

The World is Flat

Thomas L. Friedman

- A Brief History of the 21st Century
 - 2006 – Farrar, Strauss, and Giroux
 - New York, NY
 - Book summary by Douglas W. Green, EdD.
-
- Since 1989 ten forces have converged to “flatten” the world as far as business, commerce, and education are concerned. Friedman describes these flatteners and goes on to discuss their impact on our world.

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#1 – 11/9/89

- The fall of the Berlin Wall on 11/9/89 unleashed forces that liberated all the captive peoples of the Soviet Empire.
- It also tipped the balance of power across the world toward those advocating democratic, consensual, free-market-oriented governance. More economies would be governed from the ground up by the interests, demands, and aspirations of the people rather than from the top down.

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#2 – 8/9/95

- When Netscape Went Public
- The Web browser could retrieve documents or Web pages stored on Internet Web sites.
- Netscape was the first mainstream browser which created a culture of Web browsing for the general public.
- Windows 95 shipped one week later and had built-in Internet support.
- The installed base of PCs allowed for an explosion in demand.
- Netscape also set off the dot-com bubble.

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The fiber-optic bubble

- The telecommunications act of 1996 allowed local and long-distance companies to get into each other's business.
- Projections for Internet growth were unrealistically high but thanks to the dot-com bubble money was easy to get and companies just kept building more capacity. When telecom companies went bankrupt the fiber capacity was sold for ten cents on the dollar to companies who could make a profit.

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To review flattener #2

- The PC-Windows phase was about you and me interacting with our computers.
- The Internet-email-browser phase was about your computer interacting with anyone anywhere.
- This was the foundation for the next step in flattening the world.

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#3 – Work flow software

- Let's do lunch: Have Your Application Talk to My Application
- People who were connected wanted to do more than browse and send email. They wanted to work together to shape things, design things, sell things, buy things, keep track of inventories, do somebody else's taxes, and read somebody else's X-rays from half a world away.
- Additional transmission protocols helped ensure that everyone's software applications could connect with everyone else's.
- The Internet now connected people and their software programs so they could all work together.

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#4 – Open sourcing

- Self-Organizing Collaborative Communities
- Source code is what programmers create as they try to make a computer do something. Source code is human readable. It is converted to machine code which is the 1's and 0's that make a program work.
- Source code that is open is something that anyone can read and improve on.
- Many products necessary to running a Web site and other things are built on open source code.
- In other words, a bunch of geeks built the foundation of modern web servers in their spare time.

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#5 – Outsourcing (Y2K)

- In 1951 Nehru set up seven institutes of technology in India. Since India's socialist government could not provide good jobs for the talent the United States hired top talent.
- With all of the capacity available from the fiber-optic bubble, Indian talent could stay at home and do work for American companies.
- The need to fix many software systems prior to 2000 provided many programming jobs for Indians. Jan. 1, 2000 became India's 2nd independence day.
- A lot of other work goes to and from India in digital format via fiber left from the dot-com bust.

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#6 - Offshoring

- The difference between offshoring and outsourcing is that in offshoring a company places an entire factory in another country rather than just sending some work to another country.
- On December 11, 2001 China joined the World Trade Organization. China therefore assured foreign companies that they would be protected by international law and standard business practices.
- This meant cheaper labor, lower taxes, subsidized energy, and lower health-care costs.

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#6 – Offshoring - II

- Cheap imports have saved U.S. consumers \$600 billion since the mid 1990's and have saved U.S. manufacturers untold billions in cheaper parts for their products. This has helped the Federal Reserve to hold down interest rates which allows more people to purchase and refinance homes and provides more capital for businesses to invest.
- Factories in a giant market like China can sell to the Chinese without having to export.

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#7 – Supply-Chaining

- Delivery, sorting, packing, distribution, buying, manufacturing, reordering, etc.
- Wal-Mart is the best example of how a company can use information technology to set up and run its own supply chain. By ordering in large volume and having their suppliers ship to one spot they save money that they can pass on in lower prices.
- The Wal-Mart trucks are tracked by satellite. Anytime they are near a supplier they pick up goods to save delivery charges.

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#7 – Supply-Chaining II

- Wal-Mart's warehouse operations are highly automated. Workers picking goods to ship are instructed by voice so they can use both hands.
- RFID (radio frequency ID) tags have replaced bar codes on pallets. This means that the system can track every box automatically.
- Wal-Mart has meteorologists who spot storm conditions such as coming hurricanes and shifts deliveries to feature products people are more likely to purchase (beer early, pop tarts later).

#8 - Insourcing

- What the guys in the funny brown suits are doing. “Your World Synchronized”
- UPS now synchronizes global supply chains.
- If your Toshiba laptop breaks they tell you to drop it off at a UPS location. UPS ships it to it’s hub where UPS technicians fix it. They do the same for Hewlett Packard.
- They even figured out how to ship and sedate tropical fish so they would have a pleasant ride.
- The term insourcing implies that UPS comes inside your company.

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#8 – Insourcing II

- UPS works with U.S. Customs Service to help level customs barriers. Customs can say to UPS “I want to see any package sent from Germany to the US by someone named Osama.” This makes inspection more efficient without disrupting the flow of goods.
- UPS redesigned Ford’s entire North American delivery network. Cars are now tracked like little packages.
- UPS Capital will also finance transformation of your supply chain.
- In-truck systems tell each driver where a package is in the truck and where to go next. Customers can track trucks online to find out when the truck will be in their neighborhood.

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#9 – In-Forming

- Google, Yahoo!, MSN Web Search
- Using Google one woman found out that her date had been arrested for felony assault. Another woman found that her estranged brother had become a male stripper in Mexico. When she went to try to talk him out of his chosen profession she met a fellow dancer who she has since married.
- Typical top searches are sex, god, jobs, and professional wrestling but no topic ever accounts for 2% of searches at a time.

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#9 – In-Forming

- Never before have we seen so many people finding so much information about so many things and so many other people.
- The goal is to have access to the world's knowledge via a handheld device or cell phone.
- In-Forming is the personal analog to the other flatteners. You can become your own self-directed researcher, editor, and selector of entertainment.
- People have searched for heart attack symptoms and then called 911.
- Support groups have formed that would never exist were it not for online collaboration.

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#10 – The steroids

- Digital, Mobile, Personal, and Virtual
- Computational capability, storage capacity, and input/output capability are three key attributes of any computer system. In the last 30 years all three have multiplied many times.
- All forms of content can now be digital and manipulated at high speeds from just about anywhere.
- More smaller multipurpose devices all for gathering, processing, and sharing all types of content on the go. Wireless technology drives this.
- Have you noticed the some locker rooms no longer allow cell phones? Now that they can take pictures you could find yourself undressed on the Internet.

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The triple convergence

- #1 – Enough people had PC's connected to Internet pipes with sufficient capacity.
- #2 – The ten flatteners have been around long enough so the leading businesses have changed their practices to take advantage of them.
- #3 – Over three billion more people around the world now have opportunities to join in the process.

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America and free trade

- How to be untouchable (so your job doesn't get outsourced).
- Be special – Michael Jordan, Tiger Woods, and anyone with a global market
- Be specialized – High end knowledge workers who are among the best at what they do like surgery, lawyers, engineers, etc.
- Be anchored – Any job that must be done in a specific location like, chefs, plumbers, nurses, hair dressers, cleaning ladies, etc.
- Be adaptable – constantly acquire new skills, knowledge, and expertise so you can constantly create value beyond the vanilla version of whatever you do. Learning how to learn is key.

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America and free trade

- A good metaphor for how the rest of the world is catching America is the 2004 Olympic basketball team that finished 3rd and lost to Puerto Rico, Lithuania, and Argentina.
- The world had learned the NBA standard which was no longer enough. Even though the US team was more talented the other teams collaborated more effectively.
- Now the US is faced by three “dirty little secrets” that place the future in doubt.

Dirty little secret #1 – The numbers gap

- The generation of scientists and engineers who were motivated to go into science by the threat of Sputnik in 1957 and the inspiration of JFK to go to the moon are reaching their retirement years and are not being replaced at the rate needed to keep our advanced economy ahead of the pack.
- The number of 18-24 year olds who receive science degrees has fallen from 3rd to 17th in the world.
- Only 31% of degrees in US are in science or engineering as opposed to 60% in China.
- Historically we have made up for the lack of home grown people by importing foreign talent. In a flat world, however, foreign talent can stay home and innovate. In addition, visas for foreign students have been harder to get since 9/11/2001.

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Dirty little secret #2 – The ambition gap

- When jobs are sent abroad 75% is saved in wages and quality and productivity go way up. A low-wage, low-prestige job in America becomes a high-wage, high-prestige job in India.
- As a result it is getting harder for Americans to qualify for high end jobs.
- Immigrants are always hungry and they don't have a back up plan.
- Kids of educated advantaged people have a sense of entitlement. The competition is coming and many kids are going to move into their 20's clueless about these rising forces.

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In China

- Bill Gates is Brittany Spears
- In the United States
- Brittany Spears is Brittany Spears
- And that's part of our problem

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Dirty little secret #3 – The education gap

- 44% of 8th graders in Singapore scored at the advanced level in math on a recent international test as did 38% in Taiwan. Only 7% did so in the US.
- Part of the problem is that our system is decentralized and fragmented. Most other countries nationalize and can introduce research based innovations faster.
- In the 70's and early 80's people wanting to be lawyers swamped those wanting to be engineers and scientists. In the 90's more people chose business schools for MBA's.

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In China

- When you are one in a million, there are 1,300 of you.

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The muscles we need most

- Portable benefits and opportunities for life-long learning are key ways to make workers more mobile and adaptable. You don't want people to feel like they have to stay at a company forever just to get a pension and health benefits. To be competitive our workers need to be willing and able to jump into new industries and new job niches spawned by the flat world.
- Workers should also have easier access to stock ownership. People with a piece of the pie are more likely to hustle to make a company succeed.

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Parenting

- There is clearly a need for improved parenting. There comes a time when a parent has to tell a child to put away the Game Boy, turn off the TV, put away the iPod, and get down to work.
- In July 2004 Bill Cosby upbraided African-Americans for not teaching their children proper grammar and for black kids not striving to learn more. “You can’t be a doctor with that crap coming out of your mouth.” He went on to address squandered opportunities by saying “You’ve got to stop beating your women because you can’t find a job, because you didn’t want to get an education. Jesse Jackson added “let’s fight the right fight. Drunk people can’t do that. Illiterate people can’t do that.

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Watch out Mexico and Egypt!

- In 2003 China replaced Mexico as the number 2 exporter to the US. (Canada is still #1)
- China is also displacing some companies in Mexico where Chinese made clothing and toys are showing up in Mexican stores.
- In Egypt, Chinese-made Ramadan lanterns with battery-powered lights are replacing traditional Egyptian lanterns.
- China sends 50,000 students to study in the US. Mexico which is next door only sends 10,000. Mexico also does much less to promote education at home.

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To compete a country needs to make it easy to:

- 1) Start a business in terms of local rules, regulations, and license fees.
- 2) Hire and fire people.
- 3) Enforce a contract.
- 4) Get credit.
- 5) Close a business that is failing or goes bankrupt.

Some countries don't make it easy.

- In Indonesia, it takes 168 days to start business operations.
- In Panama, employment laws require fixed term appointments, approval from the union to fire an employee along with five months of severance pay.
- In the United Arab Emirates, it takes 27 procedures and more than 500 days to resolve a payment dispute in court.
- In Ethiopia, you cannot use account receivables as collateral for a loan and you cannot prove you have good credit because there are no credit registries.
- In India it takes ten years to complete the bankruptcy process.

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Some countries do make it easy.

- It takes two days to start a business in Australia and 215 in the Congo.
- There are no monetary costs to start a business in Denmark but 56 times the income per capita in Syria.
- A commercial contract can be enforced in seven days in Tunisia but almost 1,500 days in Guatemala. The cost of enforcement is less than 1% in Austria, Canada, and the UK but more than 100% in the Dominican Republic, Indonesia, and the Philippines.

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What does a culture need to thrive?

- According to David Landes in *The Wealth and Poverty of Nations*, the key factor to a country's success is its cultural endowments. Internalization of the following are key:
 - The value of hard work
 - Thrift
 - Honesty
 - Patience
 - Tenacity
 - Being open to change and new technology
 - Equality for women
- This explains why some Muslim countries struggle.

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Culture matters but it can change.

- China didn't take off until Mao Zedong's intolerant form of communism was scrapped in favor of totalitarian laissez-faire.
- Bahrain was one of the first Arab countries to discover oil and the first to run out. It was the first country in the Gulf to hold an election for parliament where women could vote and run.
- Muslim Saudi Arabia is one of the most intolerant societies. Muslim Dubai next door is one of the most tolerant, cosmopolitan places in the world with more golf courses and sushi bars than mosques.
- Culture is nested in contexts not genes. Those contexts and leaders can change and adapt.

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The Arab problem

- Good jobs are not being created because the environment of openness required to attract international investment and stimulate local innovation is all too rare in the Arab-Muslim World today.
- The Qu'ran is treated as a divinely inspired text that is not open to any literary criticism or creative reinterpretation. In this type of culture critical thought and original thinking whither.
- The Arab-Muslim world is not participating in the flat world. In the 90's Arab countries produced 171 patents while South Korea produced 16,328.
- To help we need to collaborate with the progressive members of the Arab world.

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Energy and China's growth

- Beijing adds over 1,000 cars a day to its streets. Sixteen of the world's twenty most polluted cities are in China.
- China is now the second largest importer of oil after the US. China foreign policy consists of two things: preventing Taiwan from becoming independent and finding more oil. They are looking for oil from countries that will not retaliate if China invades Taiwan. China is now competing with the US for oil from Canada and Venezuela.
- Current trends will result in China going from importing 7 million barrels a day to 14 million by 2012. That is like adding another Saudi Arabia.
- Perhaps China will work with us to develop alternate energies. Why not?

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Supply chains and peace

- No two countries that both had McDonald's had ever fought a war against each other since each got its McDonald's. In a country with a middle class large enough to support a network of McDonald's people would rather wait in line for burgers than fight a war.
- This also implies that no two countries who are part of the same global supply chain are likely to engage in war. They have too much to lose.

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Supply chains and peace

- A look at the countries that are not part of any major global supply chains is revealing.
- Iraq, Syria, South Lebanon, North Korea, Pakistan, Afghanistan, and Iran.
- When the people of Taiwan had to choose between a pro independence party and a party in favor of better ties with Beijing they chose the latter. Motherboards won over Motherland.
- India's central place in the world's services supply chain was a big factor in the governments decision to tone down the rhetoric and step back from the brink of war with Pakistan in 2002.

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Al-Qaeda in a flat world

- The flattening process has intensified feelings of humiliation in some quarters of the Muslim world over the fact that civilizations to which the Muslim world once felt superior – Hindus, Jews, Christians, Chinese – are now all doing better than many Muslim countries and everyone can see it.
- The Islamo-Leninist mobile, self-financing mutant supply chains such as AL-Qaeda, use all the tools of collaboration offered by the flat world.
- The suicide supply chain used by the Islamist insurgent forces in Iraq is a good example. As the retailers of suicide deploy a human bomber in Baghdad, another is recruited and indoctrinated in Beirut. This will require a major rethinking of US military doctrine.

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Al-Qaeda in a flat world

- The flat world is a huge boon for al-Qaeda and its ilk because of the way it enables the small to act big. The flat world makes it easier for the terrorists to transmit their terror.
- Bin Laden can't show his face but he can reach every household thanks to the Internet. Hell hath no fury like a terrorist with a satellite dish and a Web site.

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Context is key to imagination

- Imagination has never been commoditized and there has never been a time in history when the character of human imagination wasn't important. If we can give young people a context where they can translate a positive imagination into reality they will not want to blow up the world.
- The fact that Indian Muslims have never been associated with al-Qaeda supports this. There are more Muslims in India than any country except Indonesia.
- A Muslim woman sits on India's Supreme Court while no Muslim woman can drive a car in Saudi Arabia.

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You can flourish in a flat world

- It takes the right imagination and the right motivation. We must not wall ourselves in due to excessive fears of another 9/11. We must not wall ourselves off in search of economic security in a world of 11/9.
- Economic competition in the flat world will be more equal and more intense. As a result, Americans will have to work harder, run faster, and become smarter to get our share.
- Imagination has always been our strength and we still are the world's greatest dream machine.

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The Flatteners – A Review

- 1 Berlin Wall Falls
- 2 Internet Browsing/Fiber Optic Bubble
- 3 Work Flow Software/Mine talks to yours
- 4 Open Sourcing/Free Software
- 5 Out Sourcing/Hello India
- 6 Offshoring/Factories in China
- 7 Supply Chaining/Wal-Mart
- 8 Insourcing/UPS
- 9 Informing/Google
- 10 Steroids/My Daughter's Next Computer

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What do you think?

- Do you disagree with anything?
- Any comments?
- Based on what you do agree with, what are the implications for educators?

Expanded edition material 2006

- The following slides contain material that were added to the book a year later. I wish books like this would come with a way to purchase only the updates for less money rather than a whole new book. Oh well.
- The next two slide have special importance for educators.

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Two skills employers and educators are looking for in a flat world.

- 1) The ability to learn how to learn. To do this you need to enjoy learning. Taking courses from teachers who are excited about what they teach can help. You can't light a fire in someone else if it doesn't burn in you to begin with. If you love kids and convey the love they will be inspired by you.
- 2) In a flat world, those with passion and curiosity for what they do have an advantage. They are self-educators and self-motivators. Curious people tend to work harder.

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Two more skills employers and educators are looking for in a flat world.

- 3) Plays well with others - People skill will become more important than computer skills. The geeks will not inherit the earth. You can't collaborate if you can't get along.
- 4) A right brain that has been nurtured - Right-brain skills like artistry, empathy, seeing the big picture and pursuing the transcendent are increasingly important. You will be untouchable in jobs that computers and robots cannot do faster and some talented foreigner cannot do cheaper. The pursuit of right-brain ability aligns with passion. You are more likely to find a lawyer writing a screen play in his spare time than you are finding a sculptor doing other people's taxes on the weekend.

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Preservation of local cultures

- The flat-world platform enables you to take your own local culture and **upload** it to the world. You are no longer stuck with homogeneous American culture everywhere you look. The most popular food in the world is pizza, but every culture adds its own toppings. Now more people can survive and thrive by staying home in their native region. It is also easier to take your local culture with you if you need to relocate. This trend is called globalization of the local. It is further promoted by the ease with which anyone can create podcasts to share their own ideas with others even if they don't have an ipod.

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