on the cumulative knowledge of all humanity to the next generation so they do not have to reinvent the wheel or commit the same follies as their forefathers. The conventional definition of a generation is the average period, generally considered to be about thirty years, during which children are born and grow up, become adults, and begin to have children of their own. But in these days of rapid social change, the next generation often refers to the next generation of thinking, technology or organization, not merely of people and the duration of these other types of generations can be much shorter than for human beings.

Accelerating the transfer of knowledge within and between human generations, between people and organizations around the world, and between different fields of activity is becoming increasingly important. And it is not just people who need to learn faster. It is also the concepts, systems and networks of knowledge that increasingly relate and interconnect activities in space and time. For example, scientific leadership in Cognitive Computing now requires in-depth specialized knowledge in at least four fields which are traditionally regarded as independent of one another—mathematics, computer science, neuroscience and psychology. Similar interdependencies exist in many other fields of the natural and social sciences.

International professional and scientific networks have an extraordinary potential to provide leadership. The building of global cooperative knowledge networks has become an important contributor for genetics-based Big Data medical research. Examples in Biomedicine include the formation of the Global Alliance for Genomics and Health (www.ga4gh.org), which includes 500+ data-sharing organizations worldwide, and the global networks of oncologists for rapid learning cancer treatment at (www.asco.org). Another example of fast, crossbreeding, global information networks to support distributed leadership for science-based rapid learning is National Institutes of Health VideoCasting (www.videocast.nih.gov), which brings leading-edge ideas and discoveries in all areas of biomedical research and public health policy to researchers and students in all countries (including for-profit pharmaceutical and startup companies) as quickly as possible, 1-2 years before print publication. The Kaiser Family Foundation provides a similar service to improve global news media and link international public health/policy networks (www.kff.org). They make facilities and professional services available, at cost, to other organizations to bring plenary sessions of significant conferences and regularly scheduled research and policy colloquia to new, boundary-crossing, global networks.

The logic that is valid for genetics and cancer can be equally relevant to building leadership with regard to socially responsible investing, climate change, management of cities, and in many other fields. Science-based systems for rapid learning require leaders with what psychologists call "integrated complexity." They need the capacity to make sophisticated

assessments of different users and cases. A database and user interface for research scientists will be different from the repackaged discoveries and user interface that a physician will want when seeing a patient with an undiagnosed ailment for the first time. Patients with chronic conditions and patient-advocacy groups will have their own needs for online and usable access to science-based learning.

18. Implementation Science

The knowledge needed to change the world cannot be found in any textbook or classroom concentrating on one of the 1000+ disciplines and subdisciplines taught in universities today. The division of knowledge into specialized fields has played an important role in the growth of specialized knowledge. But in doing so it has largely lost sight of the complex interrelations and interdependencies of life in the real world. Knowledge of the human body is of limited value for medical practice if it is not accompanied by an understanding of the psychology of patients and family members or the sociological factors that powerfully influence physical health and psychological wellbeing. Yet around the world medical education focuses almost exclusively on the patient's body to the exclusion of mind, emotions and social context. Technical education in microelectronics and artificial intelligence focuses on how to enhance the power of computer systems rather than on understanding the needs of human beings and the impact of technology on society and psychological wellbeing. Management education emphasizes profit maximization rather than maximization of the welfare and wellbeing of the full range of stakeholders.

The rapid transformation of global society requires radical change in education at all levels and in all fields. A critical missing link in education today is the link needed to bridge the gulf between ideas and actions, between theory, research, public policy and implementation. Today innumerable institutions around the world are focusing on the SDGs. But in almost all cases their work is confined to one stage of the implementation process—theory, applied research, policy-making, regulation, applications in business or civil society. Achievement of the SDGs will depend on our capacity to bridge the divide between different types of institution and different types of knowledge—scientific, technological, administrative, commercial, social, cultural, and psychological. The world's leaders need to understand social processes such as the diffusion-of-innovation strategy which brings all institutions up to the already-known Best Practices, such as those recognized by the Baldrige Awards, databases of Six Sigma, Toyota, and other management and process-design achievements in the public and private sectors. Similar knowledge is needed in every field.

The knowledge of the process that connects all the various fields is also needed. That is the objective of the discipline of "Implementation Science", which is evolving as a useful scientific synthesis of effective practices in the field of healthcare. E. Rogers, *Diffusion of Innovation* is a standard reference. AcademyHealth.org is an annual leading-edge Conference on the Science of Dissemination and Implementation in Health.

Rapid implementation strategies are needed that cut across all Sustainable Development Goals. The early agricultural revolution in the US built implementation networks linking

farmers, field agents, and agricultural outreach services at state universities. Studying the lessons, sociologists made discoveries like the "S" curve and the two-stage model of opinion leadership and adoption of innovation. The Department of Learning Health Systems at the University of Michigan works to advance the science of rapid-learning systems. Sanjeev Arora's design for Project ECHO delivers leading-edge and new specialty training to doctors who have basic MD training in medically underserved and rural areas. It is a hub and spoke design, with experts using Internet videoconferences for case management discussions. Once professionals have learned how to learn, the Project Echo human relationships allow advanced medical education to "move information, not people." This organizing model is now operating in 38 countries. The goal is rapid implementation to reach 1 billion+ patients in rural and under-served areas.[*]

19. Harnessing Humanity's Collective Wisdom

Project Drawdown was established by Paul Hawken in 2013 to identify the 100 most substantive solutions to global warming. The list was compiled by an international team of over 200 scholars, scientists, policymakers, business leaders and activists to assess each solution's carbon impact through the year 2050, its total and net cost to society, and its total lifetime savings. For each solution, researchers describe its history, the carbon impact it provides, the relative cost and savings, the path to adoption, and how it works. Their research and conclusions were reviewed and validated by a 120-person advisory board including prominent community geologists, engineers, agronomists, politicians, writers, climatologists, biologists, botanists, economists, financial analysts, architects and activists. The goal of the project is to determine if we can reverse the buildup of atmospheric carbon within thirty years. All solutions modeled are already in place, well understood, analyzed based on peer-reviewed science, and are expanding around the world.[22]

This remarkable initiative did not create a master plan for the world. Rather it sought out and discovered the elements of a successful strategy to not only stop but reverse the buildup of carbon emissions in the atmosphere—hence the name 'Drawdown'. It did so by accessing knowledge and expertise that already existed and had been tested by research and commercial projects around the world. Drawdown is a dramatic example of a leadership strategy designed to systematically harness the collective wisdom to address global challenges.

Nor are their findings purely theoretical. Many of them are based on proven real world examples which demonstrate that drawdown is really possible. For example, in spite of political paralysis on climate action at the national level in USA, by applying drawdown strategies the State of California —the sixth largest economy on the planet—is on track to meet the pledge it made in 2006 to reduce greenhouse emissions to 1990 levels by 2020.

Project Drawdown represents a new type of global social organization capable of harnessing the expertise of the whole world to provide collective leadership for global social transformation.

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* See https://echo.unm.edu/locations/global

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20. Power of the Visual Arts

The power of the motion pictures and other art forms to precipitate sudden changes in public awareness, values, attitudes and actions is well documented. Former US Vice President Al Gore's Oscar-winning documentary about the environment, *An Inconvenient Truth,* communicated complex scientific arguments about the threat of climate change into a language and form accessible and intelligible to the educated general public. It was well-received politically in many parts of the world and is credited for raising further awareness of global warming internationally. A 47-country Internet survey conducted by The Nielsen Company and Oxford University found that 66% of those respondents who had seen the film stated that it had "changed their mind" about global warming, 89% said it had made them more aware of the problem, and 74% said they had changed some of their habits because of seeing the film. Another example is Sir David Attenborough's series *The Blue Planet* which helped get governments to enact pro-environment legislation such as no single use plastic, no micro-beads, etc.

21. Leadership Education

New forms of educational content and new delivery systems are needed at all levels and in all fields from healthcare and environmental sustainability to responsible investing and business management. The growing repository of Online Educational Resources (OER) and improved Information and Communication Technology (ICT) are serving education now during the COVID-19 pandemic when distance and online learning are becoming mainstream. This shift must be matched by corresponding changes in our traditional ways of teaching, by separating accreditation from learning, and introducing holistic methods of evaluation.

One of the urgent needs in education is the need for leadership education. Social transformation requires change and change is initiated by leaders with the capacity to think for themselves and the skills to communicate, organize and motivate others to set out on a new course. The Ashoka Model of changemaker education strives to impact leadership as a basic life skill. Ashoka is a large network of social entrepreneurs started in India in 1981, that identifies and supports social entrepreneurs who have ideas for far-reaching social change. Its work impacts millions of people and communities through its work in the fields of farming, education, human rights, finance, media, and women and youth empowerment globally. It functions as a collaborative network that supports and amplifies change by bringing together those who solve problems, the changemakers. It functions on the basis of the understanding that in order to solve all the problems of the world, everyone must become a changemaker, and empathy, teamwork, leadership, and problem solving are the tools for change. Its programs for students, youth and young entrepreneurs enable them to acquire the skills they need to thrive and become role models in their communities, and ultimately benefit the entire society. It builds a team of teams that unlock enormous social as well as business value. This model is one of a small but steadily growing group of institutions the world over that are stepping in to fill the shortfall of truly well-educated and well-developed individuals.

Colleges and universities worldwide offer undergraduate majors and specialized MA programs to train entry-level and mid-career students for leadership positions in public

and global problem-solving and public-private strategies such as industrial development planning. Association of Professional Schools of International Affairs (APSIA) is an umbrella organization of leading graduate programs. Elite business schools have formed the Global Network for Advanced Management to develop cadres of global leaders for government and private sector problem-solving. The network offers a set of MOOCs with an advanced curriculum to support this vision.

"The formulation of the 17 Sustainable Development Goals and 169 targets is an unprecedented example of the transition from evolution to conscious social transformation."

Ultimately, the quality and impact of leadership depend on the values and knowledge on which they are based. The leaders humanity needs today must be inspired by inclusive universal values. The knowledge they need necessitates a deep understanding of global challenges and emerging opportunities, the underlying process that guides human social evolution and the process by which leaders can act as catalysts for humanity's conscious social transformation.

The principal aim of the UN-WAAS project on Global Leadership in the 21ˢᵗ Century is to gather insights from our collective evolutionary past to formulate the knowledge needed to prepare leaders in every field—government, business, science and civil society—to guide and mobilize global society for rapid transition to a better future. One of its aims is to develop new types of courses in every field to impart knowledge of the process of transformational leadership and the ways it can be applied to accelerate global evolution in government, business, education, science and other fields.

22. Knowledge Mobilization for Deep Societal Transformations

Society is an organic whole. The division into separate disciplines is artificial, inadequate and counterproductive for guiding conscious evolution of that whole. Most of the problems arise due to the gaps, disconnect and inherent contradictions between the premises of different social science disciplines. We need a coherent, integrated knowledge of underlying transdisciplinary social processes that express in all fields but beyond the scope of prevailing social science theory and practice. We need to take steps to evolve a transdisciplinary science of society founded on common core principles and processes rather than independent and often contradictory premises. Such an exercise will give us the knowledge to initiate and accelerate conscious societal transformations.

From the beginning WAAS has brought together many different disciplines with divergent perspectives and sought to synthesize and integrate for a coherent understanding of the whole. WAAS is not just about promoting scientific research and applying its results to problems as understood and defined by political authorities. It is all about understanding the process of

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social evolution by which rising social aspirations shape social trajectories which emerge as awareness, generate social preparedness, release social energies and underlying social forces, and direct and transform them through organizations and institutions into coherent actions aligned with evolutionary objectives.

The history of great social transformations testifies to the fact that we are most often blind to radical change until it is already well underway. In retrospect, we can explain anything. Mind is like a rear-view mirror, it sees everything clearly in retrospect after it has happened, but is blind to the sudden transformations that are right around the corner, which are beyond the visionary boundaries of conventional thinking. Today, we are approaching an intellectual point, where our entire educational system, our entire disciplinary academic structure and even the theories in the social sciences are going to be tested to their limits and no longer maintain their integrity. This will usher in a transitional period of great confusion and creativity. Old structures will break. We see signs of that change in the institutions, even in the disciplines, but it has yet to fully manifest and break through the prevailing institutional inertia and conventionality. One example with regard to universities is the Stanford University study "Stanford 2025": a future was envisioned in which students will be free to create their own disciplines and departments are transformed into knowledge resource centers, so that each student can design his or her own curriculum. This change will take our knowledge and the capacity to apply our knowledge to a whole new level.

23. Leadership in Thinking

Transformative leadership emanates from the formulation of new ideas and perspectives. The formulation of effective ideas depends on the kind of mental thought processes applied. Generating ideas with leadership potential depends on the way we think. All the challenges confronting global society today can be traced back to the inadequacy of the mental processes and premises on which prevailing ideas, theory, institutions, strategies, policies and actions are based.

This defect is common to virtually all disciplines and fields of knowledge and activity. It arises from the tendency of the human mind to divide reality into parts and then regard each part as if it exists as an independent whole and can be treated separately from all the other parts of which it is a constituent element. This process of mental analysis has proven to be an effective means for developing specialized scientific knowledge. But it has generated countless problems when it is applied to action in life. Knowledge can be divided, but life is always an integrated whole. Piecemeal disciplinary knowledge results in partial perspectives, fragmented policies and uncoordinated actions, which can only be partially compensated by efforts to construct complex mental models of reality. It has led to an artificial divide between subjects such as the division of economics from politics and ecology as if there can be an economy that does not take place within a policy-making and environmental context. It has led to a chasm between financial markets and the real economy, a division between technology development and human wellbeing, a fissure separating education from the needs of society, society from the environment, and many other mental obstructions to effective knowledge and action.

Effective global leadership starts with changing the way we think about the natural world we live in, human society, nation-states, communities and individual human beings. None exists independently of the others. The world is an inseparable whole. None of its component elements can be fully developed without reconciling and integrating its aims and objectives with that of the others. Global leadership requires a transdisciplinary perspective and cooperative spirit between the different fields of knowledge, a greater awareness of the whole of which each is only a part. It requires a paradigm shift in political, economic and business theory, economic and financial models, technology development and deployment strategies that seek to arrive at an integrated science of society.

Most of all it requires a fundamental change in education to correct the inherent bias toward analytic thinking which overlooks or fails to comprehend the wholeness, complex interdependencies, and deeper connectedness of the social and natural world which constitute the reality in which we live. It requires a shift in emphasis in science from analytic processes to validate new hypotheses to promote development of the creative, intuitive mental processes that lead to the original formulation of new ideas and hypotheses, which are the true source of all scientific discovery. WAAS seeks to promote a paradigm shift in theoretical thinking as the basis for evolving effective real world solutions.

Part V: Global Social Transformation

24. Leadership in Thought that Leads to Action

At a time sixty years ago when international travel was limited, communication was slow, and the Cold War was just in the process of gaining momentum, WAAS was founded by eminent scientists and intellectuals deeply concerned with the policy implications and social consequences of rapid advances in the development and application of science and technology. The founding members included a number of scientists who had been associated with the development of nuclear weapons, including Einstein, Oppenheimer and Rotblat, who lived to regret that the nuclear genii had ever been released. The development of the nuclear arms race led them to the inescapable conclusion that science could no longer remain a passive observer of how the creations of science impacted on human society. Science must accept responsibility for the consequences of its creation and ensure that it was in the service of humanity. Along the way the Academy adopted as its motto "Leadership in thought that leads to action."

The Royal Society founded in 1660 is the oldest national scientific institution in the world. Since then national academies of distinguished scientists have been founded in most countries of the world to promote science and its benefits, support and recognize excellence in science, provide scientific advice for policymaking, foster international and global co-operation, education and public engagement. During the 20th century associations of national academies and scientific institutions were established, which are now represented by the International Science Council (ISC), the world's premier representative scientific organization uniting more than 140 national and regional academies together with research

councils and 40 international scientific unions and associations. The EARTH CHARTER and its 16 Principles of Human Responsibility was launched at the Rio +5 Summit in Brazil in 1997, to complement the Declaration of Human Rights. It has been ratified since by NGOs, academics, SRI companies, municipalities worldwide and was unveiled at the Peace Palace in The Hague in 2000, with Maurice Strong, Mikhail Gorbachev, and hundreds of dignitaries. It is now housed at the University of Peace in Costa Rica (See www.earthcharter.org)

25. From Social Evolution to Social Transformation

Global society has been evolving for millennia toward convergence without anyone being in charge of the process. It has evolved from isolated, small, autonomous, culturally homogeneous communities to larger, heterogeneous, multicultural nation-states giving rise to an increasingly interconnected and interdependent global community capable of relating, communicating, exchanging, learning, sharing and acting collectively as never before. It is also evolving from settlement of disputes by use of violent physical force to negotiated peace, rule of law and universal human values; from governance by arbitrary authority to freedom, self-governance and self-determination; and from reliance on military power to the power of economy, science, technology, cultural diplomacy, and the emerging social conscience of humanity as a whole. At the same time it has evolved from innumerable independent fields of activity—political, economic, technological and social—toward increasing levels of interrelatedness, interdependence, convergence and integration approaching a closely knit global society or World Wide Web.

Today the process of global social evolution is taking place far more rapidly than at any earlier time in history. It is also taking place far more consciously and intentionally. Instead of a long, slow, trial and error process of subconscious change driven by the pressure of circumstances and events, it is in the process of morphing into a conscious process of social transformation guided by growing awareness of the need and opportunity to direct our collective energies and actions toward a better common future. Instead of solely depending on chance events or the external compulsions, global social evolution is being guided by the power of ideas, values, aspirations and goals. The formulation of the 17 Sustainable Development Goals and 169 targets is an unprecedented example of this transition from evolution to conscious social transformation.

Today humanity possesses far more knowledge of how our ancestors lived in the past than anyone had during their own lives. As we move forward, we are discovering and recording the history of our ancient origins with a depth, precision and perspective never possible until now. At the same time we are looking further ahead into the future, imagining, projecting, and planning for events centuries from now. Yet in spite of this remarkable extension of our knowledge, we still understand relatively little about the process by which we have evolved in the past or are transforming ourselves at this very moment. We have many more facts, but knowledge of the process itself remains elusive. We have acquired the capacity to explain many things in retrospect, but have not yet developed a science of society which enables us to fully understand the process or course of our own future evolution.

The inadequacy of our knowledge is symbolized by the many instances in which social change has occurred with a speed and course of events that even the most perceptive observers did not anticipate, a phenomenon social scientists refer to as social tipping points. We know that the force of circumstances and events can build for long periods of time without fundamentally altering the status quo and then suddenly and unexpectedly undergo radical change when it was least anticipated, as it did during the period from 1989 to 1995. The sudden fall of the Berlin Wall, collapse of the USSR, dissolution of communist regimes in Eastern Europe, end of the Cold War, reunification of Germany and the radical reduction in nuclear weapons stockpiles are striking examples of our collective ignorance, but they are not the only ones. The birth and growth of the World Wide Web a mere half decade later took the world equally by surprise, as did the 2008 financial crisis, Brexit and the recent retreat from democracy, economic globalization and multilateralism. Many social scientists attribute our incapacity to foresee events to the increasing complexity of global society. Complex phenomena defy modeling and accurate prediction. Others attribute it to the increasingly rapid and unpredictable nature of technological innovation and dissemination. But regardless of the cause, the process still escapes our understanding.

This inability to see the approach of radical social transformations until they are already underway is both a source of insecurity and a source of promise. For it reminds us that no matter how immovable and all-powerful the obstacles to social evolution appear, they reflect only a limitation in our capacity to perceive the deeper forces that are reshaping society. Thus, none of the major European colonial powers imagined that in a few short years following the end of WWII, virtually all the old colonial empires of the world would be only memories. One of the most precious endowments of leadership is the capacity to aspire, believe in and envision that which contradicts the evidence of our senses and the prevailing status quo. The recent statements cited earlier in this report regarding the need for radical change in investment strategies and business purpose can be interpreted as early signals of further surprises to come.

In spite of our tenuous knowledge of tipping points, a study in the proceedings of the National Academy of Sciences suggests that we may well be approaching a positive social tipping dynamic in which global society finally acts rapidly and effectively to address the existential threat of climate change. Researchers examined six small changes which might precipitate larger cascading changes in a positive direction and in a way that could substantially reduce greenhouse gas emissions. They include interventions that would increase the financial returns of investment in clean energy systems by reducing fossil fuel subsidies and redirecting government support to clean energy systems; changes in building codes and construction practices on buildings and infrastructure projects which account for 20 of the current global emissions; divestment campaigns in fossil fuel intensive projects; rapid adoption of rooftop solar and electric vehicles as a result of changes in behavioral norms and values unleashed by social movements such as Fridays for the Future, Extinction Rebellion and the Green New Deal in USA; educational campaigns such as the one on cigarette smoking and vaping; and more effective tracking, monitoring and corporate disclosure of information related to carbon and climate more visible to consumers, business and government.[23]

This project on Global Leadership in the 21st century seeks to increase our understanding of the process of conscious social transformation and to enhance our perception of unrealized possibilities which are waiting to become actualities. It may not result in a mature science of society which humanity has yet to develop, but it can provide us with valuable insights into the process and many of the catalytic instruments available to us to foster it.

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