

OVERTURE

Faulty Maps, Distorted Worldviews: Challenging Perceptions of Asia in the World

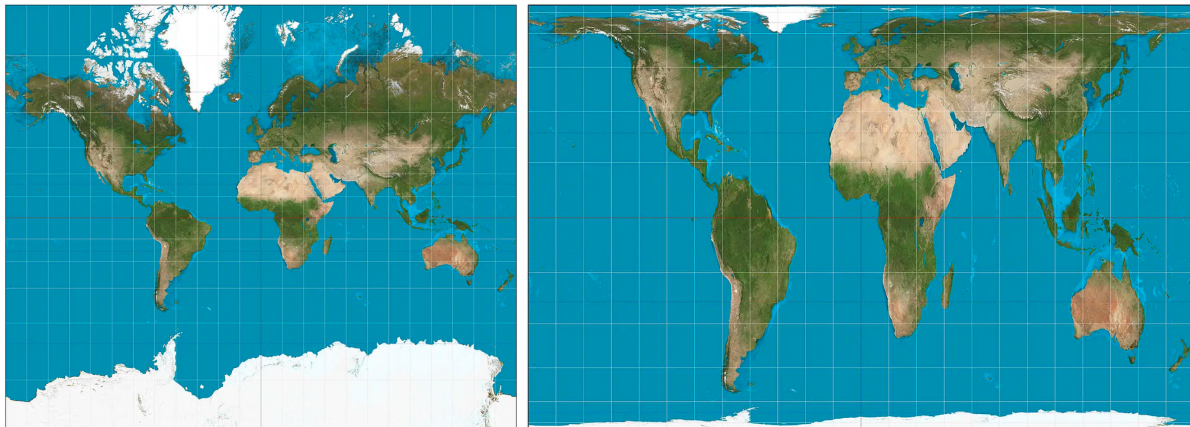
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In a now-famous episode of the TV series *The West Wing*, fictional White House Press Secretary C.J. Cregg meets with an organization called the Cartographers for Social Equality. The cartographers ask that the president replace all maps shown in U.S. public schools. Quite understandably Cregg becomes confused, asking them, “Why are we changing maps?” The cartographers reveal to her a shocking truth: the maps that have formed our views on the world around us are erroneous.

The map that most of us are familiar with is called the Mercator projection. Originally formulated in 1569 by Flemish geographer Gerardus Mercator (1512-1594), this map became the standard for navigation due to its grid of right angles, allowing ship captains to navigate easily across the ocean. Today, more than four centuries after his cartographic Mercator’s world map is taught to students in most U.S. classrooms and is even used as the basis for the projection featured on Google Maps. However, what was once a feat of cartography that allowed for navigational ease across vast nautical distances is now unsuitable for modern use. The projection is wildly inaccurate in its representation of land mass, artificially inflating the size of objects the further away they are from the equator. It suggests, for example, that Greenland is roughly the same size as the entire continent of Africa, when Africa is fourteen times larger than Greenland. Brazil appears to be rather insignificant compared to North America, yet in reality it is larger than the entire contiguous United States and almost as large as Canada. Alaska seems enormous compared to most countries across the world, when in reality the state is about as large as Libya.

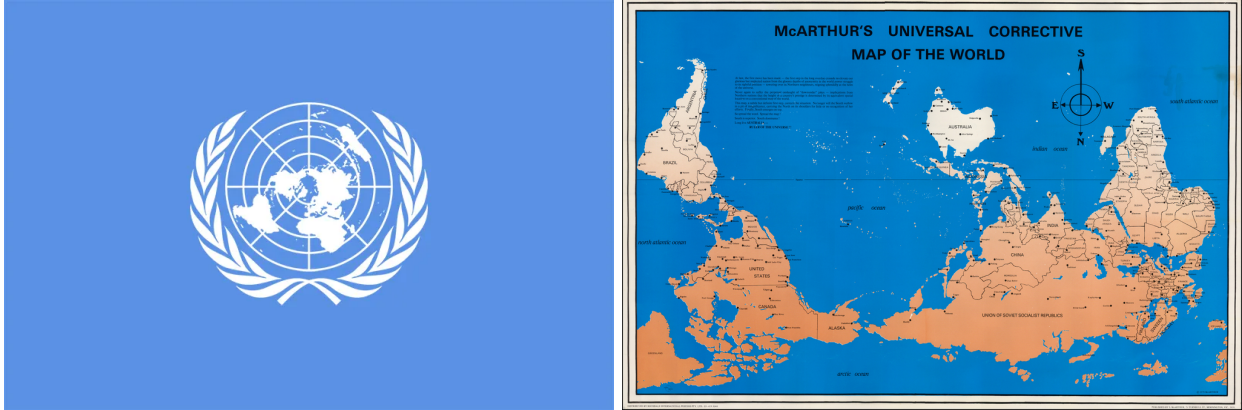
Over the last few decades, there has been increasing pressure to leave the Mercator map in the past in favor of widespread adoption of a different projection. For example, the cartographers who appear in *The West Wing* advocate the adoption of the Gall-Peters map by U.S. public schools. (The projection was originally formulated by Scottish clergyman James Gall in 1855, and a near-identical projection was independently created by German historian Arno Peters in 1967.) The Boston Public Schools system did exactly this in 2017, becoming the first public school district to officially replace all classroom Mercator maps with the Gall-Peters map. This projection preserves countries' proportional accuracy while still maintaining parallel east-west lines that intersect north-south lines at right angles, thus presenting viewers with a more realistic view of the world.

However, the Gall-Peters projection contains its own problems as well. While it is more accurate in terms of area, the projection does not preserve shape the way that the Mercator map does. Landmasses such as Greenland are distorted by the Gall-Peters projection. In fact, every single map in existence is incorrect in some way. Whenever cartographers try to transfer a sphere to a two-dimensional plane (a "projection"), some aspect of the original three-dimensional model is lost. In the case of the Mercator projection, the accurate relative area of the continents is lost. For the Gall-Peters projection, it is integrity of shape.



The Mercator projection map, widely used in the United States, is shown on the left. The Gall-Peters projection, which preserves proportional accuracy, is shown on the right. For example, the true relative size of the African continent is depicted in the Gall-Peters map (Source: Business Insider).

Many more projections exist beyond the Mercator and Gall-Peters. For example, the National Geographic Society utilizes the Winkel-Tripel projection, a projection that aims to minimize three kinds of distortion (“tripel” is the German word for triple): area, direction, and distance. However, this projection does not preserve right angle intersections of parallel east-west and north-south lines. Other projections challenge our perceptions of the world in much more radical ways. Azimuth equidistant projections preserve both distance and direction from the central point, which is often one of the poles as opposed to our normal central point of Western Europe. This creates an interesting view of looking “down” on Earth from above the North Pole or “up” on Earth from the South Pole. While many may view these projections as odd, they are no less correct than our commonly-used Mercator maps. In fact, an azimuthal equidistant polar projection – centering on the North Pole – adorns the official emblem of the United Nations. Other projections that challenge modern Western thinking include the “Down Under” map, an example of a South-up projection. Many would perceive such a projection as incorrect and “upside down.” However, there is no rule saying that the Northern Hemisphere must be depicted at the top of maps. For example, medieval Christian maps placed Jerusalem at the top, thus creating an East-up projection. Truly, the options for map projections are seemingly endless, and no one map is entirely “correct.”



Left: The United Nations Emblem features an azimuth equidistant polar projection, centering on the North Pole (Source: Encyclopedia Britannica). Right: McArthur's Universal Corrective Map of the World shows the world from "Down Under," inverting common Western notions of what a map ought to look like (Source: ICA Commission on Map Design).

Nonetheless, the debate over which kind of map should hold pride-of-place, especially in spaces such as classrooms, still matters a great deal. This is not merely a debate about presenting a more accurate map of the world to students, but a story about the cultural assumptions of the world around us that are fostered by those maps. The consequences of which map we choose to hold as our standard are thus incredibly significant, since maps can severely distort and omit information crucial to our understanding of the world. As one of the fictional cartographers says to C.J. Cregg on the aforementioned episode of *The West Wing*, "the Mercator projection has fostered European imperialist attitudes for centuries and created an ethnic bias against the Third World." They argue that it has fostered ethnocentrism and global misconceptions that perpetuate bias towards places on the map that feel smaller, further away, and less significant.

Indeed, this idea is widely supported by cartographers and geographers today. John Blair and Jerusha McCormack, authors of *Comparing Civilizations: China and the West*, write that "The internalization of this map by Americans makes it hard to convince them that Mexico is in global fact much larger than Alaska... people forget that they are maps [i.e., imperfect and artificial representations] and take their more or less arbitrary depictions as showing the way the

world really is” (Blair and McCormack 7). This is a considerable problem in a world where many believe that the balance of power is increasingly shifting away from the United States towards Asia. Consequently, it is more important than ever before to understand the complexities of our interconnected world.

Yet, ignorance persists across our nation. The tragic rise in acts of senseless violence against Asian-Americans after the initial spread of the COVID-19 pandemic offers one glaring example of our profound incomprehension, of our cluelessness of those we label as “others,” and our apathy towards regions of the world that seem too far away (Cabral). Not only are our maps faulty, but our worldview is distorted. To many, Asia appears to be on the periphery of both our maps and our minds. Moreover, our national discourse regarding Asia centers on a razor-thin understanding of China and its immediate sphere of influence. In an effort to correct such misapprehension, the Liu Institute for Asia and Asian Studies developed a critical gateway course, “Approaching Asia,” to provide a more well-informed understanding of Asia – an absolutely essential aspect of navigating the future of the 21st century. The students enrolled in Approaching Asia this past fall worked throughout the semester to challenge our ignorance and broaden our understanding of the diverse place – really, *the idea* – we call Asia.

Author and geopolitical expert Parag Khanna firmly asserts that Asia is the future. He argues that there is no more important region of the world for us to better understand than Asia – especially when the stakes are so high. He writes in his celebrated book *The Future is Asian: Commerce, Conflict, and Culture in the 21st Century* that “The Asian economic zone... now represents 50 percent of global GDP and two-thirds of global economic growth” (Khanna 4). He continues:

Of the estimated \$30 trillion in middle-class consumption growth estimated between 2015 and 2030, only \$1 trillion is expected to come from today's Western economies. Most of the rest will come from Asia. Asia produces and exports, as well as imports and consumes, more goods than any other region, and Asians trade and invest more with one another than they do with Europe or North America. Asia has several of the world's largest economies, most of the world's foreign exchange reserves, many of the largest banks and industrial and technology companies, and most of the world's biggest armies. Asia also accounts for 60% of the world's population. It has *ten* times as many people as Europe and *twelve* times as many people as North America. As the world population climbs toward a plateau of around 10 billion people, Asia will forever be home to more people than the rest of the world combined. (Khanna, 4)

Indeed, it was Asia that dominated the globe for almost the entirety of the past two millennia, according to the late British economist Angus Maddison. He demonstrated that the Asian powers of China, India, and Japan generated a greater GDP than the "west" from 1 AD all the way until the 1880s, when the Industrial Revolution propelled Europe (and eventually the United States) to global power (Khanna 2). As we see today, "western" power is fading and Asia is once again taking the lead role on the global stage.



Measured in terms of PPP, Asia represents about half of global GDP, and China has surpassed the United States as the world's largest economy. Source: Parag Khanna, The Future is Asian

Not only has the totality of Asia's "comeback" been quite muted in the West (having focused almost exclusively on China for decades), but most people do not understand *what* Asia even is. Thus, it would do us a disservice to focus on contemporary Asia solely through the lens of GDP, a metric that researchers through the OECD considered insufficient in their 2018 report *Beyond GDP: Measuring What Counts for Economic and Social Performance* (Stiglitz et al). There is much more to Asia than dollars and cents. Asia's diversity alone is absolutely dizzying. As Khanna explains, "Asia contains half of the world's largest countries by land area, including Russia, China, Australia, India, and Kazakhstan. Asia also has most of the world's twenty most populous countries, including China, India, Indonesia, Pakistan, Bangladesh, Japan, the Philippines, and Vietnam" (Khanna 5). Asia is truly a megaregion that stretches all the way from the Suez Canal to the Pacific, and from the Arctic Ocean to the Indian Ocean. Too often, people mistakenly equate Asia with "Far East," namely with China. However, as Khanna notes, "China

borders other major Asian subregions, but it does not define them” (Khanna 6). So too do we incorrectly view places like Russia and the “Middle East” as separate from Asia. It is no wonder, then, why so many people recently asked on social media when the World Cup will ever return to Asia, not realizing that it already had with Qatar’s hosting of the famed international competition this past November and December. Our misunderstanding of Asia begins with our misunderstanding of geography, and our misunderstanding of geography begins with our erroneous maps.

As long as we maintain a narrow and misguided view of Asia and of the entire world around us, we destine our future policy making and decision making – which are now inherently global processes – for failure. We can no longer view ourselves as fully independent from the forces of the world. Our perception is simply not our reality. We must aim to be globally informed citizens in order to appreciate and understand the changing world around us, rising beyond the fragmented worldview that has confined us for too long.

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