Rethinking the Relation Between Economics, Resources, Technology and National and International Security
Seminar Series
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Note: Many of the topics Dr. Friedman discussed at the Seminar will appear in an article he has written for Officer, the magazine of the Reserve Officers Association. Dr. Friedman provided a copy of that article as a handout at the Seminar. Prior to the article’s publication in September, the handout which includes an offer from www.stratfor.com can be obtained by clicking here.

Dr. Friedman began his talk by noting that he was working on a new book that would not be available until 2008 even though it already appears on amazon.com for pre-ordering. The new book will attempt to describe what the year 2100 will look like. Stratfor’s mission is forecasting but pushing the projections out for a century is a major effort.

Go back to 1900 to see what people could have imagined 2000 would be like
• If you talked to the Department of War or Department of the Navy, they would have been clueless
• Better results could come from talking to science fiction writers
  ▪ For example, H.G. Wells descriptions of submarines have come fairly close to reality
  ▪ Looking forward from today, think about Robert Heinlein
    • More accurate than the Rand predictions since World War II
  ▪ Science fiction writers are better at forecasting because they are not using common sense
    • Common sense tells you that the world will not change much in a few decades
    • But common sense is always wrong

Twenty-year Cycles in History
Look at 20-year snapshots from recent history to see if what did happen could have been predicted
• 1900 – Europe was enormously prosperous, at peace, investing all over the world
  ▪ “War was not possible” because of the commercial interactions among the great powers
• 1920 – Europe had been ripped apart
There had been a war in Europe that was only decided when the US got involved. Most of the old empires had fallen (Hapsburg, Russian, etc.) Germany was decimated leaving England and France to rule the world.

- 1940 – Germany conquered France in 6 weeks
  - Totally against all common sense and War College exercises
  - War already seemed to be over with the Soviets allied with the Germans
  - The British were whipped and the US would not get involved
  - Germany would dominate

- 1960 – Germany and rest of Europe were occupied by either the US or the Soviets
  - China was ruled by a mad man who would cause great problems when he got nuclear weapons
  - Nuclear weapons would be more useful than tanks
  - The next war would be fought in Germany’s Fulda Gap

- 1980 – There had been a war but it was the one that the US fought in Vietnam
  - US was becoming allied with China because Nixon went to China
  - Soviets were moving out everywhere and were the rising power
  - All US defense policy was centered on dealing with the Soviets and their allies and clients
  - The US expected to be dealing with Soviet problems for decades

- 2000 – The Soviet Union had collapsed
  - Nobody expected it to happen, no matter what they say now
  - China was becoming something of a capitalist communist country
  - US was the only global superpower
  - Then 9/11 happened

Forecasts usually look out about 20 years
- You can assume that most everything will look different by that time
- Forecasters have always be wrong about such predictions in the past
- So, how likely is it that we will be fighting jihadists in 2020?
  - Based on historical cycle analysis – not very likely

There is also a Long Cycle that needs to be looked to for general guidance

Problem: When the defense establishment does not get right the changes in the 20-year cycle, the military won’t be prepared for the next set of battles
- Need to be prepared for something that seems crazy – not a natural thing for these people to do
- Result: the force designed for the Fulda Gap had to fight in Vietnam
- Defense community is understandably focused on its immediate task
  - DoD and academics work on the concept of “Let’s be reasonable.”
  - Result: Being reasonable will always get it wrong in the long run

Fourth Generation Warfare is bound to be discussed the way Air Land Warfare previously was
- Neither have a chance of being useful doctrines
Both contained excellent ideas that just did not work out
4th Generation warfare has always been a part of warfare
  - Currently, the assumption is that it will be growing in importance
  - Now peer-to-peer warfare is being overlooked
    • But peer-to-peer is more likely to happen

Long cycles in history – 500 years
First global empire age began in 1492
• Before that time there was little known about other parts of the world
  - Incas did not know about China
  - China did not know about England
  - A time of sequestered empires
• After the Europeans began reaching out and creating a global empire age all over the world, leading to each region/empire knowing about the others
  - China can now make things, especially for Norwegians

Why were the Europeans the ones to do this and not the Chinese?
And why did the Europeans do it when they did?

Start with a geopolitical reality in 1492 – Spain expelled the Moors
• Spain then had options and capabilities but no missions
  - Turkish navy had begun to dominate the Mediterranean
  - Western Europe desperately wanted spices from India
    • Needed pepper to preserve meat
    • Without pepper the whole economy could collapse
  - Turkish navy was squeezing the European trades
  - Europe wanted a way to get to India without going through Muslim countries
• Spain also had some technological capabilities
  - A not so new technology – ”Caravels” (type of ship) that could sail the high seas
    • Needed to stay away from the shores where they could be more easily attacked by smaller ships
  - New navigation systems opened the seas even more
  - When they wanted to force others to trade with them, they brought in ships with cannons
    • Always easier to get what you want with smile and a gun rather than with just a smile
• Europeans took advantage of what technologies were available
  • Turned investors into entrepreneurs
    • Example: Queen Isabella hocked her jewels to support Columbus
  • Once a few got to “India” and saw its value, then many more got involved
  • Columbus going to the Indies was rather like Armstrong going to the moon
    • Columbus did not see how important it would be
    • 50 years later there was much more activity
    • May need to wait that long for the race to the moon to pay off
Europe was never really united because no one could conquer the British
  - The Spanish Armada tried it, failed and ended Spain’s dominance of the sea
  - The Germans tried it twice and failed
  - By the British remaining outside any European empire, they guaranteed the balance of power in Europe
  - In the meantime the British went out to conquer the world
    - Had to fight many wars
    - Then Europe and its empires collapsed after World War II – most important event in the 20th Century
      - Result: US / Soviets occupied Europe (as NATO / Warsaw Pact)
      - Within 15 years Europe simply walked away from its colonial empires
        - 500 years of empire simply disappeared
      - Era ended with the Cold War which was carried out by the two semi-anti-imperial imperialistic nations – US and Soviets
        - One (US) could not lose and one (Soviets) could not win
        - One was a maritime nation, wealthy and good to trade with (US)
        - The other was not (Soviets)

1980 – big unrecognized turning point when trans-Pacific trade equaled trans-Atlantic trade
  - Previously, whichever country controlled trans-Atlantic trade controlled the world
    - It was the center of gravity
    - What happened there would determine what happened world-wide
  - After 1980 any power would need to control trade in both oceans
    - After WWII the US Navy did control both oceans
    - It has been taken for granted the US could and would invade other countries from time to time to control the oceans
  - It has never happened that a single country controlled all the seas before
    - Even the British did not
    - So center of gravity migrated to North America
    - Originally US had tried to build two fleets but could not
      - Built the Panama Canal instead
    - Amazing that the US could invade both Japan and Europe simultaneously in 1944

Center of gravity for this period has shifted to North America – not necessarily the US
  - Not necessarily for 500 years, either
  - US happens to be preeminent now
    - No one else to threaten that position now
  - This Second Global Age has its center of gravity in North America
    - First Global Age had center of gravity in the Atlantic
    - Now more global
  - A look at the map shows why South America not in any position to take preeminence
• Old declining Europe has been losing out to young, brash, barbaric US
  ▪ Europe’s weariness can be seen at least by them to come from the deep insight
    of maturity
  ▪ Think of US as a 15 year old male
    ▪ About man size but without the constraints maturity brings
    ▪ A bit clumsy with mood swings
    ▪ Can often go into attacks of rage and then worries if anyone loves him
  ▪ Nations have life cycles like people
    ▪ US is still very young and uninformed
    ▪ When asked: Why did you do that in foreign affairs?
      o Answer: Because we could
      o US has room to make mistakes and it does
      ▪ Lost in Vietnam
      ▪ Will lose in Iraq
  ▪ Centuries ago Spain was ruled by a Christian fanatic who thought God was
    directing him
    ▪ Did crazy things and others stayed out of his way
    ▪ Parallels to the current situation?
• US has an empire – but why?
  ▪ What should be done with it?
  ▪ The US geo-position between 2 oceans helps
  ▪ Rather like the magnitude of adolescent belief in its own power
    ▪ Actually difficult to gage
  ▪ US public has an inability to underestimate what the country can do
    ▪ Rather like a manic-depressive with moods whipping up and down
    ▪ First Americans always say “No one can beat us”
    ▪ Then they fear being overtaken by one country or another even though
      their economy outstrips all others
• A new age began in 1991 when the Soviet Union collapsed
  ▪ US had no one left to fight
  ▪ Almost exactly 500 years after Columbus
  ▪ Part of that Long Cycle

Demographic changes will have a great deal of impact on this cycle
• US is already about the most under-populated country in the world
• Demographic boom is finished everywhere
  ▪ Germany’s population will be contracting 25% by 2050
  ▪ By 2050-2060 most mid-tier countries will reach population stabilization
  ▪ By 2100 even the countries with the current highest rates and lowest
    development will reach stability
• Already the 44 most developed countries have passed point of stability and are
  contracting – except for the US which is still growing because of immigration

Capitalism is built on the concept that there will always be more workers and more
consumers
• Also involves the concept that loans will be paid back with “cheaper” money that comes from better productivity, etc.
• Assumes expanding markets

US is the center of gravity now
• US dominates all oceans
• US can poke its nose into Eurasia from time to time
  ▪ May get bitten and claims it will never do that again
  ▪ Will continue to lose small numbers of people this way
• Despite problems, US will not give up its ocean dominance

During the first global age there were new technologies to move things along
• First there were ships that could rapidly cross oceans
• Even more high speed transportation and communications technologies were developed in the 19th century to help control expanding empires

US does have a demographics problem, too, but different than Europe
• US has immigration but knows how to handle it
• In a few years US will be handing out bonuses to get people to come here
• Reflects changes in the work force since Social Security began for those over 65
  ▪ At that time average life expectancy was about 61
  ▪ Age when entering the work force has also increased with more education
    ▪ In Dickins’ day could have 6-year-olds working at washing bottles
    ▪ Now need some college for most jobs
  ▪ Result: people have more non-productive years at both ends of life

Even the “Third World” (no longer a useful term) has a declining birth rate
• Mexico will reach zero population growth about 2045
  ▪ Already has the 15th largest economy
  ▪ Also has a bad attitude about the US
  ▪ Germany and France will probably start hiring them
• Russia’s demographic situation is so bad that it almost be said: “Last one out, turn off the lights”
• Many countries may need to get their labor forces from bribery
• We are entering a period of population stabilization
• The current immigration debate is amusing considering what is likely to happen in the future
  ▪ The US is good at assimilating immigrants
  ▪ Places like France and Germany are not

There will be a greater dependence on technology to help with the problems of aging
• Robotics will be an alternative
  ▪ In the 1950s robots were not useful because the population was doubling
  ▪ Robotics will be doing jobs immigrants are now doing
• The military will need to stop expanding its warfare activities or use more robots
• The single technology that will matter most will involve getting computers to actually do things rather than just calculate things

Another up and coming industry will be genetics
• The country cannot afford to have large numbers of 65-80+ year olds just sitting around at home
  ▪ There is a need for more education
  ▪ Losing out on a lot of productivity
• Need to take on the degenerative diseases that reduce people’s productive years
• Most believe that radical breakthroughs are about to happen

The hydrocarbon era is coming to an end in Europe
• Europe first employed steam power to increase the productivity of workers
• Discussion of greenhouse gases is really a religious debate and will be avoided in this talk
• It is understandable that most hydrocarbons now come from areas where people would shoot at outsiders
  ▪ After adding in the costs of wars to the other costs of hydrocarbons, can see that the price is too high
  ▪ Americans believe that they deserve cheap gas
• Other alternatives have been studied but all have problems
  ▪ Nuclear power requires a great deal of investment
  ▪ Hydrogen turns out to have a large CO² footprint and cost
  ▪ Ethanol now seen to cause pollution, too
  ▪ Windmill power is possible but huge numbers would be needed
  ▪ Wave power can cause problems to fish
• Best alternative energy system appears to be space-based solar reflectors
  ▪ US needs a better reason to make use of space
  ▪ US controls space and the Saudis do not
  ▪ No major power would fight against the US unless it could knock out US space assets
  ▪ Like Columbus in the West Indies, Armstrong saw nothing to make use of when he got to the moon
    • Cost of bringing energy or other materials from space would be enormous
    • Compare that to what it cost to bring desired goods from India to Portugal during the earliest trading period
• Bottomline: control of the earth now depends on control of space

Some predictions
• Another Cold War with Russia will be coming and it will crack wide-open because of its demographic problems
• Islamic world will continue to have difficulties but has already had its earthquake
• China cannot remain stable – too many very deep problems
• Japan still needs to be taken seriously
• Turkey may emerge as an important power
  ▪ Has recently risen to the 18th largest economy from being the 30th
  ▪ Has one foot in each of many areas – Europe/Asia/Mid-East/Muslim/secular
  ▪ It did have the Ottoman empire for 700 years

• Mexico showing potential as a Great Power as it grows
  ▪ Has growing economy and good demographics
  ▪ Has the position to be in touch with two oceans

**Summation**

There are cycles in history
• Every 20 years things will be radically different
• Deep cycles last about 500 years
• Fundamental drivers for these cycles
  ▪ Population changes
  ▪ Technologies that have synergy with geo-political realities
  ▪ Energy issues
    ▪ US will want what it can control best
    ▪ US could exploit space based opportunities but should not be the only option
  ▪ Japan, Turkey and Mexico will outstrip France and Germany
    ▪ Their aggressive growth will not make the US happy

World history is highly unpredictable
• Do not use common sense to try to predict out 20 years
• Look at patterns for predictions
• Ignore what you knew to be true in the 20th century
  ▪ Western Europe now is incapable of doing anything
  ▪ Turkey has made bold moves with its troops along the Iraqi border
• There will be a changing of the guard
• Expect a weird world – but not inexplicable
• Robots, not immigrants, will be cutting your lawn in the near future

**QUESTION AND ANSWER SESSION**

Turkey and India are not at the same level for future major power development
• Turkey’s GDP/capita is about $5,500 while India’s is about $500
  ▪ In India development is irregular, regional – not in 80% of the country
    ▪ Makes for instability
    ▪ Many weird islands of good development
  ▪ India is still an important ally, primarily because its good relations with the US scares Pakistan
• Japan is also not a likely future super power because of demographics
  ▪ Has no good way to integrate immigrants
  ▪ Has world’s worst demographic situation with its aging population
- Weaknesses in China may bring Japan into the picture
- Also see much Japanese influence in the maritime areas of Russia
- Japan could exploit China for its population and Russia for its raw materials
- US is comfortable with the Japanese military coming here to exercise
  - Does not like Japan holding exercises on its own
- US likes the low cost products that China produces but does not want to be in charge of China
- Countries with bad demographic situations will behave differently now
  - Population growth has defined the last century
  - Now populations are declining

Dual use technologies are everywhere
- Military uses have always been drivers
  - Think of telegraphs, etc
  - Military underwrites the initial costs
- Government underwrites the development of space
  - Since the government is so involved, hard for others to get in
  - Now wealthy individuals are beginning to build space ships
    - Taking NASA patents and making them efficient
  - Space exploration will soon look like the 16th century exploration/exploitation of Latin America
    - That will make things even more dangerous
- Uncomfortable to imagine a time when some other country is better at dealing with space than is the US
  - In the past, the countries that had better ships were the one that did best in developing the Americas
  - DoD’s concept is to keep everyone else out of space

Evolution of the human brain (learning in a day what used to take a week)
- May be happening; good idea
- Not enough known about the area to discuss possibilities here

Al Qaeda does not want to remain a non-state actor
- Knows it must have a state as a base its returned grand caliphate
- Nationalism was an overwhelming concept in the 20th century
  - Transnational countries are still not likely to survive
    - Sub-group rivalries will force them to break up
- Al Qaeda has had a good opening round but no strategic punch

Africa
- Birth rate collapsing there, too, but still very high
- Best thing in Africa is South Africa
  - Only 15-20 years away from its refounding, so not surprising that it has yet to figure out its way
- Need to look at Nigeria because of its oil reserves
• Africa needs some kind of imperialism
  ▪ Europe will not do it again
  ▪ US should not do it
  ▪ South Africa could but is unlikely to get it together

Turkey’s big Kurdish problem
• Turkey does have an integrating religious history
  ▪ Practical fanaticism
  ▪ Willing to kill for religion or political reasons
• Did have a transnational model that failed (Ottoman Empire)
  ▪ Will continue to have many transnational interests
  ▪ But has many borders to worry about
  ▪ If Turkey tries to form a regional hegemony, will have a problem
    • Also will have a problem without the hegemony
  ▪ The Kurds will likely be disappointed again
    • Turkey will make sure there is no Greater Kurdistan

Security related to communications and robotics is critical and badly needed and should be better funded

Another question for Turkey – do the Kurds really want to be absorbed

Dr. Friedman noted that he is agnostic about global warming

The need for huge amounts of oil for their vehicles has put big strains on the US military to get its weapons systems where they need to be

There has been a great deal of discussion not about states dissolving but nationalism, despite saying that nations are not as important as they were in the past
• May need better definition of what a nation is
• Not moving toward non-national situations
  ▪ Maybe more emphasis on trans-national (EU, etc.)
  ▪ National movements still happening – see Palestinian issues
• There is no evidence that the concept of the nation state is going away

Non-Government Organizations (NGOs)
• Have had major impact on nation state development in the past
  ▪ The 19th century Mission Board expanded imperialism more than any other entity
  ▪ The Catholic church has always been involved in spreading nation state concepts
• Human Rights Watch uses soft power by bearing moral witness
  ▪ Usually irrelevant because it is not on one side or the other
  ▪ Manages to negate its power by condemning both sides
China

- After the 1991 collapse of Japan’s economy, new protective arrangements were developed
  - When a similar situation occurred in Korea, not as much of a world impact
- 40% of the Chinese GDP is non-performing
- China only looks like a capitalist system
- Major problem with huge debt overhang
  - Solved the problem by surging exports
  - Exports brought in cash to pay off loans but needed more loans to keep going
- China has had the goal of fostering growth in the economy
  - But there has been no way to add to the work force
- World has experienced two Asian meltdowns already
- Also a problem with the inability of the West to understand Japan
- *Business Week* is finally asking “Can China be fixed?” when no one would admit to any problems before
  - China may not solve its problems because they are so vast
  - China has a 30-40 year cycle to deal with
    - Needs more trained workers but no supply of them available
  - If China is doing so well, why is it cracking down on everyone?
    - Obviously, they know something we do not
  - If China’s economy is growing so well, why is all the capital flowing overseas?
  - Their security apparatus is much larger than they should need
  - Chinese should be dancing in the street – but they are not
  - China is building a huge military – whom do they intend to fight?
  - Why is China adulterating products?
    - Must mean they are already have problems

What are the implications to the US economic system?

- We are in the middle of a 50-year cycle (1980-2030)
  - Era of new capital growth and entrepreneurship
  - More focus will come eventually
  - From 1990-2020 is period of expanding growth
  - When Baby Boomers retire fully and other inevitable conditions kick in, then there will be problems
- Just as the 1970s and the late 1920s-early 1930s were bad times, so the 2030s are likely to be bad