

**Entropy in Geopolitics**  
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A hundred and fifty years ago, a German physicist derived the concept of “entropy” from the second law of thermodynamics. Since then, entropy has stood for the idea that everything in the universe eventually moves from order to disorder, from structure to formlessness, and from predictability to uncertainty. Entropy is the measurement of that change. It is also the most fitting description of current trends in geopolitics and geoeconomics.

The strategic stabilities of the old order are all in various stages of decay. Some in my country and abroad had come to view the United States as the next best thing to a world government and global policeman. But, even before tweets replaced policy papers in Washington, this conception had become preposterous. The established presumptions no longer operate.

Washington led the way in creating global institutions after World War II. It fathered the United Nations, the International Monetary Fund and World Bank, the World Trade Organization, and the G-7, among others. But these institutions have ceased to rise effectively to the challenges before them. The world increasingly ignores them, bypasses them, or seeks to replace them with new deals struck at the sub-global or regional level. New organizations, banks, and coalitions are emerging to address new needs.

Think of the New Development Bank, the Asian Infrastructure Investment Bank, the various Silk Road funds, China's initiative to connect everything on and adjacent to the Eurasian landmass, the proposed Free Trade Area of the Asia-Pacific, the G-20, and the Pacific Alliance. More often than not, institutional innovation has been taking place despite the United States, which has diminished credibility and seems to have run out of ideas for global governance, the money

to fund it, and the will to lead it. President Trump's bilateral and transactional approach to foreign policy is dealing a final, fatal blow to the United States as the global rule-maker.

The European Union, whose coalescence was a major contributor to world order, is now shrinking rather than expanding. According to President Trump, it could even disappear. Britain has set itself adrift. Turkey and Russia have ended centuries of effort to redefine themselves as "European." Turkey has given up on the EU accession process and is affirming a non-European, authoritarian, and Islamist identity. Russia now emphasizes its civilizational distinctiveness. Ukraine continues to wobble in place. War in Europe is no longer unthinkable.

Ankara and Moscow have begun to work together with Tehran to pick up the pieces of a Middle Eastern order shattered by ill-conceived U.S. interventions and their aftermath. The region is further shaken by Saudi-Iranian rivalry. (Iran appears to be coming out ahead.) Former US client states (Israel, Egypt, Iraq, Saudi Arabia) are only somewhat less estranged from the United States than Iran has been. The Middle East is less pivotal to a global economy in which concerns about peak demand --not peak oil -- predominate. But the rise and spread of transnational Islamist terrorism has put the region at the center of worldwide anxiety about homeland security.

After a few bad centuries, Asia is back as the global center of economic gravity. It is home to three of the world's great economic powers – China, India, and Japan – as well as formidably competitive societies like south Korea and a flourishing group of Southeast Asian countries. It is also full of intensifying rivalries and potentially explosive confrontations, including some that pit China against the United States. China is fast becoming a technology leader. India is now the largest destination in the world for foreign direct investment. Despite its amazing earlier success, Japan remains economically becalmed. Korea is in political distress. The Association of Southeast Nations is increasingly divided. The sound of jet engines and gas turbines in the East and South China Seas foretells the possibility of catastrophic armed conflict between major powers that could erase decades of socioeconomic progress.

Meanwhile, Africa is on the rise. It has some of the world's fastest growing economies. What it blessedly does not yet have is a direct role in the escalating rivalry between the great powers of America, Asia, and Europe.

This brings me to where I stand – *en México, una ciudad, una cultura, y un país que llegué a admirar hace más de medio siglo, cuando estudié aquí en la UNAM.* This is a city, a culture, and a country for which I have had special regard since I studied here at the national university fifty-six years ago. No nation matters more to the United States than this one, and none is so sadly misunderstood or neglected. *México está a punto de descubrir que tiene muchos más amigos y simpatizantes en el extranjero de lo que sabía. ¡Afortunado México! Tan cerca de los dioses del comercio y tan lejos del pantano en Washington.*

Like the president of this country, I do not believe in walls. As a great poet<sup>1</sup> from Vermont once urged:

“Before I built a wall I'd ask to know  
What I was walling in or walling out,  
And to whom I was like to give offence.  
Something there is that doesn't love a wall,  
That wants it down.”

*"Antes de levantarlo, yo quisiera  
saber a quién incluyo, a quién excluyo  
a quién, quizás, ofendo con el muro.  
Algo hay que no es amigo de los muros,  
que quiere derrumbarlos."*

But some sort of wall on the border is the opening gambit of the Deal-maker-in-Chief who has

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<sup>1</sup>Robert Frost



just taken up residence in the White House. This should be treated as a proposal for more effective border control. That is something that is in the interest of both Mexico and the United States. In diplomacy, the best answer to an unwelcome proposition is to reframe it so that both sides can gain. There is a bargain to be struck, perhaps including commitments from the United States to finally do something about the uncontrolled demand for illegal narcotics and traffic in guns that have been so disastrous for domestic tranquility in Mexico.

There are, of course, broader questions raised by the surge of populist, protectionist politics in the United States and some other industrialized democracies. Mexico is not alone in its concern about the implications of these policies for trade, investment, and the global energy economy. Neither the United States nor the world can afford to dismantle global supply chains. There is a limit to how many trade wars any country can manage at once. If the United States takes on the world, the world is likely to unite in pushing back. Mexico will have many allies.

I don't want to take any more time from my fellow panelists. I was asked to speak about geopolitics. But, since this conference is about the transformation of oil and gas markets, let me offer a parting observation about energy in the new world disorder. As is the case with many other issues these days, no one is in charge. Saudi Arabia is now the swing producer for OPEC but not for the world. The role of a global swing producer has fallen to US frackers, a motley group driven by market forces rather than policy. They can and will rapidly increase or reduce production in response to shifts in demand. Barring civil strife and terrorist attacks that prevent oil from coming to market, this heralds lessened price volatility in future.

To conclude: Increased entropy in geopolitics means that the world will either return to respect for the UN Charter, international law, and the sovereignty of nations or anarchy will allow might to make right in world affairs. In either case, middle-ranking powers, like Mexico, have no choice but to seek greater independence, to maneuver internationally, to seek new allies, and to play a larger role in global and regional governance. We are entering an era in which regional, not global balances will clearly be the dominant feature of the international state system.



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The last century was claimed by the United States. My country is voluntarily forfeiting its claim to this one. The 21st century is now up for grabs.