5-21-2021

Conflict, Complexity, and Cooperation

John, Lord Alderdice
Harris Manchester College, University of Oxford

Follow this and additional works at: https://scholarworks.umb.edu/nejpp

Conflict, Complexity, and Cooperation

John, Lord Alderdice
Harris Manchester College, University of Oxford

Abstract

This article explores the thesis that we are at a time of historical inflection and suggests what next steps might look like. The change in the seat of authority from the sixteenth century on with the replacement of political and religious hierarchies by participatory democracy and Enlightenment philosophies based on rationalism has seen a remarkable period of progress in science, technology, education, medicine, governance, trade, economics, and the rule of law. The twenty-first century, however, has ushered in a series of reversals for liberal democracy, the fraying of the international rules-based order that emerged after the two world wars and a collapse of public confidence in the institutions and methods based on the rationalist approach. The article suggests that the old forms are dissolving and that the time has come for the emergence of a new paradigm and proposes that three developments may point toward the next evolutionary way station: the emergence of complexity science, an appreciation that our emotions are a positive evolutionary advantage rather than a flaw to be overcome, and a focus on relationships rather than simply on individuals.

Liberals and progressives, no less than the population at large, have in recent times been experiencing a roller coaster of expectations, emotions, and reactions to challenging political developments, both national and global. Most people who grew up in Europe and in the United States in the past two or three generations were used to a postwar world on a continuous trajectory of economic improvement, physical security, and increasing freedom and democracy. With the fall of the Berlin Wall and the end of the Cold War, they were joined by the citizens of states from the old Soviet bloc, South Asia, Latin America, and parts of Africa, which were also becoming more democratic, stable, prosperous, peaceful, and relatively free. It seemed that we might be moving into a new era, characterized by the more rational conduct of global affairs and where people were protected by the adoption and implementation of human rights instruments governing not only civil and political affairs but social and economic development too. Liberal democracy and the capitalist economic model seemed to have won the day, demonstrating and affirming the validity of the principles that had emerged from the Enlightenment. Not everyone went quite as far as Francis Fukuyama, who argued that the global spread of liberal democracy and free market capitalism may signal the end point of humanity's sociocultural evolution and be the ultimate form of human government.[1] Many certainly believed, however, that we were far along a linear process of evolutionary development and that progress is based on human reason.

There had been earlier shocks to this optimistic interpretation of history and its trajectory, notably the two global conflicts of the first half of the twentieth century. The involvement of Germany in the prosecution of war, and more especially in the Holocaust, despite its impressive educational system and its history of thought and culture, was especially troubling. Germans had been important contributors to the political and intellectual liberalism and rationalism that emerged in previous centuries through the Reformation and the Enlightenment. Faith in human reason had led to extraordinary progress in science and technology and would continue to do so, not least in medicine, transport, and communication; but that confidence had experienced a profound setback. Enlightenment thinkers had expected that a few generations of popular literacy and rational education would be sufficient to curb human aggression and violence and would ensure the peaceful and stable progress of humanity. The First World War put a serious question mark against those optimistic assumptions. Sigmund Freud, who described himself as "a liberal of the old school,"[2] was so affected by the terrible events of the war that he dramatically altered his theoretical model, introducing the notion of the death instinct and responding in a rather pessimistic way to Albert Einstein's invitation to suggest ways of preventing future wars.[3]

Initially most political observers hoped that the problems that had led to Germany's engaging in such destruction could be addressed by the application of more democratic principles. If human rationality had not contained human aggression, surely it was a problem of the old imperial order, and new national democratic constitutions along with institutions of international cooperation would prevent a recurrence. The application of human rationality to governance in Germany's new Weimar Republic, however, and international cooperation through the League of Nations did not resolve the problem, and despite improvements in the management and infrastructure of Germany, inflation grew to catastrophic levels and was accompanied by a rise in political extremism that resulted in a second and in some ways even more appalling and widespread global conflict.

As the Second World War came to a close, leading figures in Europe and the United States were forced to recognize that education and rationality applied to socioeconomic and political development had not prevented the disastrous violence of two world wars, and so they proposed a more robust international rules-based approach in the hope that it might succeed.

The League of Nations was replaced by the United Nations, bringing countries together around the table but with a special role for the victorious powers in its central governing body, the United Nations Security Council. The creation of the Bretton Woods institutions addressed the economic challenges that had been held responsible for at least some of the interwar instability. The purpose of the Nuremberg trials was not only to allow the vengeance of the victors but also to make clear that there would in the future be no impunity for "crimes against humanity" that were not excusable even in times of all-out war. And more important, a new secular code of global "commandments" was set out in the Universal Declaration of Human Rights (UDHR). The thirty articles of the declaration start with a statement of belief in Article 1 that "all human beings are born free and equal in dignity and rights," followed by the insistence that "they are endowed with reason and conscience and should act towards one another in a spirit of brotherhood." But the UDHR recognizes that the freedom and dignity that every individual should be able to enjoy depends on human rationality and on conscience and a spirit of brotherhood. That moral imperative and fraternal spirit had failed in Europe for a catastrophic second time in less than a generation. It was becoming clear that the human rights that had been declared by the humanists and liberals of the eighteenth and nineteenth centuries could not be guaranteed merely by an appeal to a rational moral conscience. So the UDHR, adopted by the United Nations in 1948, was imbedded in an international rules–based system with new international institutions that it was hoped would ensure its full implementation.[4]

The decades that followed gave some grounds for optimism that humanity had learned its lesson and that a new age had begun, guided by universal values that went beyond religion, nationality, politics, and culture. The hope was that this new body of international law based on human rights and grounded in postwar multinational institutions would ensure the development of a global culture of lawfulness. International courts began to hold to account those found guilty of crimes against humanity. Countries that had been former enemies over many centuries came together, first in Europe and then in other regions, to form transnational unions cooperating on economic, legal, cultural, scientific, and political challenges, as well as the emerging global threats to health and the environment. Real progress was made on tackling infectious diseases and reducing poverty and hunger. The end of the Cold War saw serious efforts to reduce the stockpiles of nuclear weapons and limit their further proliferation to new states. To some, especially liberals in the West, it really began to look as though a new golden age was dawning.

It was therefore a profound shock for many people to see all this change in recent years with the rise of transnational terrorism, religious fundamentalism, extreme nationalism, and a slide into deepening racial and ethnic divisions and violent political conflict throughout the world. Questions about what creates and sustains intractable violent political conflict and how it may be possible to find ways out of it returned with an urgency not seen for decades. Prosperity was replaced by austerity and for the first time a generation of young people had to adjust to the expectation that they would likely have a lower standard of living than their parents. Every previous generation had expected to build on the success of those who went before, but now many young people would struggle to own their own homes, and almost all would have to work longer before retiring with lower pensions. This generation in most countries around the world are less confident than their parents were about the adequacy and quality of the public provision of education, health care, and social care. Pollution, catastrophic climate change, and other environmental threats are on the rise, and the high hopes for a new world order after the end of the Cold War have given way to profound anxiety with the rise of Islamist and white right extremism and terrorist attacks. The security responses of the "War on Terror" have not resulted in a more stable world, and instead we have an increasing number of fragile or failing states. The new models of international cooperation at a regional level, most notably the postwar European Project, seem to be struggling against a public mood of

skepticism and even disenchantment. The departure of the United Kingdom from the European Union after almost half a century of membership is an important example of how decades of expansion of liberal democracy have given way to political fragmentation and the return of populism and nationalism in Europe. But this drift is mirrored on every other continent too, and liberals are deeply anxious about it.[5]

Faced with such reversals of fortune, many liberals who would normally try to reflect with some objectivity on the root causes of political challenges find themselves, like everyone else, driven by feelings of fear and anger, becoming intolerant of different perspectives and blaming those with whom they disagree for being responsible for these disappointing and frightening changes. What many of my colleagues do not see is that by conducting the debate in somewhat belligerent tones, they are contributing to the polarization and profound partisanship that now deform our political discourse rather than promoting reflection, conversation, and inclusive engagement of the whole community in understanding our dilemmas and how they can be addressed in new ways.

Under such pressures, the natural human response is to turn inward and focus on one's own domestic circumstances, so, for example, Democrats (and some Republicans) in the United States, distressed by the 2016 election and subsequent performance of President Donald Trump, focused on him and the methods that his campaign (and some external players) employed to get him elected and on how close or unrepresentative that election result actually was. They concentrated, successfully, on ensuring that he was not re-elected in 2020, but the result was not an overwhelming victory; instead, it demonstrated that the United States, like so many other liberal democracies, is split down the middle and the questions must still be asked, "What has happened to cause such a large percentage of white Americans to turn away from the Democratic offer and vote for such a person? How can it be that liberal democracy can result in such an outcome when people know with great clarity what they are voting for?" The psychoanalyst Ed Shapiro in a recent book says that the lesson he has learned from a lifetime of engaging with such issues is that he needs always to ask the question, "What is the other guy right about?"[6]

This, however, is not just an American problem. We must reflect on the fact that similar swings of fortune are seen in almost every part of the world, with populists, demagogues, and nationalists rising to prominence almost everywhere. Unlike a previous generation of leaders such as Mikhail Gorbachev, Nelson Mandela, F. W. de Klerk, Anwar Sadat, Menachem Begin, Bill Clinton, and George Mitchell, who believed that the job of a statesman was to *resolve* conflicts, today's leaders look for greatness in *conducting* conflicts, domestically and internationally. Whatever has occasioned this change in the global community, it is not merely about the conduct of politics in one jurisdiction. There is a worldwide shift. People of every age and stage also seem to feel increasingly distant and alienated from all institutions of governance—whether national government, regional structures such as in the European Union, or the postwar international rules-based order as represented by the United Nations, the World Bank, the International Monetary Fund, the World Trade Organization, and the World Health Organization. The legitimacy of these structures is questioned, and one hears constant complaints that they are not operating in the interests of ordinary people and that they are ineffective, not only taking military actions under dubious mandates but unable to justify them by subsequently bringing these interventions to a satisfactory conclusion—one of the requirements of the doctrine of the "just war." The wars in Afghanistan, Iraq, Libya, and Syria have resulted in widespread chaos and lawlessness that is also reaching beyond the borders of these failing states, with enormous costs in the destruction of life and property and with no successful end in sight.

There is also anger about what is perceived as gross inequity and corruption in the financial system. The assumption, and the promise, that abandoning socialism and adopting liberal

economic models would bring prosperity to all now seems like a bad joke to many who lost their jobs and livelihoods in the financial crises, especially when they see that those in the banking and finance industry who were responsible for the economic collapse got off lightly and, in some cases, even prospered from their unethical irresponsibility.

This loss of faith in the authorities and trust in their expertise applies not just to politicians and government, bankers, and financiers but to many kinds of scientific, technical, academic, and educational experts and authorities. While the COVID-19 pandemic has swept across the globe and the only hope of limiting its catastrophic impact is through the guidance of epidemiologists and the remarkable research successes of those who produce vaccines and identify treatments, those groups of people who express their lack of trust in other authorities also refuse to wear masks and observe physical distancing, they are skeptical and even antagonistic to vaccination, and conspiracy theories run wild through their social networks.

With trust in experts and elites gone, people have also found similar betrayals in those areas of social engagement with which they most easily identify, such as popular sports like football, and institutions that normally provide some of the social glue that keeps societies together in difficult times, including the churches and other religious organizations, have been exposed as infested with dishonesty, corruption, and the abuse of children and young people. Confidence in all these traditional structures and their leaderships is at a very low ebb and people are turning in large numbers to movements and leaders who express the anger and betrayal that they feel so strongly. It does not matter whether they believe all that such groups and leaders say. They do not necessarily read their manifestos and find themselves persuaded of new political theories. What appeals to them is that these leaders in their very personalities express the feelings of anger and betrayal with which many people identify strongly. There is a growth in nationalism and populism and an angry intolerance of difference that is now expressed by liberals almost as much as by conservatives. This development raises a question about whether it is in the nature of liberalism not to address anxiety, mistrust, and the negative emotions that people feel because it is such a rationalist philosophy, and so its failure when faced with such a picture is inevitable. This is an important question and I return to it later. What is clear is that the leaders of the old order, liberal and conservative, have lost confidence that they themselves really know how to address the challenges they face, and those who represent the expertise in governance, finance, science, and technology that has delivered extraordinary benefits in increased international trade and travel and huge progress in medicine, communication, and information technology have now lost much of the earlier, and justifiable, popular respect and trust in their integrity and judgment.

Recent technological developments are often described as "disruptive." For some this word has positive connotations, suggesting interruptions in the status quo and the opening up of new opportunities for change, while for others, possibly a majority, the welcome they give to particular new technologies, such as "smartphones," is not reflected in an enthusiasm for all aspects of the new technology and its complicated personal, social, and ethical implications. When we are faced with such crisis and uncertainty, our natural reaction is to look to the experience of the past to see whether we can identify previous patterns that, while not repeated precisely, may nevertheless give us guidance. Some thinkers, troubled by the rise in political extremism, see resonances with the rise of fascism in the 1930s following on from the impact of the First World War, the influenza pandemic of 1918–1920, and later the Great Depression. They identify the financial and economic crises of 2008 as a trigger for the regression from liberal democracy to populism and authoritarianism. Other commentators see analogous developments in earlier periods or emphasize other drivers for their analyses.

In trying to understand the dynamics of what has come to be called Brexit—the decision by the United Kingdom to disengage from the European Union—I have been reflecting on how we had a kind of Brexit five hundred years earlier when Henry VIII broke the link between the

English Church and the rest of the Roman Catholic communion. At that time Europe was experiencing crises that had some characteristics similar to those of today. Among these was profound disenchantment with the Roman Catholic authorities that exerted control over the population in religious affairs (and there were no other substantial churches or religious authorities in the West) and in much of the secular world too. In 1517 a German monk called Martin Luther, believing that the Church leaders were corrupt, dishonest, misleading people about their faith, and untrustworthy on key issues of public and private life, issued a challenge in the form of ninety-five theses. Not only, however, did his theology challenge the authority of the Pope and the Church by its insistence on the priesthood of all believers and the responsibility of everyone to read the Bible and work out their own faith and relationship with God, but he followed it up by translating the Bible into the German vernacular. Because printing had become widely available with Gutenberg's invention of the printing press in the mid-1400s, the content of Luther's ideas and the Bible itself were now quickly available to large numbers of people in their own language. What was true for German speakers soon became true for others, with the result that right across Europe a ferment of ideas was generated, resulting in a fundamental shift of authority. Gutenberg's new "disruptive" technology was first used for the printing of indulgences for the Church and the printing of the Bible in Latin— a language that was not understood by many religious at the time, never mind the ordinary people. It was not long, however, before printing began to make the ideas of Luther, Calvin, and other reformers available for people to read for themselves, and the arguments became fierce about theology, liturgy, and church government and practices and also about the standing of the secular authorities. Soon the seat of authority in both faith and politics no longer lay with the bishops and princes who could no longer insist that they had the monopoly of interpretation of the world or the instruction of people on how life should be lived. In principle at least, every man had the freedom, the facility, and the responsibility to read and interpret the scriptures and an increasing amount of other literature for himself—though this freedom was not quite as complete as it was often declared to be. Coming at a time when there was profound unhappiness about corruption in the Church and frustration at religious and political authoritarianism, Luther's intervention was like a spark to tinder.

Today we do not think of printing as a "disruptive technology"; but in those days many of the bulwarks of society must have sat around their dinner tables discussing the profound dangers of this invention. They knew that people would develop all sorts of new ideas and the old certainties and the very stability of society were under threat. They were right to be concerned. The result of this disruption was violent conflict and an end of their position of unquestioned authority. Similarly, as we look around today, we see that new disruptive technologies abound; deep anger about the corruption seems endemic in authorities of all kinds, and they have lost the respect of their people. The result is political fragmentation. If we look back at what happened five hundred years ago, can we learn anything? What are the similarities and differences?

In the first instance, men of science (and they were almost all men) like Galileo, Descartes, and Newton did not challenge specifically religious doctrine, but their observations emboldened them to question what the Church was teaching about the universe we inhabit. While some were able to avoid sanctions by the Church because of where they lived, others had a much more difficult time; but their healthy intellectual curiosity ensured that rather than simply accepting the traditional teachings of the Church about the world, they continued to explore it for themselves.

Galileo Galilei was not only an acute observer; he also developed the use of instruments such as the telescope to improve the quality of his observations and conducted experiments to see whether his thinking and his mathematical calculations were borne out in practice. The thinking based on these experiments got him into trouble with the Church in his home country

of Italy because his results challenged the received Church wisdom, especially in the field of astronomy, where, among other things, in his book *Sidereus Nuncius* (Starry Messenger), published in 1610, he put forward the proposition that the earth goes around the sun, rather than that the sun goes around the earth. The Polish polyglot Copernicus had already expressed this view but had died shortly after the publication of his book *De revolutionibus orbium coelestium* (On the Revolutions of the Celestial Spheres) in 1543.[7]

While Copernicus and Galileo were forced by their scientific observations and mathematical calculations to question the Church's beliefs about the natural world, the Frenchman René Descartes, in his *Discourse on the Method of Rightly Conducting One's Reason and of Seeking Truth in the Sciences* (1637), ventured into even more challenging territory. The Protestant Reformation had fundamentally altered the seat of authority. According to the reformers, every individual had the right and the responsibility to work matters out for themselves and Descartes was able to find freedom to develop his philosophical ideas by moving to the relative openness of the Protestant Netherlands, though even there his commitment to a rationalist approach to enquiry rather than accepting religious dogma led him into disputes with some of the Protestant theologians. He was determined not to appeal to God as the final cause for everything but instead he would "divide all the difficulties under examination into as many parts as possible, and as many as were required to solve them in the best way" and "conduct [his] thoughts in a given order, beginning with the simplest and most easily understood object, and gradually ascending, as it were step by step, to the knowledge of the most complex."

This mode of examination was applied to the mind and the body, to the mental and physical worlds, with both available for scientific exploration, though in different spheres. This separation of the two spheres enabled him and others to make enormous progress in understanding the physical world. His mathematical inquiries tended to reduce the higher and more complex phenomena to their constituent parts, without entirely appreciating what was lost in this reductionism. In exploring mental functioning, he also believed that the brain resembled a working machine and that mathematics and mechanics could explain the most complicated processes of the mind. By making this spilt between mind and body, he was able to move ahead while retaining a religious perspective.

Isaac Newton, the greatest of the English scientists, took a similar approach. "Nature is extremely simple and conformable to herself," Newton said. "Whatever reasoning holds for greater motions should hold for lesser ones as well." In other words, he too seemed to believe that we can separate phenomena into their fundamental elements and so build up a complete understanding of the physical universe. It appears that having said that, he did understand that something else was going on. "I can calculate the motion of heavenly bodies, but not the madness of people," he said, and he also conducted an extensive study of alchemy, presumably from an instinctive appreciation of the limits of the explanatory models with which he was working. By the end of the nineteenth century, however, some physicists who had continued to build on Newton's scientific ideas were beginning to think that they had identified all the key laws and that, while there were still details to be worked out, the main principles were clear.

Others were not convinced and things began to change quite dramatically in the early twentieth century, not least when in 1927 Werner Heisenberg made clear that absolute accuracy about some things simply wasn't possible not just in practice because of the state of knowledge or technology but in principle because, as he said, "One cannot measure the exact values of the position and momentum of a particle at the same time."[8]

It was becoming apparent that in chaotic systems, even miniscule differences in measurements of initial position and momentum could result in huge errors of long-term

predictions of these quantities—there was sensitive dependency on initial conditions and in a very fundamental way a degree of uncertainty that could not be removed.

These developments in mathematics and physics linked up with politics, because eventually a significant development in one area of intellectual life affects all other areas and, more immediately, because governments were struggling even more than previously with the violent political conflict that was convulsing the world and they turned to scientists to apply their scientific understandings to the technology of warfare. Dramatic new opportunities for communication had been developed by Guglielmo Marconi, Samuel B. Morse, Alexander Graham Bell, and others, enabling messages to be communicated almost instantaneously across huge distances. At the same time, powered flight and new types of military vehicles, such as the tank, transformed warfare by bringing a step change in the destructive capacities and geographical range of operations. The race to be the first in the development of new technologies of warfare was mirrored by developments in civilian life with medicine, travel, communication, lifestyle, and political ideas all being hugely affected by the application of science.

The scientific method was more difficult to apply to biology and the development of humanity; but with the evolutionary ideas of Darwin and the notion that we can break things down into their component parts and understand those, some scientists began to think of human relationships as being able to be reduced to an almost mechanical understanding of basic human functions, such as nourishment, sexuality, and aggression. Later generations continued to follow this reductionistic line, with people like Richard Dawkins seeing humanity as little more than what he described as "throwaway survival kits for genes."[9] It should not be surprising that the dissolution of boundaries and value systems was unsteadying.

Others wondered, however, about the limitations of reductionism and linear thinking. Rather than reducing everything to its simplest elements, John Hughlings Jackson, the father of English neurology, looked through the telescope from the opposite end and pointed out that in human beings, individual maturation and development involves the emergence of new capacities. As reflexes are replaced by voluntary movements, there is increasing flexibility, adaptability, and complexity but by dint of that, less predictability. When that development is obstructed by illness or injury, the newer, higher, more adaptable functions are lost and the older more predictable, less complex functions return; but a natural process of healing then enables some return of higher functions. In his Croonian lectures in 1884, he applied these ideas of evolution and dissolution of the nervous system to physical development and to "mentation," or the thinking function, and even described these as an analogy to governance, or the functioning of societies.[10] His ideas were the basis for much of the approach that Sigmund Freud took in the development of psychoanalytic theory. Freud was working at a watershed period. Some of his thinking and that of his colleagues and successors tended to be reductionistic, describing our higher functions in somewhat hydraulic or mechanistic terms. At other times he seemed to suggest that the primitive mechanisms are only a foundation on which other more advanced defenses or transformations could build. At these times he seemed to be more focused on the development of emergent functions than on reducing complexity to simple functions. Another physician who tried with some success to recognize the emergence of new and complex capacities was the French evolutionary psychiatrist Henry Ey. His "neo-Jacksonian" organo-dynamic theory tried to get over the Cartesian split between mind and body by incorporating the existentialism of people like Martin Heidegger into his ideas of the evolution and dissolution of personality and consciousness; his understanding of the latter was influenced by Heidegger's notion of "being-in-the-world." Ey appreciated that something radically new is created by the emergence of consciousness—the capacity to be aware of oneself and create in one's mind a kind of theater in which one can observe the world in fantasy.

To concentrate on the building blocks that provide the foundations of brain function does not enable us fully to understand this emergent phenomenon.[11]

In the field of psychology, it was becoming clear that exploring how the individual functions requires an understanding of the larger and wider systems in which the individual operates. The individual with an eating disorder, for example, could not be successfully treated without taking the family into consideration and without bringing them into treatment in family therapy. Physicists were finding something similar. They could understand everything about hydrogen and everything about oxygen, but that understanding did not tell them what emergent properties to expect when they were brought together as water. Examining an individual molecule of water provided little understanding of the concept of "wetness." Some of these physicists working at Los Alamos, where "the Bomb" had been developed, started to take their thinking about systems into exploring complex adaptive systems. With greater complexity, new phenomena emerged through theoretical developments in higher mathematics that took them beyond linear thinking and were confirmed in practice.

They set up a new center, the Santa Fe Institute, which became the world center for the study of complexity science. The work there has clarified that in reductionism not only structure and organization but information is lost. Breaking things down into their constituent parts illuminates some things, but it can miss others. It may seem that we have strayed a long way from the challenge of understanding the dangerous developments in our global village, so let us return to see why these discoveries are relevant and important.

While the key events of today, the development of disruptive technologies, the appearance of widespread corruption, the loss of respect for authority with resultant instability and violence in society has some precedents in the 1500s, at that point the reformers had a very clear and progressive agenda. They wanted to replace the authorities that were standing in the way of intellectual development with a more liberal democratic order that would facilitate new, critical ideas and thinking, scientific exploration of all kinds, and a new economic and political order with new ways of creating and distributing wealth. It is more difficult to see what the reform agenda is today, for those who have adopted "disruption" as their modus operandi. They seem to believe that to destroy the current structures and elite will, in itself, bring about a better future; but as René Girard points out, it may simply bring chaos and violence.[12]

My own experience of trying to resolve the apparently intractable problem of political violence in Ireland and bring about a new and better future led to a very different perspective from that of "the disruptors" in the terrorist organizations. After hundreds of years of attempts by England to dominate Ireland, punctuated by recurrent violent rebellions, finally in 1921 most of the island succeeded in achieving independence. The reason this did not include the whole island was that the people of Ireland were divided on the future they wanted to see. The majority in the northern part of the island had a different sense of identity and allegiance from the rest of the people of Ireland. They were pro-British and Protestant, and they wished to remain part of the United Kingdom. A thirty-year terrorist campaign between 1967 and 1998 failed to break their spirit or disrupt the connection, and the violence was finally ended by the historic Belfast/Good Friday Agreement. This agreement and the process that led to it were unique because a long process of engagement was undertaken to bring the violence to a permanent end through analyzing and exploring all the key sets of disturbed historic relationships.

The foundation for this process was two-fold—first, the practical example of the European project that enabled historic enemies, Germany and France, to find new and peaceful ways of relating to each other, and second, the acceptance of the liberal pluralism best described by the philosopher Isaiah Berlin. He maintained that since we have the possibility of choice and different individuals and communities will have differing views about what is a good future, if one side is not to be repressed and the other dominant, a pluralist outcome will be required.[13]

For Protestant unionists, the clear wish was to remain within the United Kingdom, while Catholic nationalists wanted to leave the United Kingdom. Whereas nationalist disruption through a long-running terrorist campaign had failed to sufficiently disrupt the state, repression of the nationalist aspiration by unionism had also proved to be impossible. The three key sets of relationships that emerged from the initial explorations were between Protestant unionists and Catholic nationalists in Northern Ireland, between the people in the North and the people in the South, and between Britain and Ireland. Thus, a three-stranded process was created that involved the relevant political representatives of these three sets of relationships and when an agreement was reached, it addressed all three sets of relationships with interlocking institutions.

While one could address each set of relationships separately and one could explore the various socioeconomic problems, and also policing and the administration of justice, political identity and control, religious affiliation and culture, history and geography, none of these issues on their own was an explanation for the intractability of the conflict, and any engagement with one impacted the dynamics of all the others. All these relationships and issues had to be addressed in the same process. This was a complex adaptive system in which every intervention impacted every other element and any resolution had to engage the whole system. The application of systems theory to psychological problems in the 1970s had resulted in the development of new approaches to treatment, such as family therapy in which a whole family group was brought into sessions at one time to address the network of relevant connections and relationships, rather than only the individual identified patient. In an analogous way, when we started to think about developing the Peace Process in Northern Ireland, we realized that we needed to respect the importance of the complex system of historic relationships involving Britain and Ireland and every section of the community had to be involved in negotiating the agreement.

In the years after the 1998 Belfast/Good Friday Agreement, problems arose every time one or more of these relationships were taken for granted. The British-Irish Inter-Governmental Conference that was to maintain and sustain the London-Dublin relationship did not meet at the top level for a decade, and so when the issue of Brexit arose there was no working relationship between the political leaderships of the British and Irish governments. The absence of such a relationship not only created problems in Northern Ireland but also proved to be very problematic for the British government in its attempts to negotiate a Brexit agreement with the European Union and for the Irish government as it found its political and economic stability under threat. The process of negotiating the 1998 Belfast/Good Friday Agreement and the problems that have arisen since are a demonstration of the centrality of relationships in such a complex adaptive system. A mechanical device is designed, built, and operated, and, especially if it is a complicated device with many parts, it may break down and it will not repair itself. The offending piece must be repaired or replaced, and then the mechanism can return to its previous way of operating. The mechanism is complicated, but it is not complex. Social systems are complex. A malfunctioning part of a social system will trigger attempts in the remaining parts of the system to continue functioning, though in a different way. This resilience of social systems is an example of the self-organizing capacity of a complex adaptive system.[14]

The Irish experience also adopted what one might understand as complexity thinking in understanding terrorism. When an "ordinary" crime is committed, the police and the justice system attempt to gather evidence, identify a suspect, build their legal case, and prosecute the individual or small group of individuals concerned. It is a linear process. The criminal meantime, whose motivation is usually some form of personal gain, will try to hide his involvement, and for him it is a disaster if he is caught and convicted. The terrorist, however, is part of a larger cohort with an agenda that does not involve personal gain and the victim who is attacked is not the target of their attack. Instead, the triangularity of the process is such that they attack a victim and make public that it is they who have conducted the attack in order to

undermine the government or responsible authorities, who are their real target. While they know that they are breaking the law, they see their actions as justified by a higher morality where they are defending the culture or identity of their people. Even their own survival is not as important as the well-being of their cause for which they will make costly sacrifices.[15] They are prepared to kill and to die for the sake of the cause, and they do not regard their death in the course of their terrorism as a catastrophe as long as the cause to which they are devoted continues to progress. In such a situation the normal, linear, individualized legal process is of limited value because dealing with an individual terrorist rarely has much impact unless that person is a key leader, and even then, the group can often find a successor. Dealing with such a problem involves understanding and addressing the cause for which a whole group or community of people is prepared to fight and die, and so it is a systemic rather than an individual or linear challenge. Terrorism, as described by Vamik Volkan, is not a matter of individual psychopathology but a phenomenon of "large group psychology."[16]

The same analysis can be applied to the terrorist violence of the radical Islamists and the "alt-right," extreme right, or white supremacist movements. They see themselves as fighting, not on their own behalf but as part of a group or community that they believe to be under threat, to have been treated unfairly, humiliated, and disrespected, and to have been unable successfully to resolve these toxic experiences through peaceful democratic processes. They are fully aware that their actions are seen under the law as criminal acts, but they believe themselves to be serving a higher morality—the protection of their community from existential threat. Even those who operate as "lone wolves" almost always identify with a larger group or community. The Irish Republican Army (IRA) were extreme nationalists with a relatively simple political agenda—independence and unity for Ireland—and this is also largely true of some Islamist groups such as Hamas. Other more radical Islamists, such as Al Qaeda, the Islamic State, and their various associated networks, are, like the white supremacists, transnational networks with a wider and less specific agenda though driven by similar concerns and emotions but arguably representing the more profound deterioration in the global system to which I have referred. It is still true, however, that if we examine these terrorist phenomena not as the actions of a large number of disconnected, self-aggrandizing criminal individuals or small groups of discontented and disturbed people but rather as complex large group phenomena, we might improve our understanding and effectiveness. In trying to understand the functioning of a murmuration of starlings we do not seek to identify which is the leader for we know that no such individual bird exists. These flocks of birds are not led by one or more leaders, nor are they merely a collection of individual birds. They are functioning as a system. Exploring networks of violent actors as large group phenomena, rather than the individual actions of many troublesome individuals, would assist our analysis and help us understand better how to address the problems. But the challenge of moving to a new and different paradigm is significant.

First, it is not easy to maintain a new and nonpartisan way of thinking. I was struck by how when the British prime minister Tony Blair, who had been deeply involved in the Irish Peace Process (a process he did not create but inherited from his predecessor, John Major), subsequently engaged in the Middle East problems with Israel and Palestine, he seemed to entirely forget all the lessons learned about understanding the complex sets of historic relationships involved. His behavior demonstrates the powerful tendency we have to regress to previous ways of thinking and functioning when we move to a new problem, and especially when we confront a challenging and polarized situation where the pressure to identify with one side or the other is very strong. But once one starts to identify with one side or the other, one has simply become part of the problem. The only way beyond this is to seek to understand the problem as located not in the aims or actions of one or other side but in the disturbance of the relationship between the two (or more) sides, now and in the past.

In addition, though a shift of thinking and functioning is required, the social structures that were constructed on the old way of operating will strongly resist any attempted shift. The Reformation triggered the Counter-Reformation. Those who have benefited from or come to power in the old system, or have simply become comfortable or used to it, will strongly and often violently resist change. They will use every intellectual argument, economic pressure, political hurdle, and religious, cultural, or legal obstacle to resist the change, and, of course, in many instances this is not only psychologically understandable but perfectly reasonable for those who will lose out as individuals or communities from the change.

Second, part of the complexity, and certainly a key element in relationships, is the affective component. The Enlightenment focused on reason as the key to progress, and rationality certainly has a primary role in our functioning as human beings. But we function as emotional beings too. Goethe and others were quick to point out that how we think has affective and other complex and nonrational components. Those who come from an Enlightenment perspective have tended to regard "feelings" as failings to be overcome in the service of rationality; but it is becoming increasingly clear that the nonrational components of our make-up have also been essential to our evolutionary success as human beings. In his most recent book, on cognitive biases in strategic instincts, Dominic Johnson sets out how cognitive biases can result not in catastrophic defeats but in remarkable successes.[17] He gives the example of George Washington, who, on any objective evaluation of military strengths and weakness, ought to have been soundly defeated but refused to accept setbacks and ultimately achieved a historic victory and independence from Britain.

These observations by Johnson offer some profoundly important messages to progressive thought and political liberalism. Successful ideologies and organizations, like complex adaptive systems, survive because they can evolve and adapt. In a few short years we have gone from Fukuyama and liberal democracy as the end of history to a widespread view that history may be watching the beginning of the end of liberal democracy. This is evidenced by opinion polls that show that increasing numbers of young people in the West are disenchanted with democratic politics. Globally we see the rise of authoritarian leaders who intend to govern for the foreseeable future without the inconvenience of free and fair elections and term limits.

Can liberalism evolve and adapt to this challenging political and cultural climate?

If we take seriously the increasing disenchantment with "expertise," the loss of faith in authorities and experts, and the rise of nationalism and populism; if we appreciate that there is justifiable anger about widespread corruption and frustration with unfairness, broken promises, and the undeliverable prospectus of equality; if we focus on fairness, cooperation, community, and a radical new way of understanding based on complexity theories and science, will it bring peace, stability, and prosperity? We cannot be sure; indeed, one of the key insights of complexity science is that the resilience of systems brings outcomes that are not predictable. In the short term, whatever we do, we may be facing profound disruption. But when individual patients present with various pathological defenses, the psychological psychiatrist will not only try to find the anxieties or other feelings that underly and lead to the disturbance of thinking and behavior. He or she will also explore the key relationships of the patient and try to understand how far the disturbances of the individual who has presented are a function of systemic disturbances of the network of relationships of which they are "the presenting node." We live in an age of anxiety, but this is not just about my personal anxieties. Since the bombs in Hiroshima and Nagasaki, we have all lived with unprecedented and growing threats to the very survival of humanity because we now have the capacity to destroy all human life on the planet. Two generations later we have additional well-founded public anxiety about threats to the life we know from large and rapid changes in technology, rapid population movements and consequent cultural pressures, and the existential threat of climate catastrophe. This anxiety, which we all share, results in regression not only to the past but also to a fundamentalist way

of thinking in the community as well as in individuals. There is also increasing anger about the disrespect and unfairness that many people feel, and while anxiety may likely result in regression in the form of thinking, extreme anger can result in violence if there is no peaceful route to its resolution. Such dissolution of ordered relationships results in loss of complexity, a return to the past, fusion with the group as opposed to the other, and thinking based on being a "devoted actor" committed to a very different set of non-negotiable values that may involve costly and even fatal sacrifices for ourselves and others.

Can we evolve and adapt in the face of such pressures, moving forward and pursuing a more cooperative "way of being"?

The first step is to appreciate that liberalism must move beyond being concerned only about individual liberty for some, rather than about freedom of choice for all—including those with whom I disagree. This requires a pluralist form of governance not because every opinion or choice is as good as any other but because I have no defense against the person who believes that their truth can be imposed on me, if I act in that way toward them. If I am to be free to make my choices, then I must be prepared to negotiate the creation of a society where those who have a different perspective from me not only believe but also feel that they are being taken seriously and treated fairly and respectfully, as individuals and as communities.

Liberalism is not just about liberty. It is also about liberality—a generosity of spirit that empathizes with and is concerned for those who feel disadvantaged, left out, or marginalized. This attitude, however, must be honest and believable. A prospectus that declares that everyone is equal is simply not believable because it is manifestly clear that human beings are not equal and will never be equal. Ensuring fairness is an entirely different and deliverable commitment, and all the intractable conflicts that I have examined involve communities of people who feel deeply disrespected and believe themselves to have been treated profoundly unfairly.

If we can expand our perspective beyond the "rational individual actor" to create caring and cooperative "ways-of-being" in community without losing our concern for the individual, to be informed by rationality but also by emotions, basing our understanding on external reality but also appreciating wishes, fears, and creativity, appreciating the lessons of history and understanding the complexity of "large group" relations, then we may be able to rebuild our resilience as a human race.

The old forms are dissolving, and we must look to the emergence of a new paradigm. Perhaps these three elements—the emergence of complexity science, the appreciation that our emotions are a positive evolutionary advantage rather than a flaw to be overcome, and a focus on the significance of relationships rather than simply on individuals themselves—may point toward a path for survival and our next evolutionary way station. We cannot be sure that this will be a successful way forward, but if we do not venture out, we will not find a new path. Exploration requires that we make the dangerous journey and we will come at length to a wholly new place only if we take the risk of leaving where we are, with all the risks that have attended the explorer in every generation. We know that complexity makes for greater unpredictability and while that itself produces anxiety, it seems it is also necessary if we are to evolve and adapt to the uncertain future ahead.

Notes

[1] Francis Fukuyama, *The End of History and the Last Man* (London and New York: Penguin, 1992).

[2] Sigmund Freud, "A letter to Arnold Zweig, dated Nov 26, 1930," in *The Letters of Sigmund Freud and Arnold Zweig*, ed. E. L. Freud (London: Hogarth Press, 1970).

[3] Sigmund Freud and Albert Einstein, "Why War?" in *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (London: Hogarth Press, 1964), 22:195–215.

[4] John Alderdice, "Terrorism and the Development of Thinking on Human Rights," in *Contemporary Human Rights Challenges: The Universal Declaration of Human Rights and its continuing relevance*, ed. Carla Ferstman, Alexander Goldberg, Tony Gray, Liz Ison, Richard Nathan, and Michael Newman (London: Routledge, 2019).

[5] Timothy Garton Ash, "The Future of Liberalism," *Prospect*, January/February 2021, 81–90.

[6] Edward Shapiro, *Finding a Place to Stand: Developing Self-Reflective Institutions, Leaders, and Citizens* (Bicester, UK: Phoenix, 2020).

[7] Antonino S Zichichi, *Galilei, Divine Man* (Milan: Gruppo il Saggiatore s.p.a, Marco Tropea Editore s.r.l., 2001)

[8] David Cassidy, *Beyond Uncertainty: Heisenberg, Quantum Physics, and the Bomb* (New York: Bellevue Literary Press, 2009).

[9] Richard Dawkins, *The Selfish Gene* (Oxford: Oxford University Press, 1976).

[10] John Hughlings Jackson, "The Croonian Lectures: Evolution and Dissolution of the Nervous System," *British Medical Journal*, April 5, 1884, 660–663.

[11] Henri Ey, *Consciousness: A Phenomenological Study of Being Conscious and Becoming Conscious* (Bloomington and London: Indiana University Press, 1986).

[12] René Girard, *Violence and the Sacred* (Baltimore: Johns Hopkins University Press, 1977).

[13] Isaiah Berlin, *Liberty* (Oxford: Oxford University Press, 2017).

[14] Cedric De Coning, "From Peacebuilding to Sustaining Peace: Implications of Complexity for Resilience and Sustainability," *Resilience*, 2016, DOI:10.1080/21693293.2016.1153773.

[15] Scott Atran, *Talking to the Enemy* (London: Allen Lane, Penguin Group, 2010).

[16] Vamik Volkan, *Blind Trust: Large Groups and Their Leaders in Times of Crisis and Terror* (Charlottesville, VA: Pitchstone, 2004).

[17] Dominic D. P. Johnson, *Strategic Instincts: The Adaptive Advantages of Cognitive Biases in International Politics* (Princeton: Princeton University Press, 2020).