



Shaping a Multiconceptual World 2020



World Economic Forum

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Shaping a Multiconceptual World 2020

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The 50th anniversary of the World Economic Forum coincides with a period of profound global change. These events prompted the Forum to draw on its network of diverse experts – heads of leading global think tanks and research institutions – and present 10 chapters that explore the emerging shape of geopolitics in the new era.

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The Expansion of Geopolitics

Børge Brende, President, World Economic Forum

The world appears to be on the brink of a new era – not since the end of the Cold War three decades ago has the global landscape been primed to be redrawn in such a significant way. New centres of power, new alliances and new rivalries are emerging, putting pressure on institutions governing global trade and security. As power is shifting and dispersing, domains for geopolitical competition or cooperation are also expanding.

The expansion of geopolitics can be seen across a number of areas – economic, environmental, technological – where it is an open question whether powers will

collaborate to address fast-approaching challenges, adopt a posture of rivalry in a bid to gain advantage or take an approach that is some combination of the two.

Understanding the trajectory of geopolitics is a prerequisite for navigating the new global environment. That is why the World Economic Forum asked heads of think tanks from around the world to explore the direction of global relations, focusing on how geopolitics today is expanding to include new actors as well as new domains across which power dynamics are operating. The interdisciplinary and multiconceptual nature of this analysis is fit for purpose – only by exploring the full dimension of global relations through a diversity of perspectives can we hope to gain practical insight into the geopolitics of our new era.

Domains for competition or cooperation

That the world is in a period of significant transition is apparent. In approximately a decade, seven of the world's 10 largest economies are expected to be from current emerging markets. Alongside the rise of new economic powers, increased military spending by several of these countries is creating new regional and global dynamics. The shifting distribution of global power, according to John R. Allen, President of the Brookings Institution, is "creating a moment of genuine danger in international affairs" – one that calls for a reassertion of Western-led multilateralism. But Fyodor Lukyanov, Chairman of the Presidium of the Council on Foreign and Defense Policy, feels the sun has set on the age of a stable post-Cold War order. Instead, he argues, there are likely to be more "ad hoc coalitions of countries" as the "efficiency" of 20th-century global institutions declines.

Indeed, the identity of the global community – and the very idea of a community itself – is being contested. Robin Niblett, Director of Chatham House, examines the rise of nationalism around the world, arguing that the trend stems from ingrained, even primal, tendencies among states to support national mythologies. Paradoxically, the only way to achieve a cooperative geopolitical framework, Niblett argues, is through governing structures at the state and local levels that accommodate strong national identities. Qi Zhenhong, President of the China Institute of International Studies, makes the case that global frictions – particularly those between the West and non-West – are largely the result of values-based alliances that have served to exaggerate differences between cultures. The path towards stronger multilateral cooperation, for Qi, is through respect for diverse cultures, as well as through a collective global identity.

When it comes to technology, digitalization across industries and societies is becoming a matter of course – what has come to be known as the Fourth Industrial Revolution. Breakthroughs in technology are offering powers opportunities to coordinate in unlocking new possibilities, but these same

The expansion of geopolitics can be seen across a number of areas – economic, environmental, technological

advances can tempt powers to seek strategic advantage.³ Samir Saran, President of the Observer Research Foundation, argues that because digital technology will be a frontline of geopolitical competition, the formation of a "D20" group, comprised of the leading technology companies and global powers, is necessary to mitigate conflict. But Amos Yadlin, Executive Director of the Institute for National Security Studies, offers a dose of scepticism about the power of digital technologies to upend the balance of military power. In arguing that the strategic advantages of artificial intelligence in a military context may be short-lived, Yadlin counsels stakeholders not to place excessive faith in a single defense system, even if it appears promising.

On the environment, the window for stemming the effects of climate change is closing and the world is entering a stage in which the repercussions of our actions – or inactions – is becoming apparent. Yet, it remains to be seen whether the most pronounced effects of global warming – the melting of ice caps in the Arctic, for instance – will serve as a wake-up call for ambitious multilateral action or as an opportunity to exploit new resources for strategic advantage. Indeed, Jane Harman, Director, President and CEO of the Wilson

One only needs to look to the recent past to see the value of a cooperative geopolitical framework

Center, sees a climate-changing world as one that offers areas for both geopolitical cooperation as well as competition. Focusing on reducing global emissions is vital, she states, but so too is viewing the effects of a changing climate through a prism of national security. "The winner of the green technology race will find tremendous economic and geopolitical rewards at the finish line," Harman says. Yoichi Funabashi, Chairman of the Asia Pacific Initiative, sees the effects of rising

temperatures as a geopolitical X-factor of sorts. Because states will capture advantages that come with new shipping routes in the Arctic or new market opportunities for sustainable infrastructures but will also face dangers from rising seas and stronger storms, Funabashi argues it is difficult to identify which states will be most impacted by climate change and in which way.

The economic landscape is the area in which the road ahead, in terms of geopolitical rivalry or cooperation, is perhaps the most uncertain. Global growth in the near term is expected to soften and the International Monetary Fund has called for "synchronized policy action" to stem a slowdown. But some powers have used the tools of an integrated global economy – trade, foreign direct investment, protocols around cross-border data flows – to coerce global rivals rather than advance shared prosperity. Within this context, L. Enrique García R., President of the Council on Foreign Relations of Latin America and the Caribbean, makes the case for developing economies, such as those in Latin America, to resist taking sides and instead to play the long game by focusing on the fundamentals of building stronger intra-regional ties and producing more globally competitive products.

Shaping the future

As domains for global cooperation or rivalry expand, shaping the direction of geopolitics becomes ever more complicated. To be sure, stakeholders can cooperate across individual domains while competing across others. But over time, cooperation will likely beget cooperation and rivalry will likely beget rivalry. The more powers compete and pursue strategic advantage at the expense of addressing shared technological, environmental and economic challenges, the more likely it will be that a broader sense of friction will develop across the global system. A rivalrous global system will in turn make it more unlikely that shared priorities are fulfilled.

One only needs to look to the recent past to see the value of a cooperative geopolitical framework. Whether it was strengthening security protocols in the aftermath of the 11 September terrorist attacks or preventing a global depression in the aftermath of the 2008 financial crisis, multilateral efforts were key to advancing safety and prosperity. As the world becomes even more interconnected in terms of flows of information, capital and people, states will be more reliant on one another to realize positive outcomes for themselves and the global community. At a time when power dynamics are in flux, there is an opportunity for stakeholders to make the decision to shape geopolitics in a cooperative, rather than competitive, manner.

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John R. Allen President, Brookings Institution, USA

Throughout modern history, established regional or international orders have been overturned when a shift in technology has enabled or amplified a change in the balance of military or economic power. That was true when new technologies and techniques of sail vaulted Portugal past the larger European powers to become the first Western nation to establish a major presence in

the Indian Ocean; when steam and the invention of the loom and new financial techniques powered the English industrial revolution; and when new approaches to mass production catapulted the United States to the top of the world economy – and then to the forefront of the defence of the free world in World War II and during the Cold War.

The American-led arrangements that emerged have been the backbone of international order ever since, and the systems of alliances and multilateral institutions that have supported this order have been the bulwark of international stability. But as we near the 75th anniversary of the end of World War II and mark the 30th anniversary of the end of the Cold War, a combination of economic and technological shifts is once again driving geopolitical change.

Some of these changes arise from hugely positive developments: integrating into the global economy and undergirded by liberal institutions like the World Trade

Economic and technological developments over the past three decades are creating a moment of genuine danger in international affairs

Organization, emerging markets have pulled more than a billion people out of poverty and forged a global middle class. During the same period, institutions like the United Nations, driven by the West but encompassing genuinely global collaboration, made sustained progress on reducing the ills of civil war, infectious disease and humanitarian crises. But for all the positives, there is no escaping the reality that the cumulative effect of changes fuelled by economic

and technological developments over the past three decades are creating a moment of genuine danger in international affairs.

Technological change and the rebalancing of power

The technological advances and an economic rebalancing under way are causing the world to enter a new phase – one where the non-Western powers, as well as some non-state actors, see low-cost and relatively low-risk opportunities to weaken the United States and the Western alliance.

One area where this danger is pronounced is in East Asia. As China's growth has vaulted it into the top ranks of global economic power, it has progressively shed its strategy of "hide and bide" and begun to exert itself in political and strategic affairs, in its region and beyond. The economic and export prowess of China is intrinsically challenging the dominance of the Western model in international affairs. Again, some of this is productive: China's surge into Africa in the 1990s, in search of food, mineral and energy resources to power its growth, helped to pull more than a dozen African nations into middle-income status. But with global economic reach comes global interests and the temptation to project global power; now China has moved into a new phase of expansion – into a global network of ports, technology plays and infrastructure assets that in some theatres seem purposefully designed to challenge the West.



REUTERS/Edgar Su

Added to this are powerful changes in the technological sphere: not only the deeper and now pervasive integration of cyber networks into military technology but also the wide penetration of social networks – and above all qualitative leaps in the effectiveness and power of supercomputing, artificial intelligence and biotechnology. Any one of these technologies could amplify shifts in the balance of geopolitical power – especially amidst a lapse in US global leadership and a weakened and disorganized multilateral order. The current US Administration has usefully focused on the China challenge; but it has chosen to react to these developments not by deepening its commitment to democratic values and securing or expanding its alliance structure, but by alienating its closest friends and weakening multilateral arrangements just when they are most susceptible to concerted pressures from authoritarian states and most needed for global stability.

The risks from technological and economic change are not limited to the realm of great power relations. In regional conflicts, technologies like the remote management of drone swarms, precision strike missiles, and enhanced cyber- and artificial intelligence-supported influence operations in the information sphere can lift the power of lesser adversaries, and even of non-state actors like the Islamic State – who have used the information domain to spread their influence and network across most civil wars in the Middle East, North Africa and into South-East Asia. The danger is made graver, though, by the escalation of great power tensions; for while civil and regional wars were often the subject of international cooperation during the last quarter century, we are now watching a return to the behaviour of the world's top military powers treating these conflicts as zones for proxy competition – with disastrous results in terms of human suffering, as we've experienced in Yemen, Syria and Venezuela.

Getting the assessment right

While new technologies are unlikely to radically change the military balance of the nuclear powers in a way that makes military aggression likely in the near term, these technologies are helping to create new geopolitical tensions. Leaders do not always make rational calculations, and it can be tempting to have a new technology or new capabilities at one's disposal. Otherwise cautious or risk-averse leaders can become risk-prone, or simply reckless, if they believe they have a technological "silver bullet". The fact that history is replete with cases where such leaders fail in war does not rule out new episodes of miscalculation.

Beyond the narrowly defined military sphere, new developments in telecoms and technology are amplifying, perhaps even accelerating, the drift away from cooperation and towards competition. Technology is increasingly a zone of this rivalry: if Chinese companies like Huawei build out the global 5G infrastructure, the West will lose the intelligence

Tensions are likely to be most acute in the areas of surveillance, social manipulation and human rights collection capabilities it currently enjoys.

Furthermore, the West will have to contend with new concerns about information assurance whenever it shares information with partners and allies that rely on a Chinese telecom stack.

On a larger scale, there is a growing possibility of a geopolitical digital divide as Russia seeks

to follow China in the creation of a "sovereign internet". Indeed, this very outcome may be accelerating as the Chinese authorities and the Trump Administration undertake policies that decouple the US and Chinese economies and technologies.

Tensions are likely to be most acute in the areas of surveillance, social manipulation and human rights. States that lack strong rule of law institutions are discovering the power of new technologies to increase the effectiveness of their social controls. This will intensify as the costs for mass real-time surveillance technologies continue to shift downward and big data analytics vastly increase the aperture through which the state can monitor its citizens. In the social domain, authoritarian states and other actors are seeking to turn the openness of the West into a weapon against it. Most of that manipulation is occurring within consumer apps and social networks that have proven difficult for democratic governments to regulate effectively. Digitally-controlled industries are also vulnerable – as Ukraine learned in 2015 and 2016 at the hands of, likely, a Russian predatory cyberattack on its power grid.

The return of great power competition

National governments often feel tempted in moments of change and uncertainty to launch sudden strikes – literal or otherwise – aimed at weakening their opponents. At a moment of flux in American policy and in the coherence of the West, that temptation may loom

particularly large. While direct military confrontation with the United States or with NATO remains a very high risk and high-cost option – and, thus, is unlikely to transpire – the great powers and some middle powers are trying hard to increase their ability to affect adversary perceptions at all levels, by sowing discord in national populations, disrupting the unit cohesion of soldiers through psychological operations, and pumping false information into intelligence fusion centres. All this weakens trust, erodes cooperation and increases the risk of outright conflict.

No part of this challenge will be ameliorated by American unilateralism, British isolationism or Chinese expansionism – to say nothing of Russian revanchism. As unfashionable as it is to argue the case, the reality remains that the best guarantor of stability in the coming period is Western unity and a deepening, not weakening, of the alliance structure. Cooperation with other democracies would strengthen the West's hand: in the realm of data and technology, the West should strengthen ties with India, whose data sets and tech entrepreneurs will be valuable assets in the coming competition, as well as with Mexico, whose technology and infrastructure grids can either be the soft underbelly or the strategic reserve of the West.

At this moment of geopolitical tension, it is unfashionable, too, to call for calm and for dialogue in US-China relations – but these are essential ingredients if both want to defend common interests and avoid outright conflict. These two countries have the largest economies in the world, the two top militaries in the world and the two most dynamic technological sectors. They are destined to be strategic competitors but are not yet destined to wage a new Cold War. Some in the United States, espousing greater emphasis on individual national sovereignty and strengthened borders, would squander

the extraordinary asset of the alliance structure on the argument that it increases American exposure to costs and dangers in Asia and Europe in the face of a rising China. The reality is that the United States' economy and its values are already fully exposed by the global nature of information and energy flows, supply chain trade and the spread of democracy. What is in question is whether the United States defends its values and interests alone or with a robust network of allies and partners. That

No part of this challenge will be ameliorated by American unilateralism, British isolationism or Chinese expansionism

said, many of America's traditional friends and closest allies find it increasingly difficult to comprehend the values for which America stands, which further undermines the integrity of existing multilateral organizations or the future of purpose-built coalitions or instruments.

The simultaneous rise of the Asian economies and the impacts of the Fourth Industrial Revolution are amplifying risk and creating intense levels of geopolitical uncertainty. But crisis is not foreordained; as it has done in the past, a combination of American values and leadership, Western coherence and multilateral cooperation can still help us navigate these trends. The question now becomes: does the United States regain its role as the principal

advocate for global stability through alliances and multilateralism, and does it extend that leadership to the technological domain? Or does the United States stay on its current path towards isolationism, and thus fail to prevent the growing risk of great power confrontation? Only time will tell, yet the answer to these important questions may very well decide the character, and perhaps even the fate, of the community of nations in the 21st century and beyond.

Multilateralism in an Ungoverned World



Fyodor Lukyanov

Chairman, Presidium of the Council on Foreign and Defense Policy, Russian Federation

Political history develops in cycles, with adjoining cycles often opposing one another. In the second half of the 20th century, seeking to avoid repeating what had been the worst course of history, the global community chose governability as its credo. This required the adoption of certain rules of behaviour, including the UN system with

the right to veto as a substitute for war between major actors, a balance between the two superpowers and their spheres of influence, and a network of international institutions to address specific problems.

Today, as has been the pattern throughout modern history, we are seeing the overthrow of the preceding geopolitical model. The system developed in the wake of the Cold War that sought to advance a multilateral order under a global identity built on a common set of (Western) values is being challenged by the rise of divergent state-based interests and values. The renewed emphasis on the state as a structural unit of the international system means that competition will increase, global institutions will erode and diplomacy will be practised in new ways.

Geopolitical reversals

The growing counterforce against the post-war and post-Cold War orders is particularly apparent when it comes to ideology, alliances, interdependence and borders.

The fall of ideology

International relations in the 20th century were greatly influenced by ideology. Totalitarian ideologies – the fascist one, which provoked a world war, and the communist one, which determined world politics in different forms in the 1920s to the 1980s – were opposed to the liberal ideology that won the Cold War and later dominated the world for more than two decades. But today, ideologies, especially those associated with the 20th century, no longer have the importance they used to enjoy. This is evidenced by the crisis of traditional ideological parties and the rise of movements in response to specific social problems, such as migration, ecological threats and technological challenges. Social networks and new media contribute to these new trends as they greatly help mobilize people around specific issues, not around shared ideologies.

In international affairs, we are witnessing a sharp rise in protectionist sentiments, a departure from the principles of globalization, and the crisis of the "liberal world order". Remarkably, there is a simultaneous trend towards the globalization of politics, where the powers of different (non-Western) political cultures and traditions (such as China and India) are beginning to play a noticeable role in international affairs, bringing in their own understanding of them. All these factors make the universalistic approach to the current developments inapplicable while at the same time requiring their harmonization.

The fall of alliances

Throughout the 20th century and into the first two decades of the 21st, crucial importance was attached to alliances – standing associations based not only on the states' matching geopolitical interests but also on common values. The configuration of those alliances was considered invariable, although when one of the opposing actors suffered a defeat (the Warsaw Pact), its opponent (NATO) immediately expanded its sphere of influence. The essence of the alliance remained intact and, importantly, NATO's format was viewed as a model to copy by other potential groupings.



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Yet, today, alliances of the previous type more often than not fetter the potential of their participants instead of increasing it. Several European Union member states would prefer to skip sanctions against Russia in order to enjoy economic benefits, but they are unable do so because of EU regulations. Similarly, US allies and partners in Asia are sandwiched between their security commitments that are more and more oriented towards containing China, when at the same time they do not want to antagonize Beijing due to both economic and security considerations. The freedom of manoeuvre and the ability to maximize opportunities become the main factors in ensuring national interests. Any exclusiveness, that is, creation of closed associations, runs counter to the general trend towards greater flexibility in promoting national interests.

The fall of interdependence

Interdependence was considered to be a means of reducing tensions and increasing stability. Importantly, the interdependence varied from guaranteed mutual destruction to closer economic cooperation, the disruption of which could seriously impact all the parties. But it turned out that the more closely the actors in international relations were connected to each other, the more vulnerable they were in case of conflict, and the greater damage their counterparty would suffer.

With economic sanctions used more and more often, particularly in the 21st century, the intertwining of economies turns into a battle – one that is relatively equal in balance if economies are comparable in scale but crippling for a junior partner if they are not. This forces the latter to seek asymmetric responses and thus exacerbates the international

situation still further. As international institutions designed to manage the global economy become weaker, and the system of rules and regulations continues to be eroded, players also tend to use sanctions as a means of regulating economic processes.

The rise of borders

One of the obvious lessons of the first half of the 20th century was the challenges associated with state borders. Border claims were the cause of and immediate pretext for the two world wars. The revision of borders after the collapse of empires brought immeasurable suffering to millions of people. It is not accidental that during the Cold War, fixed borders were considered an indispensable condition for stability (the Helsinki Accords). But after the Cold War, the view that borders should be gradually erased became dominant.

Where do things stand now?

The elimination of physical borders is no longer regarded as a way to reduce threats or as a guarantee of stability. All states, each according to its own capabilities, seek to protect their territory from external impacts: political, economic, information, cultural, migration, etc. Thirty years after the collapse of the main symbol of division – the Berlin Wall – the construction of obstacles and borders in all spheres of human activity is once again considered normal and often even desirable. This changes the entire international atmosphere as far as the nurtured image of a desirable future is concerned.

Redefining multilateralism

The turn away from 20th-century norms and systems will continue. Twentieth-century institutions, which the international community tried to adapt for the 21st century, will further erode. They are unlikely to fall apart or be formally abolished, but their efficiency will decline. New formats are emerging, such as the OPEC+ arrangement between Russia and Saudi Arabia, or the Astana tripartite forum for Syria (Russia, Turkey and Iran). In the former case, the functions of a multilateral institution have changed under the influence of bilateral agreements between the biggest market players. In the latter case, the unifying

We can expect the crisis of traditional multilateral diplomacy to continue

factor is not the parties' trust (there is none) or identical interests (they are largely different), but the understanding that without interaction with the other two partners, none of them will be able to achieve anything for themselves in Syria.

We can expect the crisis of traditional multilateral diplomacy to continue. It will manifest itself not only in a transition to a transactional bilateral model, but also in alterations to the concept of multilateralism as such. Currently it means activities within international organizations with a large number of participants.

In the future, multilateralism will most likely mean ad hoc coalitions of countries interested in solving a certain problem, or a combination of different bilateral relations temporarily harmonized (similar to former US Defense Secretary Donald Rumsfeld's 2002 "coalition of the willing" in Iraq).

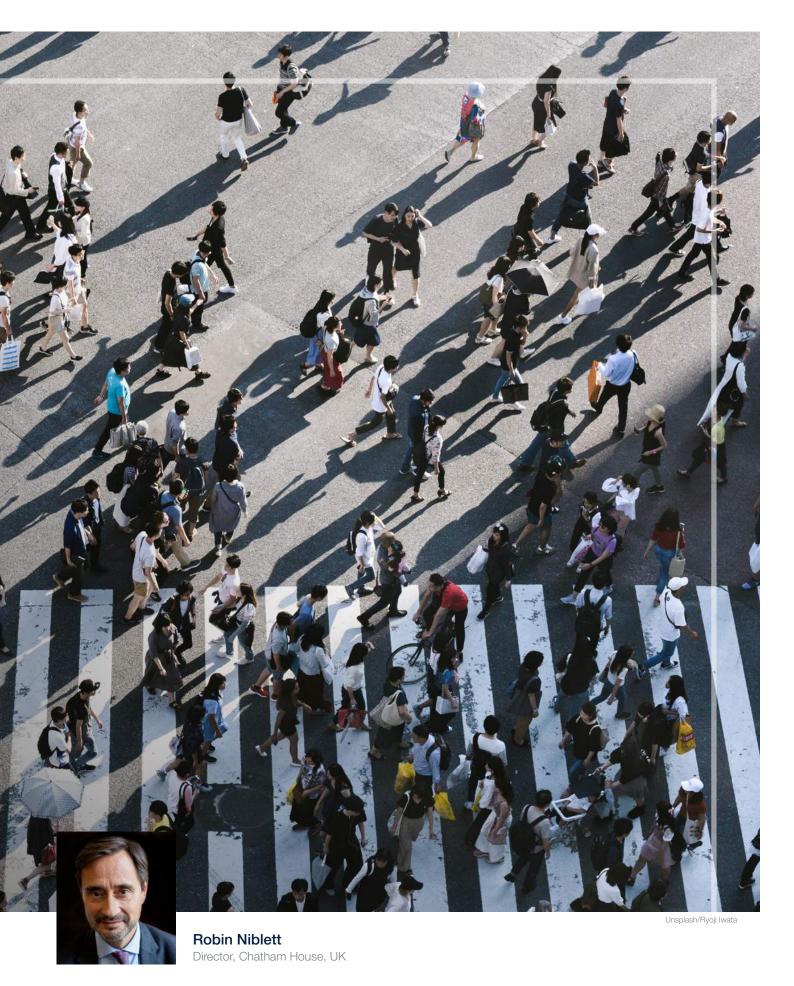
Such a new form of multilateralism will be challenged by new trends in conflict and competition. The risk of large-scale war between major countries, especially a world war, is relatively moderate, mainly due to the fact that all key players, that is, potential participants in such a conflict, have nuclear weapons. But as the arms control and strategic stability model that existed for more than half a century has apparently exhausted itself, the context has changed dramatically. There will be increased risks due to the decline of trust and transparency, with nuclear weapons continuing to act as

deterrence. Competition will intensify as other forms of influence on the opponent will be employed, above all, in order to weaken its internal stability. This means primarily economic and information-cultural forms of influence, which will encourage protective measures and therefore isolationist trends. This tendency is most manifest in the internet, the fragmentation of which is believed to be almost inevitable.

Multilateralism will most likely mean ad hoc coalitions of countries interested in solving a certain problem

In general, there is reason to expect that the coming period will in many ways be the opposite of the one that preceded it – the period of bipolar stability in the second half of the 20th century and unipolar dominance in the first decade of the 21st century. More elements of anarchy will inevitably emerge in the international system, but there will be no return to the models of past centuries because of continued economic interdependence, nuclear deterrence and worsening global problems, such as climate change. In a situation with fewer formal external restraints in place, each particular state and its leaders will have to bear much greater responsibility.





There is an urgent need for global responses to a host of shared challenges, from climate change and technological disruption to financial imbalances. And yet, perversely,

atavistic politics that seek to divide people are returning to the fore in democracies and autocracies alike. What is going on?

The rise and fall and rise of nationalism

All the world's nations and nation states are organized around myths. In 1983, the Irish historian Benedict Anderson described how political leaders beginning in the 18th century created "imagined communities" in order to build modern, industrialized European states; more recently, Israeli historian Yuval Harari has explained how humanity used "lies" and "stories" to transition from small hunter-gatherer tribes to large, complex political entities. The curation of common religious beliefs, the evolution of common norms and behaviour, and the construction of common narratives enabled the emergence of strong polities, united by shared cultures. With the creation of the United Nations in 1945, the international community has recognized highly diverse political entities (former empires, small feudal autocracies or kingdoms, newly-created and long-standing democratically constituted nations) as nation states – granting nations the legal status of states under international law and thus offering a further level of legitimacy to national myths.

However, the near simultaneous adoption in 1948 of the Universal Declaration of Human Rights and the founding of the Bretton Woods institutions created a powerful counterforce: because both were forged at a moment of US-led Western hegemony, the sense in the West was that the world would witness the expansion of nation states governed by increasingly homogenous political systems with a shared commitment to democracy and open markets. The process of globalization demanded that all states adapt to being part of a shared project and subject themselves to its norms and laws. Globalization thus implied the end of the identity-led politics that had led to the creation of nation states in the first place, as well as to the national chauvinism that had fuelled the world wars of the 20th century.

The United States and its allies provided the security umbrella under which many nations designed their routes to this modern statehood. As importantly, the fact that the global superpower was a melting pot of former nationalities challenged the idea of concentrating statehood around ethnic identity. America's civil rights movement in the 1960s showed how a country could progress towards the ideal of a state based on a common set of values rather than ethnicity.

The fact that the global superpower was a melting pot of former nationalities challenged the idea of concentrating statehood around ethnic identity

Under US protection, the European Union became the vanguard of this process of post-nationalism. With the creation of the European Coal and Steel Community followed by the European Economic Community during the 1950s, and then the establishment of the European Union in 1993, member states pooled their sovereign interests into a supranational

organization that would help deliver economic and other policy outcomes they could not deliver alone. To the extent that there was an emerging European identity, it was anti-nationalist.

But the period since 2016 has brutally exposed the exceptional nature of this moment in human history. And it has illustrated the continuing power of myths and of a distinct sense of national identity to mobilize groups of people towards shared goals.

The failure of globalization to deliver its gains equitably across Western societies over the last 30 years has created an upswell of resentment against those politicians and political parties who championed globalization. President Donald Trump was elected to office on the back of his rejection of "globalism" and by championing "Americans first". Supporters of Brexit pine for a return to Britain's identity as a "sceptred isle", separate from the European continent – a "great trading nation" plying the waves to the distant shores of the former British Empire.

America and Britain are not the only countries where the nostalgia for national identity is ascendant. In Russia and Hungary, the threat of global integration has intensified a historical rejection of outsiders and sense of national grievance. Their leaders have turned to national culture and identity as the basis for resistance. China has carefully curated its period of historical exploitation by Western powers to strengthen popular support for its return as a great power. In India, Prime Minister Narendra Modi and the Bharatiya Janata Party have reawakened Hindu resentment against the country's minority Muslim community and have used myths about Hindu India's glorious past to try to galvanize Indians towards its potential great future.

Because of the insecurity it arouses in others, the rise of nationalism begets the rise of more nationalism. South Korea and Japan, which both fear China's growing power, have allowed historical disputes to fuel their national resentment of the other. Nationalism can also serve more utilitarian purposes. President Jair Bolsonaro claims that he wants to decolonize Brazil from the foreign environmental NGOs that prevent it from exploiting the Amazon. President Andrés Manuel López Obrador is demanding reparations for Mexico from the Spanish government for the predations of the "conquistadores". This swirl of historical facts, myths, slights and grievances are now turbocharged by social media in ways that can prevent political leaders from retaking control of the narrative, and policy, later.

Managing and leveraging the new nationalism

States around the world are at different stages of political evolution and their governments have different levels of political legitimacy. But two approaches would help manage the politics of this multinational as well as multiconceptual world so that states can continue to work together towards addressing shared challenges.

The first is to adapt international institutions to take better into account this global reawakening of national identities. The era of permissiveness to Western leadership is

ending, while the desire within Western countries to carry the burdens of leadership is waning. Investing over the coming years in the legitimacy of major international institutions such as the United Nations, World Trade Organization and International Monetary Fund is essential. Without greater legitimacy, these institutions will find they are increasingly ineffective. One immediate step should be to begin a process of balancing more equitably the voting weights, exceptions and structures that favour the winners of the 20th century.

But international institutions are only as effective as their constituent members. Weak or unstable governments can lead to weak or unstable institutions. It is equally important for national governments and other political actors to focus on their own domestic legitimacy.

Unfortunately, politics in the West may be regrouping around a new duopoly of those who are open to globalization and its attendant rules and are willing to abandon the national myths of the past, and those whose belief in national distinctiveness demands greater protection and scope for autarky. A new polarization of this sort will not lead to a new era of political stability. If the myths are purely nostalgic, they will betray their followers. If, on the other hand, the sense of national identity is eroded, it may prove impossible to retain the democratic legitimacy to engage multilaterally.

Political leaderships among the autocracies face an equally complex problem. National myths are essential to legitimize their non-democratic systems. If autocratic governments

National identities cannot and should not be done away with

can organize to deliver economic and social progress and security to most of their citizens, then the myths can generally play a supportive role, as China and Singapore have demonstrated. If they fail to deliver, however, as is now the case in Russia, the temptation for governments to fall back on the notion of "the other" and blame external forces can

become not only irresistible but entrenched, given the lack of a democratic pathway to an alternative. The result can be overt or covert conflict.

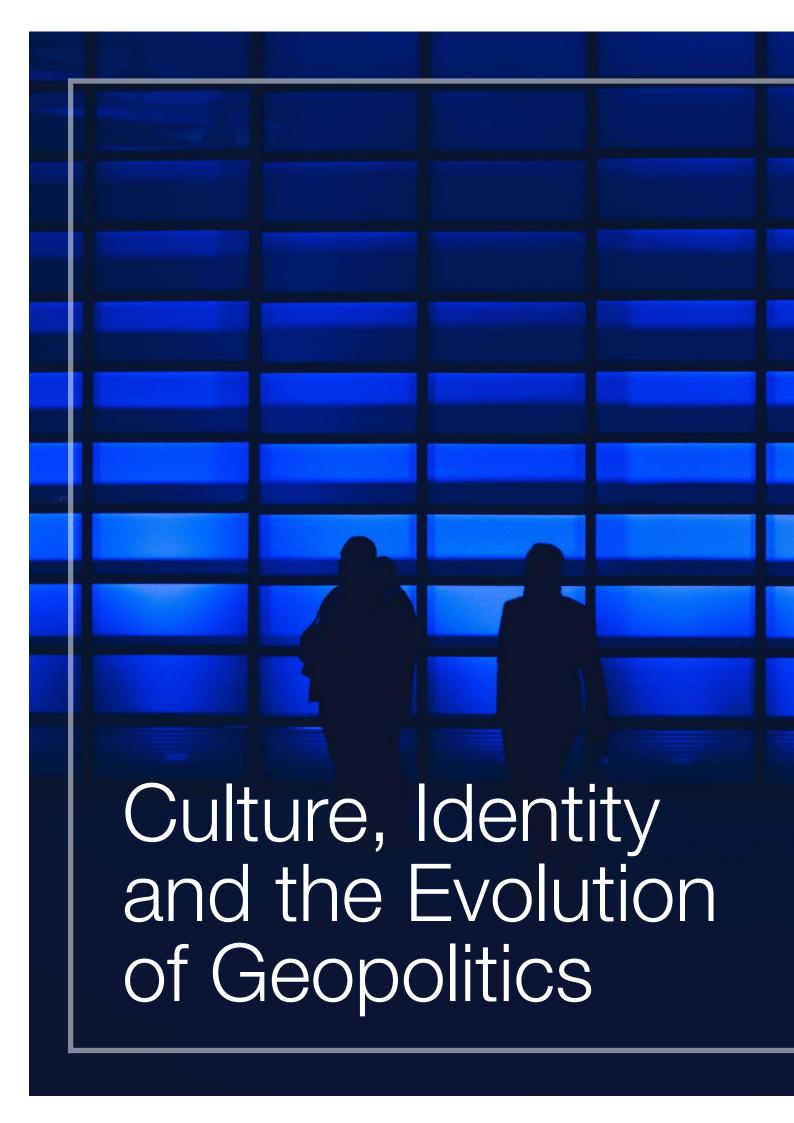
There is a logical response to both these sets of dynamics. National identities cannot and should not be done away with. Rather than tamping them down in favour of a global, supranational identity, governments need to channel them within models of inclusive domestic governance.

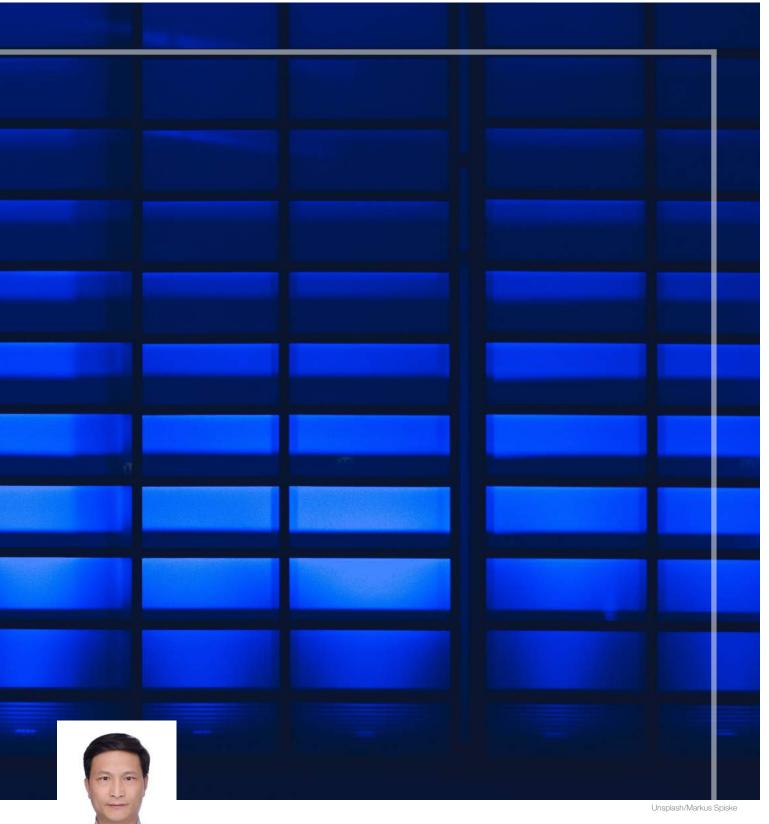
In the first place, even with the need for greater international interdependence, nation states should retain and invest in those instruments of fundamental sovereign power that can protect citizens from external threats, whether military, cyber or criminal. People who have confidence in their governments' capacity to provide for their immediate security are less likely to retreat into an aggressive nationalism.

Conversely, national governments should devolve the maximum amount of political power over social policies, local development and infrastructure to regional authorities, cities or local communities, with corresponding decentralization of some powers of taxation. At a time of technological disruption and rapid economic change, a strong sense of local identity and solidarity can be a more positive force for adaptation than centrally-driven policies and narratives.

Governments should then pool regulatory decision-making over global public goods (protecting biodiversity, controlling greenhouse gas emissions or preventing pandemics) as much as possible at the regional and supranational levels, retaining appropriate levels of national supervision.

The risks of letting national mythologies rise again today without inclusive forms of national and international governance are severe. A large autocracy like China may one day face a structural economic slowdown at the same time as a large democracy like the United States undergoes a fundamental restructuring of its domestic politics, while Europe and others turn inwards. At that moment, the temptation for all sides to use nationalism to mobilize their people and political power will be strong, and the results unpredictably dangerous.





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Today's world is facing unprecedented changes that are bringing both fresh hope and gloomy despair. On the one hand, the power pattern of the world has become more balanced, with the forces for world peace ascending; the productive forces of human society have also gained unparalleled development, thanks to the Fourth Industrial

Revolution. On the other hand, the global landscape is facing uncertainty and instability, due to the rise of power politics and unilateralism, competition among major powers, protectionism and the deglobalization of the world economy.

Identity geopolitics

Culture and identity are among the factors shaping the pattern of geopolitics. They play their roles by impacting values, ways of thinking and the means of states and stakeholders who shape international geopolitics. In the age of globalization, faced with new domestic and international challenges, these actors have become more sensitive to and anxious about the independence, particularity, integrity and purity of their own culture and identity.

Some nations and states set it as a goal to promote their traditional culture and restore their glorious past, as a way to foster the sense of identity and solidarity among their citizenry. Some nations and states, which remain separated due to war or other historical reasons, regard unification as an important mission that is part of culture and identity construction. Other nations and states have looked to "reconstruct" their identity as a way to change their regional or geopolitical positioning.

The re-emergence of worrisome xenophobia as an ideology and social movement is another manifestation of how culture and identity impact the contemporary politics of states and regions. The large-scale influx of immigrants and refugees has put pressure upon the population structure, the social welfare system and the public order in a number of European countries, and has aroused strong fear of and aversion towards immigrants and foreign students. Because of modern media's strong social penetration capacities, xenophobia has provided fertile ground for populism, nationalism and extreme right-wing forces to enter the political arena in those countries and then to make huge changes to those countries' domestic and foreign policies in an anti-establishment way, thus producing spill-over effects on the world's political ecology in a destructive way.

At the sub-state level, some non-state actors have drawn upon culture and identity to realize their specific political urges. The real threat of this is that those actors have taken radical means to pursue extreme political goals. For example, extreme national separatists have incited armed violence and engaged in terrorist activities, such as assassination, kidnapping and bombing, under the banner of striving for "national self-determination" and "national independence"; religious extremists have advocated fundamentalism, spurred terrorist and violent activities against so-called "pagans", launched "holy wars" and sought to establish clerical regimes in the name of "freedom of religion" and "purity" of religious culture.

At the interstate level, conservative political forces in some countries concocted the theory of "a clash of civilizations" for the sake of their own power politics. Acting as the representative or leader of a civilization, they have been trying to draw a distinction between civilizations, or countries with different social systems. In this way, they mobilize like-minded allies to suppress countries that have posed potential challenges to them or refuse to tolerate their bullying. Similar to the "clash of civilizations" mindset, a handful of countries have advocated for the establishment of a "value alliance", taking ideology as

the criterion of identity, seeking an alliance of the countries with the same social system to support their attempts to maintain geostrategic advantages in the region and the world.

The common point of the advocates of these two theories is that they deliberately magnify cultural and identity differences, provoke confrontations between the West and non-West – between countries with different values and development models – and turn geo-conflicts into a self-fulfilling prophecy. With regional and even global powers involved, this kind of geopolitical conflict is so dangerous that it could push major-power relations into violent turbulence and, even worse, trigger a new cold war or a hot war between great powers.

Beyond culture and identity

Although culture and identity can exert potential influence on international politics, and sometimes appear to be the root causes of international tensions and conflicts, other factors have greater influence. In today's world, where nation-states are still the main actors in the international community, the pursuit of power and interests by states is still the main driving force for the change of the geopolitical pattern. Culture and identity, in many cases, are just policy tools concealing the real interests of international actors.

Hence, to prevent global geopolitical turmoil, the international community should, first of all, be alert to the attempts of those countries and political forces to exaggerate the differences and competitions between cultures and identities, and prevent them from taking culture and identity as tools to manipulate international politics, to provoke and magnify conflicts and confrontations among nations and states, to undermine international peace and cooperation, and to push mankind into the abyss of a geopolitical catastrophe.

Second, to alleviate the cultural and identity anxiety, the international community should respect cultural diversity and keep an open, tolerant and learning attitude towards different cultures. Maintaining cultural diversity is the basis for civilizations to progress, and the pillar for a multiconceptual world. More efforts are needed to protect cultural heritages and provide necessary support to cultural inheritance and preservation.

Individuals and states should honour the spirit of equality and respect, abandon arrogance and prejudice, promote intercultural exchanges and dialogues, learn from the achievements of other countries and civilizations, use others' strengths to complement their own weaknesses and incorporate other cultures into their own. Doing so will make their civilization vigorous, while creating favourable conditions for the survival and development of others and promoting the common progress of mankind.

Culture and identity, in many cases, are just policy tools concealing the real interests of international actors Third, the international community should work together to build a collective identity. Living in the "global village", countries face the same challenges, such as climate change, infectious diseases and terrorism, which no one can be immune from or able to deal with alone. With the development of globalization, countries have become so interdependent that a community with a shared future has taken shape: no one can live without others; prosperity and losses have to be shared with others. Pursuing the interests of certain groups, nations, states or groups of states cannot help to achieve lasting peace and sustainable development. Only by fostering a sense of community with a shared future and shared responsibility can the international community pull together to tide over difficulties, and build a peaceful and prosperous future for all. For this purpose, the international community should strengthen collaborations in the fields of global governance, poverty alleviation, disaster relief and sustainable development, for instance, and make the weak no longer feel alone and helpless.

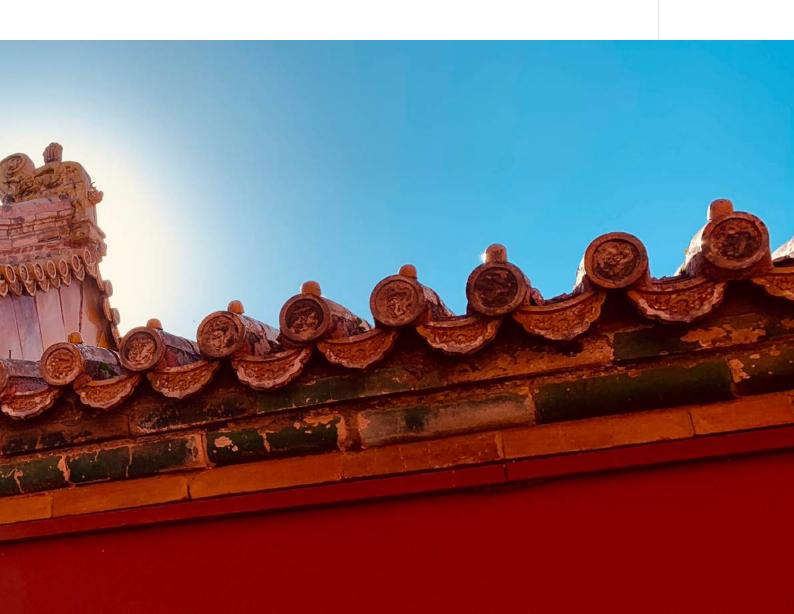
Finally, the international community should safeguard multilateralism, respect the order based on international law and improve global governance institutions. The prosperity

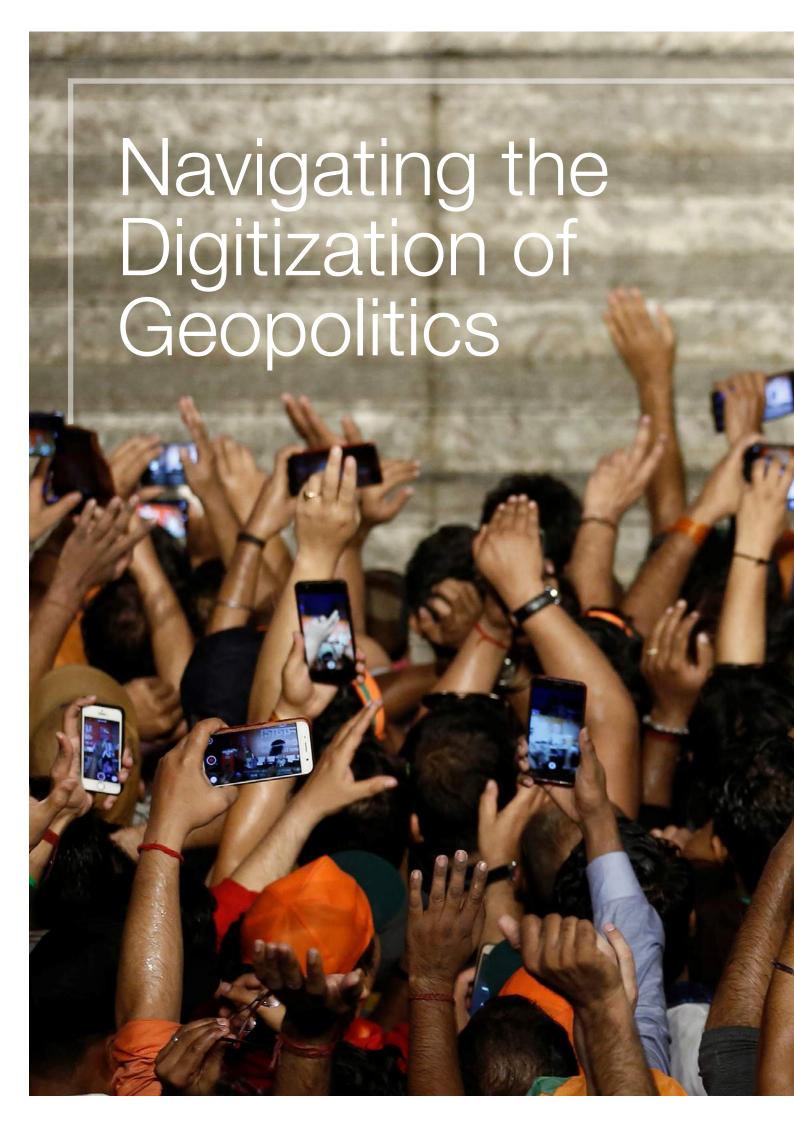


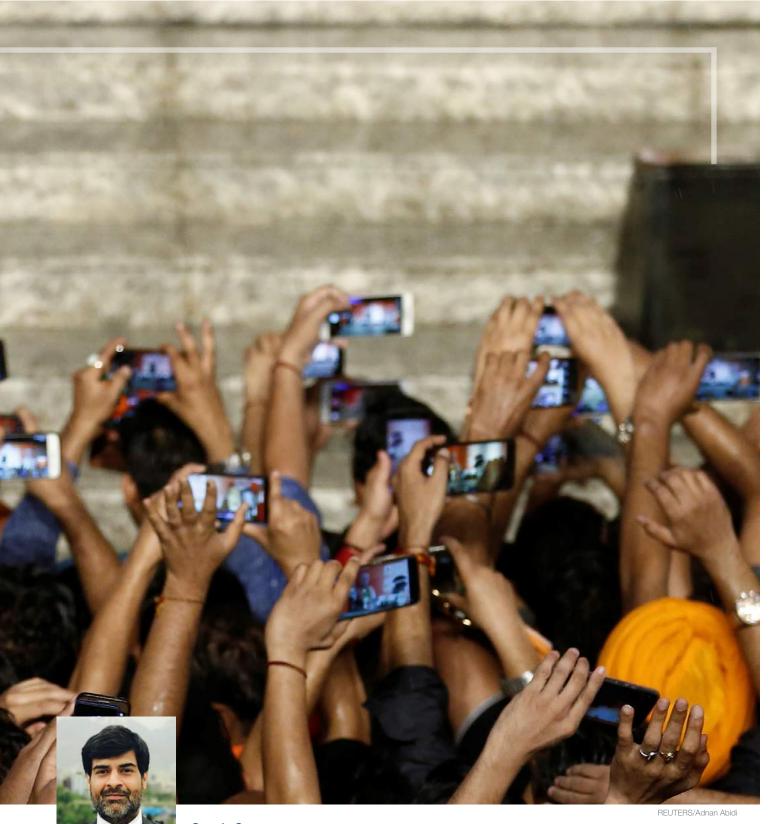


of the world after World War II is the result of multilateralism. It is widely acknowledged among countries that only by supporting the multilateral economic, political and security systems of the world can large and small countries realize their potentials and achieve common development. In order to safeguard multilateralism, all countries should work together to resist unilateralism and protectionism, support multilateral dialogue and respect international law.

Since the balance of global power and the process of globalization are in transition, some of the old institutional arrangements no longer conform to the new power pattern or the trend of economic and social development; some new norms are required in areas such as the global commons to guide the actors' practice. To renew existing institutions and to formulate new rules requires the consideration of all stakeholders' views, so as to make the new rules and norms representative and legitimate. Major powers should not act wilfully, or pursue unilateralism, but should play a positive and responsible role as models in promoting international law and order, making sure the institutions of global governance are fair, rational and effective.







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From the steam engine to penicillin to the atom bomb, the development and deployment of frontier technologies have always been intimately tied to geopolitical disruptions. Those disruptions often manifest as a race towards the acquisition of new technologies - or diplomatic elbowing to consolidate gains from scientific breakthroughs and keep these out of reach of

challengers. Tensions fuelled by digital technologies are the most recent manifestation of this historical trend. Yet, today's technologies, due to the breadth of their reach and the democratization of their ownership, are having a unique influence on the geopolitical landscape.

The differences of digital

Across the three previous industrial revolutions, innovations upended existing balance-of-power arrangements. The steam engine and gunpowder facilitated Europe's colonial ambitions. Using technology, Europe was able to marginalize the cultural relevance of Asia and Africa and contain them within the amorphous formulation of the "Third World". And the atom bomb helped end World War II, leading to the rise of the United States and creating space and demand for the international liberal order.

Whether it is the emerging contest over trade and technology between the United States and China, disputes between platforms and labour over the terms of employment or disagreement over the regimes managing international data flows that are carriers of

The development and deployment of frontier technologies have always been intimately tied to geopolitical disruptions

intelligence, value and wealth, the Fourth Industrial Revolution is similarly leading to a new period of contest and churn.

And, as in the past, a new world order will inevitably result.

Nevertheless, four crucial differences set apart digital technologies and the disruption they herald.

First, few other technologies have diffused so pervasively across all aspects of human life in the same manner as digitization. Most importantly, none created an external, mediated – or "virtual" – reality, in the way that digital

technologies have. As digital spaces mature, the "distance" between the real and the virtual is rapidly collapsing. The virtual world has real world consequences. The "#MeToo" mobilizations on social media catalysed agitations on the street. Digital campaigns across Europe, America and Asia influenced political outcomes of the realm. The 2019 events in Hong Kong SAR offer another example. While protesters deftly leveraged communications technologies to grow their (physical) protests, Beijing responded with heavy-handed influence operations on Western social media platforms like Twitter and Facebook, meant to advance its own message at home and abroad.

The distinction between biological, digital and virtual will blur further with advances in technologies like brain-machine interfaces and virtual reality. This will create new surface areas for the application of statecraft. Neat distinctions between the liberal international order, and its presumably illiberal counterpart, will be difficult to draw. After all, the virtual world – as the earlier examples show – has no rules of the road that separate the good from the bad.

Second, geopolitics in the 20th century (and earlier) was almost always concerned with the state. The state was the only unit capable of exercising influence and enforcing outcomes in international politics. Take the example of the Global Positioning System (GPS), which became the fulcrum of American power – thanks to its surveillance and intelligence-gathering capabilities – especially after the fall of the Berlin Wall. The US

government denied India access to GPS data that its military sought during the Kargil conflict in 1999. Digital technologies of a more recent vintage, however, have undermined the state's monopoly over the affairs of citizens and resources. Geopolitics in the digital era will increasingly be shaped by a plethora of actors, including large technology platforms, sub-state actors, non-state actors, digitally mobilized communities and even influential or vocal individuals.

Consider the following developments: content on social media has fuelled violence across Myanmar and Sri Lanka. Chinese companies are selling surveillance tools to governments across the developing word. Online propaganda created by the Islamic State fuelled bombings in Brussels in 2016. The #MeToo community created a global political movement, organically picking up allies without need for negotiations, backroom deals or diplomatic roundtables. These may appear disconnected events. However, they all point to the increasing relevance of non-state actors in influencing key events – events that may support or undermine state interests or international regimes.

Third, the scale and velocity of technology-driven events are unprecedented. A decade ago, the conversation about social media and communication technologies centred on their emancipatory potential, as in Iran's 2009 Green Revolution and the 2010-2012 Arab Spring. However, this narrative has shifted dramatically: digital technologies are seen as national security vulnerabilities, or even as tools for authoritarian governments to control and subdue large populations. Put differently, the multiple technologies and political processes that are converging have created an environment of unknown variables. It is nearly impossible to predict which technology, or combinations thereof, will produce what type of political consequence or security risk.

Finally, digital technologies have created a "platform planet". The aggregation of individual identities, mobilization of political voices, determinants of economic growth and provision of national security were earlier processes conducted under national regimes. Today, many of these processes have migrated to the digital and virtual arenas. The Westphalian state will soon co-exist and be implicated by the amorphous "cloud state", which exists beyond its geography. In this territory, domestic debates are not limited to citizens, and economic opportunities are dependent on the architecture of the cloud rather than trade regimes.

As a result, the "platform-ization" of statecraft is visible. In other words, states understand that geopolitical gain will come from the "globalization" of their own

Geopolitics in the digital era will increasingly be shaped by a plethora of actors

technological systems and attendant standards, products, rules, social norms and technical infrastructure. China's digital governance propositions, for instance, will vastly differ from those of the United States. It should surprise no one that the standard-setting Institute of Electrical and Electronics Engineers decided, in May

2019, to ban Huawei researchers from publishing in its journals. The move was in response to the US government's blacklisting of Huawei from its supply chains, and in deference to the European Union leveraging the General Data Protection Regulation to advance its own cyberspace rules. Other powers like Russia, India and Indonesia are exerting their own interests.

The consequence of these processes, however, has been the increased fragmentation of cyberspace. The platform states are likely to be less interoperable than ever before. The "decoupling" under way between the American and Chinese technological systems is only a precursor of what is likely to come. Other jurisdictions and geographies will be implicated in messy, complex ways that will not resemble a conventional struggle between "superpowers".

Managing the digital landscape

Collectively, these four trends will help shape the geopolitics of our era even as communities and countries struggle to negotiate a new relationship within national boundaries among the state, enterprises and citizens. Creating and managing global regimes for this new world will require states to anticipate risks to domestic institutions and processes, maintain economic interdependence, identify strategic vulnerabilities and national security challenges, and develop international norms and institutions.

Because the Fourth Industrial Revolution is unfolding as the global landscape becomes increasingly multipolar, no single state will possess the political capital to enforce its own interests. Just like the G20 was incubated to manage the global economy in a multipolar world, there is need for a new digital collective, perhaps a "D20" comprised of the largest digital economies and technology companies. It should function as a steering mechanism of sorts, managing the implications of digital technologies while more formal institutions mature.

The international community must also create mechanisms to facilitate "platform interoperability". Global stability has always been a function of interdependence – the economic and political matrix of relationships that states enter into. If the fragmentation of our global technological system continues, competition, even confrontation, and instability are inevitable. Arriving at a functional mechanism to allow national technological systems to talk to one another, despite technical, political or social differences, will be crucial.

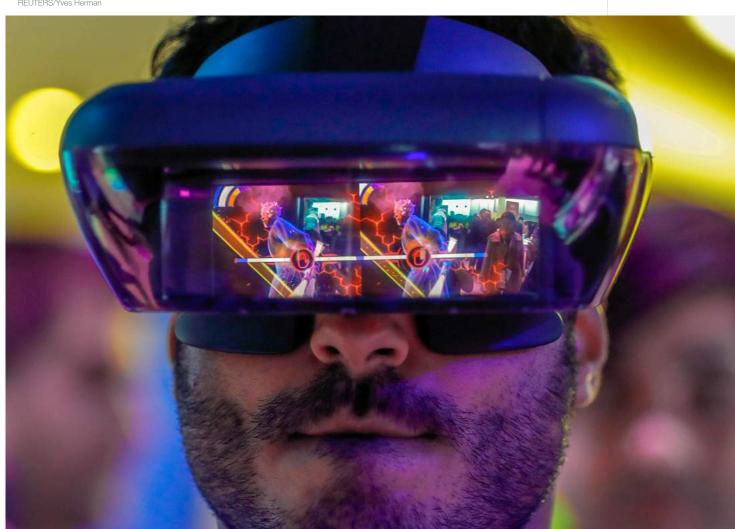
Informal and normative international rule-making processes must support both these imperatives. The treaty system functioned effectively in the bipolar and unipolar world

of the 20th century. It is no template for the future. In the short term, it is also unlikely that states will be able to achieve a convergence of interests on digital issues. Instead, the international community must work towards standardization in core economic and security operations, while allowing states the flexibility to manage the social and political consequences of emerging technologies domestically. This may be a suboptimal arrangement, but it is likely to be a more effective one.

There is need for a new digital collective, perhaps a "D20" comprised of the largest digital economies and technology companies

The "emerging technologies" discussed today are mostly those that have matured from internet-related breakthroughs in the late 20th century. The international community is only beginning to respond to the set of challenges they have raised. What lies ahead? The next few decades will see even more rapid advance in technologies, with some that place the human body at the frontier of innovation, and even a new arena of geopolitical contest. The intervening period will test the world's ability to learn the right lessons from the tensions that require resolution today – and apply them to build 21st-century arrangements.

REUTERS/Yves Herman



The Upcoming Technological Revolution on the Battlefield? Not So Fast



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The race to build next-generation technology is reshaping the contours of global relations. Nowhere is that more apparent than in the competition between the United States and China to become the world leader in artificial intelligence (Al), quantum computing and fifth generation wireless networks (5G). The prediction among many is that these technologies will bring about the next revolution in military affairs by improving the collection and analysis of data, encryption, the transfer of large amounts of information and the creation of autonomous weapons systems. However, this prediction may be flawed, as new technology will neither cause a revolution on the battlefield in the next 10 to 15 years nor will it necessarily ensure military victory for those who master it.

The argument about the limited effects of digital technology in a military context is based in part on the "power of three twos" formulated by Israeli Brigadier General (ret.) Isaac Gat. The first "two" is that the development and production of every new weapons system is twice as expensive as initially estimated. The second "two" is that innovation takes twice as long as expected to build operationally significant capabilities. And the final "two" is that new weapon systems tend to be only half as effective on the battlefield as predicted.

It is also worth noting that throughout history every measure of technological superiority on the battlefield has, sooner or later, been mitigated to a degree by countermeasures. For example, air power was once considered the decisive capability that would condemn

Every measure of technological superiority on the battlefield has, sooner or later, been mitigated to a degree by countermeasures armies and navies to irrelevance. General Giulio Douhet of Italy and General William Lendrum Mitchell of the United States were two of the most notable proponents of the importance of airpower in the early 20th century. But their expectations proved far beyond what planes were actually able to achieve in World War II. Modern-day radar and anti-aircraft weapons, as well as stand-off targeting (the launching of missiles from points far away from targeting areas), have only added more complications to the aviation equation. All this is to say that unquestioning

belief in the benefits of advanced weapons systems, without accounting for their exploitable vulnerabilities, ignores lessons from history. It also ignores other fundamental factors that often prove determinative in military conflict.

The human factor

While humans have slower processing speeds than supercomputers, our unique ability to think creatively, and even unpredictably, is highly instrumental in war. For example, creative thinking could allow humans to develop methods to fool Al-based systems and take advantage of their systematic computerized thought, inability to read situations, or other weaknesses. It is also worth remembering that the logic of war can be the opposite of the logic of everyday life; as a result, it may be especially difficult to train computers to understand when or how to act in a counter-intuitive manner. Because of these vulnerabilities and limitations, some advanced weaponry of the future will likely seek to harness computerized processing while maintaining human input for creativity, judgement and safety.

At the same time, because the nature of warfare is unlikely to change, strategy and doctrine will continue to play important roles on the battlefields of the future. Fundamental concepts, like nuclear deterrence resulting from mutually assured destruction and mutual conventional deterrence between states (the idea that modern war is usually not "worth it" because the destruction outweighs what can be achieved), are not going to disappear after AI enters



REUTERS/Aly Song

the battlefield. It is also safe to assume that having a more advanced military will do little to serve state interests if not employed effectively towards achieving political aims, nor will technological inferiority condemn one to failure. This truth is evident when comparing Russia's recent success in Syria with US strategic blunders in the Middle East: they were not

The logic of war can be the opposite of the logic of everyday life

the result of military superiority or inferiority but the ability to set achievable goals to advance the national interest and executing them at acceptable costs – under totally different rules of engagement.

Furthermore, despite the fact that some semi-autonomous weapons capable of selecting targets are already in use, many weapons will not be automated or made autonomous as soon as it is technologically possible to do so. For example, although lethal unmanned aerial vehicles are commonplace, "the U.S. Army has for years resisted the idea of arming unmanned ground vehicles", according to reporting. This is particularly surprising considering that over 90% of US casualties since 1945 have been ground forces, and robot replacements for infantry would likely save many lives. If automation could prevent soldiers from having to face the dangers of battle, why is it not used in every case? Some

of the many considerations for not using automated or autonomous weapons when it is possible to do so might be cost, effectiveness, survivability or ethical and legal concerns.

Does new technology pose a new threat?

Proponents of the argument that digital technology will fundamentally change warfare point to several potential scenarios:

- A paralysing cyberattack on power stations or command and control stations, often referred to as a "cyber Pearl Harbor".
- The deployment of autonomous weapons systems based on AI that are small, cheap, deadly, multifunctional, long-range and can "swarm" the traditional weapons platforms of the great powers (aircraft carriers, stealth planes, armoured divisions, special forces, and intelligence bases and command posts).
- The destruction of a given country's social fabric and the disruption of its political system through a media campaign that damages citizens' ability to discern what is real and what is not and radicalizes discourse, including through the use of "deep fakes" (the manipulation of video content to make it appear individuals said or did things they did not).

While these predictions are chilling on paper, there are several reasons they may not come to fruition.

Claims regarding the dangers posed by cyber due to its potency and low threshold for entry warrant scepticism. The capability to launch major cyberattacks requires the investment of tremendous resources that are not available to most state actors, let alone non-state actors; high-quality intelligence and perfect timing are indispensable for building and launching cyber weapons capable of exploiting vulnerabilities before cyber defenders can patch them up. If such weapons were indeed accessible to the public, there is little doubt that radical terrorist groups would have used them already. Further, when states do possess significant cyber capabilities, they are restrained to some degree by the other party's ability to respond (perhaps outside the cyber realm) – much the way they are constrained in the case of conventional weaponry. Finally, if cyber were indeed the "perfect weapon" as some believe, it would be difficult to explain why the Russians remain bogged down in Ukraine or why the US cannot defeat Iran despite overwhelming Russian and US cyber superiority in those confrontations.

As for autonomous swarms, despite what appear to have been overly optimistic expert predictions, scientists have yet to perfect the self-driving car for civilian purposes. That indicates that it could be some time before similar capabilities are harnessed to create platforms that are resilient against enemy fire, capable of launching effective strikes on enemy forces, and warrant enough confidence to be sent off to war. In addition, the idea

that these swarms can be cheap, lightweight, fast, smart, long-range and powerful ignores the basic reality that all developers have encountered – weapons have basic trade-offs dictated by the laws of physics, and this dilemma is all too familiar to those who have witnessed efforts to develop weapons like bunker busters that require a difficult combination of speed, power, range and cost-effectiveness.

Claims regarding the dangers posed by cyber due to its potency and low threshold for entry warrant scepticism

And, when it comes to psychological operations, such as misinformation campaigns meant to sow discord, democracies do suffer an inherent vulnerability because they allow for the free flow of information. However, by improving digital literacy among the population and developing measures to detect and halt online influence campaigns, it is possible to minimize the effect of these campaigns on the country's citizens as well as on democratic processes.

Preparing for a more digital world

So how should decision-makers prepare for the emergence of next generation technology? First, in light of the technological race and its security implications, it will be critical to maintain both a technological edge as well as a keen awareness of the research and development of adversaries. As for the former, despite the stated scepticism towards the claim that we are headed for a revolution in military affairs in the next decade or so, continued innovation is still important in that it can yield (limited) battlefield advantages. The latter will prove useful in informing the understanding of emerging threats and ultimately the development of countermeasures.

At the same time, the military ought to maintain and continue to upgrade existing, legacy warfighting platforms. The process of converting an innovative technology into a new weapons system is a long, expensive and uncertain process – and that is all before its gradual introduction and extended period of testing to determine whether it is adequately effective and resilient. It is also important to avoid placing too much faith in any one system even if it seems promising, as only integrating between branches, weapons and technologies can provide synergy. This approach may prove less efficient in terms of budget, production and training, but it provides a range of advantages and ensures that all systems do not suffer from the same weaknesses. The "secret" to successfully executing this approach is understanding what to phase in and what to phase out.

Second, when formulating policy on next generation technology, it is worth considering how these innovations will impact national security beyond their integration into weapons systems. For example, it is conceivable that the competition for leadership in these

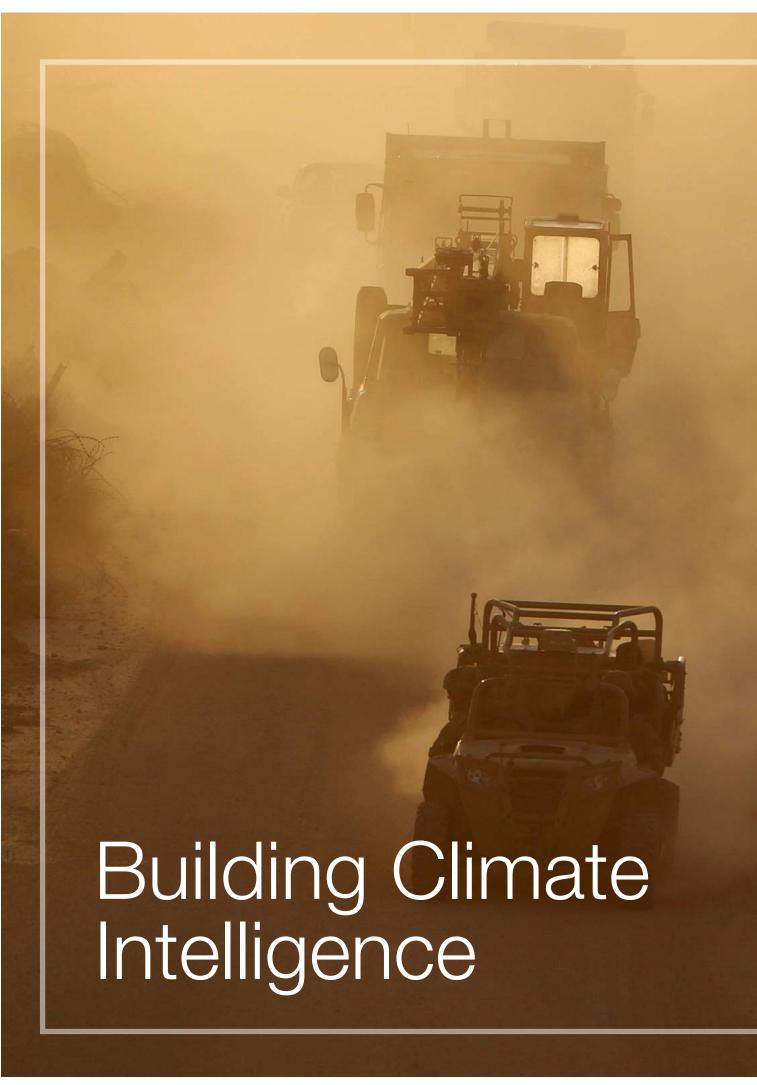
scientific fields could affect the global alliance system. Based on what we have seen thus far in regard to 5G, it appears that most countries will line up according to their interest in receiving the best product at the best price rather than traditional alliances or values.

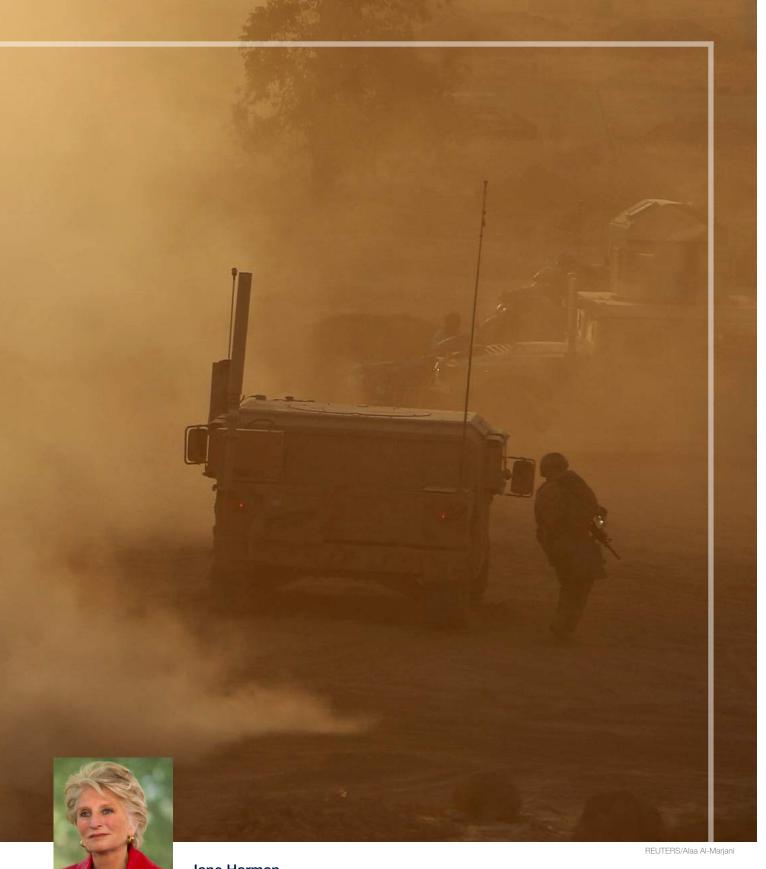
Finally, but certainly not least importantly by any metric, the non-technological dimensions of warfare will remain extremely important into the foreseeable future. One need look no further than the Middle East to find countries that fell victim to the false notion that billions of dollars in cutting-edge weaponry would guarantee security against impoverished adversaries with outdated arms. Of course, those systems proved to be of little use without qualified individuals to operate them within a strategic framework. Whatever future weapons might arise, investing resources to maintain high-quality human capital, up-to-date doctrines and a strategy designed to advance core interests will remain essential to achieving victory.

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The Sahel region of Africa is a microcosm of climate change: temperatures in this part of the world are rising nearly twice as fast as the rest of the planet, droughts and floods are severe, and farmland is shrinking. 1 Meanwhile,

populations are growing and terror groups are taking advantage of the vacuum left by governments that are unable to govern.

The dire national security consequences of climate change – in Africa and around the world – were noticeable even a decade ago. At the time, several members of the US House Permanent Select Committee on Intelligence urged the American intelligence community to include climate change as a threat to national security in the National Intelligence Estimate, the National Intelligence Council's *Global Trends* report and the Director of National Intelligence's annual *Worldwide Threat Assessment*.

Some, including the Republican ranking member of the committee at the time, disagreed with the idea of viewing climate change through the prism of national security.

Global warming is exacerbating refugee crises, straining weak governments and giving rise to new geopolitical conflicts

Yet, in 2007, the George W. Bush Administration proposed creating a combatant command for the African continent to counter potential threats – in part due to climate-spurred conflicts occurring in the Sahel. That same year, the US House of Representatives voted to direct intelligence agencies to assess the impact of climate change – a measure that was ultimately signed by the president.

The resulting assessment – the first-ever high-level intelligence community report on the issue – detailed how water scarcity, decreased agricultural productivity and infrastructure damage resulting from climate change and natural disasters would make nearly all other global challenges worse.

Twelve years later, most stakeholders agree that global warming is exacerbating refugee crises, straining weak governments and giving rise to new geopolitical conflicts. The global community has already seen how climate disasters like famine and drought can bolster the recruiting efforts of terrorist organizations.² This is why former US Department of Defense official Sherri Goodman calls climate change a "threat multiplier".³

Consequences of climate change

When it comes to the threat of climate change, the global consensus is growing, but unfortunately, so too is the challenge. Three recent, stark consequences of climate change bear this out.

First, according to the *Global Report on Internal Displacement 2019*, natural disasters displaced more people in the first half of 2019 than during the same period in any other year on record.⁴ Over the course of those six months, almost twice as many people – 7 million – left their homes due to extreme weather versus conflict and violence. And the first half of 2019 is not even the worst disaster season; the report estimates that people displaced by weather would total 22 million by that year's end.

Second, while glaciers melt and coastal cities deal with more frequent and fierce hurricanes and floods, in many other places water is harder and harder to come by. While experts at the Wilson Center's Environmental Change and Security Program say the doomsday prediction of "water wars" distracts from successful efforts at cooperation, regional conflict could yet occur. The European Commission's Joint Research Centre identified five "hotspot" water basins where there is a chance of "hydro-political risk" because of climate change and demographics. India, for instance, threatened in early 2019 to restrict water supplies to Pakistan after a suicide bombing in the disputed Kashmir region.

Water supplies are also made vulnerable by the trade in "virtual water" – the amount of water used in the production of goods – as drought-prone countries like China use fresh-water supplies to produce crops and textiles for sale abroad. In 2012, China's net exports to the United States used up 2.4 billion tons of water – enough to support 6.3 million households for a year. Even if the world can avoid a full-on water war, factors like virtual water are bound to play a growing role in trade conflicts to come.

The third consequence of climate change is military-related. In 2018, Hurricane Michael caused nearly \$5 billion in damages to Florida's Tyndall Air Force Base – home to two F-22 squadrons. The massive Ronald Reagan Ballistic Missile Defense Test Site, which monitors missile threats from North Korea, Russia and China from the Marshall Islands in the Pacific, may be flooded in a matter of decades. And as temperatures rise, military aircraft will not be able to carry as much or travel as far without refuelling. When it comes to personnel themselves, incidence of heatstroke among US troops has already gone up nearly 60% in a decade. All of this limits the United States' national security capacity, as it surely does for nations around the world.

Identifying geopolitical opportunities

Amid the myriad national security threats from climate change, it is also worth considering those areas in which there may be opportunities for stakeholders.

As the ice caps melt in the Arctic, the new Northern Sea Route is reducing the journey from East Asia to Europe by 10 to 15 days, or about 5,000 miles. ¹⁰ The waterway is both an opportunity and a potential threat to US security and, as one of eight Arctic nations, the United States should play an active role in developing its own ports and energy sources. Doing so would spur economic development, safeguard our national security and ensure that the Arctic remains a centre of cooperation, not confrontation.

There is no time to waste. Russia and China – the latter of which declared itself a "near-Arctic state" in 2018 – are already full steam ahead on monetizing the Arctic to their

own benefit. Russia has a fleet of over 50 icebreakers – the United States has just two – and requires vessels to pay a toll for escort through the Northern Sea Route. China plans to expand its investment in the Arctic to further its "Polar Silk Road," linking transportation infrastructure from Shanghai to Hamburg, and eventually to administer the even shorter Transpolar Sea Route across the top of the world. China already owns a nearly 30% stake in Yamal LNG, a major Russian energy plant in the Arctic.¹¹

Along with new shipping routes, climate change has created new markets for clean energy. Five years ago, solar and wind energy were cheaper than coal and gas in just 1% of the world. Today, they are the cheapest energy sources in two-thirds of the world, according to research from Bloomberg New Energy Finance, and that number continues to grow. The US Bureau of Labor Statistics reports that the two fastest-growing occupations in the country are solar and wind energy technicians.

And while President Donald Trump has rolled back environmental regulations and has sought to bar California from setting its own climate rules, the private sector in the United States and around the world has doubled down on green energy. Over 200 of the largest global companies have committed to using 100% renewable energy by 2050.¹⁴

The winner of the green technology race will find tremendous economic and geopolitical rewards at the finish line. Here, too, China has a head start; a report by the Global

The winner of the green technology race will find tremendous economic and geopolitical rewards at the finish line Commission on the Geopolitics of Energy Transformation noted that China is the world's top producer, exporter and installer of wind turbines, solar panels, electric vehicles and batteries. In an indication of China's aggressive investment in green research, the country also holds approximately 30% of all renewable energy patents, compared with the United States' 20% and a negligible amount in oil-rich countries like Russia and Saudi Arabia. New technology – along with vast reserves of lithium and other resources that power the technology – will strengthen China's influence in energy markets

while drastically weakening that of oil-exporting countries. If the transition is poorly managed, it will be sure to stoke international tensions.

Fortunately, there is now also more global enthusiasm than ever about tackling climate change. First-hand experience of natural disasters, effective education on climate change, and activists like Greta Thunberg, the Swedish girl who started a worldwide school strike movement, have finally lit a spark.

In the United States, a recent poll showed 79% of adults and 86% of teenagers believe human activity causes climate change, and respondents disapproved of President Trump's handling of climate change more than any other policy area. At the 2019 UN Climate Summit in New York, 59 countries said they would boost their climate plans by 2021 and 66 will reach carbon neutrality by 2050. Even countries like North Korea pledged to cut greenhouse gas emissions each year in accordance with the Paris Agreement on climate change. And President Trump's withdrawal from the Paris Agreement does not take effect until Election Day in 2020.

In the interest of national security, the United States should line up on the right side of environmental efforts

Attitudes in Congress are also changing, a decade after the push to assess the impact of climate change on national security. The recently departed Director of National Intelligence, Dan Coats, previously downplayed the dangers of global warming as a member of Congress. The But in his intelligence role from 2017 to 2019, he emerged as a climate champion, recognizing climate change as a national security threat in all three Worldwide Threat Assessments he produced. Said Coats in written testimony submitted to the Senate Intelligence Committee in 2019, "Global environmental and ecological degradation, as well as climate change, are likely to fuel competition for resources, economic distress, and social discontent." 18

Coats got it right. Simmering conflicts, exacerbated by global warming, will make unstable regions even more dangerous. In the interest of national security, the United States should line up on the right side of environmental efforts.

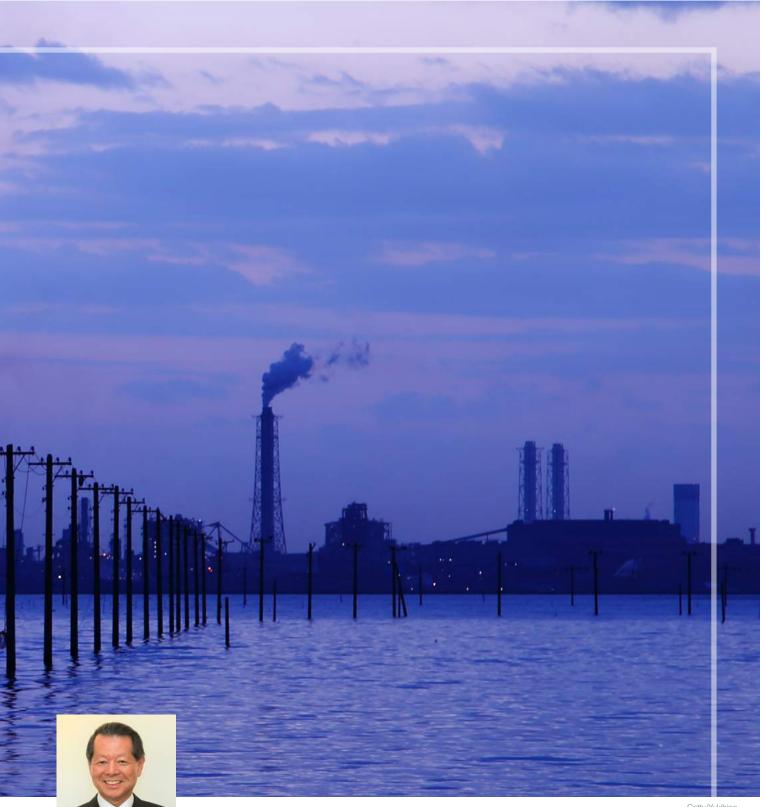
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By 2050, China, India and the United States are projected to emerge as leading global powers. The three will boast the world's largest national economies by gross domestic product (GDP), if measured in terms of purchasing power parity. India is expected to surpass the United States in terms of this metric by 2040 – a milestone indicating the sustained, and indeed growing, importance of the IndoPacific region within the world economy. The shifting economic picture means that different potential scenarios for the future international order will emerge that involve these three countries: the possibility of a system pitting China against a US and Indian partnership exists, as does the potential of an order in which the three separately compete against one another.

While GDP is an indicator often used, population is a more fundamental metric by which to predict the power balance between states.³ Here, the United States can expect to occupy a relatively favourable position in coming decades, whereas prospects for China appear grim.⁴ The US Census Bureau estimates that China's population will peak in less than a decade.⁵ By 2050, China is predicted to lose its position as the world's most populous nation to India.⁶ China's population could decrease from 2019 to 2050 by approximately 31.4 million – a reduction of 2.2%.⁷ At the same time, Beijing will also have to cope with an imbalanced ratio of men to women within China that may lead an excess of millions of men devoid of opportunities for marriage to cause dangerous unrest within society.⁸

The picture for Japan and the European Union is comparatively dim, with both experiencing long-term decreases in numbers of working-age individuals. As a result, the United States – with a population predicted to grow to approximately 380 million by 2040 – will be an increasingly valuable security asset to greying partners. Still, the United States, whose comparatively large population and skilled labour force were key to its establishment following World War II as a leading world power, will find itself behind India, China and Nigeria in terms of population in 2050.

The uncertain geopolitical implications of climate change

Demographic trends may be fairly predictable. Trends related to climate change and its effects, however, are unpredictable in a way that will add another significant layer of complexity to the development of the future geopolitical balance. For example, Gulf states like Saudi Arabia will suffer severe consequences from rising global temperatures as demand for oil declines. Under one scenario, Saudi Arabia's economy could shrink by 10% by 2048 – a situation that could lead to domestic upheaval or intensified regional conflict,

Climate change and its effects, however, are unpredictable in a way that will add another significant layer of complexity to the development of the future geopolitical balance

as public spending is the driver of domestic and regional growth.¹³ In the midst of such developments, the United States may rise to become a more prominent exporter of oil or natural gas.¹⁴ But even if the United States looks to take on such a role, climate change has the potential to force governments to depend less on fossil fuels and pursue heavier use of alternative sources of energy.¹⁵ The development of such technology in countries like China, which as of 2016 boasted more than 150,000 patents related to renewable energy, may therefore ultimately position it to be an energy leader.¹⁶

Another area of geopolitical uncertainty relates to water. Competition for water will intensify later in the

century, with countries rushing to obtain enough of the resource for their citizens and for stable economic development. Asia will experience such competition as the Himalayas and surrounding areas become battlegrounds in collecting water. Control of water, along with the construction of dams, will raise tensions in the region significantly and could lead to open conflict. Such conflict may be diffuse within Asia, spanning from Himalayan countries, such as China, India and Pakistan, to states further away from this mountain range, including Myanmar and Vietnam. Indeed, water may become as coveted as materials such as fossil fuels are now, painting a dim picture for potential international cooperation in the future.¹⁷

One of the regions in which climate change may have the greatest geopolitical consequences in the near future is the Arctic. Evidence indicates that sea ice levels across the Arctic have been decreasing since 1979. Such changes are having geopolitical implications: in 2018, a total of 879 ships passed through waters that are within the bounds of the so-called Polar Code, a collection of regulations related to safety and the environment. The figure represented an almost 60% increase from the total recorded six years previously. Increases in maritime traffic in the Arctic could greatly benefit countries like Russia, whose Yamal Peninsula has been estimated to house the planet's largest reserves of natural gas. Tankers capable of cutting through ice already

transport gas from Russia to both Asia and Europe, and more of these ships are being built. Canada and the United States may also be able to transport larger quantities of materials if diminishing amounts of sea ice allow certain ports to move more cargo for more time each year.²⁰ China and Russia, for their part, have also expressed interest in exploiting materials like metals and fossil fuels in the Arctic while ice disappears, creating the potential for heightened competition among states

Competition for water will intensify later in the century

in the region.²¹ China has in the past considered developing a so-called "Polar Silk Road" for trade via the North Atlantic, and suggested constructing airports, as well as mining infrastructure, on Greenland before ultimately abandoning these plans.²² A rise in trade via the Arctic could tip the geopolitical scale in favour of those countries with greater access to the region, creating new economic opportunities for these states.²³

While trade is certainly an important factor to consider when predicting the relative advantages that countries surrounding the Arctic may be able to exploit in the future, modified security considerations related to this region should also be assessed. The United States has already taken action to strengthen its position within the Arctic region as ice melts and China and Russia engage in increasingly assertive behaviour in these northern areas. As part of this strategy, Washington has increased the number of fighter jets it maintains in Alaska, strengthened cooperation with the armed forces of Nordic states, and worked on plans for a new icebreaker meant for use by the Coast Guard.²⁴ If similar strategic decision-making regarding the Arctic continues into the future, the

northern areas of the globe, despite their relative remoteness, could develop into a hotbed of competition between the world's most powerful states.²⁵

Possibilities of cooperation

There is the possibility of cooperation in the northern regions of the globe. The Sea of Okhotsk – a waterway for ships travelling between North-East Asia and the Arctic Ocean – has in the past been expected to become of growing strategic value for not only Russia but Japan as well.²⁶ The rising value of this body of water, as well as of the Sea of Japan, could precipitate an age of strategic accommodation between these neighbouring

The northern areas of the globe, despite their relative remoteness, could develop into a hotbed of competition

countries. Such an improvement in relations, if realized, could create a milieu for cooperation and even a mutually acceptable solution to the Northern Territories dispute between Moscow and Tokyo (a dispute over four islands in the Kuril Islands archipelago), which would be a major geopolitical development.

Climate change will not act as the only determinant of future geopolitical conditions. Varying levels of

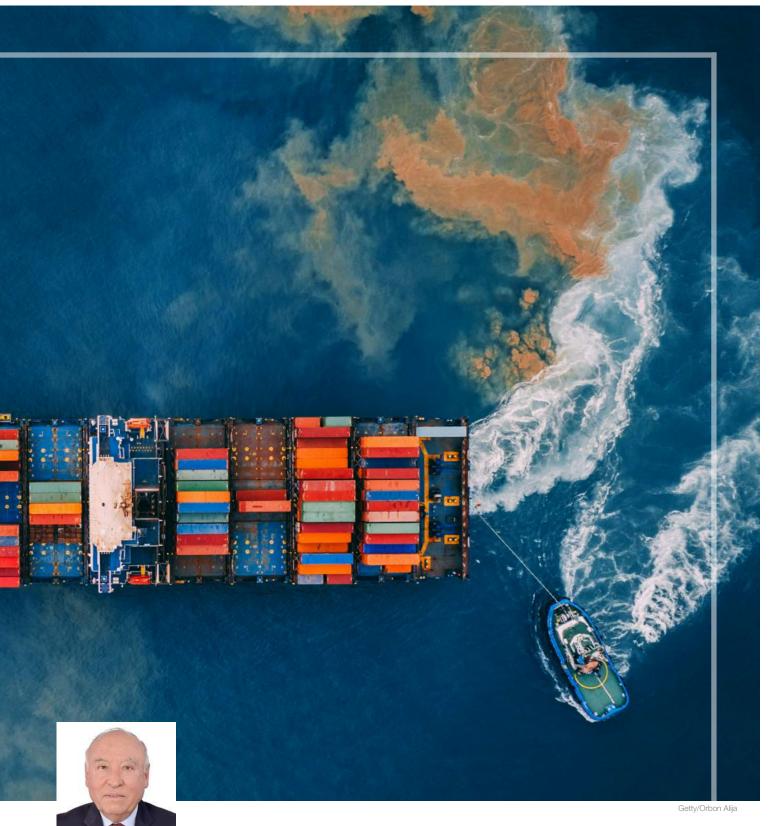
domestic social cohesion and political stability, for example, will impact states' relative strength on the global stage, determining also the degree of resilience with which nations are able to cope with serious challenges brought on by climate change. Governments will find themselves forced to take unprecedented action when presented with the stark realities confronting their states, and solutions embracing innovations in technology and governance must be sought.

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The world is confronting a dynamic and accelerated process of change. The multilateral architecture that was designed and successfully implemented after World War II is being questioned. The rise of actors like China and several developing countries has changed the balance of power in recent years. Globalization is under attack even by leaders of countries that were the founders, promoters and defenders of open markets, free trade, regional

integration and multilateralism. Renewed nationalism and regional fragmentation are prevalent trends in several parts of the world. International relations are moving from a cooperative spirit to a competitive one, particularly in the trade area. In this environment, the World Trade Organization and other multilateral institutions that were created to manage trade relations are facing difficulties to operate effectively.

Tensions between the United States and China will have a negative impact on the global economy and, more specifically, on developing countries. Yet, despite these immediate challenges and despite any short-term opportunities that these developments may present, Latin America should take a long-term perspective. It should focus on the fundamentals of strengthening regional integration and identifying avenues for growing intra-regional and global trade.

Latin America in the middle-income trap

Latin America, considered the world's most prosperous developing region as early as in the first half of the 20th century, has been caught for the last several decades in the middle-income trap – the phenomenon of developing economies getting stuck at a certain level of income. In fact, the economic trend is not encouraging; the region has moved from periods of macroeconomic stability, reasonable rates of growth and positive social indicators, to periods of fiscal and monetary imbalances, debt problems and inflation.²

The region's economic challenges are clear when examining global economic data:

- Since 1960, the region has stagnated at a 5-6% range of total global economic output.3
- Per capita income compared to the United States has remained in the 25-27% range for decades and has diminished considerably as compared to the more dynamic emerging economies in Asia.⁴
- The participation of Latin America in world trade has diminished from 11% in the early 1980s to 5.5% in 2014.⁵
- Notwithstanding a substantial reduction in the level of poverty over the last two decades, the region continues to be the most unequal in the world.⁶

Part of the reason for Latin America's erratic performance and stagnation since the late 1970s is the region's high dependence on primary commodities and low-technology goods for export, productivity and competitiveness gaps and insufficient investment and savings levels. Complacency and the belief that super cycles of high commodity prices and temporary access to international flows of capital at low interest rates would last forever have also been responsible for Latin American's loss of relative importance compared to emerging Asia and other dynamic economies in the world.

Tensions between the United States and China will have a negative impact on the global economy Another factor has been the presence of too many regional platforms, sponsored by different governments with diverse and changing ideological and geopolitical positions, which has prevented Latin America from consolidating a coherent regional economic identity. Furthermore, countries have tended to prioritize their relationship with the United States, China and other

extra-regional partners in response to the demand for their traditional exports. As part of this trend, new pragmatic alliances have been established in recent years, such as the Pacific Alliance between Chile, Colombia, Mexico and Peru. Also, a good number of free trade agreements have been signed and are being negotiated between Latin American countries and nations around the world. All these factors are important reasons for the low level of intra-regional trade in Latin America (15.5%), one of the lowest in the world.⁸

Trade as a catalyst to accelerate development

For Latin America to thrive, it will need to accelerate the transition towards a higher value-added exports paradigm. This implies an effective process of productive transformation that would expand natural resource manufactures and other medium and high-technology exports not only to traditional markets but also to new destinations.

At the same time, intra-regional trade should be expanded and serve as a catalytic vehicle to support small and medium-sized enterprises that produce low and medium technology goods and services, and to insert the region in value chains with a global perspective.

To be successful, the region should prioritize the following:

Technology and digital platforms

Investment in the expansion and modernization of information and communications technologies and digital platforms is a crucial component of a successful strategy. As expressed by Jeffrey Sachs in a recent round-table discussion on global affairs, the digital revolution will require a new development pathway that is not dependent on the export of labour-intensive manufactures.⁹

2. Infrastructure and logistics

Actions should be taken to achieve higher levels of investment in infrastructure and logistics, since the region invests around 3% of GDP, compared to more than 7% in emerging Asia. Given the magnitude of financing required, governments should adopt stable rules of the game for the mobilization of internal and external savings, especially from institutional investors. Attracting foreign investment and establishing public-private partnerships and special purpose vehicles should be an integral part of this agenda.

3. Trade facilitation and soft infrastructure components

Improving trade facilitation and border management components is critical, as is reducing non-tariff barriers to reduce transport costs. Included in this group are import licensing, price controls, import subsidies and technical measures related to product standards and quality, as well as sanitary and phytosanitary specifications.

4. Education and skills

Since the digital revolution will require a new development pathway that is not as dependent on the production of labour-intensive products and services for domestic supply and export, an important challenge will be to find alternative activities that could absorb contingent and displaced workers. Consolidating an efficient labour force with appropriate skills, abilities and qualifications to work in the advanced technological and digital environment of the future is key. Success in this effort will allow countries to better respond to the increased demand in global value chains for more knowledge intensive and highly skilled labour.

5. External financing foreign direct investment

Access to external financing (i.e. debt, equity and other instruments from multilateral and bilateral development agencies, commercial banks, capital markets and FDI) is of the utmost importance to close the gap that separates total investment needs from total national savings. Beyond providing capital and financial resources, FDI should be seen as an important factor for the transfer of technology, the improvement of managerial practices and the diversification of exports.

6. Climate change and the environment

Measuring their impact on climate change and the environment should be standard practice for all investments, technological changes, productive processes and trade. The environment must be at the centre of strategy and policy design, as well as of project preparation, evaluation and implementation.



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Latin America in the new geopolitical landscape

For Latin America to regain the relative economic and geopolitical relevance it enjoyed a few decades ago, countries in the region need to account for what may be a new multipolar global power structure, in which economic, social and political interactions are highly influenced by the competing and even confrontational behaviour of the United States and China and by the dynamics of the Fourth Industrial Revolution. But the fact that the trade confrontation between the United States and China opens, in the short run, an opportunity for South America to replace US exports of natural resource commodities to China and low and medium technology Chinese manufactures to the United States does not mean that the long-term trade strategy, based on productive transformation and value-added exports, should be postponed.

Latin America should also redefine its existing regional integration and cooperation principles and institutional mechanisms in line with the geopolitical and economic realities of the new epoch. The renewed process should be viewed not only as an instrument to increase intra-regional trade, but as a vehicle to insert the region in global value chains and to diversify trading partners. In this process, efforts should be made to strengthen relations beyond its traditional partners and its already growing ties with China to India, Korea and other dynamic emerging economies of the world.

Finally, the region should relaunch a regional integration process to construct a common regional position on trade and other multilateral issues. This is a necessary condition for Latin America to have a relevant voice in global negotiations on trade, climate change, the financing of development, multilateralism and other relevant areas.



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- ⁵ Claudio M. Loser, "Where is Latin America Going: Developments and MediumTerm Prospects", Emerging Markets Forum, 20–22 October 2019, http://www.emergingmarketsforum.org/wp-content/uploads/2019/10/Latin-America-October-2019-Web. pdf; accessed 31 October 2019; Internal calculations based on Centennial Group projections and International Monetary Fund, "World Economic Outlook", April 2016.
- ⁶ The average Gini coefficient was 0.47 in 2014. United Nations Economic Commission for Latin America and the Caribbean, "Latin American Economic Outlook 2019: Development in Transition", October 2019, https://www.cepal.org/en/publications/44515-latin-american-economic-outlook-2019-development-transition, accessed 31 October 2019.
- ⁷ According to the following indicators: (1) Export concentration: with the exception of Mexico, with a relatively low participation of commodities in exports (11%), the rest of the region is characterized by a high concentration of exports in commodities (34%), particularly in South America (55%). These levels of concentration expose the region's countries to recurrent volatility in commodity prices, with the corresponding negative impact on macroeconomic and development indicators. (2) Productivity: productivity growth in Latin America has been low in recent decades compared to all emerging and developing regions of the world. According to the Centennial Group, total-factor productivity (TPF) average growth in the 2000-2018 period was only 0.33% for Latin America, compared to 2.93% and 4.0% in emerging and developing countries and emerging Asia, respectively. (3) Competitiveness: the World Economic Forum Global Competitiveness Report 2018 (with Global Competitiveness Index 4.0 2018 rankings) indicates that the 19 Latin American countries included in the survey ranked, on average, 82nd among 147 countries. Furthermore, in the 12 pillars assessing competitiveness, out of a possible maximum 100% performance index for each pillar, the average for Latin America was 56%. (4) Savings and investment ratios: low savings and investment ratios characterize the region. Average total national savings is 19% of GDP, compared to 39% in emerging Asia. At the same time, total investment in the region is, on average, 20% of GDP, compared to 37% in emerging Asia. It is estimated that total investment ratios of 25% or higher are required to achieve annual growth rates above 5% in the next 30 years, if the region wants to converge, in terms of per capita income, with the advanced economies. Internal calculations based on data and statistics of the World Bank, the World Economic Forum, the Economic Commission for Latin America and the Caribbean and Centennial Latin America.
- ⁸ United Nations International Trade and Integration of the Economic Commission for Latin America and the Caribbean, "International Trade Outlook for Latin America and the Caribbean: Adverse Global Conditions Leave the Region Lagging Further Behind", 2019.
- ⁹ Jeffrey Sachs, "Some Brief Reflections on Digital Technologies and Economic Development", *Ethics & International Affairs*, vol. 33, no. 2, 2019, pp. 159-167.

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