7/31 – Corona-Crisis Exposes the Need for Transformative Leadership

Jaap Geerlof

COVID-19: The Latest Pandemic

Jaap Geerlof

On the last day of 2019, health officials from China reported to the World Health Organization (WHO) about a group of 41 patients with similar symptoms of an unknown type of pneumonia. The outbreak in China became world news. On January 7, 2020, Chinese authorities identified a novel coronavirus as the cause of the symptoms. Scientists believe the novel coronavirus jumped from bats to pangolins to humans at the Huan Wholesale Seafood Market, where these kinds of wildlife are sold for consumption (Huang et al., 2020; WHO, 2020b). On February 11, 2020, the WHO named this coronavirus COVID-19 (CO-rona-VI-rus-D-isease-2019). COVID-19 is not the first coronavirus with major health risks; the first corona-cases were detected in the 1930s (WHO, 2020a). Severe Acute Respiratory Syndrome (SARS), also a coronavirus, emerged in Asia in 2002. In 2004, the spread of the virus was contained, with 8,000 confirmed cases and a death toll of 800. Another coronavirus, Middle East Respiratory Syndrome (MERS), was first detected in 2012; since then, hundreds of cases have been reported with an average fatality rate of 35% (Centers for Disease Control and Prevention, 2020).

COVID-19 is new, but zoonosis is not. As long as humans have invaded the living space of wildlife, viruses and other pathogens have jumped from animals to humans and vice versa, causing diseases like anthrax, avian flu, Creutzfeldt-Jacob disease, Ebola, leprosy, rabies, swine influenza, tuberculosis, and West Nile fever. Some pathogens wreaked havoc and brought societies to a standstill. The 1918 Spanish flu, for instance, infected one-third of the world's population and killed an estimated 50 million people. This pandemic cruised the world in several waves, in particular hitting younger people who lacked immunity from previous H1N1 infections (Jordan, 2019). The worst pandemic, the Black Death, struck Eurasia and North Africa, peaking in Europe between 1347–1349. The Black Death, triggered by the bacteria Yersinia pestis, is the worst humanitarian crisis ever recorded, with up to 100 million casualties. This traumatic moment in world history brought civilizations to their knees and laid the groundwork for the cultural disentanglement of humanity and nature (Berry, 2000; Wallerstein, 1976/2011). The latter is exemplified by a lack of attention to human-animal and animal-animal transmissions, resulting in animal casualties that outnumber the human death toll (Messenger, Barnes, & Gray, 2014).

Today's outbreak of COVID-19, then, is not a novel phenomenon. For decades, virologists and experts have warned us of the threat of pandemics caused by novel pathogens (Henig, 2020). Our leaders could have been prepared for its emanation, but they were not.

Leadership Response to the Pandemic

The feudal leaders of 14th century Europe did not master the science of virology and epidemiology, and could not have prevented the Black Death pandemic. Similarly, the Spanish flu occurred during the end of World War I, and leaders at the time didn't have access to medical technology like antibiotics and vaccines. In the last century, however, considerable advancements have been made in the areas of health technology, disease surveillance, medical care, medicines and drugs, vaccines. … All of these resources, tools, technologies, programs and activities are excellent tools for pandemic planning, and pandemic planning itself has improved significantly since 1918. … The World Health Organization (WHO) has published instructions for countries to use in developing their own national pandemic plans, as well as a checklist for pandemic influenza risks and impact management. (Jordan, 2019, "Learning From the Past," paras. 8–16)

Despite all of these resources, the spread of COVID-19 was not confined to Wuhan, China. Instead, COVID-19 swept through China —and later through Europe, the United States, and the rest of the world like a rogue wave. Global pandemic dashboards show a steep rise in the number of confirmed cases and fatalities since the early days of 2020, although there are major differences in the number of cases and fatalities between and within countries; these differences, in part, can be attributed to variations in leadership responses. The sobering reality, however, reflects the extent to which our leaders were ill-prepared for a pandemic of this magnitude: most of our leaders seemed to be taken by surprise. Many public leaders and governments had not taken the necessary health care precautions, and a majority of business leaders never anticipated having to lead their companies in a paused economy.

The Chinese leadership was the first to be tested by the virus. President Xi Jinping and his government initially covered up the emergence of COVID-19 during a phase when the outbreak could have been best contained—a strategy successfully applied during the SARS outbreak. When the number of casualties rose quickly, Xi then opted for a complete lockdown of millions of people. Astonishingly, many national leaders elsewhere thought the virus would not spread beyond China and the Asia-Pacific region, and/or claimed their own nations to be well prepared. When the first cases were confirmed in their own countries, some of them dilly-dallied for days or even weeks: see, for example, President Jair Bolsonaro of Brazil, President Hassan Rouhani of Iran, Prime Minister Giuseppe Conte of Italy, Prime Minister Pedro Sánchez of Spain, Prime Minister Mark Rutte of The Netherlands, Prime Minister Boris Johnson of the United Kingdom, and President Donald Trump of the United States. Their bespoke responses appeared well

thought out, but in fact they represented a collective neglect of the factual situation in their individual countries. COVID-19, after all, does not have a timetable and does not wait for inert political deliberations; in our highly interconnected world, the virus simply follows the interaction patterns of people. Oddly, as a national security strategy the governments of these countries invest billions per year to maintain a defensive capacity, because their leaders still believe that "to be prepared for war is one of the most effectual means of preserving peace (Washington, 1790)"—but they were fatefully deficient in terms of an infrastructure for pandemic prevention. If these leaders had applied the precautionary principle, the rapid global spread of COVID-19 might have been prevented. The *precautionary principle* simply dictates that with issues of grave potential harm to public health and the environment, when the scientific evidence about the hazard is absent or mixed, "policy decisions should be made in a way that errs on the side of caution with respect to the environment and the health of the public" (Kriebel et al., 2001, p. 875).

Once COVID-19 got a foothold in these leaders' societies, inadequate preparations materialized as shortages of personal protective equipment (PPE), hospital beds, ICU units, and a lack of qualified doctors and nurses. Insufficient planning also manifested as a scarcity of testing capacity, which had many of our leaders flying blind—not knowing who was infected—and therefore hampering adequate leadership responses that would have prevented unnecessary fatalities. The lack of timely preventive measures meant that COVID-19 continued to spread in too many countries, with a reproduction rate of three (Liu, Gayle, Wilder-Smith, & Rocklöv, 2020)—which is equal to the spread of fire through dry grass—as gatherings such as religious services, Carnival parades, and soccer matches were still allowed, as were visiting pubs, public markets, and restaurants; the use of public transportation; and working together in cramped office buildings. Not surprisingly, in those countries the numbers rose exponentially and only started to flatten weeks after mitigation measures had been implemented.

Not all leaders misjudged the risks of COVID-19. Some have been praised for their timely response. Germany, for example, was well-prepared—it had a large and regionally varied laboratory network, so it could immediately respond to the outbreak with extensive testing—and was one of the first countries in Europe to take mitigation measures. German Chancellor Angela Merkel informed her constituents on March 11, 2020, of the possibility that 60-70% of the population might become infected if proper measures to contain the virus's spread were not taken (Mischke, 2020). The Danish Prime Minister, Mette Frederiksen, took some of the toughest measures in Europe; Denmark was the first to close its border. Greek Prime Minister Kyriakos Mitsotakis was ahead of most of Europe in his policy response; one example is the cancellation of Carnival parades in late February. Outside of Europe, Prime Minister Jacinda Ardern of New Zealand again showcased her leadership skills in times of crisis by intervening early and decisively with a total lock-down (Philips, Orange, Smith, Graham-Harrison, & Ainge Roy, 2020; Smith, 2020). President Tsai Ing-wen of Taiwan and her government showed a responsive leadership presence as well; having learned from an earlier SARS outbreak, her country was well-prepared for the pandemic. By January 2020, President Tsai's government had already implemented an approach that tracked travel and contact, coordinated the production of PPE with the private sector, and had a rationing system in place for protective masks (Tsai, 2020). President Moon Jae-in of South Korea and his government reined in the containment of the virus by implementing a strategy of mass testing, without a total lockdown (Ferrier, 2020). As Avivah Wittenberg-Cox (2020) comments, many of these exemplary leaders are women. These leaders told their citizens an honest story about the knowns and the unknowns of the epidemiology of COVID-19, the risks involved and the sacrifices that had to be made to contain the spread of the virus, grounded their actions in science, showed compassion, and resolutely implemented a strategy of lockdown. Additionally, the success of their approaches may be partly attributed to the fact that most of them lead in countries with higher levels of trust in government (Henley & Roy, 2020).

COVID-19 is a crucial test for the resilience and agility of our political, business and administrative leaders, our governments, and international organizations; however, this healthcare crisis is bringing out the best and the worst in our leaders and governments. In a time when an internationally coordinated and multilateral response should be the norm, it appears to be the exception, as each country tries to outbid others on the international market in a quest for PPEs, respirators, and other medical equipment. Even within national borders, the federalism that should guarantee a coordinated approach to contain the spread of the virus, like in the United States, is not in place, effectively pitting the states against each other on every policy discourse: Who decides what? Who pays the bill? Who is responsible for increasing testing capacity and obtaining medical equipment? The European Union (EU) is challenged as well. Although the EU claimed to be prepared for coordination in January 2020 (Gehrke, 2020), the degree of EU-level intervention in the following months has been quite sobering, because "the European Commission, which has limited power over health matters, sensed danger in January but didn't convey real urgency until March" (Herszenhorn, 2020, para. 8). The European Commission largely overestimated its member-states' preparedness, evidenced by the lack of communication, coordination, and cooperation on health care issues between the EU and the member states, and between governmental and non-governmental organizations. This pandemic reveals deficiencies in the EU's ability to govern in times of crisis, similar to those found in the European sovereign debt crisis of 2008–2014 and the ongoing migration crisis, which in my view is consequential of its present federalist model of multilevel governance. In this model, competencies are bundled for a restricted number of non-overlapping governance levels, each responsible for a particular territory at a particular scale, with a particular policy mandate (Bache & Finders, 2010). This model defies the ontological notion that society has transformed into a complex web of overlapping, embedded networks, such that effective governance requires the dispersal of policy development and implementation competencies across a large number of organizations and jurisdictions, public as well as private (Rosenau, 2010).

Corona-Crisis

To contain the outbreak of COVID-19, the Chinese government imposed a total lockdown in Wuhan on January 23, 2020. Governments of other locations beginning to report increasing numbers of people infected with the virus followed suit, although some of them did so reluctantly. At the end of April 2020, one-third of the world population was in some form of lockdown (Buchholz, 2020). A *lockdown* is a container for a number of policy measures, such as basic protective measures (e.g. hand-washing) and physical distancing—referred to as "social distancing" (this turn of phrase is unfortunate, as we need to physically distance to contain the spread of the virus while staying socially connected). Lockdowns can also include bans on social gatherings, non-essential movements, and working outside of the home(excluding essential professions); closures of non-essential shops; self-quarantine for symptomatic people and their family members; school closures; postponed events; closures of national borders; and a halt to non-essential production. In the absence of a COVID-19 vaccine and/or medical treatments to alleviate the symptoms of the disease, these measures will stay in place in some form for some time. The development and large-scale administration of a vaccine may take years, and at present there is no proven therapy to lessen the symptoms. Although our leaders are looking for ways to open

their countries, they are confronted with a host of "unknowns" about the virus and the conditions needed to lift the lockdown without causing a viral resurgence. Therefore, healthcare experts all over the world warn that lifting the restrictions too soon could lead to another explosive outbreak of COVID-19 infections. As Dr. Anthony Fauci, one of the U.S.'s top (and most visible) infectious-disease experts explains: "The virus decides when the country will open back up" (CNN, 2020).

Lockdowns have immense psychological, social, economic, and humanitarian ramifications. It has all the effects of a shock doctrine —a term coined by Naomi Klein (2007)—because a lockdown impacts all infrastructures of modern life: we have to socialize and work digitally, and many of our economic, educational, political, production, and transportation systems have been paused. Lockdowns have ignited discussions about the future of mass tourism and globalization, privacy protections, the playbook of democratic elections, and cultural outlooks. In fact, the aftermath of the lockdowns could well prompt a reset of the global geo-political balance. In other words, lockdowns are challenging the very nature of our world's order. For centuries, the dominant infrastructures of our world order have been organized according to the principles of the Western worldview (Tarnas, 1991) and the socio-economic ideology of (neo-) liberal capitalism (Kotz, 2015). Let me briefly explain these structures below.

The Western worldview is a mental model of reality born of modernity. It preaches the supremacy of men as masters of the universe, who believe that reality matches the perceptible world of concrete objects and who perceive nature as a limitless "resource" to be exploited. According to this view, organizations and systems function as "machines," their behavior governed by mechanical laws. The outcomes of these organizations and systems are predictable, and they are the result of one person—the leader—who controls these systems. This viewpoint presupposes that the whole can be known by studying the visible parts, which themselves are organized in a logical hierarchy (Kelly, 2010; Loy, 2002; Tarnas, 1991).

Economic thought is also enshrined within the Western worldview. Its dominant discourse—(neo-liberal) capitalism—is foundational to our world order (e.g., Kotz, 2015; Shiva, 2012). As a system, capitalism can only function if its engine is kept running with an uninhibited flow of capital; it must constantly be fed with resources. The system can only survive if the capital injected into each commodity and every service has an exchange value and a certain margin of profit (Harvey, 2010, 2014). Only then can capitalism function as a giant force field, "that ubiquitous, all-powerful and greatly misunderstood dynamo that drives our society" (Kovel, 2007, p. 38).

The recent and humbling observation for our leaders is that this engine has almost come to a standstill: planes are grounded, public and private transportation is largely restricted, and many factories, schools, shops, bars, restaurants, and sports/cultural venues are closed. A severe restriction on the flow of capital is a recipe for a credit crisis; a surging jobless rate and mounting bankruptcies might ignite an unprecedented economic depression. The resultant diminished tax incomes can translate into sovereign debt crises and later crystallize in austerity programs, in particular in debt-ridden countries like Japan, the United States, Southern Europe, and countries in the Global South. Ultimately, the dark clouds of austerity will rain on the most vulnerable in these countries and cause tremendous pain: no guaranteed income implies the risk of housing eviction, homelessness, hunger, and a lack of healthcare access despite the omnipresence of COVID-19. These people will be the first to be struck by an all-encompassing societal crisis: an evolving *corona-crisis*.

In times of crisis, problems tend to compound. Until now our leaders have, some reluctantly, focused their attention on the healthcare problem. They have not immersed themselves in their integral implications of lockdowns, although their attention has recently shifted toward the economic impact. To address the consequences of this impact, the national leaders of our major economies have enacted "one-size-fits-all" economic rescue packages, and trillions of renminbi, dollars, yen, and Euros have been printed to finance them. These programs are implemented from the top down, rather neglecting the complexity of our networked, individualized, highly interconnected and partly self-organizing society; they do not work with individual and collective creative potential, experiential knowledge, and sense of responsibility to find practical solutions to corona-crisis challenges. Of course, our leaders claim they didn't have enough time to develop more elaborate programs. It is my contention that their policy responses and leadership presence are the result of their worldview and leadership outlook, both of which have fundamental flaws at ontological and epistemological levels.

Unease, Uncertainty and Unpredictability as the New Normal

This pandemic is not the first time in which too many leaders have showcased their inability to deal with a crisis. Take, for example, the ecological and climate crises we have been experiencing for decades; our leaders have not taken the actions necessary to head off a man-made cataclysmic ecological and climate disaster, despite an abundance of scientific evidence. The endangerment of Mother Earth as the sustainer of life and the concurrent extinction of species has been unfolding since the first Industrial Revolution (Brand et al., 2016; Kolbert, 2014), when the capitalist mode of production spread worldwide to become the dominant political-economic system—the steep rise in the global gross domestic product since the 17th century (Maddison, 2006) matches the upward trend of CO_2 concentration in the Earth's atmosphere (Jacobs & Jones, 2006). In short—humanity has been systematically degrading nature's buffer capacity, which it needs to survive, since the mid-18th century. Many scholars warn that our socioeconomic, ecological, and food-production systems could collapse because of environmental degradation and climate change (e.g., Bonneuil & Fressoz, 2015; Jacobs & Jones, 2006; Servigne & Stevens, 2015; Wells, 2013). Approximately 60% of our ecosystems are being degraded or being used unsustainably—a conclusion that should serve as a wake-up call to our leaders, but one that does not register in most of their policy agendas (Rockström et al., 2009; Steffen et al., 2015). Environmental degradation and climate change, like pandemics, are continuous global threats, but not the only ones. The list can be lengthened with crisis-prone topics such as migration and refugees, socio-economic inequality, social and racial injustice, financial system instability, and the colonization of democracy by wealthy people (e.g., Chaturvedi & Doyle, 2015; Geerlof, 2011, 2014, 2019a, 2019b; Robeyns, 2019; Shiva, 2015). As the Dutch public leadership scholar Paul 't Hart (2014) elucidates, these wicked problems are transtemporal and transnational in their origin, locally and regionally varied in their materialization, transgenerational in their consequences, and multilevel in their policy implications.

The reasons why our leaders seem to neglect the risks involved with crises have been widely studied. One of the reasons that scholars point to is their tendency to overlook the systemic causes of these crises, which are rooted in our capitalist mode of production (e.g., Achterhuis, 2010; Chomsky, 1999, 2010; Giridharadas, 2018; Harvey, 2010, 2014; Kallis, 2018; Kotz, 2015;

Latouche, 2003; Lapavitsas, 2019; Martinez-Alier, Pascual, Vivien, & Zaccai, 2010; Moore, 2015; Sassen, 2014). Another reason is the established fact that too many of our leaders are detached from the complexity of reality and the reality of complexity (e.g., Dror, 2002, 2015a, 2015b; Montuori, 2010; Morin, 2014, 2015, 2018). A third reason is the Western worldview our leaders embrace, which causes them to perceive reality as knowable, stable, and predictable—and as the playing field on which gradual progress, directed by their decisions, is made. Our world order, however, is anything but stable, nor does it develop in a linear fashion; it is in constant flux. Ambiguity has become the norm, especially in times of crisis, and certainty is now the exception (e.g., Geerlof, 2019b; Montuori, 2010, 2014; Montuori & Donnelly, 2017).

I welcome our leaders to postnormal times. To paraphrase the prophetic, award-winning writer and critic of our times, Ziauddin Sardars:

All that was normal has now evaporated; we have entered postnormal times, the in-between period where old orthodoxies are dying, new ones have not yet emerged, and nothing really makes sense. To have any notion of a viable future, we must grasp the significance of this period of transition which in characterized by three C's: complexity, chaos and contradictions. (Sardar, 2010, para. 1)

For us, the three C's materialize as unease, uncertainty, and unpredictability. *Unease*, because COVID-19 has a profound psychological impact; people worry about their own health and that of their loved-ones, and a growing number experience stress because of the current disruptions to their way of life. Furthermore, the likelihood of austerity measures means that their traditional sources of security and entitlement—food on the table, access to education and healthcare, and affordable housing—might no longer exist, as they never did for the underprivileged in the Western world and in large parts of the Global South. *Uncertainty* rises, because the corona-crisis falsifies the belief in certainty. Uncertainty is intrinsic to life itself, and to science, governance, and leadership (Montuori, 2014; Morin, 2015, 2018). Therefore, we should all become psychologically and intellectually prepared for the unexpected—for contradictions and paradoxes. The corona crisis fosters *unpredictability* by unveiling our knowledge as always limited and refuting the paradigm of plannability and absolute truths. We simply cannot know what will happen to us in the near future. In this case, we know so little about the epidemiology of COVID-19 that even the most elaborate prediction models bounce around on a near-daily basis in their assessment of the probable number of infections and fatalities. Despite advances in epidemiological knowledge, the interaction patterns in our networked and globalized society are far too complex to predict what our exact situation will be tomorrow, let alone next year.

The three U's will also impact our leadership. As I wrote in my latest book,

in our globalizing, complexifying, and hybridizing world it has become far more difficult for leaders to be effective…. The present leadership challenges are no longer defined by questions of how leaders can contribute to gradual progress on an organizational or nation-state level. The transitional state of our present world order necessitates a leadership capable of guiding humanity towards a sustainable future in a world that seems directionless and un-steerable. The traditional leadership response to this kind of uncertainty is to upgrade the leadership's influence and power to direct the organization or state back to "normalcy," to a world order we once knew. (Geerlof, 2019b, pp. 9–10)

This retrograde strategy won't work in postnormal times. It is questionable whether the corona bailouts can prevent (socio-economic) collapse and it is debatable whether governments can afford mounting public debt. Despite the corona-rescue packages, a wave of layoffs and bankruptcies is hitting the world economy, and the most vulnerable people are already paying the highest price. As people become aware of the systemic causes of the various unfolding crises and how they intersect, they will start to question the premises upon which our leaders' agendas are grounded: the religion of the market, the merits of globalization, the belief in (economic) progress, the reliance on technology, the monetarization of life and living, and the propagation of mass consumerism. The corona crisis is undoubtedly opening cracks in our mental models and existing systems—including our thoughts on leadership.

Beyond Corona: A Leadership Change

The people sense that our leaders are incapable of dealing with the urgent problems of our times and with the magnitude of the corona-crisis challenges. A growing number of people realize there are hardly any leaders left to look up to; a lack of conscious leadership makes them aware that their leaders have failed them (e.g., Dishman, 2016; Khoury & Crabtree, 2019; Twenge, Campbell, & Cater, 2014). Some scholars even conclude that we are in the midst of an unfolding leadership crisis, which is coupled with an epistemological crisis in leadership studies, as too many leadership theories are not in tune with societal and organizational developments (Hunt, 1999, Montuori, 2010; Spoelstra, Butler, & Delaney, 2016).

Our world has complexified at a very rapid pace, thanks to an increase in the levels of education, globalization, informatization, and the networkification of society (e.g., Sloterdijk, 2005; Teisman, 2005). This transition has undermined the once-powerful position of the nation state, traditional organizations, and social and political movements; this, then, calls for a different engagement with leadership than the kind envisioned by the leadership scholars of the 20th century, such as trait, behavioral, or situational leadership theories and even transformational leadership theory (Geerlof, 2019b). Leadership scholars like Bernard Bass (1985, 1990), Warren G. Bennis (1989), and James McGregor Burns (2003) defined *transformational leadership* as a mutual effort of leaders, followers, and bigger audiences aimed at achieving a common goal and advancing a higher level of morality and motivation. Transformational leadership theory was a promise to the world in its representation of the conviction that leadership starts when social changes are required—but it, too, tends to glorify the individual leader (Delaney & Spoelstra, 2015).

The issue with all these leadership epistemologies is that they are grounded on the idea of gradual progress with a leader at the center of an organization or a political/social movement, who is the nucleus of decision-making processes. Gradual progress is an historical anomaly; analyses of past transitional periods undergird that societal transitions do not occur from one structurally stable level to another stable, uniform level (Braudel, 1984, 1994; Tainter, 2015). Still, the notion of gradual progress engulfs mainstream leadership's response to the various crises: a business-as-usual strategy and policy instrumentation (Macy & Johnstone, 2012). Furthermore, the placement of leaders at the center of an organization or a nation state has its origins in Taylorism (Taylor, 1911) and is itself an outmoded construct; more frequently, people organize in embedded physical and virtual networks. The point is that networks do not have a singular person in charge, nor a clear boundary or center. The emerging fluid, complex, and networked

structure of society necessitates a humble, collaborative, and distributive leadership presence and a new set of leadership competencies (Geerlof & Van Beckhoven, 2016; Teisman, 2005).

A Novel Transformative Leadership Presence

In my view, transformative leadership is the leadership answer in times of crisis and rapid transformation, when old orthodoxies are dying, existing organizations and systems are being tested, and novel structures have not yet emerged, because this leadership presence is capable of dealing with the complexity of reality and the reality of complexity. Alfonso Montuori was one of the first leadership scholars to do justice to the experiential knowledge of leaders faced with the complexity of reality. He integrated complexity theory, complex thinking, and the social-change perspective of transformational leadership into what he defined as *transformative leadership* (2010). Here, I briefly introduce complexity theory and complex thinking. *Complexity theory* focusses on the intricacy and interactions of processes that occur within and between parts and wholes, and the accompanying positive and negative feedback loops that constantly change systems. The theory perceives development as the unpredictable outcome of interaction patterns within and between networks of people and organizations (Richardson, 2004, 2005, 2008). What happens in times of crisis is that the number of variables influencing the behavior of systems and the randomization of their interaction patterns increases: as a result, all kinds of feedback mechanism surface, which progressively enhances the unpredictability of what future states will look like. *Complex thinking* underscores the idea that in times of rapid change a new level of chaos emerges to collide with the existing order (Bateson, 2002). Then, instead of one overarching logic, various logics surface and compete for public attention; these logics can be simultaneously complementary and antagonistic (Morin, 2014, 2015, 2018). The daily televised briefings of our leaders on corona exemplify how much they struggle to deal with the complementarity and antagonism of various logics in terms of the different viewpoints of medical professionals, scientists, economists and businesspeople, politicians and bureaucrats, and the public at large.

Montuori's conceptualization of leadership diverges from the leader-centric, gradual-progress perspective of 20th-century leadership theories. In his view, leaders are not the nuclei of social change so much as participants in transitional processes. His approach invites a polycentric, multilevel, participatory leadership presence in which everyone can become a leader. This framing "argues for the importance of a form of thinking that contextualizes and connects, is self-reflective and relational, and open to the reality of uncertainty, rather than engaging in a perennial quest for certainty" (Montuori & Donnelly, 2017, p. 12). Montuori's version of transformative leadership partly overlaps complexity leadership theory that attempts to enhance the understanding of organizational leadership in a complexifying world (Marion & Uhl-Bien, 2001; Uhl-Bien, Marion, & McKelvey, 2007). From this perspective, the idea of a leader as someone who determines the desired future state of an organization—and who attempts to implement that state by giving orders to employees—inspires traditional cause-and-effect thinking while holding the idea of a predefined organizational outcome. These leadership epistemologies defy the "determinism" of leaders who have followers working on the manifestation of their goals. This breach is paradigmatic, and as the epistemic anomalies of traditional leadership theories intensify, these anomalies in general lead to—as explained by Thomas Kuhn (1970)—the creation of a new paradigm that might overtake the existing one.

Transformative leadership and complexity leadership theory move away from the machine-thinking of organizations and societies and invite a participatory and complexity approach to leadership wherein leadership can no longer be defined as an "entity," but instead as a "process." In this framework, leadership can only be understood as an emergent, interactive dynamic, a complex interplay between networked people and organizations, which is a relational process (Clarke, 2013; Maparyan, 2012; Montuori, 2010).

The skills and competencies transformative leaders need are not innate. Transformative leaders have to develop them to be able to enact a genuine, responsive, and generative leadership presence. At the heart of this process lies the leader's self-awareness; their progress toward self-mastery; the continual enhancement of their cognitive, spiritual, and emotional intelligence and related practical competences; and their perpetual development of a deep understanding of the multitudinous realities of people, events, and situations (e.g., Grint, 2007; Hart, 2000; Quin, 1996; Scharmer, 2009; Zohar & Marshall, 2001). There is no single blueprint for a transformative leader. That said, given the multitude of contingencies and personal differences, there are several defining dimensions of transformative leaders that contextualize their leadership. I briefly summarize them. (I have described these characteristics in more detail in *On Becoming a Transformative Leader: Leading in a Complexifying World* [2019b, pp. 62–68]). The first dimension is *Adopting Reflexivity.* Becoming a transformative leader is a lifelong learning process; so, going through the cycles of personal and professional learning is a prerequisite for effective and lasting change. To that end, the learning potential of transformative leaders must be enhanced and cultivated (Argyris, 2005; Bradbury & Associates, 2017; in 't Veld, 2013; Mezirow, 1997). The second dimension is *Becoming a Change Agent.* This implies an innovative approach for political and business leaders to envision alternative regimes compelling enough to energize a coalition of change agents, a reformist approach for bureaucratic leaders working toward the realization of new institutional arrangements ('t Hart, 2014), and a disruptive approach for civic leaders. A disruptive approach alludes to the pressure civic leaders can build to kindle regime change, in part by co-creating alternative futures. The third dimension is *Developing of a Complexity Mindset and Action Logic*, because leaders with a complexity mindset have acquired the ability to reflect on their own ideology and behavior (Kegan & Lahey, 2009). They are able to think in terms of complexity, chaos, contradictions, opposites, and paradoxes, and they are endowed with the capacity to unify their experience and actions in an adaptive way (e.g. Dror, 2002; Montuori, 2010). The fourth dimension is *Reflecting Humility and Vulnerability*. Given that there can be no ironclad guarantee of how the future will unfold, leaders should not be surprised by sudden, unplanned events. The only position transformative leaders can take is a pluralist and humble one, as they will never be able to ascertain whether change will be the outcome of their actions (e.g. Plumwood, 2002; Wells, 2013). The fifth dimension is *Serving the Greater Good*. Transformative leaders must reflect timeless public values as they will be engaged in activities designed to foster the greater good (e.g., Bass, 1985; Burns, 2003). In order to increase collective wellbeing, transformative leaders must develop the capacity to see how the world came to be the way it is, ascertain what stewardship toward integral sustainability entails, and determine what it means to go against the current of vested interests (Weiner, 2003). The sixth dimension is *Understanding and Influencing the Context*. It is the collective that carries each transformative leader. If people are energized by her or his worldview and actions, they will follow and participate in mutual processes of decision-making and action; if not, they won't (Teisman, 2005). Today's transformative leaders believe that governing change can only occur in consultation and partnership with community involvement, and by organizing consensus between independent actors at different levels simultaneously (Barbour, Burgess, Falkman, & McManus, 2012). The seventh dimension is *Viewing Leadership as a Process*. Transformative leaders are part of the dynamic of

change, not the dynamic itself; they operate as energizers in organizations and social movements (e.g. Marion & Uhl-Bien, 2001; Pearson, 2012).

Beyond corona: The Chance Is in the Change

The disruption caused by the corona-crisis is characterized by most leaders as a wicked problem to be solved ASAP, because it endangers the stability and continuation of the present world order (and their own leadership future). However, "when written in Chinese, the word for 'crisis' is composed of two characters—one represents danger and the other represents opportunity" (John F. Kennedy, as quoted in Geerlof, 2014, p. 35). The corona-crisis is not only a threat; it is also an opportunity for a large-scale transformation. It is a chance to finally make those improvements that our leaders have not prioritized, the ones that many people have been longing for: a future wherein everyone can lead a decent life, and live with respect for animals and our natural environment. Transformative leaders should guide us in a long-lasting, multilevel, intergenerational reinvention of our organizations and systems. In a globalized world, this process transcends nation-state boundaries and continents; as an emergent process, it cannot be managed or predicted—it can only be influenced. Reinvention requires the integral innovation of all our infrastructures and cannot be projected without technological, legal, and institutional adaptations (Rotmans & Kemp, 2013) and, above all, the active participation of the people (Bradbury & Associates, 2017).

The reinvention of our infrastructures is the outcome of interactions between processes at the macro-, meso-, and micro-levels; an interrelation defined in terms of complexity theory as a nested hierarchy. The macro-level is defined by (changes in) policy paradigms and the global and national economy, and the institutional infrastructure in nation states. The meso-level represents (changes in) social norms, and rules and regulations that undergird the decision-making processes of business and administrative leaders. The micro-level refers to individuals and civic leaders in networks, who work on new ideas (techniques and social practices) and translate them into small-scale initiatives (Grin, Rotmans, & Schot, 2010). This complex, multilevel perspective of transition processes implies that transitions are the emergent outcomes of interactions between processes at three levels: (a) niche-innovations (read: micro-level) build up internal momentum, (b) changes at the landscape (read: macro-) level create pressure on the regime, and (c) destabilization of the regime (read: meso-level) creates windows of opportunity for niche-innovations. (Geels & Schot, 2007, p. 28)

The challenge for transformative leaders is to develop a leadership presence that strengthens and combines the transformative forces at these three levels, because it is the interaction between processes on micro-, meso-, and macro-levels that often defines the direction and pace of societal transition (Wheatley, 2006).The current times are optimal for their endeavor: at the macro-level, the corona-crisis puts pressure on all our systems, which are destabilizing; at the meso-level policy measures thought impossible for decades are implemented; at the micro-level, millions of people worldwide have developed niche-innovations for a sustainable future that are vying to be upscaled.

The corona-crisis is cracking open our socio-economic systems, lifting the barriers our leaders have imposed on the emergence of a participatory, sustainable world. As Otto Scharmer and Katrin Kaufer (2013) argue, one should "always start by 'attending to the cracks'…. 'attending to the crack' means attending to the openings, the challenges, and the disruptions where we feel the past is ending and the future is wanting to begin" (p. 23). Former transformative leaders have showcased how to attend to the cracks and to interpret them as windows of opportunity. Take, for example, the rapid changes in energy production and consumption in Germany. Germany's Energiewende is first and foremost grounded on the achievements of civic leaders and grassroots movements, which seized several one-time opportunities to democratize the energy sector and pressure the German government engage in a transition to sustainable energy. One such once-in-a-lifetime chance is the 2011 Nuclear Phase-Out Act, which shut down nuclear reactors after the Fukushima accident (Morris & Jungjohann, 2016).

In the age of corona, not just cracks but faultlines are emerging in our socio-economic systems, as the downsides of existing regimes (macro-level) and institutional failures (meso-level) become evident. One good example is the major disruption to supplies of goods and services, because our current economic model is built on efficient "just-in-time global supply chains." Or, one can witness the raw reality of inequality divide, where the ultra-rich flock to their second homes in rural areas to escape the pandemic while the common people who work essential, frontline jobs live in overcrowded places; not only do these workers have to deal with the virus and the psychology of existential risks, their future lives may well be marked by joblessness, debt, and possible housing evictions. These faultlines of our world order—consequences of the neo-liberal policy paradigm, the capitalist model of production and consumption, and the functioning of our financial systems—have been challenged for decades by all kinds of social movements and civic leaders. These leaders and organizations have addressed these risks, because their underlying missions focus on countering the neo-liberal elite's annexation of society and on vying for new public policy paradigms grounded in participatory, inclusive, socially just, and sustainable worldviews (e.g., Chomsky, 1999; Graeber, 2015; Harvey, 2010, Rifkin, 2014; Wells, 2013). Transformative leaders should embrace these kinds of initiatives and forge a new social contract, reinventing Jean Jacques Rousseau's (1762/1999) social contract. The change-agenda of this contract should be the outcome of a co-creative process between the political, business, and administrative leadership and the people, civic institutions, and their leadership (Geerlof, 2019a). This re-imagined contract can be based on numerous experiments and policy proposals fostering social equality, environmental sustainability, participatory democracy, and the repurposing of our economy toward a value-based system; many such proposals have been developed.

We can learn from the rapid policy changes being enacted during the corona-crisis. The idea that the economy could be slowed down and repurposed to focus on basic life needs—previously inconceivable in the eyes of our political and business leaders (Kallis, 2018)—has been adopted in a matter of weeks. Working from home as much as possible by relying on available technology—an option, of course, available only to workers in a limited number of countries and sectors—has become mainstream. Working from home, additionally, can free people to optimize their work environment and, by choosing their workstyle, become more productive. The decoupling of income from paid labor—which post-growth scholars (Cosme, Santos, & O'Neill, 2017) and basic-income advocates (Bregman, 2017; van Parijs, 1992, 1996; van Parijs & Vanderborght, 2017) had been calling for and our leaders had usually dismissed as morally wrong and financially unaffordable (Booth, 2018; De Grauwe, 2015; Henderson, 2015)—has indeed become a lifeline during the corona-crisis, although the people would have been better off if basic income systems had already been implemented beforehand, so the negative consequences of its complex implementation (de Wispelaere & Stirton, 2012) could have been avoided during the crisis itself. The merits of a reduction in environmental impacts have become visible to all of us: bluer skies,

the return of animals to their original living spaces, and less polluted canals, rivers, and lakes. Individual responses to the corona-crisis showcase that as a collective we can live without mass consumption, and find happiness with food on the table and a focus on our relationships with family and friends. Our happiness would, of course, be enhanced if *all* of our basic needs are met through a guaranteed income, affordable housing, and access to healthcare and education. If we can meet these needs in times of corona-crisis, we can do it afterward, too.

From Futurability to Reality

As I write on my website, "Transformative leaders have developed the capabilities to see how the future is already shaping the present and to translate futurabilities into a responsive and generative leadership presence." This definition embodies paradox, but leadership itself ís a paradox (Geerlof, 2017). Although complexity theory informs us that the past can only be partly known, the present is uncertain, and the future unpredictable, we can envision possible future states, labeled by the Israeli philosopher Yehezekel Dror (2002) as futurabilities. That imagining is what past transformative leaders have done—and what current transformative leaders are doing right at this moment.

The corona-crisis can fuel a wave of innovations and provides the conditions to turn futurabilities into reality. A compelling example is the accelerated implementation of Basic Income Systems (BIS). A basic income is commonly defined as an income paid by a political community to all its members on an individual basis, without means, tests, or work requirements. BIS is an old idea and has many advocates, among them the British economist Guy Standing (2017) and the Belgian economist and philosopher Philippe van Parijs (1992, 1996; van Parijs & Vanderborght, 2017), whose quest to promote BIS started decades ago. They are the co-founders of the Basic Income Earth Network (BIEN). This network of academics, practitioners, and activists has catalyzed basic income experiments worldwide. Until recently these experiments have not been upscaled to the level of a nation state.

In corona-times several countries have installed temporary financial relief and income support measures to cover the salaries for those who simply cannot work consequential of lockdown; essentially, these supports are BIS. Unintendedly, our (neo-liberal) leaders have let the genie out of the bottle regarding BIS. The million dollar question, then, is as follows: What will happen next? Several leaders have expressed the need to secure these arrangements, among them Pope Francis and the Democratic presidential candidate Andrew Yang (Clifford, 2020). The current advocacy for BIS, then, is strongly rooted in pragmatism and not only in ethics. Advocates claim that due to a surging jobless rate and mounting bankruptcies, our economy (because of a lack of consumer spending) and our society (due to social unrest) might collapse in the coming years if we do not put into place a uniform and solid income guarantee floor below which no one can fall. At the moment, Spain is the first country moving towards establishing a permanent basic income. The Spanish Minister for Economic Affairs, Nadia Calvino, recently expressed that "the government's wish was to make a nationwide basic wage a permanent instrument that supports citizens 'forever.' If the policy is implemented successfully over the coming weeks, it would make Spain the first country in Europe to introduce a universal basic income on a long-term basis" (Meredith, 2020, "A Level Unifier," paras. 2–3). An expedited implementation of BIS would imply the most seismic social reform of the century, one that requires a radical funding solution: a shift from taxing labor towards taxing capital and taxing the ultra-rich, and by pricing environmental costs (van Parijs & Vanderborght, 2017).

The change is in the chance to make the dream of an ecologically sustainable and socially just world a reality. I hope public, business, and civic transformative leaders will relentlessly seize the opportunity of the current cracks and faultlines in our organizations and systems, envision futurabilities, and actively participate in the process of their emanation.

References

Achterhuis, H. (2010). *De utopie van de vrije markt* [The utopia of the free market]. Rotterdam, The Netherlands: Lemniscaat.

Argyris, C. (2005). Double-loop learning in organizations: A theory of action perspective. In K. G. Smith & M. A. Hitt, *Great minds in management: The process of theory development* (pp. 261–279). New York, NY: Oxford University Press.

Bache, I., & Finders, M. (Eds.). (2010). *Multi-level governance.* Oxford, England: Oxford University Press.

Barbour, J. D., Burgess, G. J., Falkman, L. D., & McManus, R. M. (Eds.). (2012). *Leading in complex worlds.* San Francisco, CA: Jossey-Bass.

Bass, B. M. (1985). Leadership: Good, better, best. *Organizational Dynamics*, *13*(3), 26–40. https://doi.org/10.1016/0090-2616(85)90028-2

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, *18*(3), 19–31. https://doi.org/10.1016/0090-2616(90)90061-S

Bateson, G. (2002). *Mind and nature.* Cresskill, NJ: Hampton Press.

Bennis, W. G. (1989). *On becoming a leader.* New York, NJ: Addison Wesley.

Berry, T. (2000). *The great work: Our way into the future.* Portland, OR: Broadway Books.

Bonneuil, C., & Fressoz, J. B. (2015). *The shock of the Anthropocene.* London, England: Verso.

Booth, P. (2019, May 22). The case against a Universal Basic Income (UBI). *Institute of Economic Affairs* [Blog]. Retrieved from https://iea.org.uk/the-case-against-a-universal-basic-income-ubi/

Bradbury, H., & Associates. (2017). *Cooking with action research: Stories and resources for self and community transformation.* Thousand Oaks, CA: Sage.

Brand, U., Blamey, N., Garbelli, C., Griesshaber, E., Posenato, R., Anglioni, L., & Came, R. (2016). Methane hydrate: Killer cause of Earth's greatest mass extinction. *Paleoworld*, *25*(4), 496–507. https://doi.org/10.1016/j.palwor.2016.06.002

Braudel, F. (1984). *Civilization and capitalism, 15th–18th century: Volume 3, The perspective of the world* (S. Reynold, Trans.). Berkeley: University of California Press.

Braudel, F. (1994). *A history of civilizations* (R. Mayne, Trans.). New York, NY: Penguin Books.

Bregman, R. (2017). *Utopias for realists: And how we can get there.* London, England: Bloomsberg.

Buchholz, K. (2020, April 23). What share of the population is already on COVID-19 lockdown? *Statista.* Retrieved from https://www.statista.com/chart/21240/enforced-covid-19-lockdowns-by-people-affected-per-country/

Burns, J. M. (2003). *Transforming leadership.* New York, NY: Atlantic Monthly Press. (Original work published 1978).

Center for Disease Control and Prevention. (2020). Middle East Respiratory Syndrome (MERS). Retrieved from https://www.cdc.gov/coronavirus/mers/about/index.html

Chaturvedi, S., & Doyle, T. (2015). *Climate terror: A critical geopolitics of climate change.* Basingstoke, England: Palgrave McMillan.

Chomsky, N. (1999). *Profit over people.* New York, NY: Seven Stories Press.

Chomsky, N. (2010). *New world of indigenous resistance.* San Francisco, CA: City Lights Books.

Clarke, N. (2013). Model of complexity leadership development. *Human Resource Development International*, *16*(2), 135–150. https://doi.org/10.1080/13678868.2012.756155

Clifford, C. (2020, April 13). Pope Francis: "This may be the time to consider a universal basic wage." *CNBC.* Retrieved from https://www.cnbc.com/2020/04/13/pope-francis-it-may-be-the-time-to-consider-a-universal-basic-wage.html

CNN. (2020, April 4). Dr. Fauci: The virus decides when the country will open back up [Video file]. Retrieved from https://edition.cnn.com/videos/health/2020/04/10/dr-anthony-fauci-coronavirus-response-newday-vpx.cnn

Cosme, I., Santos, R., & O'Neill, D. W. (2017). Assessing the degrowth discourse: A review and analysis of academic degrowth policy proposals. *Journal of Cleaner Production*, *149*, 321–334. https://doi.org/10.1016/j.jclepro.2017.02.016

De Grauwe, P. (2014, December 30). A universal basic income will never happen. *Economist's Journey to Life* [Blog]. Retrieved from http://economistjourneytolife.blogspot.nl/2015/01/top-economicst-says-universal-basic.html

Delaney, H., & Spoelstra, S. (2015). Transformational leadership: Secularized theology? In B. Carroll, J. Ford, & S. Taylor (Eds.), *Leadership: Contemporary critical perspectives* (pp. 69–87). London, England: Sage.

de Wispelaere, J., & Stirton, L. (2012). A disarmingly simple idea? Practical bottlenecks in the implementation of a universal basic income. *International Social Security Review*, *65*(2), 103–121. https://doi.org/10.1111/j.1468-246X.2012.01430.x

Dishman, L. (2016, April 6). Why employees don't trust their leadership. *Fast Company.* Retrieved from https://www.fastcompany.com/3058630/why-employees-dont-trust-their-leadership

Dror, Y. (2002). *The capacity to govern: A report to the Club of Rome.* London, England: Frank Cass.

Dror, Y. (2015a, April 17). Preventing hell on earth. *Cadmus*, *2*(4), 57–68. Retrieved from http://www.cadmusjournal.org/article/volume-2/issue-4-part-1/preventing-hell-earth

Dror, Y. (2015b, February 17). Priming political leaders for fateful choices. *Eruditio: E-journal of the World Academy of Art and Science*, *1*(6), 98–108. Retrieved from http://eruditio.worldacademy.org/files/issue-6/reprints/ej-v1-i6-priming-political-leaders-ydror-reprint.pdf

Ferrier, K. (2020, April 9). South Korea ramps-up export of COVID-19 testing kits. *The Diplomat*. Retrieved from https://thediplomat.com/2020/04/south-korea-ramps-up-exports-of-covid-19-testing-kits/

Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy, 36*(3), 399–417. https://doi.org/10.1016/j.respol.2007.01.003

Geerlof, J. (2011). *De 60 procents maatschappij, einde aan de talentverspilling* [The sixty percent society—Ending the waste of talent]. Amsterdam, The Netherlands: Thoeris.

Geerlof, J. (2014). *The awakening of the soulful leaders.* Bodegraven, The Netherlands: Kalistratous Publishers.

Geerlof, J., & van Beckhoven, A. (2016, April 23). Complexity, self-organization and leadership: Enlivened experiences from the Netherlands. *Integral Leadership Review*, *16*(2). Retrieved from http://integralleadershipreview.com/14633-complexity-self-organization-and-leadership-enlivened-experiences-from-the-netherl/

Geerlof, J. (2017, August 31). Learning to embrace the paradox of leadership. *Integral Leadership Review*, *17*(2). Retrieved from http://integralleadershipreview.com/15719-learning-to-embrace-the-paradox-of-leadership/

Geerlof, J. (2019a). A new social contract: Substituting the neoliberal public policy paradigm with a participatory paradigm. *World Futures* 75(4), 222-241.

Geerlof, J. (2019b). *On becoming a transformative leader: Leading in a complexifying world.* Nieuwkoop, The Netherlands: Kalistratous Publishers.

Gehrke, L. (2020, January 29). Europe's response to the deadly coronavirus explained. *Politico.* Retrieved from https://www.politico.eu/article/europes-response-to-the-deadly-coronavirus-explained/

Giridharadas, A. (2018). *Winners take all: The elite charade of changing the world.* New York, NY: Alfred A. Knopf.

Graeber, D. (2015). *The utopia of rules: On technology, stupidity, and the secret joys of bureaucracies.* Brooklyn, NY: Melville House.

Grin, J., Rotmans, J., & Schot, J. (2010). *Transitions to sustainable development: New directions in the study of long term transformative change.* New York, NY: Routledge.

Grint, K. (2007). Learning to lead: Can Aristotle help us find the road to wisdom? *Leadership*, *3*(2), 231–245. https://doi.org/10.1177/1742715007076215

Hart, T. (2000). Transformation as process and paradox. *Journal of Transpersonal Psychology*, *32*(2), 157–164. Retrieved from http://atpweb.org/jtparchive/trps-32-00-02-157.pdf

Harvey, D. (2010). *The enigma of capital and the crisis of capitalism.* New York, NY: Oxford University Press.

Harvey, D. (2014). *Seventeen contradictions and the end of capitalism.* New York, NY: Oxford University Press.

Henderson, D. R. (2015). A philosophical economist's case against a government-guaranteed basic income. *The Independent Review: a Journal of Political Economy, 19*(4), 489–502. Retrieved from https://www.independent.org/publications/tir/article.asp?id=1045

Henig, R. M. (2020, April 8). Experts warned of a pandemic decades ago. Why weren't we ready? *National Geographic.* Retrieved from https://www.nationalgeographic.com/science/2020/04/experts-warned-pandemic-decades-ago-why-not-ready-for-coronavirus/

Henley, J., & Roy, E. A. (2020, April 25). Are female leaders more successful at managing the coronavirus crisis? *The Guardian*. Retrieved from https://www.theguardian.com/world/2020/apr/25/why-do-female-leaders-seem-to-be-more-successful-at-managing-the-coronavirus-crisis

Herszenhorn, D. M. (2020, April 7). How Europe failed the coronavirus test. *Politico.* Retrieved from https://www.politico.eu/article/coronavirus-europe-failed-the-test/

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., … Cao, B. (2020, January 24). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet, 395*(10223), 497–506. https://doi.org/10.1016/S0140-6736(20)30183-5

Hunt, J. G. (1999). Transformational charismatic leadership's transformation of the field: An historical essay. *The Leadership Quarterly, 10*(2), 129–144. https://doi.org/10.1016/S1048-9843(99)00015-6

in 't Veld, R. J. (2013). Sustainable development within knowledge democracies: An emerging governance problem. In L. Meuleman (Ed.), *Transgovernance: Advancing sustainability governance* (pp. 3–36). Heidelberg, Germany: Springer.

Jacobs, P. T., & Jones, R. (2006). *Terra incognita, globalisering, ecologie en duurzaamheid* [Terra incognita, globalization, ecology and sustainability]. Gent, Belgium: Ginkgo Academia Press.

Jordan, D. (2019). *The deadliest flu: The complete story of the discovery and reconstruction of the 1918 pandemic virus* Centers for Disease Control and Prevention. Retrieved from https://www.cdc.gov/flu/pandemic-resources/reconstruction-1918-virus.html

Kallis, G. (2018). *Degrowth.* Newcastle upon Tyne, England: Agenda Publishing.

Kegan, R., & Lahey, L. L. (2009). *Immunity to change: How to overcome it and unlock the potential in yourself and your organization* Boston, MA: Harvard Business Press.

Kelly, S. M. (2010). *Coming home: The birth & transformation of the planetary era.* Great Barrington, MA: Lindisfarne Books.

Khoury, G., & Crabtree, S. (2019, February 6). Are businesses worldwide suffering from a trust crisis? *Gallup Workplace.* Retrieved from https://www.gallup.com/workplace/246194/businesses-worldwide-suffering-trust-crisis.aspx

Klein, N. (2007). *The shock doctrine: The rise of disaster capitalism.* New York, NY: Metropolitan Books.

Kolbert, E. (2014). *The sixth extinction: An unnatural history.* New York, NY: Henry Holt.

Kotz, D. M. (2015). *The rise and fall of neoliberal capitalism.* Cambridge, MA: Harvard University Press.

Kovel, J. (2007). *The enemy of nature: The end of capitalism or the end of the world?* New York, NY: Zed Books.

Kriebel, D., Tickner, J., Epstein, P., Lemons, J., Levins, R., Loechner, L. L., … Stoto, M. (2001). The precautionary principle in environmental science. *Environmental Health Perspectives*, *109*(9), 871–876. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1240435/pdf/ehp0109-000871.pdf

Kuhn, T. S. (1970). *The structure of scientific revolutions.* Chicago, IL: University of Chicago.

Lapavitsas, C. (2019). *The left case against the EU.* Cambridge, England: Polity Press.

Lapavitsas, C. (2019). *The left case against the EU.* Cambridge, England: Polity Press.

Latouche, S. (2003, November). Pour une société de décroissance [Toward a degrowth society]. *Le Monde diplomatique*, pp. 18–19. Retrieved from https://www.monde-diplomatique.fr/2003/11/LATOUCHE/10651

Liu, Y., Gayle, A. A., Wilder-Smith, A., & Rocklöv, J. (2020). The reproductive number of COVID-19 is higher compared to SARS coronavirus. *Journal of Travel Medicine*, *27*(2), 1–4. https://doi.org/10.1093/jtm/taaa021

Loy, D. R. (2002). *A Buddhist history of the West: Studies in lack.* Albany: State University of New York Press.

Macy, J., & Johnstone, C. (2012). *Active hope: How to face the mess without going crazy.* Novato, CA: New World Library.

Maddison, A. (2006). *The world economy: Vol. 1, A millennial perspective and Vol. 2, Historical statistics.* Paris, France: OECD Publishing.

Maparyan, L. (2012). *The womanist idea.* New York, NY: Routledge.

Marion, R., & Uhl-Bien, M. (2001). Leaders in complex organizations. *The Leadership Quarterly*, *12*(4), 389–418. https://doi.org/10.1016/S1048-9843(01)00092-3

Martinez-Alier, J., Pascual, U., Vivien, F., & Zaccai, E. (2010). Sustainable degrowth: Mapping the context, criticism and future prospects of an emergent paradigm. *Ecological Economics*, *69*(9), 1741–1747. https://doi.org/10.1016/j.ecolecon.2010.04.017

Meredith, S. (2020, April 16). The coronavirus crisis could pave the way to universal basic income. *CNBC.* Retrieved from https://www.cnbc.com/2020/04/16/coronavirus-crisis-could-pave-the-way-to-a-universal-basic-income.html

Messenger, A. M., Barnes, A. N., & Gray, G. C. (2014). Reverse zoonotic disease transmission (Zooanthroponosis): A systematic review of seldom-documented human biological threats to animals. *PloS One*, *9*(2), Article e89055. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3938448/

Mezirow, J. (1997). Transformative learning: Theory and practice. *New Directions for Adult & Continuing Learning*, *74*, 5–12. https://doi.org/10.1002/ace.7401

Mischke, J. (2020, March 11). Merkel expects two-third of Germans will get coronavirus. *Politico.* Retrieved from https://www.politico.eu/article/coronavirus-angela-merkel-expects-two-thirds-of-germans-will-get/

Moore, J. W. (2015). *Capitalism in the web of life: Ecology and the accumulation of capital.* London, England: Verso Books.

Morin, E. (2014). Complex thinking for a complex world: About reductionism, disjunction and systemism. *Systema*, *2*(1), 14–44.

Morin, E. (2015). *L´aventure de la methode.* Paris, France: Editions du Seuil.

Morin, E. (2018). *Confronting complexity: Essays by Edgar Morin* (A. Heath Carpentier, Ed.). Manuscript submitted for publication.

Morris, C., & Jungjohann, A. (2016*). Energy democracy: Germany's energiewende to renewables.* New York, NY: Palgrave Macmillan.

Montuori, A. (2010). Transformative leadership for the 21st century: Reflection on the design of a graduate leadership curriculum. *Revision: a Journal of Consciousness and Transformation*, *30*(3), 4–14. https://doi.org/10.1007/978-3-319-66893-2_59

Montuori, A. (2014). Créativité et complexité en temps de crise [A clash of mentalities: Uncertainty, creativity, and complexity in times of upheaval]. *Communications, 95*(2), 179–198. https://doi.org/10.3917/commu.095.0179

Montuori, A., & Donnelly, G. (2017). Transformative leadership. In J. Neil (Ed.), *Handbook of personal and organizational transformation* (pp. 1–33). Cham, Switzerland: Springer International Publishing AG.

Pearson, C. S. (Ed.). (2012). *The transforming leader: New approaches to leadership for the twenty-first century.* San Francisco, CA: Berrett-Koehler.

Philips, T., Orange, R., Smith, D., Graham-Harrison, E., & Ainge Roy, E. (2020, April 12, 2020). COVID-19: How world leaders responded to the crisis*. The Guardian.* Retrieved from https://www.theguardian.com/world/2020/apr/12/covid-19-how-world-leaders-responded-to-the-crisis

Plumwood, V. (2002). *Environmental culture: The ecological crisis of reason.* New York, NY: Routledge.

Quin, R. E. (1996). *Deep change.* San Francisco, CA: Jossey-Bass.

Richardson, K. A. (2004). System theory and complexity, Part 1. *Emergence: Complexity and Organization*, *6*(3), 75–79.

Richardson, K. A. (2005). System theory and complexity, Part 3. *Emergence: Complexity and Organization*, *7*(2), 104–114.

Richardson, K. A. (2008). Managing complex organizations: Complexity thinking and the science and art of management. *Emergence: Complexity and Organization*, *10*(2), 13–26.

Rifkin, J. (2014). *The zero marginal cost society: The internet of things, the collaborative commons, and the eclipse of capitalism.* New York, NY: Palgrave MacMillan.

Robeyns, I. (2019). *Rijkdom* [Wealth]. Amsterdam, The Netherlands: Prometheus.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, S. H. III, Lambin, E., … Foley, J. (2009). Planetary boundaries: Exploring the safe operating space for humanity. *Ecology & Society*, *14*(2), Article 32. Retrieved from https://www.ecologyandsociety.org/vol14/iss2/art32/

Rosenau, J. N. (2010). Strong demands, huge supply: Governance in an emerging epoch. In I. Bache & M. Finders (Eds.),*Multi-level governance* (pp. 31–49). Oxford, England: Oxford University Press.

Rotmans, J., & Kemp, R. (2003). *Managing societal transition: Dilemmas and uncertainties: The Dutch energy case-study* (ENV/EPOC/GSP(2003)15/FINAL). Paris, France: Organisation for Economic Co-operation and Development. Retrieved from http://www.oecd.org/netherlands/2483769.pdf

Rousseau, J. J. (1999). *The social contract* (C. Betts, Trans.). Oxford, England: Oxford University Press. (Original work published 1762)

Sardar, Z. (2010). Welcome to postnormal times.*Futures,* 42(5), 435–444. https://doi.org/10.1016/j.futures.2009.11.028

Sassen, S. (2014). *Expulsions: Brutality and complexity in the global economy*. Cambridge, MA: The Belknap Press of Harvard University Press.

Scharmer, O. (2009). *Theory U: Leading from the future as it emerges.*San Francisco, CA: Berrett-Koehler.

Scharmer, O., & Kaufer, K. (2013*). Leading from the emerging future: From ego-system to eco-system economies* San Francisco, CA: Berrett-Koehler.

Servigne, P., & Stevens, R. (2015).*Comment tout peut s'effondrer: Petit manuel de collapsologie à l'usage des générations présentes* [When everything is falling apart: A guide to collapsology for present generations]. Paris, France: Editions de Seuil.

Shiva, V. (2012). *Making peace with the Earth*. Black Point, NS: Fernwood Publishing.

Shiva, V. (2015). *Earth democracy: Justice, sustainability, and peace.* Berkeley, CA: North Atlantic Books.

Sloterdijk, P. (2005). *In the world interior to capital: For a philosophical theory of globalization* (W. Hoban, Trans.). Malden, MA: Polity Press.

Smith, H. (2020, April 14). How Greece is beating coronavirus despite a decade of debt.*The Guardian.* Retrieved from https://www.theguardian.com/world/2020/apr/14/how-greece-is-beating-coronavirus-despite-a-decade-of-debt

Spoelstra, S., Butler, N., & Delaney, H. (2016). Never let an academic crisis go to waste: Leadership studies in the wake of journal retractions. *Leadership*, *12*(4), 383–397. https://doi.org/10.1177/1742715016658215

Standing, G. (2017). *Basic income: And how we can make it happen*. London, England: Penguin.

Steffen W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., … Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science, 347*(6223), Article 1259855. https://doi.org/10.1126/science.1259855

't Hart, P. (2014). *Understanding public leadership.* London, England: Palgrave.

Tainter, J. A. (2015). *The collapse of complex societies* (Reprint ed.). Cambridge, England: Cambridge University Press. (Original work published 1988)

Tarnas, R. (1991). *The passion of the Western mind: Understanding the ideas that shaped our worldview.* New York, NY: Ballantine Books.

Taylor, F. W. (1911). *The principles of scientific management.* New York, NY: Harper & Brothers. Retrieved from https://wwnorton.com/college/history/america-essential-learning/docs/FWTaylor-Scientific_Mgmt-1911.pdf

Teisman, G. (2005). *Publiek management op de grens van chaos en orde: Over leidinggeven en organiseren in complexiteit*[Public management on the edge of chaos and order: Leading and organizing in complexity]. The Netherlands, The Hague: Sdu Uitgevers bv.

Tsai, I.-W. (2020, April 20). President of Taiwan: How my country prevented a major outbreak of COVID-19.*Time Magazine.* Retrieved from https://time.com/collection/finding-hope-coronavirus-pandemic/5820596/taiwan-coronavirus-lessons/

Twenge, J. M., Campbell, W. K., & Cater, N. T. (2014). Decline in trust in others and confidence in institutions among American adults and late adolescents, 1972–2012. *Psychological Science, 25*(10), 1914–1923. https://doi.org/10.1177/0956797614545133

Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly*, *18*(4), 298–318. https://doi.org/10.1016/j.leaqua.2007.04.002

van Parijs, P. (Ed.). (1992). *Arguing for basic income: Ethical foundations for a radical reform.*London, England: Verso Books.

van Parijs, P. (1996). Basic income and the two dilemmas of the welfare state.*Political Quarterly, 64*(1), 63–66. https://doi.org/10.1111/j.1467-923X.1996.tb01567.x

van Parijs, P., & Vanderborght, Y. (2017). *Basic income: A radical proposal for a free society and a sane economy.* London, England: Harvard University Press.

Wallerstein, I. (2011). *The modern-world-system: Capitalist agriculture and the origins of the European world-economy in the*

sixteenth century. Berkeley: University of California Press. (Original work published 1976)

Washington, G. (1790, January 8). *First Annual Address, to both Houses of Congress.* Washington Library, Center for Digital History. Retrieved from https://www.mountvernon.org/library/digitalhistory/quotes/article/to-be-prepared-for-war-is-one-of-the-most-effectual-means-of-preserving-peace/

Weiner, E. J. (2003). Secretary Paulo Freire and the democratization of power: Toward a theory of transformative leadership. *Educational Philosophy and Theory, 35*(1), 89–106. https://doi.org/10.1111/1469-5812.00007

Wells, J. (2013). *Complexity and sustainability.* New York, NY: Routledge.

Wheatley, M. J. (2006). *Leadership and the new sciences: Discovering order in a chaotic world.* San Francisco, CA: Berrett-Koehler.

Wittenberg-Cox, A. (2020, April 13). What do countries with the best coronavirus responses have in common? Women leaders. *Forbes*. Retrieved from https://www.forbes.com/sites/avivahwittenbergcox/2020/04/13/what-do-countries-with-the-best-coronavirus-reponses-have-in-common-women-leaders/

World Health Organization. (2020b). Coronavirus disease (COVID-19) pandemic [Web page]. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019

World Health Organization. (2020a). *Report of the WHO-China joint mission on Coronavirus disease 2019 (COVID-19).* Retrieved from https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf Zohar, D., & Marshall, I. (2001). *Spiritual intelligence: The ultimate intelligence.* London, England: Bloomsbury Paperbacks.

Jaap Geerlof is an independent researcher, consultant, visiting lecturer, and writer. He holds a PhD in transformative studies from the California Institute of Integral Studies, San Francisco. He is the co-founder and former CEO of a Dutch policy research and consultancy company in the Netherlands. In his work he integrates his experiential knowledge on leadership with the principles of complex thinking, appreciative inquiry, and action research. He has been an advisor to city aldermen and several ministries in the Netherlands, and a co-creator of transformations in Dutch public administration. He recently published his latest book *On Becoming a Transformative Leader: Leading in a Complexifying World* (see www.kalistratous.com).

Email: Kalistratous@gmail.com

- Tweet
- Facebook
- LinkedIn