

Jump Start for AP Human Geography

Recommended Summer Assignment for 2016-2017 School Year

Part 1:

The attached articles and response questions are RECOMMENDED ASSIGNMENTS for you to get a jump start on AP Human Geography (APHuGe) for next school year. Successful completion of the response questions for ALL THREE ARTICLES will earn 25 POINTS (about 33% of a test grade). If you chose not to submit the article responses, you will not be penalized. However, be advised – if you submit the assignment, it will be graded based upon rubric criteria.

You will find the rubric, articles, and response questions at the end of this document.

Part 2:

These recommended activities will NOT be collected or graded. However, taking time now to complete these activities will give you an advantage when the course begins as APHuGe is fast paced and time intensive.

1. **Define the vocabulary for Unit 1.** The vocabulary chart is attached to the end of this document.

2. **Review current events in the news.** Every day for at least 15 minutes.

2. **Explore the Power of Place** (<https://www.learner.org/series/powerofplace/>). View some of the online video series and explore the concepts you will cover in APHuGe.

4. **Go geocaching!** (www.geocaching.com) provides you with instructions and further information

Good luck! If you have specific questions about these instructions, please contact Mrs. Pendergraft, Mr. Greenblatt, or Mr. Aymes via email sooner rather than later.

ATTACHMENTS FOR PART 1

(if you do not want to print full articles, URLs are provided with each article)

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Article 1.....Page 3

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Article 3.....Page 17

ATTACHMENTS FOR PART 2

Vocabulary terms chart.....Page 20

RUBRIC FOR WRITTEN RESPONSES IN ADVANCED PLACEMENT

Use the following guidelines for your responses to the three articles.

You must respond to all three articles to be eligible for credit.

(25 POINTS): Exceptional. The responses are focused on the topic at hand; they provide numerous text based examples with explanations & analysis, considering multiple perspectives when appropriate. Each response reflects a deep engagement with the ideas presented in that reading. It is evident that proofreading for errors, both grammatical and typographical, was thoroughly completed before submission.

(15 POINTS): Satisfactory. Each response is reasonably focused, and explanations or analysis are mostly based on text based examples. Fewer connections are made between ideas, and though insights are offered, they may be less well developed. Responses are more descriptive of the content of the articles under consideration rather than engaging analytically with those articles. Responses may not always indicate a strong understanding of the ideas presented in the readings. It is evident that some proofreading for errors, both grammatical and typographical, was completed before submission; however, it was not thorough and several errors are noted.

(5 POINTS): Underdeveloped. The response is mostly description or summary, without consideration of alternative perspectives, and few connections are made between ideas. The responses reflect a passing engagement with the articles. Responses are surface level, incomplete, or missing. There is little to no evidence of proofreading for grammatical and typographical errors.

Responses should be typed using standard MLA Formatting & Style. Please review those parameters here:
<https://owl.english.purdue.edu/owl/resource/747/01/>

Failure to follow MLA formatting will result in deduction of 5 points.

Responses must be submitted as hard copy on the first day of class. LATE work will not be accepted for credit. It is strongly recommended you save a copy of your work in digital form as you may also be requested to submit soft copy by your teacher.

Fall semester due date: August 29, 2016

Spring semester due date: January 25, 2017

Do Maps Create or Represent Reality?

Guest Column by Laura Hebert 04/27/02

<http://geography.about.com/library/misc/ucmaps.htm>

Laura Hebert is a high school senior in New Hampshire.

This column is the result of her Senior Project.

Have you ever stopped and really looked at a map? I'm not talking about consulting the coffee-stained map that makes its home in your glove compartment; I'm talking about really looking at a map, exploring it, questioning it. If you were to do so, you would see that maps differ distinctly from the reality that they depict. We all know that the world is round. It is approximately 27,000 miles in circumference and home to billions of people. But on a map, the world is changed from a sphere into a rectangular plane and shrunk down to fit on an 8 ½" by 11" piece of paper, major highways are reduced to measly lines on a page, and the greatest cities in the world are diminished to mere dots. This is not the reality of the world, but rather what the mapmaker and his or her map are telling us is real. The question is: "Do maps create or represent reality?"

The fact that maps distort reality cannot be denied. It is absolutely impossible to depict a round earth on a flat surface without sacrificing at least some accuracy. In fact, a map can only be accurate in one of four domains: shape, area, distance, or direction. And in modifying any of these, our perception of the earth is affected.

There is currently a debate raging over which commonly used map projection is the "best" projection. Among a multitude of options, there are a few that stand out as the most recognized projections; these include the Mercator, the Peters, the Robinson, and the Goode's, among others. In all fairness, each of these projections has its strong points. The Mercator is used for navigation purposes because great circles appear as straight lines on maps utilizing this projection. In doing so, however, this projection is forced to distort the area of any given landmass relative to other landmasses. The Peters projection combats this area distortion by sacrificing accuracy of shape, distance, and direction. While this projection is less useful than the Mercator in some respects, those who support it say that the Mercator is unfair in that it depicts landmasses in the high latitudes as being much larger than they really are in relation to landmasses in the lower latitudes. They claim that this creates a sense of superiority among people who inhabit North America and Europe, areas that are already among the most powerful in the world. The Robinson and the Goode's projections, on the other hand, are a compromise between these two extremes and they are commonly used for general reference maps. Both projections sacrifice absolute accuracy in any particular domain in order to be relatively accurate in all domains.

Is this an example of maps “creating reality”? The answer to that question depends on how we choose to define reality. Reality could either be described as the physical actuality of the world, or it could be the perceived truth that exists in peoples’ minds. Despite the concrete, factual basis that can prove the verity or the falsehood of the former, the latter may very well be the more powerful of the two. If it weren’t, those - such as human rights activists and certain religious organizations - who argue in favor of the Peters projection over the Mercator would not be putting up such a fight. They realize that how people understand the truth is often just as important as the truth itself, and they believe that the Peters projection’s areal accuracy is - as the Friendship Press claims - “fair to all peoples.”

Much of the reason that maps so often go unquestioned is that they have become so scientific and “artless.” Modern mapmaking techniques and equipment have served to make maps seem like objective, trustworthy resources, when, in fact, they are as biased and conventional as ever. The conventions - or the symbols that are used on maps and the biases that they promote - that maps make use of have been accepted and utilized to the point that they have become all but invisible to the casual map observer. For example, when we look at maps, we don’t usually have to think too much about what the symbols represent; we know that little black lines represent roads and dots represent towns and cities. This is why maps are so powerful. Mapmakers are able to display what they want how they want and not be questioned.

The best way to see how mapmakers and their maps are forced to alter the image of the world - and therefore our perceived reality - is to try and imagine a map that shows the world exactly as it is, a map that employs no human conventions. Try to envision a map that doesn’t show the world oriented in a particular manner. North is not up or down, east isn’t to the right or left. This map has not been scaled to make anything bigger or smaller than it is in reality; it is exactly the size and shape of the land that it depicts. There are no lines that have been drawn on this map to show the location and course of roads or rivers. The landmasses are not all green, and the water is not all blue. Oceans, lakes, countries, towns, and cities are unlabeled. All distances, shapes, areas, and directions are correct. There is no grid showing latitude or longitude.

This is an impossible task. The only representation of the earth that fits all of these criteria is the earth itself. No map can do all of these things. And because they must lie, they are forced to create a sense of reality that is different from the tangible, physical actuality of the earth.

It’s strange to think that nobody will ever be able to see the entire earth at any given moment in time. Even an astronaut looking at the earth from space will only be able to see half of the earth’s surface at any particular instant. Because maps are the only way that most of us will ever be able to see the earth before our eyes - and that any of us will ever see the entire world before our eyes - they play an immensely important part in shaping our views of the world. Although the lies that a map tells may be unavoidable, they are lies nonetheless, each one influencing the way that we think about the world. They do not create or alter the physical reality of the earth, but our perceived reality is shaped - in large part - by maps.

The second, and just as valid, answer to our question is that maps represent reality. According to Dr. Klaus Bayr, a geography professor at Keene State College in Keene, NH, a map is “a symbolized representation of the earth, parts of the earth, or a planet, drawn to scale...on a flat surface.” This definition states clearly that a map represents the reality of the earth. But merely stating this viewpoint means nothing if we can't back it up.

It can be said that maps represent reality for several reasons. First, the fact is that no matter how much credit we give maps, they really mean nothing if there isn't a reality to back it up; the reality is more important than the depiction. Second, although maps portray things that we can't necessarily see on the face of the earth (e.g. political boundaries), these things do in fact exist apart from the map. The map is simply illustrating what exists in the world. Third and last is the fact that every map portrays the earth in a different way. Not every map can be a totally faithful representation of the earth, since each of them shows something different.

Maps - as we are examining them - are “symbolized representation[s] of the earth.” They depict characteristics of the earth that are real and that are - in most cases - tangible. If we wanted to, we could find the area of the earth that any given map depicts. If I were to choose to do so, I could pick up a USGS topographic map at the bookstore down the street and then I could go out and find the actual hill that the wavy lines in the northeast corner of the map represent. I can find the reality behind the map.

All maps represent some component of the reality of the earth. This is what gives them such authority; this is why we trust them. We trust that they are faithful, objective depictions of some place on the earth. And we trust that there is a reality that will back up that depiction. If we did not believe that there was some verity and legitimacy behind the map - in the form of an actual place on the earth - would we trust them? Would we place value in them? Of course not. The sole reason behind the trust that humans place in maps is the belief that that map is a faithful representation of some part of the earth.

There are, however, certain things that exist on maps but that don't physically exist on the surface of the earth. Take New Hampshire, for example. What is New Hampshire? Why is it where it is? The truth is that New Hampshire isn't some natural phenomenon; humans didn't stumble across it and recognize that this was New Hampshire. It is a human idea. In a way, it may be just as accurate to call New Hampshire a state of mind as it is to call it a political state.

So how can we show New Hampshire as a physically real thing on a map? How are we able to draw a line following the course of the Connecticut River and categorically state that the land to the west of this line is Vermont but the land on the east is New Hampshire? This border isn't a tangible feature of the earth; it's an idea. But even in spite of this, we can find New Hampshire on maps.

This would seem like a hole in the theory that maps represent reality, but in fact it is just the opposite. The thing about maps is that they not only show that land simply exists, they also represent the relationship between any given place and the world around it. In the case of New Hampshire,

nobody is going to argue that there is land in the state that we know as New Hampshire; nobody will argue with the fact that the land exists. What the maps are telling us is that this particular piece of land is New Hampshire, in the same way that certain places on the earth are hills, others are oceans, and still others are open fields, rivers, or glaciers. Maps tell us how a certain place on the earth fits into the bigger picture. They show us which part of the puzzle a particular place is. New Hampshire exists. It isn't tangible; we can't touch it. But it exists. There are similarities among all of the places that fit together to form what we know as New Hampshire. There are laws that apply in the state of New Hampshire. Cars have license plates from New Hampshire. Maps don't define that New Hampshire exists, but they do give us a representation of New Hampshire's place in the world.

The way that maps are able to do this is through conventions. These are the human-imposed ideas that are evident on maps but which cannot be found on the land itself. Examples of conventions include orientation, projection, and symbolization and generalization. Each of these must be utilized in order to create a map of the world, but - at the same time - they are each human constructs.

For example, on every map of the world, there will be a compass that tells which direction on the map is north, south, east, or west. On most maps made in the northern hemisphere, these compasses show that north is at the top of the map. In contrast to this, some maps made in the southern hemisphere show south at the top of the map. The truth is that both of these ideas are totally arbitrary. I could make a map that shows north being in the lower left-hand corner of the page and be just as correct as if I said north was at the top or bottom. The earth itself has no real orientation. It simply exists in space. The idea of orientation is one that had been imposed on the world by humans and humans alone.

Similar to being able to orient a map however they choose to, mapmakers can also utilize any one of a vast array of projections to make a map of the world, and none of these projections is any better than the next one; as we have already seen, each projection has its strong points and its weak points. But for each projection, this strong point - this accuracy - is slightly different. For example, the Mercator portrays directions accurately, the Peters portrays area accurately, and azimuthal equidistant maps display distance from any given point accurately. Yet maps made using each of these projections are considered to be accurate representations of the earth. The reason for this is that maps are not expected to represent every characteristic of the world with 100% accuracy. It is understood that every map is going to have to dismiss or ignore some truths in order to tell others. In the case of projections, some are forced to ignore areal accuracy in order to show directional accuracy, and vice versa. Which truths are chosen to be told depends solely on the intended use of the map.

As mapmakers have to utilize orientation and projection in order to represent the surface of the earth on a map, so they must also use symbols. It would be impossible to put the actual characteristics of the earth (e.g. highways, rivers, thriving cities, etc.) on a map, so mapmakers utilize symbols in order to represent those characteristics.

For example, on a map of the world, Washington D.C., Moscow, and Cairo all appear as small, identical stars, as each is the capital of its respective country. Now, we all know that these cities are not, in fact, small red stars. And we know that these cities are not all identical. But on a map, they are depicted as such. As is true with projection, we must be willing to accept that maps cannot be completely accurate depictions of the land that is being represented on the map. As we saw earlier, the only thing that can be a totally accurate representation of the earth is the earth itself.

Throughout our examination of maps as both creators and representations of reality, the underlying theme has been this: maps are only able to represent truth and fact by lying. It is impossible to depict the huge, round earth on a flat and relatively small surface without sacrificing at least some accuracy. And though this is often seen as a drawback of maps, I would argue that it is one of the benefits.

The earth, as a physical entity, simply exists. Any purpose that we see in the world through a map is one that has been imposed by humans. This is the sole reason for maps' existence. They exist to show us something about the world, not to simply show us the world. They can illustrate any multitude of things, from migration patterns of Canadian geese to fluctuations in the earth's gravitational field, but every map must show us something about the earth upon which we live. Maps lie to tell the truth. They lie in order to make a point.

RESPONSE QUESTIONS:

1. Why does Hebert argue that maps have to distort reality?
2. Hebert argues that contemporary (modern) maps are "...as biased and conventional as ever."
- How does she justify this point of view?
3. When Hebert describes the borders of New Hampshire as "...an idea" what does she mean?

It's a Flat World, After All

By THOMAS L. FRIEDMAN APRIL 3, 2005

<http://www.nytimes.com/2005/04/03/magazine/its-a-flat-world-after-all.html>

In 1492 Christopher Columbus set sail for India, going west. He had the Nina, the Pinta and the Santa Maria. He never did find India, but he called the people he met "Indians" and came home and reported to his king and queen: "The world is round." I set off for India 512 years later. I knew just which direction I was going. I went east. I had Lufthansa business class, and I came home and reported only to my wife and only in a whisper: "The world is flat."

And therein lies a tale of technology and geoeconomics that is fundamentally reshaping our lives -- much, much more quickly than many people realize. It all happened while we were sleeping, or rather while we were focused on 9/11, the dot-com bust and Enron -- which even prompted some to wonder whether globalization was over. Actually, just the opposite was true, which is why it's time to wake up and prepare ourselves for this flat world, because others already are, and there is no time to waste.

I wish I could say I saw it all coming. Alas, I encountered the flattening of the world quite by accident. It was in late February of last year, and I was visiting the Indian high-tech capital, Bangalore, working on a documentary for the Discovery Times channel about outsourcing. In short order, I interviewed Indian entrepreneurs who wanted to prepare my taxes from Bangalore, read my X-rays from Bangalore, trace my lost luggage from Bangalore and write my new software from Bangalore. The longer I was there, the more upset I became -- upset at the realization that while I had been off covering the 9/11 wars, globalization had entered a whole new phase, and I had missed it. I guess the eureka moment came on a visit to the campus of Infosys Technologies, one of the crown jewels of the Indian outsourcing and software industry. Nandan Nilekani, the Infosys C.E.O., was showing me his global video-conference room, pointing with pride to a wall-size flat-screen TV, which he said was the biggest in Asia. Infosys, he explained, could hold a virtual meeting of the key players from its entire global supply chain for any project at any time on that supersize screen. So its American designers could be on the screen speaking with their Indian software writers and their Asian manufacturers all at once. That's what globalization is all about today, Nilekani said. Above the screen there were eight clocks that pretty well summed up the Infosys workday: 24/7/365. The clocks were labeled U.S. West, U.S. East, G.M.T., India, Singapore, Hong Kong, Japan, Australia.

"Outsourcing is just one dimension of a much more fundamental thing happening today in the world," Nilekani explained. "What happened over the last years is that there was a massive investment in technology, especially in the bubble era, when hundreds of millions of dollars were

invested in putting broadband connectivity around the world, undersea cables, all those things." At the same time, he added, computers became cheaper and dispersed all over the world, and there was an explosion of e-mail software, search engines like Google and proprietary software that can chop up any piece of work and send one part to Boston, one part to Bangalore and one part to Beijing, making it easy for anyone to do remote development. When all of these things suddenly came together around 2000, Nilekani said, they "created a platform where intellectual work, intellectual capital, could be delivered from anywhere. It could be disaggregated, delivered, distributed, produced and put back together again -- and this gave a whole new degree of freedom to the way we do work, especially work of an intellectual nature. And what you are seeing in Bangalore today is really the culmination of all these things coming together."

At one point, summing up the implications of all this, Nilekani uttered a phrase that rang in my ear. He said to me, "Tom, the playing field is being leveled." He meant that countries like India were now able to compete equally for global knowledge work as never before -- and that America had better get ready for this. As I left the Infosys campus that evening and bounced along the potholed road back to Bangalore, I kept chewing on that phrase: "The playing field is being leveled."

"What Nandan is saying," I thought, "is that the playing field is being flattened. Flattened? Flattened? My God, he's telling me the world is flat!"

Here I was in Bangalore -- more than 500 years after Columbus sailed over the horizon, looking for a shorter route to India using the rudimentary navigational technologies of his day, and returned safely to prove definitively that the world was round -- and one of India's smartest engineers, trained at his country's top technical institute and backed by the most modern technologies of his day, was telling me that the world was flat, as flat as that screen on which he can host a meeting of his whole global supply chain. Even more interesting, he was citing this development as a new milestone in human progress and a great opportunity for India and the world -- the fact that we had made our world flat!

This has been building for a long time. Globalization 1.0 (1492 to 1800) shrank the world from a size large to a size medium, and the dynamic force in that era was countries globalizing for resources and imperial conquest. Globalization 2.0 (1800 to 2000) shrank the world from a size medium to a size small, and it was spearheaded by companies globalizing for markets and labor. Globalization 3.0 (which started around 2000) is shrinking the world from a size small to a size tiny and flattening the playing field at the same time. And while the dynamic force in Globalization 1.0 was countries globalizing and the dynamic force in Globalization 2.0 was companies globalizing, the dynamic force in Globalization 3.0 -- the thing that gives it its unique character -- is individuals and small groups globalizing. Individuals must, and can, now ask: where do I fit into the global competition and opportunities of the day, and how can I, on my own, collaborate with others globally? But Globalization 3.0 not only differs from the previous eras in how it is shrinking and flattening the world and in how it is empowering individuals. It is also different in that Globalization 1.0 and 2.0 were driven primarily by European and American companies and countries. But going forward, this will be less and less true. Globalization 3.0 is not only going to be driven more by individuals but also

by a much more diverse -- non-Western, nonwhite -- group of individuals. In Globalization 3.0, you are going to see every color of the human rainbow take part.

"Today, the most profound thing to me is the fact that a 14-year-old in Romania or Bangalore or the Soviet Union or Vietnam has all the information, all the tools, all the software easily available to apply knowledge however they want," said Marc Andreessen, a co-founder of Netscape and creator of the first commercial Internet browser. "That is why I am sure the next Napster is going to come out of left field. As bioscience becomes more computational and less about wet labs and as all the genomic data becomes easily available on the Internet, at some point you will be able to design vaccines on your laptop."

Andreessen is touching on the most exciting part of Globalization 3.0 and the flattening of the world: the fact that we are now in the process of connecting all the knowledge pools in the world together. We've tasted some of the downsides of that in the way that Osama bin Laden has connected terrorist knowledge pools together through his Qaeda network, not to mention the work of teenage hackers spinning off more and more lethal computer viruses that affect us all. But the upside is that by connecting all these knowledge pools we are on the cusp of an incredible new era of innovation, an era that will be driven from left field and right field, from West and East and from North and South. Only 30 years ago, if you had a choice of being born a B student in Boston or a genius in Bangalore or Beijing, you probably would have chosen Boston, because a genius in Beijing or Bangalore could not really take advantage of his or her talent. They could not plug and play globally. Not anymore. Not when the world is flat, and anyone with smarts, access to Google and a cheap wireless laptop can join the innovation fray.

When the world is flat, you can innovate without having to emigrate. This is going to get interesting. We are about to see creative destruction on steroids. How did the world get flattened, and how did it happen so fast?

It was a result of 10 events and forces that all came together during the 1990's and converged right around the year 2000. Let me go through them briefly. The first event was 11/9. That's right -- not 9/11, but 11/9. Nov. 9, 1989, is the day the Berlin Wall came down, which was critically important because it allowed us to think of the world as a single space. "The Berlin Wall was not only a symbol of keeping people inside Germany; it was a way of preventing a kind of global view of our future," the Nobel Prize-winning economist Amartya Sen said. And the wall went down just as the windows went up -- the breakthrough Microsoft Windows 3.0 operating system, which helped to flatten the playing field even more by creating a global computer interface, shipped six months after the wall fell.

The second key date was 8/9. Aug. 9, 1995, is the day Netscape went public, which did two important things. First, it brought the Internet alive by giving us the browser to display images and data stored on Web sites. Second, the Netscape stock offering triggered the dot-com boom, which triggered the dot-com bubble, which triggered the massive overinvestment of billions of dollars in

fiber-optic telecommunications cable. That overinvestment, by companies like Global Crossing, resulted in the willy-nilly creation of a global undersea-underground fiber network, which in turn drove down the cost of transmitting voices, data and images to practically zero, which in turn accidentally made Boston, Bangalore and Beijing next-door neighbors overnight. In sum, what the Netscape revolution did was bring people-to-people connectivity to a whole new level. Suddenly more people could connect with more other people from more different places in more different ways than ever before.

No country accidentally benefited more from the Netscape moment than India. "India had no resources and no infrastructure," said Dinakar Singh, one of the most respected hedge-fund managers on Wall Street, whose parents earned doctoral degrees in biochemistry from the University of Delhi before emigrating to America. "It produced people with quality and by quantity. But many of them rotted on the docks of India like vegetables. Only a relative few could get on ships and get out. Not anymore, because we built this ocean crosser, called fiber-optic cable. For decades you had to leave India to be a professional. Now you can plug into the world from India. You don't have to go to Yale and go to work for Goldman Sachs." India could never have afforded to pay for the bandwidth to connect brainy India with high-tech America, so American shareholders paid for it. Yes, crazy overinvestment can be good. The overinvestment in railroads turned out to be a great boon for the American economy. "But the railroad overinvestment was confined to your own country and so, too, were the benefits," Singh said. In the case of the digital railroads, "it was the foreigners who benefited." India got a free ride.

The first time this became apparent was when thousands of Indian engineers were enlisted to fix the Y2K -- the year 2000 -- computer bugs for companies from all over the world. (Y2K should be a national holiday in India. Call it "Indian Interdependence Day," says Michael Mandelbaum, a foreign-policy analyst at Johns Hopkins.) The fact that the Y2K work could be outsourced to Indians was made possible by the first two flatteners, along with a third, which I call "workflow." Workflow is shorthand for all the software applications, standards and electronic transmission pipes, like middleware, that connected all those computers and fiber-optic cable. To put it another way, if the Netscape moment connected people to people like never before, what the workflow revolution did was connect applications to applications so that people all over the world could work together in manipulating and shaping words, data and images on computers like never before.

Indeed, this breakthrough in people-to-people and application-to-application connectivity produced, in short order, six more flatteners -- six new ways in which individuals and companies could collaborate on work and share knowledge. One was "outsourcing." When my software applications could connect seamlessly with all of your applications, it meant that all kinds of work -- from accounting to software-writing -- could be digitized, disaggregated and shifted to any place in the world where it could be done better and cheaper. The second was "offshoring." I send my whole factory from Canton, Ohio, to Canton, China. The third was "open-sourcing." I write the next operating system, Linux, using engineers collaborating together online and working for free. The

fourth was "insourcing." I let a company like UPS come inside my company and take over my whole logistics operation -- everything from filling my orders online to delivering my goods to repairing them for customers when they break. (People have no idea what UPS really does today. You'd be amazed!). The fifth was "supply-chaining." This is Wal-Mart's specialty. I create a global supply chain down to the last atom of efficiency so that if I sell an item in Arkansas, another is immediately made in China. (If Wal-Mart were a country, it would be China's eighth-largest trading partner.) The last new form of collaboration I call "informing" -- this is Google, Yahoo and MSN Search, which now allow anyone to collaborate with, and mine, unlimited data all by themselves.

So the first three flatteners created the new platform for collaboration, and the next six are the new forms of collaboration that flattened the world even more. The 10th flattener I call "the steroids," and these are wireless access and voice over Internet protocol (VoIP). What the steroids do is turbocharge all these new forms of collaboration, so you can now do any one of them, from anywhere, with any device.

The world got flat when all 10 of these flatteners converged around the year 2000. This created a global, Web-enabled playing field that allows for multiple forms of collaboration on research and work in real time, without regard to geography, distance or, in the near future, even language. "It is the creation of this platform, with these unique attributes, that is the truly important sustainable breakthrough that made what you call the flattening of the world possible," said Craig Mundie, the chief technical officer of Microsoft.

No, not everyone has access yet to this platform, but it is open now to more people in more places on more days in more ways than anything like it in history. Wherever you look today -- whether it is the world of journalism, with bloggers bringing down Dan Rather; the world of software, with the Linux code writers working in online forums for free to challenge Microsoft; or the world of business, where Indian and Chinese innovators are competing against and working with some of the most advanced Western multinationals -- hierarchies are being flattened and value is being created less and less within vertical silos and more and more through horizontal collaboration within companies, between companies and among individuals.

Do you recall "the IT revolution" that the business press has been pushing for the last 20 years? Sorry to tell you this, but that was just the prologue. The last 20 years were about forging, sharpening and distributing all the new tools to collaborate and connect. Now the real information revolution is about to begin as all the complementarities among these collaborative tools start to converge. One of those who first called this moment by its real name was Carly Fiorina, the former Hewlett-Packard C.E.O., who in 2004 began to declare in her public speeches that the dot-com boom and bust were just "the end of the beginning." The last 25 years in technology, Fiorina said, have just been "the warm-up act." Now we are going into the main event, she said, "and by the main event, I mean an era in which technology will truly transform every aspect of business, of government, of society, of life." As if this flattening wasn't enough, another convergence coincidentally occurred during the 1990's that was equally important. Some three billion people who were out of the game walked, and often ran, onto

the playing field. I am talking about the people of China, India, Russia, Eastern Europe, Latin America and Central Asia. Their economies and political systems all opened up during the course of the 1990's so that their people were increasingly free to join the free market. And when did these three billion people converge with the new playing field and the new business processes? Right when it was being flattened, right when millions of them could compete and collaborate more equally, more horizontally and with cheaper and more readily available tools. Indeed, thanks to the flattening of the world, many of these new entrants didn't even have to leave home to participate. Thanks to the 10 flatteners, the playing field came to them!

It is this convergence -- of new players, on a new playing field, developing new processes for horizontal collaboration -- that I believe is the most important force shaping global economics and politics in the early 21st century. Sure, not all three billion can collaborate and compete. In fact, for most people the world is not yet flat at all. But even if we're talking about only 10 percent, that's 300 million people -- about twice the size of the American work force. And be advised: the Indians and Chinese are not racing us to the bottom. They are racing us to the top. What China's leaders really want is that the next generation of underwear and airplane wings not just be "made in China" but also be "designed in China." And that is where things are heading. So in 30 years we will have gone from "sold in China" to "made in China" to "designed in China" to "dreamed up in China" -- or from China as collaborator with the worldwide manufacturers on nothing to China as a low-cost, high-quality, hyperefficient collaborator with worldwide manufacturers on everything. Ditto India. Said Craig Barrett, the C.E.O. of Intel, "You don't bring three billion people into the world economy overnight without huge consequences, especially from three societies" -- like India, China and Russia -- "with rich educational heritages."

That is why there is nothing that guarantees that Americans or Western Europeans will continue leading the way. These new players are stepping onto the playing field legacy free, meaning that many of them were so far behind that they can leap right into the new technologies without having to worry about all the sunken costs of old systems. It means that they can move very fast to adopt new, state-of-the-art technologies, which is why there are already more cellphones in use in China today than there are people in America.

If you want to appreciate the sort of challenge we are facing, let me share with you two conversations. One was with some of the Microsoft officials who were involved in setting up Microsoft's research center in Beijing, Microsoft Research Asia, which opened in 1998 -- after Microsoft sent teams to Chinese universities to administer I.Q. tests in order to recruit the best brains from China's 1.3 billion people. Out of the 2,000 top Chinese engineering and science students tested, Microsoft hired 20. They have a saying at Microsoft about their Asia center, which captures the intensity of competition it takes to win a job there and explains why it is already the most productive research team at Microsoft: "Remember, in China, when you are one in a million, there are 1,300 other people just like you."

The other is a conversation I had with Rajesh Rao, a young Indian entrepreneur who started an electronic-game company from Bangalore, which today owns the rights to Charlie Chaplin's image for mobile computer games. "We can't relax," Rao said. "I think in the case of the United States that is what happened a bit. Please look at me: I am from India. We have been at a very different level before in terms of technology and business. But once we saw we had an infrastructure that made the world a small place, we promptly tried to make the best use of it. We saw there were so many things we could do. We went ahead, and today what we are seeing is a result of that. There is no time to rest. That is gone. There are dozens of people who are doing the same thing you are doing, and they are trying to do it better. It is like water in a tray: you shake it, and it will find the path of least resistance. That is what is going to happen to so many jobs -- they will go to that corner of the world where there is the least resistance and the most opportunity. If there is a skilled person in Timbuktu, he will get work if he knows how to access the rest of the world, which is quite easy today. You can make a Web site and have an e-mail address and you are up and running. And if you are able to demonstrate your work, using the same infrastructure, and if people are comfortable giving work to you and if you are diligent and clean in your transactions, then you are in business."

Instead of complaining about outsourcing, Rao said, Americans and Western Europeans would "be better off thinking about how you can raise your bar and raise yourselves into doing something better. Americans have consistently led in innovation over the last century. Americans whining -- we have never seen that before." Rao is right. And it is time we got focused. As a person who grew up during the cold war, I'll always remember driving down the highway and listening to the radio, when suddenly the music would stop and a grim-voiced announcer would come on the air and say: "This is a test. This station is conducting a test of the Emergency Broadcast System." And then there would be a 20-second high-pitched siren sound. Fortunately, we never had to live through a moment in the cold war when the announcer came on and said, "This is a not a test."

That, however, is exactly what I want to say here: "This is not a test."

The long-term opportunities and challenges that the flattening of the world puts before the United States are profound. Therefore, our ability to get by doing things the way we've been doing them -- which is to say not always enriching our secret sauce -- will not suffice any more. "For a country as wealthy we are, it is amazing how little we are doing to enhance our natural competitiveness," says Dinakar Singh, the Indian-American hedge-fund manager. "We are in a world that has a system that now allows convergence among many billions of people, and we had better step back and figure out what it means. It would be a nice coincidence if all the things that were true before were still true now, but there are quite a few things you actually need to do differently. You need to have a much more thoughtful national discussion."

If this moment has any parallel in recent American history, it is the height of the cold war, around 1957, when the Soviet Union leapt ahead of America in the space race by putting up the Sputnik satellite. The main challenge then came from those who wanted to put up walls; the main challenge to America today comes from the fact that all the walls are being taken down and many other people

can now compete and collaborate with us much more directly. The main challenge in that world was from those practicing extreme Communism, namely Russia, China and North Korea. The main challenge to America today is from those practicing extreme capitalism, namely China, India and South Korea. The main objective in that era was building a strong state, and the main objective in this era is building strong individuals.

Meeting the challenges of flatism requires as comprehensive, energetic and focused a response as did meeting the challenge of Communism. It requires a president who can summon the nation to work harder, get smarter, attract more young women and men to science and engineering and build the broadband infrastructure, portable pensions and health care that will help every American become more employable in an age in which no one can guarantee you lifetime employment.

We have been slow to rise to the challenge of flatism, in contrast to Communism, maybe because flatism doesn't involve ICBM missiles aimed at our cities. Indeed, the hot line, which used to connect the Kremlin with the White House, has been replaced by the help line, which connects everyone in America to call centers in Bangalore. While the other end of the hot line might have had Leonid Brezhnev threatening nuclear war, the other end of the help line just has a soft voice eager to help you sort out your AOL bill or collaborate with you on a new piece of software. No, that voice has none of the menace of Nikita Khrushchev pounding a shoe on the table at the United Nations, and it has none of the sinister snarl of the bad guys in "From Russia With Love." No, that voice on the help line just has a friendly Indian lilt that masks any sense of threat or challenge. It simply says: "Hello, my name is Rajiv. Can I help you?"

No, Rajiv, actually you can't. When it comes to responding to the challenges of the flat world, there is no help line we can call. We have to dig into ourselves. We in America have all the basic economic and educational tools to do that. But we have not been improving those tools as much as we should. That is why we are in what Shirley Ann Jackson, the 2004 president of the American Association for the Advancement of Science and president of Rensselaer Polytechnic Institute, calls a "quiet crisis" -- one that is slowly eating away at America's scientific and engineering base.

"If left unchecked," said Jackson, the first African-American woman to earn a Ph.D. in physics from M.I.T., "this could challenge our pre-eminence and capacity to innovate." And it is our ability to constantly innovate new products, services and companies that has been the source of America's horn of plenty and steadily widening middle class for the last two centuries. This quiet crisis is a product of three gaps now plaguing American society. The first is an "ambition gap." Compared with the young, energetic Indians and Chinese, too many Americans have gotten too lazy. As David Rothkopf, a former official in the Clinton Commerce Department, puts it, "The real entitlement we need to get rid of is our sense of entitlement." Second, we have a serious numbers gap building. We are not producing enough engineers and scientists. We used to make up for that by importing them from India and China, but in a flat world, where people can now stay home and compete with us, and in a post-9/11 world, where we are insanely keeping out many of the first-round intellectual draft choices in the world for exaggerated security reasons, we can no longer cover the gap. That's a key reason

companies are looking abroad. The numbers are not here. And finally we are developing an education gap. Here is the dirty little secret that no C.E.O. wants to tell you: they are not just outsourcing to save on salary. They are doing it because they can often get better-skilled and more productive people than their American workers.

These are some of the reasons that Bill Gates, the Microsoft chairman, warned the governors' conference in a Feb. 26 speech that American high-school education is "obsolete." As Gates put it: "When I compare our high schools to what I see when I'm traveling abroad, I am terrified for our work force of tomorrow. In math and science, our fourth graders are among the top students in the world. By eighth grade, they're in the middle of the pack. By 12th grade, U.S. students are scoring near the bottom of all industrialized nations. . . . The percentage of a population with a college degree is important, but so are sheer numbers. In 2001, India graduated almost a million more students from college than the United States did. China graduates twice as many students with bachelor's degrees as the U.S., and they have six times as many graduates majoring in engineering. In the international competition to have the biggest and best supply of knowledge workers, America is falling behind."

We need to get going immediately. It takes 15 years to train a good engineer, because, ladies and gentlemen, this really is rocket science. So parents, throw away the Game Boy, turn off the television and get your kids to work. There is no sugar-coating this: in a flat world, every individual is going to have to run a little faster if he or she wants to advance his or her standard of living. When I was growing up, my parents used to say to me, "Tom, finish your dinner -- people in China are starving." But after sailing to the edges of the flat world for a year, I am now telling my own daughters, "Girls, finish your homework -- people in China and India are starving for your jobs."

I repeat, this is not a test. This is the beginning of a crisis that won't remain quiet for long. And as the Stanford economist Paul Romer so rightly says, "A crisis is a terrible thing to waste."

RESPONSE QUESTIONS

- 1) What does Friedman mean by a "flat" world?
- 2) Has the world really gotten FLATTER? If so, how?
- 3) Of all the "flattening" events that Friedman describes, explore in detail the THREE that you think are most important.

How India Became America

By AKASH KAPURMARCH 9, 2012

<http://www.nytimes.com/2012/03/11/opinion/sunday/how-india-became-america.html>

Pondicherry, India

ANOTHER brick has come down in the great wall separating India from the rest of the world. Recently, both Starbucks and Amazon announced that they would be entering the Indian market. Amazon has already started a comparison shopping site; Starbucks plans to open its first outlet this summer.

As one Indian newspaper put it, this could be “the final stamp of globalization.”

For me, though, the arrival of these two companies, so emblematic of American consumerism, and so emblematic, too, of the West Coast techie culture that has infiltrated India’s own booming technology sector, is a sign of something more distinctive. It signals the latest episode in India’s remarkable process of Americanization.

I grew up in rural India, the son of an Indian father and American mother. I spent many summers (and the occasional biting, shocking winter) in rural Minnesota. I always considered both countries home. In truth, though, the India and America of my youth were very far apart: cold war adversaries, America’s capitalist exuberance a sharp contrast to India’s austere socialism. For much of my life, my two homes were literally — but also culturally, socially and experientially — on opposite sides of the planet.

All that began changing in the early 1990s, when India liberalized its economy. Since then, I’ve watched India’s transformation with exhilaration, but occasionally, and increasingly, with some anxiety.

I left for boarding school in America in 1991. By the time I graduated from high school, two years later, Indian cities had filled with shopping malls and glass-paneled office buildings. In the countryside, thatch huts had given way to concrete homes, and cashew and mango plantations were being replaced by gated communities. In both city and country, a newly liberated population was indulging in a frenzy (some called it an orgy) of consumerism and self-expression.

More than half a century ago, R. K. Narayan, that great chronicler of India in simpler times, wrote about his travels in America. “America and India are profoundly different in attitude and philosophy,” he wrote. “Indian philosophy stresses austerity and unencumbered, uncomplicated day-to-day living. America’s emphasis, on the other hand, is on material acquisition and the limitless pursuit of prosperity.” By the time I decided to return to India for good, in 2003, Narayan’s

observations felt outdated. A great reconciliation had taken place; my two homes were no longer so far apart.

This reconciliation — this Americanization of India — had both tangible and intangible manifestations. The tangible signs included an increase in the availability of American brands; a noticeable surge in the population of American businessmen (and their booming voices) in the corridors of five-star hotels; and, also, a striking use of American idiom and American accents. In outsourcing companies across the country, Indians were being taught to speak more slowly and stretch their O's. I found myself turning my head (and wincing a little) when I heard young Indians call their colleagues "dude."

But the intangible evidence of Americanization was even more remarkable. Something had changed in the very spirit of the country. The India in which I grew up was, in many respects, an isolated and dour place of limited opportunity. The country was straitjacketed by its moralistic rejection of capitalism, by a lethargic and often depressive fatalism.

Now it is infused with an energy, a can-do ambition and an entrepreneurial spirit that I can only describe as distinctly American. In surveys of global opinion, Indians consistently rank as among the most optimistic people in the world. Bookstores are stacked with titles like "India Arriving," "India Booms" and "The Indian Renaissance." The Pew Global Attitudes Project, which measures opinions across major countries, regularly finds that Indians admire values and attributes typically thought of as American: free-market capitalism, globalization, even multinational companies. Substantial majorities associate Americans with values like hard work and inventiveness, and even during the Iraq war, India's views of America remained decidedly positive.

I HAVE learned, though, that the nation's new American-style prosperity is a more complex, and certainly more ambivalent, phenomenon than it first appears. The villages around my home have undeniably grown more prosperous, but they are also more troubled. Abandoned fields and fallow plantations are indications of a looming agricultural and environmental crisis. Ancient social structures are collapsing under the weight of new money. Bonds of caste and religion and family have frayed; the panchayats, village assemblies made up of elders, have lost their traditional authority. Often, lawlessness and violence step into the vacuum left behind.

I recently spoke with a woman in her mid-50s who lives in a nearby village. She leads a simple life (impoverished even, by American standards), but she is immeasurably better off than she was a couple of decades ago. She grew up in a thatch hut. Now she lives in a house with a concrete roof, running water and electricity. Her son owns a cellphone and drives a motorcycle. Her niece is going to college.

But not long before we talked, there had been a murder in the area, the latest in a series of violent attacks and killings. Shops that hadn't existed a decade ago were boarded up in anticipation of further violence; the police patrolled newly tarred roads. The woman was scared to leave her home.

“This is what all the money has brought to us,” she said to me. “We were poor, but at least we didn’t need to worry about our lives. I think it was better that way.”

Hers is a lament — against rapid development, against the brutality of modernity — that I have heard with increasing frequency. India’s Americanization has in so many ways been a wonderful thing. It has lifted millions from poverty, and, by seeding ideas of meritocracy and individual attainment into the national imagination, it has begun the process of dismantling an old and often repressive order. More and more, though, I find myself lying awake at night, worrying about what will take the place of that order. The American promise of renewal and reinvention is deeply seductive — but, as I have learned since coming back home, it is also profoundly menacing.

RESPONSE QUESTIONS:

1. How does the title of the article itself describe the idea of globalization?
2. Describe in detail the different ways that the author claims that India is becoming more Americanized (this is spoken about throughout the entire article)
3. Based on the article and your own feelings, describe how globalization of culture (being exposed to different types of food, clothing, religions, languages, technology, dress, etc.) can be both positive and negative for individuals and their cultures.

UNIT 1 VOCABULARY TERMS (COMPLETE THE CHART, HANDWRITE IN PEN)

TERM	DEFINITION	FACT / EXAMPLE
<i>cartography</i>	<i>study and practice of making maps</i>	<i>Ptolemy</i>
human geography		
globalization		
spatial perspective		
location		
absolute location		
relative location		
site		
situation		
place		
perception of place		
movement		
landscape		
cultural landscape		
sequent occupance		
map distortion		
equal-area projection maps		
conformal maps		
map scale		
reference maps		
thematic maps		
cartograms		
choropleth maps		
dot maps		
flow-line maps		
isoline maps		
parallels/latitude		
meridians/longitude		

TERM	DEFINITION	FACT / EXAMPLE
Equator		
North and South Poles		
prime meridian		
time zones		
International Date Line		
mental maps		
global positioning systems		
remote sensing		
geographic information systems		
formal/uniform region		
functional/nodal region		
perceptual/vernacular region		
culture		
cultural trait		
cultural hearth		
culture diffusion		
time-distance decay		
expansion diffusion		
contagious diffusion		
hierarchical diffusion		
stimulus diffusion		
relocation diffusion		
distribution		
physiological density		
arithmetic density		
concentration		