Mr. Schwartz says that he is surprised by how many surprises there have been for our leadership.

Why are we surprised by so many things that could be predicted?
Example: Collapse of the USSR
- CIA did not want to lose its long term enemy – reduces its ability to focus its work
- Did not notice that the country was not strong enough to stay together

It is hard to imagine what we don’t want to happen
Despite evidence of likely changes
Most common strategy is denial in the face of changes
“Well, that can’t possibly happen!”
“That would be stupid!”

Surprise can be foreseen
If you see trends leading away from expectations, do you take it seriously?
Taking is seriously is more important
If your eyes are open, you will see it

Why We Are Surprised
Now must deal in a global context which is new
May not be able to perceive all the changes

Reasons:
1. The Internet – complete access to knowledge
   Almost all knowledge is available to everyone everywhere
   Wikipedia is good example – important – being updated daily
   Having better educated people allows for more economic/political growth
2. Better governance – economies are better because governments are better
   China and India are improving because corruption not as prevalent – they get the message on how things work in the developed world
   Rules of the game are more stable
   Systems less corrupt

Because of these positive changes, we are getting a more stable model for growth
Counter example that proves the point: Africa
Most countries have bad governments, little education, corruption
Result: widespread war, famine, and socio-economic chaos
It would be a big surprise if they get the message about knowledge and good government.

Spread of knowledge and science is underlying engine of growth – if we don’t mess it up like we did in the period 1905 through World War II

**Three Big Surprises in the Near Future in the New Europe**

1. **The New Europe**
   - New model of governance – more of a federal government
   - More difficult for them
     - US started out with 13 colonies with 3 million people united by a common enemy
     - Europe trying to do same with significantly more entities, long-standing nationalism, and 500 million people
     - Use to having lots of wars creating animosities among countries
     - And they are still killing each other – Balkans

   In Europe countries emerged when capital tribes took over
   - Paris, London, Berlin won out over all the other groups
   - But all had lots of sub-groups that have been chaffing under this rule
   - So now these sub-groups are finding ways to exert influence with a larger federal construct
   - This will be a useful lesson for China and India
     - As they try to integrate their millions of people / hundreds of sub-groups
     - Additional challenges presented by diversity of religious beliefs

2) **Adoption of the single currency (the Euro) was a great accomplishment**
   - At least when consider France and German giving up well-established currencies
   - Others easier to convince but may not hold for long
   - British still not fully integrated and holding on to their pound sterling

3) **Really big surprise in the offing: What happens when Russia joins the EU?**
   - At Davos meeting last year:
     - Turkey said “Let us into the EU or fight us”
     - Ukraine said “Let us in so that we don’t go back to Russian influence”
   - Implications:
     - Expect to see Russia trying to join in 4-5 years
     - Europe will say no at first but then….
       - Will recognize benefits of great natural resources and access to energy reserves
       - With Russia included (especially with nuclear weapons)
         - No longer “wimp” second tier power, especially when considering additional Russian nuclear weapons
         - Could obtain greater political independence from US
     - Implication: NATO won’t survive through the next decade
       - US is moving in a different socio-political direction than Europe
Religion: 14% of Europeans attend services regularly vs. 70% for US
Values generally different for source of actions
UK would fall somewhere between US & EU
  Problem won’t be resolved in 10 years
  Economically UK needs to be connected to Europe
  For most all else, would prefer to side with the US
Post-War relationship is over
  Environmental issues will be big
Desire to keep Europe as it was – France as Disneyland for adults (Parisland perhaps)
  Europe will try not to change a country until it absolutely has to

Surprises in Geopolitics
1. Collapse of Russia
   Some indicators are already happening with numbers clearly visible now
   Russia on the verge of collapse due to demographic, other realities
   Labor force will peak in 2005 due to 1980s downward trend in birthrate
   Situation was so bleak
     Women were having an average of 7 abortions
     Only available birth control method
     Created fertility problems
     Also facing deaths of working age men/shrinking lifespans
   Labor shortage result will be big decline in productivity
   Migrants—legal and illegal-- are only new source of labor
   Muslims from Central Asia not wanted
   China could be source but would cause border problems
   Rather like US/Mexico border problems
   This is already determined – can see this “surprise” coming

2. Latin America swings left
   Latin America used to be on US agenda but fell off over last decade
   Now will be back on
   Even Mexico might go socialist – with some level of antipathy towards US
   No big war – lots of little nasty incidents (kidnappings, energy embargos)
   Will be happening because US did not pay attention to problems for last 5 years
   Some changes aren't pro-Latin America but more anti-US
   Hard to say why so many Latin countries with great natural wealth squander it
   Argentina, Brazil, Venezuela all should be very prosperous

   Cuba is not a big problem
     Change will only come when Castro dies
     US domestic politics are deciding national policies toward Cuba
     All other countries consider Cuba just another Caribbean tourist island

3. Iraq and Afghanistan: long term outcome remains uncertain
Rather like Korea – could require long term US effort to hold things together
Will provide lots of lessons for future
  Will affect what we do in the future
  Already know that the US would probably not do the same thing again
  So won't do anything similar in North Korea or Iran
An early departure does not seem likely
Uncertainty will be:
  How far away is US departure?
  What will US leave behind after departure?
  Could still be possible that a successful democracy comes out of it – or the opposite

4. More terrorism to the level of WMD
   It won't be aimed only at the US (example: Danish cartoons)
   There are a lot of angry people out there – have been that way for 7 centuries
   Something more substantial than the cartoons could be made to happen
     Perhaps bin Laden talks to 100 people around the world
     Tells them to burn/attack every western embassy, airline, business
     Could turn into a bottom up way to drive the West out
     In India the US would not be the target – there are enough local ones
   Lots of small wars could change the world
     Global spasms of violence
     Would happen in US and Europe

Much of Muslim anger is really directed toward their own governments
   These governments are US "friends"
   The anger is not just about the West and its ways
   Indicator: only about 300 books are translated into Arabic each year
     They are not getting any infusion of new ideas

**Surprises from Geo-economics**
There is a possibility of stagflation – inflation plus unemployment
   Term goes back to the days of the "misery index"
   From growing problem of higher fuels, larger deficits
   New head of FED – perception is important
     Greenspan had long record so less uncertainty
     Real estate bust not a big worry
Problem of unsustainable industries – autos and airlines
   What if GM goes bankrupt?
     Would take Ford with it
     Basic problem: can't make money making American cars
   Some problems are structural and fundamental
     Almost as many American auto workers today as in 1982
     But foreign companies own most of the plants
     So foreign countries get most of money/sources of innovation
Auto companies could go bankrupt by the end of 2006
It would help if GM and Ford made good cars
Could make a difference if made more efficient or green cars
Airlines are a different story –
There is probably room for only 3 long-haul carriers in the US

Southwest Airlines only made money last quarter on an oil price hedge deal they had previously made
Very few airlines around the world do make money
It is a US advantage that it allows companies to fail and encourages innovation and competition

**Faith Based Conflict**

Look at what happened after the Communists were gone
The question became "Which God do you believe in?"
Politics of ideology – you can be right or wrong
Politics of religion – My God versus your God – I’ll die for mine
More and more, conflicts are about which god is right
Nigeria is the next likely hot spot
Some tribal and religious conflicts involved
Civil war is going on again and a large part of that involves religion
Recommended reading: Sam Harris *The End of Faith: Religion, Terror, and the Future of Reason*
Problem is more pressing given that the subject is hard to talk about due to

**Likely Hot Spots**

Africa – almost everywhere
Most governments are kleptocracies with rampant disease and starvation
100 million people will die in Africa in the next 20 years
US/West won’t do anything about it – again
Somalia is the proto-type for the future after droughts and interventions
Dafur and Chad are now on similar path

Expect various forms of collapse and needs for humanitarian relief in conflicts
Big question: Would US care?
At the moment US would not – maybe if Nigeria blows up and cuts oil
Problems really should be handled by old colonial masters: UK, France, Belgium

Arabian Gulf civil wars
Revenues have remained about the same for years but population grows
So amount per capita dropping even with recent huge oil cost increases
Saudi Arabia has a high chance of disruption
Negative perceptions of the Saudi royal family may increase dissent
More attacks can be expected on the oil infrastructure – some successful
US may be expected to act in such crises
North Korea, Iran and War on Terror will continue to be problems, too

Energy Price Crisis
US has generally had a real (unstated) policy of maximizing demand/minimize supply
  Hard to build any new plants or refineries
  Oil: CAFÉ standards should have been raised to 35 MPG – Reagan decided not to
    If that had been done US would be importing only about 2 billion bbls/day instead of 11 billion
    Price of oil would then be much lower due to reduced demand
    Did not want increased gas taxes
American seem to believe they have a right to $1/gal gas
Natural gas:
  US regulations make improvement of energy infrastructure nearly impossible
  LNG plants are only being allowed to be built in hurricane zones
  California will let Mexico build facilities for them
We are in the 6th peak of oil production and it won’t be the last

There may be a drop in supply in about 30 to 40 years
Prices will remain high or very high if Nigeria blows up
  Can expect to see a drop in prices in a couple of years
  Probably will stabilize around $35 a barrel in a few years
There will be many new sources of hydrocarbons (oil sands, coal gasification, etc.)
  because they will become reasonable in economic terms

Nuclear power is making a comeback because of climate change issues
  Issues will be coal vs nuclear power not alternative sources vs nuclear power
  Alternative sources cannot support base load energy needs but will grow and become contributors to the power grid
  Sales of reactor-building companies (i.e., Westinghouse) US will change its philosophy about reprocessing spent nuclear fuel
    US will need to buy its new reactors from other countries
    Even Germany and Sweden will not be able to shut down their reactors

When Putin shut off fuel to Ukraine and inadvertently cut it off to Europe
  Probably cost Russia $1 trillion over next 10 years
  Proved that Russia was an unreliable energy partner for Europe

Americans highly value freedom and privacy of their own cars
  Not likely to change our travel ways
  Clean/green cars are now more likely to develop
    Won’t help with congestion
  China went from bikes to cars in a very few years but still small percentage
    Electricity needs are really fueling demand for oil
Grid electricity unreliable so new buildings include diesel generators

**Future Financial Crises**
Really no longer important – we’ve learned to handle them quite well
Costs of building a nuclear power plant goes up dramatically with time
Much time taken up with enforcing regulations over 12 year build time
If took only 4 years versus current norm, they would be profitable
Many new construction methods now available since last plant finished

**End of Retirement**
From both necessity and choice
Many people lost lot in Enron and other financial collapses
Many don’t want to stop working – younger longer now
There won’t be a labor crisis – seniors will continue to work
So Social Security crisis won’t happen
Higher health care costs will be a problem
Much longer life spans in the long run

Drugs will compensate for some aging issues
Already testing pills to improve night vision, short term memory
Life span could easily be 120 years
Could stay young until you die
In next decade will be able to stop many diseases that now kill
A 15-year-old today could live to be 150
Will start slowing aging process by about age 40 (stay that age)
Will likely increase the divorce rate since so many people will live longer
There will be a huge biological transformation in the next 20 years
We may be the last generation to die
Genetics will develop ways to regenerate body parts
Our genetic code could even lose the genes that make us die

**Migration Pressures**
Won’t be able to stop it
Part of US vitality
Only the US among industrialized countries is still growing
Europe has a critical problem
Could lead to internal conflict
Immigrants needed but not wanted
Recent French riots will become typical
UK did somewhat better job of integrating migrants
European Union can’t close its borders and must integrate better
EU may not survive another 5 years
Might go back to border controls
Immigrants to Europe are mostly Muslim and are strong participants

Global Disease Outbreak
- Includes things like AIDS/mad cow disease
- Katrina raised US awareness on the need to be ready for big crises
- Can’t stop a pandemic but can control it
- We are moving in the right direction to be prepared
- No longer a surprise

Rapid Climate Change
- Global warming is good for us – not the enemy
- Current trends and the long-view indicate we need to worry about a new ice age
- In pre-historic period temperatures went up 40 degrees in 1000 years
  - Established an environment capable of sustain life in a civilization
- “Normal” climate of earth is much colder than we are use to now
- At higher temperature world could sustain 8 billion people
  - At lower temperatures, only 2 billion
- Changes happen over decades
  - Already looks to be happening
  - Won’t be gradual – will be catastrophic and could be warmer … or colder
- Current climate models are inadequate to address the problem
  - Beginning to see warning signs
  - Convinced it will happen, just don’t know when
- Beginning to have growing interest in this concept in the government
  - Models are beginning to improve
- Why has the climate been so stable for so long?
  - Can look back 500,000 years in earth history
  - Few impact devices available except cutting back on hydrocarbons
    - So need to look more closely at nuclear option
- Climate change will eventually dominate nuclear issues

Problem:  We don’t know enough about the huge problem to make any changes to the climate
- Recently reported but report became its own public affairs problem
- Potential results: millions of Bangladeshi would flee to India or Pakistan
- Changes in the Gulf Stream could significantly alter Europe’s weather patterns – changing from temperate to cold

Only two people in the Administration do not believe there is anything to the concept of climate change
- However, they opinions matter the most
- Could see a flip by 2008
Imagine what would happen geopolitically if the US announced it would lead environmental reforms. If the Republicans make a major change on environmental policy, they could deprive the Democrats of a key hotbutton campaign issue.

**New Technologies**
We are not slowing down technologically.
Real broadband is really about to happen.
- Will add great mobility to the internet community.
- Uses for retail and entertainment are just beginning.

Other likely possibilities include:
- Clean technologies for cars already exist.
- End to the war on drugs because they will be made at home, not imported.
- New designer drugs can be targeted to individuals.
- From readily available chemicals.
- Won’t be a problem for drug lords – reduces their transportation problems.
- Really cheap to produce, but risk factor raises prices.
- Might be able to develop drugs tailored for individuals without side effects.

**Regenerative Medicine**
Now: To cure people doctors can only cut something out or give toxic chemicals.
- Skin and bone regenerates but not nerves and hearts.
Future: Molecular biology understanding will be able to regenerate what is needed – experiments already happening.
- Most will be natural stimulation.
Rest of world is talking about new types of people – US is not.

**A New Scientific Revolution**
New thinking in the early 20th Century helped make all the rest of the changes for the rest of the century.
Revolutions happen when new hardware is introduced.
- Brings in new information.
- Plus you have anomalous thinking by a few bright individuals.
Example: Discovery of dark energy and dark matter in the universe.
- We know it is there but that is about all except for measurements.
- Now find that our old model of the universe accounts for only about 10%.

Optimal condition for Revolution currently.
Changes coming in many areas.
- Biological and genetics new understandings from the 1980s now making practical changes.
- Now manipulating matter and energy at sub-atomic level – though to be impossible 25 years ago.
No end in sight for information technology revolution  
Brings much more productivity  
The way we make things is very inefficient  
Nature does is slowly and much more efficiently  
Look at trees growing from acorns  
We will have desktop factories in 15 years  
Much like desktop printer revolution a few years ago  
Compare to old printing press  
Military already looking at making parts locally  
Will radically change life by making enormous leaps in productivity  
New paradigm will switch our level of use of the environment

**In summary, generally optimistic about the future**  
New technologies will allow us to solve many, but not all, problems  
Won’t solve religious or ethnic conflicts  
Could have a problem with an impact from outer space  
Problem is beginning to be worked on now  
Overall the rich will do better  
Already 300 million people in the world could own a BMW  
Same number make over $100,000/year

Four big questions:  
1. Will we go to war with China and/or the Islamic world?  
2. Will we be able to sustain high economic growth to make the world on average wealthier?  
3. Will we be able to distribute that wealth around the world equitably?  
4. Will we be able to make the next 2 billion people rich without destroying the environment?

If answer to any one of these questions is no, there may be big problems.