Dr. George Friedman  
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*The Geopolitical Environment of the 21st Century*

**Note:** 1. Below are informal notes taken by a JHU/APL staff member at the Seminar.  
2. Dr. Friedman’s new book mentioned in the notes below is entitled *The Next Hundred Years: A Forecast for the 21st Century*, and was published in January.

Dr. Friedman began by noting that writing a book about the entire 21st Century could be considered both presumptuous and preposterous. However, there is the advantage that if he turns out to be wrong, he won’t be around to know how wrong he was.

Intelligence is the art of forecasting
- It can involve either major concerns or minor ones (what will a foreign education minister say tomorrow)
- The purpose of intel is to discuss the future while history is about the past
- Using intel to forecast for the next century can be considered extreme forecasting
- Stratfor usually looks out in its forecasts for 10 years  
  - Certain assumptions are used to develop those forecasts  
  - The book flowed out of this set of assumptions
- Must decide what is really important in determining the future
- Important in forecasting to distinguish between essential and transitory elements of the future
- While it might be possible to describe a future, the details are likely to be wrong  
  - But what will be important will be visible
- Example: Predicting the future from about 1850 in Europe  
  - It would have been possible to know that Germany would be a major element in Europe  
  - However, there were various historic discontinuities  
  - Looking at the future from 1900, no one would have predicted the end of empires  
    - Nor that Japan, China, and South Korea would be major economic powers  
    - There would be a sense that Europe would be muddling through

People tend to think that the future will look a lot like today – only a little different
- In 1800 no one would have predicted that the US would be a naval power by 1900
- Common sense is the biggest problem in developing forecasts  
  - Common sense forecasts are projections from the present  
  - We tend to think that whichever country is strong will stay strong  
  - Trends in geopolitics are not linear – discontinuities occur  
  - Geopolitics is curvilinear  
  - The trick is to be able to identify the trends and their velocities

Today’s “Long War” concept comes from thinking linearly
- There has been fight in the Middle East for 50 years so we expect it to continue
- Look at 20 years increments to see the historic discontinuities  
  - Things change a lot sooner than even 20-year time spans  
  - The Post-Cold War world lasted only from 1991 until 9/11/2001  
  - Look at massive changes in geopolitics from 1920 to 1940 to 1960 to 1980 to 2000
- Long wars don’t last that long
Main forces that drive the forecasts for the 21st Century
1. Persistent empowerment of the United States which has been going on since 1850
   a. US growth is really still accelerating despite today’s headlines
2. Collapse of the population explosion
   a. Industrialized countries: already do not have birthrates to support replacement
   b. Mid-range countries: at about the break-even point
   c. Least developed countries: birthrates dropping (from 7.5 births per woman to 5.1 in last 15 years)

The Continuing Growth of US Power Issue
- From 1492 to 1991 the center of gravity for geopolitics was Europe
  o In 1492 the world became integrated – European decisions determined events around the world
  o Period of the first global civilizations – empires of the Iberians, British, Dutch, etc.
  o Example: Australian aborigines were affected by policies made half a world away by British who were trying to handle the overpopulation of Ireland
- During this time the geopolitical center of gravity was the North Atlantic
  o Countries from there ran massive global empires starting with the Dutch and the East Indies
  o Whichever country could control the North Atlantic controlled access to the empires
    - In turn it was the Spanish and the British mainly
- All the while that Europe controlled the world through its colonies, it kept having internal wars
  o Europe did not develop a central authority to control itself
  o By 1945 there was little left standing
  o Why Europe never came together: the English Channel
    - Countries built huge land armies but could not go that last 30 miles across the channel
    - Could not even do it when aircraft and rockets became available
  o As a result Europe tore itself apart and was occupied by two semi-European countries
    - The US and the Soviet Union both had ties to Europe but not really European
- North Atlantic control became less important in 1980 when trans-Pacific trade outpaced trans-Atlantic
  o Now to control world commerce/events a country must control both oceans
    - But there is nothing more expensive than a navy, especially aircraft carriers
  o If you could have bases on both oceans, then you had an immediate advantage
    - The Amazon and the Andes ensures no S. America country could control both coasts
    - So only N. America has the geographic advantage, and the US dominates there
- US advantages help a great deal
  o Environmental resources include great navigable rivers and vast mineral resources
  o Mostly under-populated when look at arable or all land
    - Germany has about 265 people per square mile
    - US has about 34 without counting Alaska
  o Advantages can be summed up as Capital / Land / Labor
    - Capital: US is well-capitalized, even if not quite as well as before
    - Land: under-utilized compared to Europe even with North East’s slightly different view
    - Labor: US absorbs people well including huge numbers lately from Asia / Latin America
  o US economy is as big as the next 4 economies combined – plus Denmark’s
    - US “deindustrialization” means output is as big as China and Japan combined
    - Basically, bullets that would flatten most economies bounce off the US
  o Recent news reports claim declines are the biggest since 1982
    - Does anyone remember how “bad” 1982 was? Not really
      - When looking at US economy since 1870 – even Depression was only a bump in the road
  o Strength of the US economy is vastly underestimated and so is its Navy
    - It could control any sea it wanted to
    - US is capable of invading any other country it wanted to and none could invade it
    - US could control trading patterns – could stop China from exporting
      - China holds wargames about this happening
      - Big question: Why would the US disrupt China’s exports?
- Consider the US as an over-grown 15-year old boy with some of the same characteristics
  1. Has manically high phases with tremendous self-confidence
  2. Then becomes miserably depressed
  3. Always concerned that nobody likes him (That doesn’t matter but Americans won’t accept it yet)
Someday US will outgrow this phase like any 15-year-old doe
Currently it is a national characteristic

• There is a difference between the reality of American power and the perception of that power by Americans
• To be surpassed, US must have someone to pass them, but Who? How?

The Decline in Population Issue
• The problem: most of Europe and Japan cannot now replace their populations
  o Need 2.1 births per woman but most countries are only at about 1.3 to 1.7
• This is also about true for US Caucasians
  o If the new arrivals are counted, the US comes closer to the 2.1 level
  o Immigrant have also transferred 3rd World birthrates here
• Surges in population are over in advanced countries
  o Nearly over in mid-range countries
  o Will end for all countries by the end of the century
    ▪ From 1950 to 2000: 100% growth
    ▪ By 2050: only about 50% growth
    ▪ By 2100: only about 10% growth or maybe even less
  o Why the surges are ending: urbanization
    ▪ It is expensive to raise children in cities
    ▪ More children in agrarian societies makes sense, but not in cities
• Look at changes in how lives are lived
  o In urban societies almost 50% of a life-span is now non-productive
  o Average age for leaving school in the US is 23 – a little higher than elsewhere
  o Average retirement age is 65
    ▪ Social Security was set up when life expectancy was 62
    ▪ No one expected this huge shift in living
  o These changes also reflect in the size of the cohort available to the armed forces
    ▪ Get an inverted pyramid in populations
• Every country is having problems trying to integrate new people
  o Japan did not even try
  o US/Australia/Canada/New Zealand are best at integration
    ▪ US can come up with as many new Americans as it wants
  o In 20-30 years the desire to come to the US will drop off
    ▪ Mexico already has the 13th largest economy and people will want to stay there
    ▪ Decisions will need to be made to come to the US versus Spain or Italy or….

Important Trends
• The jihadist war is over
  o There have been Arab terrorists for 1,000 years so they will continue
• Important trend: Russia is coming back to power
  o When Russia was beating up on the Georgians, US was in no position to resist
    ▪ Showed that the US national security guarantees meant nothing
  o When Russia was supposed to get out of the area, they remained for a while because they could
    ▪ Had a major psychological impact
    ▪ Expect to see a pro-Russian government in Ukraine this year
  o Expect another US-Russian period of face-off in the 21st century
    ▪ Starting with the whole issue of missile defense in Europe
      ▪ See Dr. Friedman’s op-ed in the Feb 3rd New York Times on this topic
      ▪ Russia will place a high price for providing access to Afghanistan
        ▪ Likely: No NATO troops in the Baltics
        ▪ Question: Is Afghanistan worth that price?

Leading Countries of the Future
In 1900 few would have guessed that by the end of the century that the US and Japan would be great powers
• Nor would Israel be considered at all since it did not exist
Three countries that will be major players in the 21st century
1. Japan – has the second largest economy
Also has a substantial navy and air force plus a land force as big as the UK’s
Continues to have major interests and influence in the North Pacific
Understands that the interests/needs of the US may change
They could become a major player whenever they decide to do so

2. Turkey – 17th largest economy and growing at 5% per year
- Excellent, well-integrated armed forces
- Turkish impact felt throughout the old Ottoman Empire
  - Training police in Central Asia
  - Working as merchants in northern Iraq
  - Wide presence done with a light hand
- Islamic world had one center point for 5 centuries
  - Empire stretched from walls of Vienna to Russia with alliances such as Venice
- Position in the last 100 years has been unnatural
- Fall of the Ottoman Empire kept them out of World War I
  - Helped them in other ways, too
- Expect an Islamic challenge from a traditional center
- Turkey will be helped by the fact that it is critical to US interests in the region

3. Poland
- Economy is growing enormously while that of the rest of Europe is not
  - Partly because Germany and France made it too hard to hire people
    - More like an adoption than a hiring – complex social welfare nets
    - Created a social structure that is more like a system of obligations
  - Technical base is falling behind because of social obligations
  - Poland is not as constrained
- In eastern Europe must recognize the importance of the hatred for both Germany and Russia
- US has reasons for Europe and Russia to not come together
  - Border between Europe and Russia is Poland
  - US wants a strong Poland
- A 20th Century pattern: If the US has a fundamental interest in a country, it does very well
  - See S. Korea for example – somewhat artificial growth but gives it power
    - S. Korea gets tech transfer advantages and good relations with the US
  - Israel is another example – should not be as strong as it is in the region
  - See Germany and Japan after World War II
- Poland must be sophisticated enough to absorb US intentions and interests
  - Concept of a missile defense system in Poland is the camel’s nose under the tent
  - If the US puts a system there, they will need to protect it with more troops, aircraft, etc.
  - Troops bring other benefits as well as need for tech transfers
- Result: Poland will be transformed – by 2050 with US help it will be most dynamic in Europe

Forecasts:
- Turkey will be reshaping its part of the world
- Japan will be reshaping the North Pacific – China will not be a long term player
- Civilian economies and the militaries will both have problems with dwindling labor forces
  - Solution 1: Immigration
  - Solution 2: Labor enhancers (really robots but brings up the wrong image)
- Currently immigrant labor is still cheaper than technology efforts
  - By 2030-2040 immigrant labor will not be an option at all
  - Advances in technology will come largely from DoD basic efforts
- Space will be a major pusher of technology
  - We need space and the things we put in space will need to be fixed by robots
  - Rely on space now for navigation, communication, etc.
  - If can hold the high ground, will be able to ensure sea control
    - Oceans and navies will decline in importance
    - Hyper speed missiles will make naval ships obsolete
    - If doing sea control only with a 25kt ship, could not achieve denial
  - Space will also help with the development of better, cheaper energy options
    - Will need to solve the battery problem
World also needs consistent sources of energy
  • Hydrocarbon fuels are going away
  • Nuclear power takes too long to build so economics change
  • Solar (including wind and waves)
    o Problems with nights/clouds/a lot of room for collectors
    o Solution: Go to place where always sunny, lots of room, etc.

Other help will come from efforts for space tourism
  • Expect solar power from space by the end of the century
  • If the US controls space, it could have a better monopoly than the Saudis
  • The military is going into space anyway, so energy development might as well tag along

• Nations will continue to fight but the wars will be less bloody because of precision weapons
• The Great Powers will be different – possibly not the ones we now expect
• We are not fighting a hundred-year war
  o An illusion of every war is that it will never end
  o And then it does causing great joy
  o And then there is another war.

QUESTION & ANSWER SESSION

Turkey & Other Rising Nations
Achieving membership in the European Union used to be important to Turkey
  • About 2 years ago Turkey started growing faster than the EU
  • Now Turkey is almost afraid of being offered membership

Turkey’s Kurdish problem is not going to be going away
  • Turkey has been using violence suppression tactics to restrain the problem
  • As Turkey gets stronger there will be more opportunities for the Kurds
  • There is no hope for a separate Kurdish state

The 4th country likely to be on the rise in the 21st Century is Mexico
  • The biggest threat to Mexico’s growth is the legalization of drugs in the US
  • In mid-Mexico there are vast numbers of modern factories including robotics plants
  • It remains a country of many contrasts
  • It is possible that by the end of the century the US and Mexico will be involved in a face-off
    o Would involve the parts of the US that were seceded from Mexico in the past
    o Mexico’s influence is growing in that area because so many of its people have moved there

The 5th country likely to be on the rise in this century is Brazil
  • But it is a significant distance behind the others and is really an island
  • Geography won’t allow it to push into the rest of Latin America and too far from the rest of the world

Membership in the Top Ten is likely to change
  • Italy, Spain, and Germany are likely to fall out of the Top Ten
  • This would be part of normal rotation among the countries near the top

Advances in DNA and related technologies were purposely not considered in making the forecasts for the book

Birthrate policies
  • China’s one-child strategy went very wrong when a strong preference for sons caused an abnormal
distribution of males in the population which is now causing instability problems
  • It is likely there will be some countries taking active measures to increase native populations
    o Really need to use financial incentives
    o Raising large families in the US costs more than the government could afford to pay
• Costs in 3rd world countries might be less but governments have few assets
• The Soviet Union did try incentivizing in the past
• In agrarian societies having larger families will be just naturally happen
  • Policies to increase family size just don’t work

The impact of changes in the availability of other natural resources was not considered in the forecasts

**Non-state actors**

• There have always been non-state actors including criminals and pirates
• Also had influential multi-national organizations in the past: Hudson Bay Co. / East Indies Co.
  • Nation-states were supplemented and surrounded by them
• Nation-states are still best way to organize delivery of services to citizens, defenses, etc.
  • Bin Laden was not planning on remaining as a non-state actor after 9/11
  • He was hoping to trade up to a better launch pad for his revolution
    ▪ Egypt instead of Afghanistan
    ▪ But the disruptions he believed would happen did not spread anywhere else
• We can expect that 90% of hostilities in the 21st century will be with sub-state actors
  • But the 10% with states will be more important and more dangerous

**Casualty rates and explosives**

• The most important development in warfare has been explosives
  • Initially, explosives permitted stand-off weapons – artillery and ballistic projectiles
• Artillery and missiles needed factories
  • Then opponents needed aircraft to destroy factories
• PGMs – precision-guided missiles – revolutionized modern warfare
  • In World War I it was assumed that you would need 10,000 bullets to kill one enemy soldier
  • Since Vietnam, there is no longer a need to shower targets with bullets/bombs to get a kill
  • In Baghdad could take out a comms center without taking out the 5 blocks around it
• Body armor has also had a major impact
  • There should have been many more deaths in Iraq without it
• Soon infantrymen will be more survivable, lethal, wired
  • Can’t deploy forces to 5,000 miles away with 19th century weapons
  • Hypersonic weapons will be coming
    ▪ Hi-G turns and enormous speeds will no longer allow for human pilots
    ▪ At the same time weapons are becoming more precise
  • Soldiers may have improved survivability but may not remain effective for their missions
• Result of all these improvements will be less casualties among soldiers and civilians
  • Wars will be less devastating to societies
  • India could take out just Pakistan’s intelligence headquarters but would be the consequences?

**Other issues**

• The problem with batteries is the center of gravity of all other energy-related problems
• Bio- and nano-technologies are coming together and they will have an impact
• China will remain a 3rd world country really
  • About 1.1 billion people live at the level of Nigeria
  • Many in booming cities barely eek out an existence
  • There is really only a thin layer of growth along the coast
    ▪ Development levels could changes within just blocks
  • Servers at a $1,000 dinner make only tiny amounts of pay
    ▪ But it is still better than their chances in the countryside where they came from
    ▪ In cities huge numbers live in miserable, unheated buildings
  • China is a highly export-oriented economy, making things for the US and not its own use
  • When Americans lose their jobs, they do have problems
    ▪ When Chinese lose their jobs, they starve
  • China could soon have huge armies of unemployed
Same thing happened in 1927 – resulted in Mao’s Long March
- Leadership must strategize for internal problems such as the rise in lynchings of Party members
- China is teetering on brink of chaos but is perceived by Western media as doing quite well
- Major problem: most loans are not repaid – much like Japan
  - Loans go only to those with good connections
  - There are no expectations loans will be repaid
- China is sitting on a large chunk of US dollars
  - But vast areas of the country are not touched by growth
- China has many plans but its resources are limited
  - Geographically limited – Himalayas on one side and Siberia on another
  - Han Chinese are limited to eastern part of China while west is largely uninhabited
  - China says they have 20 million unemployed – more like 200 million
    - Larger number is not controversial among China experts

**Space and other matters in the 21st Century**
- What the US could do if other countries try to go into space with hostile intent: shoot them down
- US must share space – but at some geopolitical expense
- There is a possibility of a space war
- Cold fusion advances could change many equations
  - But will it happen?
- China from 1850 to 1950 was more an area of regionalism
  - Beijing has only be in “control” a little while
  - When China is closed to the outside, it can have central control
  - Regional power centers are more the norm
  - Whenever China is open to the outside world, it suffers from regional conflicts
- Russia can be expected to collapse
  - It is much weaker than it was during the Cold War
  - It can be powerful regionally and it could cause problems

**US strategy in the 21st Century**
- US must protect its naval power – make sure no other country surpasses it
  - US goes out occasionally and creates just enough chaos to keep down other contenders
  - Not that the US realizes it is doing such a thing
  - Example: the Sunnis and Shiites are busy killing each other – Iraq is not about democracy
- There is no central place that determines US actions
  - No real General Staff – US service chiefs of staff worry more about budgets
  - This is why the US does so badly at the start of wars
    - Then the services get it together and do much better
- There is a pattern of American warfare which largely involves the defense planning process
  - Kept separate from geopolitics
- Since the US is so big and powerful, it can afford to be stupid
  - No one element of the government is actually planning anything

**Nuclear weapons in the 21st Century**
- No country but the US has ever used nuclear weapons – Why not?
  - Use of nuclear weapons rarely have adequate political effect
  - The threat of their use is more important than actually using them
    - Pakistan and India can threaten a great deal
    - But what would happen if Pakistan launched a nuclear weapon into central Mumbai and it did not explode?
      - Are the Pakistanis that sure of their weapons without real testing?
  - No way to know what things would be like after a nuclear weapon use
- One big problem would be if Russia or China collapsed and nuclear weapons fell into rogue hands
  - Best for world if US got control of them
  - Really need a state to control nuclear weapons