



World Academy  
of Art & Science



United Nations  
Office at Geneva

February 2020

# Catalytic Strategies for Socially Transformative Leadership

## *Leadership Principles, Strategies and Examples*

### INITIAL INSIGHTS

1.	Introduction	1
<b>Part I: The Evolutionary Context</b>		<b>2</b>
2.	The Power of Ideas—converting high values into practical reality	2
3.	The Social Process—the evolution from violence to social power	4
4.	From Power to Wellbeing—the values revolution in business and finance	7
<b>Part II: Levels of Leadership</b>		<b>9</b>
5.	From Individual Leaders to Global Social Movements	9
6.	Organizational Leadership—Sierra Club and Beyond Coal	11
7.	The Return of the City— from national paralysis to local activism	11
8.	Youth Movements Come of Age	13
9.	Academia	14
10.	University Networks	14
11.	Boundary-Crossing Organizations	15
12.	Integrating Research, Policy-making and Implementation—multi-stakeholder networks	15
13.	Global Citizen Movements—the Network of Networks	16
<b>Part III: The Impersonal Forms of Leadership</b>		<b>17</b>
14.	Numbers Count—Green Accounting	17
15.	Making Markets work for Us—the power of reliable information	19
16.	The Media	20
17.	Integral Complexity and Science-based Rapid Learning Networks	20
18.	Implementation Science	21
19.	Harnessing Humanity’s Collective Wisdom	22
<b>Part IV: Leadership in Thought</b>		<b>23</b>

20.	Power of the Visual Arts	23
21.	Leadership Education	23
22.	From Social Evolution to Social Transformation	24
23.	Leadership in Thinking	26
24.	Leadership in Thought that Leads to Action	27
<b>Acknowledgements &amp; Endnotes</b>		<b>27</b>

## 1. Introduction

Transformative leadership is the process of consciously accelerating the evolution of global society. This paper is a draft of work in progress. It provides an overview of initial research findings of the project on Global Leadership in the 21<sup>st</sup> century (GL21) conducted by the World Academy of Art & Science in collaboration with the United Nations Office in 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 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**

### **2. 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 20<sup>th</sup> 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. When Soviet President Gorbachev and German Chancellor Kohl met privately in July 1989, four months before the fall of the Berlin Wall, they agreed that German reunification was both desirable and inevitable. But they also agreed that it would not take place for 30 years or perhaps even later in the 21<sup>st</sup> century. In less than one year it became an actual fact.

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 17<sup>th</sup> 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 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 20<sup>th</sup> 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 38 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 them. 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 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 been 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 18<sup>th</sup> 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 14<sup>th</sup> 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 speak out proclaiming the rights of future generations to be heard and honored among the clamor of humanity's present desires. Her voice has 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.

### **3. 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 19<sup>th</sup> centuries 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.<sup>1</sup> 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 replace mob rule with rights and justice; global commerce, which replaces 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, and 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.<sup>1</sup>

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

---

<sup>1</sup> See <https://www.statista.com/statistics/617136/digital-population-worldwide/>

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 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 protesting 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.

#### **4. 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 21<sup>st</sup> century.

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). 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 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 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 in resources, acknowledges 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.<sup>2</sup> 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 130 of the world's largest corporations, to adopt a joint Statement on the Purpose of a Corporation, publically 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 share-holder 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 had 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."<sup>3</sup> 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, WWF, Skanska, the Potsdam Institute for Climate 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.<sup>4</sup> 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 mantle 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 later 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.

## Part II: Levels of Leadership

### 5. 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 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.

Feminism has been one of the most powerful, ubiquitous and effective movements of the last century. It has provided the framework and seeded grass roots initiatives for the advancement of

women and girls across the globe. These efforts have 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. The movement has no central leadership. It is coordinated by a simple 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 don't 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.

## 6. 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.

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 21<sup>st</sup> century, today there are approximately about 10 million, representing a 350-fold multiplication in a mere 20 years.<sup>5</sup> 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 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., Hazel Henderson introduced the dynamic mayor of this tiny tourist town, Nancy Shaver, who was not only promoting local support for measures to address the climate threat, but also collaborating with the leaders of municipalities and cities all over Florida to challenge the denial and indifference of state and national officials.

## 7. 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 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 of 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 of 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 environmental legislation in California 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 Plan. 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.<sup>6</sup>

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.<sup>7</sup>

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.<sup>8</sup>

## 8. 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 isn’t 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 more than 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.<sup>9</sup>

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. 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.

## **9. Academia**

[Section content to be added to next draft]

## **10. University Networks**

When the World Academy of Art & Science 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.

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.

### **11. 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” 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.

### **12. 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, not government programs. Government policies and programs certainly matter, but development is accomplished by the initiative and active participation of society as a whole.

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.

The World Academy of Art & Science 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 Interdisciplinary Research 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.

### **13. 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 local to the national or global level. The International Campaign to Ban Landmines (ICBL) is a coalition of non-governmental organizations founded in 1992 by six organizations with similar objectives. Over time it grew into a global network with active members in some 100 countries—including 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. Fifteen years after its founding, it was awarded the Nobel Peace Prize for its leading role in the ratification of the Mine Ban Treaty by 164 nations.

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 network 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.”<sup>10</sup>

### **Part III: The Impersonal Forms of Leadership**

#### **14. 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 15<sup>th</sup> 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.<sup>11</sup> 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 to 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.

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<sup>®</sup> (GTS) developed by Ethical Markets Media tracks the technological revolution which is moving the economy toward 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.<sup>12</sup>

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 with 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) is a total system approach that focuses on changing the underlying systems and addressing the root causes which encourage harmful corporate behavior, instead of focusing on symptoms (environmental, social, economic problems). Improving them is the most important action needed to achieve the goals. 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.<sup>13</sup> SCI can utilize all the successful strategies and insights about how to change investment decisions gained from SRI and ESG to address the flawed systems which presently undermine efforts to transform investing.

### **15. 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 explains in *Climate of Hope* and Tomas Bjorkman points out in the *Myth of the Market*, 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. 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.

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.

## **16. The Media**

[Section content to be added to next draft]

## **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](http://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](http://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](http://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](http://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.

What is missing is knowledge of the process that connects all these pieces of the puzzle. That is the objective of the discipline of “[Implementation Science](#)”, which is evolving 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.

To achieve the SDGs, the world’s leaders for sustainable development 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.

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.<sup>14</sup>

## 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.<sup>15</sup>

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.

## Part IV: Leadership in Thought

### 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.<sup>[101]</sup> 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. But at the top of the list 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.

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. [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.

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 includes 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 21<sup>st</sup> 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. 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 increasingly levels of interrelatedness, interdependence, convergence and integration approaches closer and closer to becoming 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 Science 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.<sup>16</sup>

This project on Global Leadership in the 21<sup>st</sup> 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.

### **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. The World

Academy of Art and Science seeks to promote a paradigm shift in theoretical thinking as the basis for evolving effective real world solutions.

#### **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, The World Academy of Art & Science 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 who had been associated with the development of nuclear weapons, including Einstein, Oppenheimer and Rotblat, who lived to regret that the nuclear genie 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 of the 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 20<sup>th</sup> 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.

InterAcademy Panel was launched in 1993 and its successor InterAcademy Partnership (IAP) in 2016. The IAP includes also the former InterAcademy Medical Panel, InterAcademy Council and regional networks in Asia/Pacific, Europe, Americas, and Africa. IAP brings together more than 140 national and regional academies. The regional associations of academies in the Americas, Africa, Asia and Europe also constitute elements of the global network of scientific institutions. Today international associations of scientists are ubiquitous, but they still have a vital role to play in bridging the gap between science, society and human wellbeing.

[Examples of the leadership role of academies and networks of academies in effectively addressing global social challenges to be added to this section.]

#### **Acknowledgements & Endnotes**

The current version was edited by Garry Jacobs, Donato Kiniger-Passigli and Mila Popovich. It contains seminal contributions by WAAS Fellows Lloyd Etheredge, Hazel Henderson, and Frank Dixon, and from other sources. Subsequent drafts will include contributions by the conveners and members of the 14 working groups now conducting research for the GI-21 Project.

- 
- <sup>1</sup> Will Koehrsen, “Has Global Violence Declined? A Look at the Data,” *Towards Data Science* January 6, 2019 <https://towardsdatascience.com/has-global-violence-declined-a-look-at-the-data-5af708f47fba>
- <sup>2</sup> Tania Carnegie, “Leading the evolution of finance: How can private equity deliver the new mandate of stakeholder capitalism in the 2020s?,” *WEFLIVE* January 22, 2020 <https://www.weflive.com/story/b665ed688c754ffa85373e32292b7d1d>
- <sup>3</sup> Klaus Schwab, “Davos Manifesto 2020: The Universal Purpose of a Company in the Fourth Industrial Revolution,” *World Economic Forum* December 2, 2019 <https://www.weforum.org/agenda/2019/12/davos-manifesto-2020-the-universal-purpose-of-a-company-in-the-fourth-industrial-revolution/>
- <sup>4</sup> New 1.5°C Business Playbook Will Help Businesses Take Exponential Climate Action *Futureearth* January 21, 2020 <https://futureearth.org/2020/01/21/new-1-5c-business-playbook-will-help-businesses-take-exponential-climate-action/>
- <sup>5</sup> *Yearbook of international organizations 2001/2002: guide to global civil society networks* (München: K.G. Saur, 2001)
- <sup>6</sup> Michael Bloomberg and Carl Pope, *Climate of Hope: How cities, businesses, and citizens can save the planet* (New York: St. Martin's Press, 2018).
- <sup>7</sup> Bloomberg *ibid*
- <sup>8</sup> Bloomberg *ibid*
- <sup>9</sup> “How Millennial Leaders Will Change America,” *Time*, Feb 3, 2020 <https://time.com/magazine/us/5770116/february-3rd-2020-vol-195-no-3-u-s/>
- <sup>10</sup> Paul Raskin, “Imagine All the People: Advancing a Global Citizens Movement,” *Kosmos Journal* Spring/ summer 2011 <https://www.kosmosjournal.org/article/imagine-all-the-people-advancing-a-global-citizens-movement/>
- <sup>11</sup> Hazel Henderson, *Mapping the Global Green Transition*, in press
- <sup>12</sup> Frank Dixon, “System Change Investing and the Sustainable Development Goals,” *Cadmus Journal* 3, no.6 (2019): 98-117 <http://cadmusjournal.org/article/volume-3/issue-6/system-change-investing-and-sustainable-development-goals>
- <sup>13</sup> Dixon, *ibid*
- <sup>14</sup> See <https://echo.unm.edu/locations/global>
- <sup>15</sup> Paul Hawken, *Drawdown: The most comprehensive plan ever proposed to reverse global warming* (New York: Penguin Books, 2017)
- <sup>16</sup> Ilona Otto et al., “Social tipping dynamics for stabilizing Earth’s climate by 2050,” *Proceedings of the National Academy of Science* 117, no. 5 (2020): 2354-2365 <https://www.pnas.org/content/117/5/2354>