

FUTURE *takes*

Your international platform for future related issues

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civ·i·li·za·tion: 1 a : a relatively high level of cultural and technological development; specifically : the stage of cultural development at which writing and the keeping of written records is attained
b : the culture characteristic of a particular time or place

The Rise and Fall of Civilizations

By Darlow Botha

INTRODUCTION

Keeping records enables humankind to trace the history of human efforts and learn from many "experiments" in civilization on record. As archeologists and anthropologists expand their findings, they discover groups of humans on all continents over a hundred thousands years ago. Some of these groups created societies complex and rich enough to claim the culture, technology and record keeping attributes of "civilization." As futurists, we must understand how and where humankind has been in the past to envision possible trajectories ahead and discriminate between desirable futures and those we would work to avoid.

One question to ask is, "Does the current world turmoil have the potential to initiate an accelerating decline of Western Civilization (and with it our American hegemony), or – is this an opportunity to exploit all our advantages to start a new direction, and create the first ever recorded history of an all powerful Western civilization morphing into a first 'World Civilization'?"

The original design of our founders and its great adaptability allowed the United States to save the world from despotic hegemonies almost two centuries later. In the six decades since then, we have helped to recreate countries devastated by war, got involved in skirmishes of dubious value to our future, and been a major

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Future (Re) Takes

By Russell Wooten
russell.wooten@dhs.gov
 571-227-2040

The September-October 2001 issue of **The Futurist** featured an article by Francis D. Reynolds, titled, "The Transportation System of the Future." Here is a short review of that article and an update.

We will travel safer, faster, cheaper with less stress and without using gasoline or creating pollution. This futuristic dual-mode transportation

system includes vehicles driven in the normal manner on streets and automatically driven on high-speed dedicated guideways while drivers use their time for anything but driving. This dual-mode system incorporates special automatic guideways with most of the artificial intelligence built into the guideway network and not into the vehicles.

The guideways will carry almost all of the categories of vehicles now used on streets and highways. Most of the traffic will consist of private vehicles, but also will include buses, rental

See Future (Re) Takes, continued on page 24

from the PRESIDENT

by LIMOR SCHAFMAN

The Fall - oddly enough - is often the season of beginnings: the school year has children charging into the school yard, businesses kick off the summer slough, and elections bring on new rounds of leadership. We are now passed the frenzy of the national election and the much (much!) calmer elections of our chapter. With the new chapter year upon us for 2004-2005, I want to bring you all up to date on all the harvesting and building of foundations the chapter Board has done over the past year in preparation for this new year:

Chapter Vision and Mission: To kick off the revitalization of the chapter, the Board held a full day strategy meeting last March. Out of this grew a number of different cornerstones of foundation for the chapter. The first was the vision of the chapter. *With unanimity and with the understanding that as the chapter grows and changes so will its vision, the Board determined to have this chapter be the center for ideas in Greater Washington D.C. that leverages the resources unique to this region in order to craft better futures for ourselves and our world. The second is our mission: to provide an independent, interdisciplinary, open forum to learn, explore, develop, produce, and promote futures thinking.*

In our own home-grown elections, we have brought on three new Board members: Sue Snyder, formerly of the Annapolis chapter and who has been collaborating with the Board, is now an official member of it and head of the Membership Committee. Jay Herson is new to the Board and contributes to **Future Takes**. And Russell Wooten, also recurring contributor to this newsletter has both joined the Board and become its new Vice President. Welcome to you all! (Our full list of Board members is provided near the end of this issue.)

Chapter Goals for 2004-2005: We are an ambitious group that sees a

large role for this chapter to play in the region. We have tried to set high-reaching yet attainable goals for this year and they include: growing the membership to 175, increasing the breadth of programming while retaining its high level of quality, expanding its outreach by developing programming with other organizations, inviting members of other organizations and agencies to join in our events, and increasing the breadth of articles contributed to future thinkers.

Expansion of Programs

Offered: In order to continue to bring value to our members as well as bring other organizations, agencies and businesses into our community, we have begun and will continue to expand our programming offerings. In addition to our monthly dinner speaker events, in September we began our monthly Book Club meetings at **Politics & Prose** and have even garnered a **Washington Post** mention as a result. With the Woodrow Wilson International Center for Scholars we have begun our luncheon program with a special talk by Australian futurist Richard Slaughter. These luncheons will continue in 2005 on a quarterly basis. We also plan to futurist tools workshops for 2005 and will keep you informed as to topics and

dates. (And if you have topics you want us to cover, please send word to our programs lead, Richard Smith at rhsmith@nanoverse.net.)

Membership Drive: We have an ambitious membership goal set for 2005, and our ambitious Fall membership drive is now in progress. We hope you are enjoying your membership, that you will renew, if you haven't already, and that you will invite colleagues and friends to visit us and see what we have to offer.

Getting Involved: We are also delighted that some of you have come forward to participate more actively in the chapter. Thank you! Your interest in being more involved is very welcome and we hope others of you will consider becoming involved in one of the committees. Getting involved in a committee is the first step to taking a position on the Board, and we want you to join us! So choose a committee or two you are interested in and give us a call.

In all, the 2004-2005 year is off with a roar and we look forward to a very exciting year for all of us!

Best regards,



New Column!

I am a Terrorist-Fighter...

Future Takes is launching a new column entitled "I am a Terrorist-Fighter;" Today we are all impacted by terrorism, and we are all potentially on the front lines. This column, administered by Assistant Editor-in-Chief Russell Wooten, provides a forum for everyone to editorialize, comment, praise, criticize or make suggestions to all of us. Comments for this column will be included without reference to origination or author, although at their option, authors may identify themselves. Send your contributions for this column to Russell Wooten at Russell.Wooten@dhs.gov.

FUTURE TAKES

Future Takes is the newsletter of the National Capital Region World Future Society (NatCapWFS), which is based in Washington, DC, United States of America. In addition to the NatCapWFS, **Future Takes** serves other interested professional societies in the greater Washington DC metropolitan area as well as other chapters of the World Future Society worldwide.

Future Takes welcomes contributed articles that serve one or more of the following objectives:

- Contribute to a reasoned awareness of the future and the importance of its study,
- Advance serious and responsible investigation of the future,
- Promote the development of methods for the study of the future,
- Increase public understanding of future-oriented studies,
- Facilitate communication and cooperation among organizations and individuals in studying or planning for the future.

In addition, **Future Takes** publishes book reviews, future studies exercises, discussion threads, letters to the editor or equivalent correspon-

dence, and summaries of NatCapWFS programs. All published material will normally follow the guidelines delineated herein for contributed articles.

In accord with the NatCapWFS objectives to promote free dialog and the exchange of ideas on matters concerning the future, **Future Takes** does not align itself with political entities including but not limited to political parties, political action committees, or political platforms. In addition, **Future Takes** does not advocate particular ideologies or political positions.

Any article published in **Future Takes** including any original article written by **Future Takes** editors represents the viewpoint of the author(s) and does not necessarily represent the official position of the NatCapWFS or the greater World Future Society.

The copyright of any article published in **Future Takes** remains with the author(s). By submitting an article to **Future Takes**, the author(s) certifies that he/she owns the article and that **Future Takes** will not violate any copyright by publishing it. By publishing an article or accepting it for publication, **Future Takes** has the implied permission to submit it to

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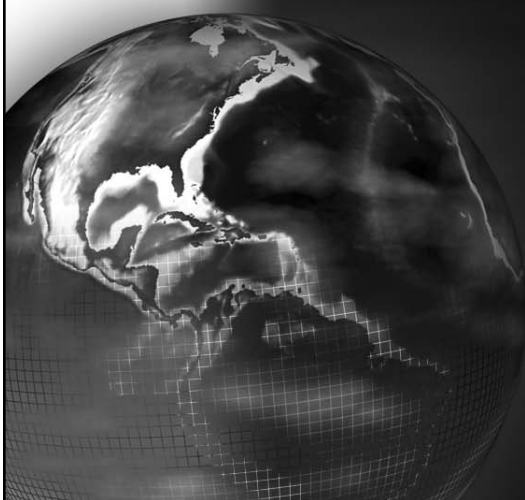
Henry Fung, Jay Herson

Editors-in-Chief, Emeriti

Alan Hines, Richard Mayer

other publications with which **Future Takes** has an official or de facto reciprocal exchange agreement. Such other publications include, but are not limited to, other publications of the greater World Future Society as well as newsletters of other organizations.

Give Us Your Perspective on the Future



We are looking for people with vision in any area of interest or expertise to write a future-oriented article for **Future Takes**. Your vision may come from personal experience, reading, lecture notes, or a topic that in your view is important for the future. Please share your thoughts with our chapter members, preferably in 1000 words or less. Send your contribution to futuretakes@cs.com.

Looking Back

The "Past" of Future Takes

Andy Hines, Editor-in-Chief Emeritus
and Past President

John Meagher, Past President

Dave Stein, Editor-in-Chief

The Metropolitan Washington Chapter of the World Future Society was re-ignited in the Fall of 1992 by the National Office, which planned and hosted three dinner meetings. A steering committee of interested members came together over the course of these meetings and charted the future of the chapter. In these discussions, the need for a newsletter to communicate to members and prospective members emerged. One of the early questions was what to call it. Here, credit must be given to Armida Stickney, a steering committee member, who came up with the moniker, **Future Takes**.

As the first Editor, Andy still has a copy of the inaugural issue, which was published in February 1993. It was a simple folded 8x14 that enabled four pages of material. It included a statement of purpose from the Chapter, a review of recent monthly dinner programs as well as previews of upcoming programs, among other news items. The goal was for it to be published quarterly, which was more or less met. In 1993, issues were published in February, June, September and December. By the 4th issue, December 1993, there was enough news to double the size from 4 to 8 pages. **Future Takes** had begun soliciting contributions from members, including a monthly "guest columnist" feature. There was simply more to report as the chapter picked up momentum, including the formation of a Saturday morning book club as well as a professional development workshop.

Andy's reign as Editor continued through March 1997 - a four-year run! The newsletter pretty much continued as an eight-pager published on a quarterly basis. In 1997, **Future Takes** took on staff writers, partially in hopes of finding an eventual successor as Editor. The initial staff writers were

Rick Mayer, Ken Harris, and Valerie Feldman. Rick, also an active member on the chapter's Board of Directors, eventually became the champion and took over **Future Takes** in 1998.

Under Rick's leadership, the hard-copy version of **Future Takes** was improved, and the first electronic version of the newsletter was developed in cooperation with Carl Pinches. Rick and Carl both were pivotal in helping the chapter transition from print to electronic communication for member notices on a regular basis and our newsletter. This effort saved the chapter significant amounts of treasure, in turn extending value to members and reducing operating costs for the chapter while also improving communications and outreach. Electronic communications enabled the chapter to keep pace with members desiring event announcements and other information in near real time. In addition, Rick inaugurated the program synopses (written by Board members), the President's page, interviews with various members, and the series on complexity and management. Program summaries were often enriched with salient points from interviews with the speakers and from the lively Q&A sessions that followed their presentations.

Upon Rick's retirement from military service and departure from the Washington DC area in 2001, **Future Takes** became dormant until 2003, when it was revived under its present leadership.

Reflects Andy, "It was a neat experience for me. I relished the opportunity to contribute something tangible to the profession. As I leaf through old copies of **Future Takes**, I can see my own evolution as an Editor, as each issue seemed to be just a little better than the one before. It is also refreshing to reflect on the great work we did and the great people involved. This was a special period for me, and I thank you for asking about it and allowing me to reminisce a little!"

Chapter Speakers Bureau!

Attention all Expert Speakers!

Are you interested in speaking at a World Future Society or other local event concerned with emerging issues and trends? Are you an expert in your field and have important information to share with colleagues and peers? If so, please let us know.

The World Future Society's US National Capital Region Chapter is looking for speakers for its own events as well as for recommendation to others who are looking for knowledgeable and engaging speakers on future-oriented topics.

For those who are interested in being part of our Chapter's Speaker's Bureau, please provide us with the following information:

- * The number of speeches, on average, you present per year, and the typical audience size
- * Three references (with contact information) of groups you have spoken to within the last twelve months
- * Biography
- * Recent photo
- * Speech topics
- * Fee information and any special criteria, if any

Information should be forwarded to Natalie Ambrose, Council on Foundations, 1828 L Street NW #301, Washington, DC 20036. Tel: 202-467-0385. Email: ambrn@cof.org

Futurist Link of the Quarter

<http://tpac.gatech.edu>

This is the Technology Policy and Assessment Center, Georgia Tech, with a wealth of information on technology forecasting, futures methodology, and trends.

Who is your favorite futurist?
Please nominate for this column.

Dave's ThinkTank

Election participation

Issue of the quarter:

Election participation. In other parts of the world, many people would like to have the right and the opportunity to choose their own head of state and other government leaders. People have fought and died for the right of self-determination. Yet, in the United States, many people choose not to exercise their right to vote. Is opting out of the political process a trend that will eventually reverse itself or is it a characteristic of a mature democracy? Furthermore, if such opting out persists, what are the long term implications for democracy itself?

Points for consideration:

What factors contribute to the non-participation, and how will these factors themselves change with time?

Possible factors:

1. complacency
2. fatalism
3. lack of time and/or interest (that is, voting and/or becoming informed on the candidates not being sufficiently high on one's priority list)
4. marginalization - being "lost in the crowd" (the perception that large national parties cannot adequately represent diverse local needs or are insensitive to them)
5. lack of relevance (the perception that the outcome will not significantly impact one's life)
6. other (You name this one!)

From the Summer 2004 Think Tank topic, "Cultural Values and Lifestyles"

Jerome C. Glenn, Director
Millennium Project
American Council for the United Nations University
<http://stateofthefuture.org>

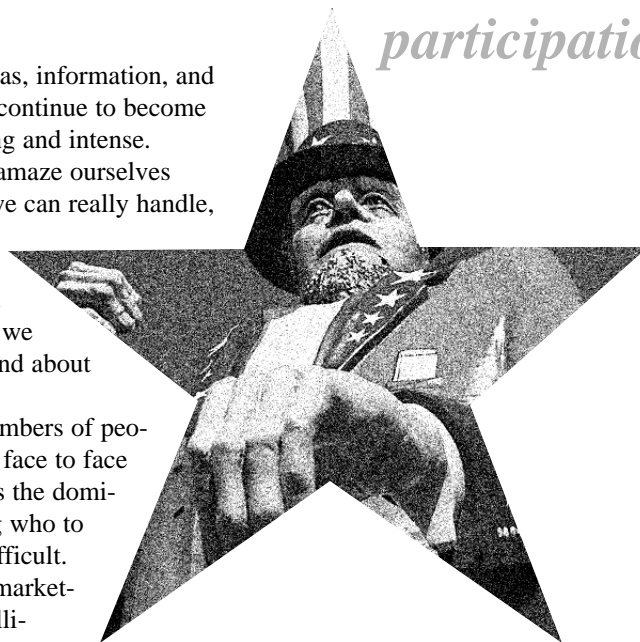
Increasing global inter-linkages, means the number of those with whom you can relate to increases. The over-

load of people, ideas, information, and opportunities will continue to become more overwhelming and intense. Although we will amaze ourselves about how much we can really handle, we will still need to be far more selective and precise about who we actually relate to and about what.

With small numbers of people in the past and face to face communications as the dominant way, knowing who to trust was not so difficult. With advances in marketing, corporate intelligence, and various forms of information warfare, trust will be more difficult. Once trust is broken, integrity is questioned we will move on to others - because we can. In the past the possibilities were far fewer, so we really couldn't move on as easily. Knowing who you are and what you want will be more important in the future than in the past as a guide to selectivity.

Work, play, and leisure are being integrated today. By 2025 the synergies among these will be valued personally and as a criteria for whom to relate to and how. Also by this time, Americans will be about 2% of the world population as Asian cultural, political, military, and political power increases. Imagine that the majority of people with whom you communicate do not have English as their first language - it will require more precision in word and concept selection.

[Editor's note: Your thoughts on either topic, election participation or cultural values and lifestyles?]



MEET A MEMBER

CARL PINCHES, a member of the Board of Directors of the World Future Society (WFS) Washington DC chapter, has been a computer programmer for 24 years. He worked 20 years for AT&T as an application programmer, working on order writing, provisioning tracking and report applications. In 2004, he was outsourced to IBM in 2000 along with most of AT&T's programming staff. Now having recently left IBM, he is seeking new professional opportunities in futures research.

A second-generation futurist, Carl has been a member of the WFS since 1980. His father worked for the USDA Extension Service in the 4H office. His work on development programs for youth led to his interest in the future, which in turn led to his affiliating with the WFS in the 1970's.

Carl has been active in the Washington DC chapter for over ten years. As member of its Board of Directors, he is responsible for information distribution and helps to maintain the chapter's Web page.

Future Lite



By Lindan Johnson
lindanlee@hotmail.com

Welcome to Area 51 where we concern ourselves with future-lite. No topic is too small, no trivia too trivial, and no fact too unfounded if it can possibly provide entertainment or enlightenment for our readers.

Boxing Outside the Think

After numerous clandestine super-secret meetings the secret proceedings of The Big Idea Committee, a secret sub-committee of the ultimate secret society, the Senior Management Committee was finally obtained by this reporter. This particular transcript is from the meeting where a futurist was invited in to facilitate a brainstorming session. Nothing, not even the names have been changed to protect anyone.

FUTURIST: "One of the most important skills a futurist relies upon is her ability to keep an open mind and not get locked into a certain way of thinking... and listen to a wide range of people-"

SMITH: "Yes, but this is The Big Idea Committee and so only SENIOR PEOPLE are listened to here and then we tell the junior people what the big ideas will be."

JONES: "That's the way we do things here."

ALL: *agree, agree, agree*

FUTURIST: "Well... moving right along... it's important that we keep our minds OPEN and think differently-"

SMITH: "Ah-HA! That would be

what we want to do today - think outside the box!"

ALL: "Here, here!"

JONES: "But what shape is the box?"

POTTER: "Quite so... is it round, square or rectangular?"

HATFIELD: "Could be triangular..."

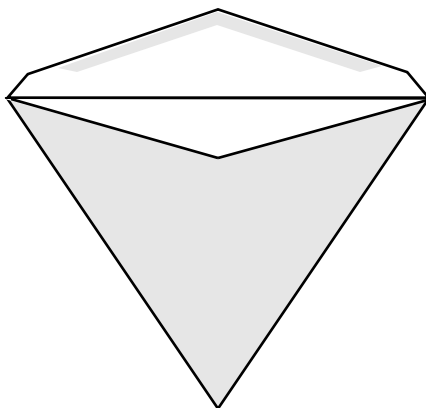
ALL: "Good answer!" (*HEARTY LAUGHTER, PATS ON THE BACK*)

MCCOY: "Maybe it's not a box-"

ALL: "What-!!" (*GASPS, SHOCK*)

MCCOY: "Maybe it's an ENVELOPE!"

HATFIELD: (rising from his chair)
"Well it could be a **TRIANGULAR ENVELOPE!**"



MCCOY: (*LEAPING UP AND POUNDING THE TABLE*) "THAT'S THE STUPIDEST THING I EVER HEARD YOU SAY!!!"

FUTURIST: "Okay, everyone...deep cleansing breaths... back in our chairs... now, let's take a moment here to commit murder-"

HATFIELD: "Now you got our attention..."

FUTURIST: "I'm so pleased. You're already armed. You're trained SENIOR assassins so let's see how many ways we can kill this idea. Just shout them out. What's wrong with

triangular envelopes?"

- * "He thought of it!"
- * "It's not in our image."
- * "It's against our company policy."
- * "It sounds too simple."
- * "It sounds too complicated."
- * "We'll never find the time to do it."
- * "We don't have the staff to do it."
- * "We don't want to do it."
- * "We don't have to do it."
- * "We don't have the budget to do it."
- * "It's not a priority."
- * "It needs to be put in writing."
- * "It needs further research."
- * "It needs to be run by the managers."
- * "It needs to be run by your supervisor."
- * "It needs to be run by a focus group."
- * "It needs to be run up a flagpole and see who salutes it."
- * "The Big Guy won't like it."
- * "Sounds crazy to me."
- * "I don't like it."
- * "We've never done anything like it before."
- * "Has anyone ever done anything like it before?"
- * "Who has done this before?"
- * "That's not consistent with the way we do things here."
- * "Let's be realistic."
- * "Let's get serious."
- * "Are you kidding?"
- * "Let's stop wasting time."
- * "Great idea... but not for us."
- * "People will say it's stupid."
- * "What will people think?"
- * "It'll never work."
- * "Be practical."
- * "Sorry, try again."
- * "That's worse than your last idea."
- * "Who's going to do it?"
- * "What happens when it fails?"
- * "I don't think so."
- * "It's too risky."
- * "Why hasn't it been done before?"
- * "I don't think you get the Big Picture."
- * "Good ideas only come from the top."
- * "Where's the detailed analysis?"
- * "Show me the numbers."

See *Future Lite*, continued on page 18

Consumers Hold Today's Key to Managing Business Uncertainty

*(reprinted with permission from the April 2004 issue of **Alternative Futures**, the newsletter of the Institute for Alternative Futures, Alexandria, Virginia; Marsha Rhea, editor)*

The key to managing uncertainty for businesses and organizations of all types for the near term future is understanding your consumers, according to Futurist Greg Schmid. Of the drivers he identified as shaping consumer behavior, he said the rising level of educational attainment is the most fundamental change for businesses.

Schmid monitors and analyzes global business issues and drivers for businesses and governments participating in the Managing Uncertainty program. He shared these insights at the annual conference in Washington, DC. (The Institute for Alternative Futures is affiliated with Managing Uncertainty through its for-profit subsidiary, Alternative Futures Associates.)

In the US more than 50 percent of the adult population has some college education. Other developing countries have rapidly rising rates of attainment - among younger adults, Japan and South Korea actually edge ahead of the U.S. and Canada in the percentage of adults with a tertiary degree.

This rising level of education attainment, Schmid said, is the key factor in another important driver, income distribution. The household income distribution curve in the U.S is flattening out as the share of the population living in households with higher levels of incomes increases. "What's your ability to play at any position on the income curve? We are turning into a society that is a rubber band society extending further apart. It will be hard to identify products that appeal across that spectrum," he said.

The jobs that these people increasingly hold are information-based jobs, and the skills they learn on the job shape their information seeking behaviors in the marketplace. Schmid said targeted, tailored and timely communications win with these information-

empowered consumers.

The U.S. consumer drives the global economy. With only 4 percent of the world's population, the U.S. market is responsible for 20 percent of GDP, and 40 percent of the net increase in world imports over the last ten years. "Why do world finance markets allow the US to have one percent interest rates when Europe has five percent?" Schmid asked. "The

world is betting on the American consumer to continue driving the global economy."

Alternative Thinking

What happens to your products and services if a new center of influence, such as China, with a different culture becomes a counter force in a consumer-driven marketplace? Tell us what you think.

[Editor's note: Flex your neurons and enlighten your fellow readers! The "alternative thinking" question provided is an excellent starting point. Other points for consideration: The article discusses a correlation among education levels, income distribution, and consumer behavior. With other countries having "rapidly rising rates of [educational] attainment," in some cases eclipsing those of the US and Canada, what are the long term implications to the US role as driver of the global economy? Furthermore, what are the implications of the baccalaureate degree becoming ever more commonplace - an increasingly educated populace or a cheapening of the degree - and with what implications to consumer behavior? Are there other reasons why "world finance markets allow the US to have one percent interest rates when Europe has five percent?" Thinking even further ahead, what will "education" itself be in 2025, and what impacts will that have on consumer behavior?]

Leadership Opportunities Available!

Editors, Staff Writers

..... **Wanted**

Do you want to help shape the dialog and discussion space, both in the greater Washington DC area and worldwide, on issues relating to the future? Do you want your ideas to have possible global impact? If so, consider a position on the **Future Takes** Editorial Board. To meet the demands of our expanding scope of operations and our growing circulation, both to local professional societies and to other World Future Society chapters worldwide, we need people for the following positions:

- * Activities and Programs Editor
- * Features Editor
- * Book Review Editor

- * **Future Takes Bulletin** Editor and Assistant Editor
- * (additional) Outreach / Exchange Editor

Our only requirements for these positions are an interest in the future and in thinking "out-of-the-box," good writing skills, and an interest in promoting **Future Takes**. Being employed as a professional futurist is not a requirement, nor is prior editorial experience.

If you are interested, contact us at futretakes@cs.com at your earliest convenience. All positions are volunteer positions.

Write on!

Civilizations *continued from page 1*

player in fantastic strides in knowledge and technology.

Of course, as a systems engineer turned futurist, I have a design – at least as good (?) as where we might be heading now! To perhaps provide some insight as to where we ought to be going, here are some selected examples of rise to empire status and circumstances leading to decline. We see examples of happy combinations of resources, populations and leadership growing to dominate their time, place and culture, creating a civilization.

The Power Elite

The common thread of empire is an elite of those who accrue power and exercise it, in the end to their own perceived interest. To the extent that this “interest” includes the broader interest of the fellow citizens of the civilization in their time and space, they can enjoy a reasonable “RHIP – rank has its privileges” existence; a rising tide lifts all boats. At some point these privileges remove the elite so far from the rest of their society that they create a divisor rather than a multiplier of success for the civilization. As the world shrank, empires were built around tribes, city states, nation states, continents ... Does the future lead to a global civilization, or does it lead to a return to a modern version of chaos and the dark ages?

Time, Place, Culture

From the origins of civilization in Mesopotamia, to civilizations in Africa, the far East, Europe and now the Americas, there has been a long chain of civilizations with “a relatively high level of cultural and technological development” appropriate to their time, place and culture. We might not recognize the culture of England at the time of King John, but it brought the signing of the Magna Carta, a precursor to our own constitution.

Generation and Decay of Civilizations

A conjunction of circumstances

initiates a critical mass of people that can create the stability of community in which civilization as defined above can develop. Mesopotamia provided the fertile environment in which agriculture could develop a surplus of sustenance allowing the development of art and records. The corruption that can destroy the civilization may come from external competition or from literal corruption internally.

To illustrate the “rise and fall” of civilizations, the following text considers five types of civilization – the agricultural civilization initiated in Mesopotamia, the Abbasid Caliphate, the mercantile civilization typified by the Dutch East India Company, the colonial empire of Britain, and the financial empire of the United States.

ILLUSTRATIONS

Mesopotamia: Key – Abundant Agriculture Resource

Mesopotamia (the land between the rivers) is recognized as the “cradle of civilization.” The Sumerians established a civilization starting around 3500 BC. The fertility of the Tigris-Euphrates valley provided for the creation of a surplus of food and the gathering of people into villages and towns. Division of labor allowed increased competence in jobs; the Sumerians learned to create levees and canals for irrigation. They also created written records – cuneiform on clay tablets. Concentrations of people required organization in the form of government as well as religion to guide the culture. While the resources for food production were good, many other resources were scarce or absent, stimulating a lucrative trade with neighbors, and Mesopotamia became a powerful empire.

Villages expanded into city-states, which then periodically warred with one another, leading to a collapse of many. From his state in the northern area, the leader Sargon capitalized on this opportunity to attack and conquered the southern states. He then united them into the world’s first empire, which he ruled for 50 years until his death. After his death the city-states grew powerful again.

“The Golden Age of Babylon”

Around 1800 BC, Amorites migrated into Mesopotamia and created their own city-states. Babylon, under the rule of Hammurabi, created a union of city-states. He had more enduring success than Sargon: he improved irrigation, the tax system, and housing for governing bodies, and he created a common religion and the reform for which he is renowned, his code of law. This provided a consistent system of justice and covered most of the aspects of daily life and conflict among citizens.

The Collapse of the First Empire

While more conventional causes such as wars and changes in the environment were instrumental in the collapse of empire, scientists have recently postulated that poisoning of the land was a significant factor. The ease of providing irrigation systems lead over time to an accumulated deposition of mineral salts following evaporation of the water, a problem not unknown to current civilizations as in the San Joaquin Valley!

Abbasid Caliphate: Key – Religious Culture and Tolerance

One does not think of the Arabian Peninsula as a land rich in natural resources in the millennium after Christ. Their resource was the Islamic religion. In the seventh century, Arab Muslim armies spread over the entire Middle East and North Africa. They carried their religion with them, not forcing it on conquered populations, but offering social and economic incentives to those who adopted it. The Arabic language spread along with Islam.

The Abbasid Caliphate adopted much from the Mesopotamians as it evolved – Greek, Iranian, Byzantine, Christian, Judaism, Zoroastrian, local elements of the region – in the synthesis of an original entity. This Islamic empire was originally dominated by an Arab elite that excluded non-Arabs from an equal share in the benefits of power. However, conversion to Islam

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Civilizations *continued from page 8*

did provide increased influence to those who converted.

By the tenth century, a single caliphate had been broken into independent units by struggles over succession and by opposition and separatist movements. The Islamic schism between Sunni and Shi'ite arose during this period. Caliphs became figureheads with little political power.

Despite the fragmentation of monolithic government, a commonwealth evolved in which a single trading system linked the Mediterranean Sea and Indian Ocean, allowing free movement of people, goods and ideas.

There are interesting references to a typical power struggle. The founder of the Abbasid Dynasty, a descendant of the Prophet's uncle al-Abbas, was proclaimed Caliph in the mosque at Kufa with the title of "the Shedder of Blood," promising to avenge Shi'ites and Abbasids killed by the preceding regime. While the initial capital was in Kufa, Baghdad became the Islamic imperial capital and emerged as a luxurious center of culture, power, manufacturing, and consumption. However, Islamic power widely spread through the Mediterranean and Europe until the Christian church took over.

Dutch Free Trade and Mercantilism: Key – State as Organizer

Following the decline of Islam in Europe, the growing influence of the Church and the rise of European nation states, the ruling economic idea prior to Adam Smith was mercantilism, in which individual nations are in a zero-sum competition with each other for wealth, gold and silver being synonymous with wealth. A nation has to export more goods and services than it imports, unless it has precious minerals of its own. The Dutch concept was that of free trade (St. Eustace in the Caribbean was a Dutch owned island with no tariffs) and the idea of dominating the East Indies trade through the Dutch East India Company. The French and the English believed that wealth could be gained

only by taking it from others. Their view of mercantilism was to establish colonies in which they could dominate both the supply of cheap resources produced in the colonies and the providing of manufactured goods at high prices in exchange.

State chartered entities were used to further this concept – for example, the Spanish exploitation of the Americas for gold and silver, with both French and British East India companies in competition with the Dutch. The concept was that of building monopolies in competition with other nation states. The British use of tariffs and restriction on North American manufacturing and trade were directly responsible for the Revolution and subsequent creation of the independent United States of America.

The French considered that the Dutch East India Company, a state chartered and supported organization, was the reason for the success of the Dutch, and they attempted to emulate this success by creating the competitive French East India Company. The real strength of the Dutch economy was not only the state sponsored Company but also the entrepreneurial nature and perseverance of the Dutch in which they had far fewer trade restrictions than any of the other mercantilist countries. A succession of Franco-Dutch wars weakened both French and Dutch to the benefit of the English, who were building the Empire on which the sun never sets.

In the end, while mercantilism's goal of increasing state revenue was successful, it ignored the development of the national economy as a whole. The sun has set on the economic policy of mercantilism, but there are still vestiges of the idea; today we call it "industrial policy"!

British Colonialism (The sun never sets!): Adam Smith Economics

The success of the British in establishing a world wide colonial empire/civilization could almost be said to have created a Pax Britannica for the 19th and early 20th centuries. The theories of Adam Smith in *The*

Wealth of Nations were a direct contradiction of the zero-sum game of mercantilism. He believed that wealth and trade was "non-zero-sum" game such that two parties involved in transactions could each actually gain because of the exchange of values as viewed by each new owner. One of the consequences of British amassing of national wealth and Adam Smith's theories is perhaps their ability to create the Industrial Revolution, in which a free market provides the forces for entrepreneurial progress.

British colonies, and the mother country hegemony over the colonies, provided the ability to create capital through the idea of buying raw resources cheap and maintaining monopolies in selling manufactured goods dear. Again, the attempt to restrict manufacturing in the Americas contributed to the revolution.

The British Colonial Hegemony created a homogenizing influence in the world. With variations, the English language has become almost a lingua-franca among modern nation states, and many of the business practices initiated in the Empire had spread world wide. However, as in the case of Spanish, French and Dutch wars with one another, the Empire was weakened by WWI, and but for the reluctant but massive intervention of the United States, almost destroyed in WWII. The baton of World Power passed to the United States. New ideas of freedom and liberty led to the independence of almost all of the former colonies and the final decline of the British Empire.

The American Financial-Industrial Empire: Key – Balance of powers, Free Enterprise Capitalism, Individual Liberty

Despite the isolationism and reluctance of the US to get involved in military adventures overseas, they were indeed the armorers of the British in lend-lease programs prior to the Japanese attack on Pearl Harbor. Their industrial might overcame the Axis powers, their isolation from the

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Book Discussion

Bare Branches: The Security Implications of Asia's Surplus Male Population

by Valerie M. Hudson and
Andrea M. den Boer
The MIT Press, ISBN 0262083256

Synopsis of the September 1, 2004
Futurist Book Group meeting; summa-
rized by Ken Harris

The September 2004 selection, discussed at **Politics and Prose**, was **Bare Branches: The Security Implications of Asia's Surplus Male Population**. The book's authors, Valerie M. Hudson and Andrea M. den Boer, place the current trend of the number of boy babies far exceeding the number of girl babies in Asia in its historical context and assess the consequences of this trend for the future. They show that favoritism of male children, even carried to the extent of female infanticide, has deep historic roots, even in Western societies. They cite several principal reasons for this:

- * Sons are considered more valuable than daughters when food gathering for a society requires hunting or heavy agricultural labor;
- * Parents incur the financial burden of raising a daughter including paying a dowry to her husband's parents only to have the daughter become part of her husband's family;
- * Only sons can perform certain religious rites;
- * Sons support parents in old age; and
- * Sons are more valuable for warfare than daughters.

Favoritism for boy babies, according to the authors, has especially deep historical roots in Asian societies, particularly China and India. Female infanticide was widely practiced in India but was ended by the British colonial administration. However, the ratio of boy to girl babies has steadily risen since independence. Female infanticide, the authors show, was practiced over thousands of years of Chinese imperial history, and,



although gender equity was an initial goal of the Communist revolution, that country's one child policy has steadily skewed the sex ratio in favor of males.

Technology has made it far more possible for Chinese and Indian parents to have more boy than girl babies. Ultra-sound technology has become widely available and cheap in these countries, so that parents can know the sex of a fetus before birth. That, coupled with availability of relatively safe abortion, has led to dramatic increases in the ratios of boy to girl babies in China and India. Hence, as boy babies grow up, many will be unable to find wives. They will become "bare branches"-so called because, like the bare branches of a tree in Winter, they have nothing attached to them and have the appearance of cold and bleakness. The authors estimate the "bare branches" aged 15-34 in India in 2020

will total 28 to 32 million and in China 29 to 33 million.

The "bare branches" will be from the lower socioeconomic strata because the available women will marry above their social station. Accordingly, they will be relegated to a permanent lower social class with a culture characterized by violence and vice. On the basis of historical precedents of societies with an excess of young men, the authors believe the prospect for democracy in China is not good and that India will have difficulty maintaining its democracy.

The Futurist Book Group meets the first Wednesday evening of each month at **Politics and Prose**. See the chapter website, www.natcapwfs.org, for information on forthcoming meetings.

[Editor's suggested points for consideration: In China, to what extent, if any, will the migration from farms to cities impact the preference for male children? Conversely, if democracy fails or even if it succeeds, what are the long-term implications of the "bare branches" to world peace and to China's social order? The book authors and discussion group participants have shared their words of wisdom - now let's read yours!]

Book Discussion

The Next Big Thing IS REALLY SMALL

By Jack Uldrich and Deb Newberry
Crown Business, ISBN 1400046890

Synopsis of the July 7, 2004 Futurist
Book Group meeting; summarized by
Ken Harris

On July 7, 2004, the chapter resumed its book discussion program with a discussion of **The Next Big Thing is Really Small** by Jack

Uldrich and Deb Newberry. The book is a good non-technical summary of the prospects for nanotechnology - the technology of the very small. It is intended primarily for business executives but also is a good primer on nanotechnology for anyone interested in this important emerging field.

Uldrich's and Newberry's key the-

See *Big Thing*, continued on page 11

The Borg is Here!

The Cyborgization of Humans

And What This Means for Our Lives in The Future And Today

Synopsis of the July 15, 2004 chapter dinner program presented by Mark Bayliss, with Joel Coulter and Roosevelt Ellison; summarized by Dave Stein

When we think of the Borg shown in **Star Trek: First Contact**, we think of a dehumanized alien species melded from human and machine parts. Most of us do not think we are even close to having the level of technology depicted in that film. Well, we're wrong, according to Mark Bayliss, CEO of Visual Link Inc. and speaker at our July 2004 dinner program, co-sponsored by the American Society for Technical Innovation (ASTI).

From a body-worn, voice-activated, high-power processor, to a single eye visual display of 2"x2", Visual Link Inc. and Xybernaut Corporation have combined mobility, communications, battery innovations, compression and visualization technologies to create a new level of communications and computing technology - high level mobile computing in vehicles and on people. Their purpose is to increase human mobility, efficiency, productivity, performance and safety. Assisted by Joel Coulter and Roosevelt Ellison of Xybernaut Corporation, who demonstrated wearable computer products, Bayliss discussed the envisioned impacts of this new technology on health, business, warfare, and lifestyles.

TECHNOLOGICAL TRENDS

Technological trends are evolving to enable mobile, low power, low cost, global education, and e-commerce. One's future cellphone might also be his/her PDA, computer, GPS locator, MP3, video game console, and even concierge combined into a single hands-free, wearable device. A computer that can be worn on one's belt, and that consists of a screen with a wrist band, is already here. It has the same power as the common desktop.

"FORCING FUNCTIONS"

As Bayliss pointed out, real estate agents were a pivotal market that drove the cell phone industry. In like manner, many of the enabling innovations for wearable computers came from Japan, largely as a result of the hectic pace, the close quarters, and the communications infrastructure. The technology enabled their commuters to check e-mail, read the news, and check stock prices while riding on their subways. Personal space, so highly valued in the US, is virtually nonexistent in Japan.

Nowadays, other sectors are driving the market. Law enforcement agencies need secure communications and higher data rates for voice messaging. Presently, their radio transmissions can often be intercepted by anyone with a scanner. They need better capability and equipment, complete with biometrics protection when the communications units are unattended

or in repair.

Emergency communications including 911 dispatch, Civil Air Patrol, and other first responders also require high data rates and secure links. Others who can benefit from wearable computers are those who need their hands free, including members of the US military and the US postal service, said Bayliss.

THE THIRD WORLD ADVANTAGE

Ironically, developing countries have at least one advantage over the US, according to Bayliss, even though IT-based content development and e-commerce models have made possible the immense growth that the US has experienced. Developing countries can leapfrog the US because they have no bureaucracy nor cumbersome infrastructure. For this reason, they are free to build an IP based infrastructure that is primarily wireless and supports

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Big Thing *continued from page 10*

sis is that the nanotech revolution, which is just now in its early stages, is an even more profound revolution than the Internet revolution. They note the driving forces for this revolution today - large-scale government R&D expenditures (particularly in the USA and Japan), university centers devoted to nanotechnology research, and many private initiatives, some of which have already resulted in innovative products on the market like stain-free clothing. At the end of each chapter, the authors offer a series of questions "Nanopoints" to help executives clarify how nanotechnology will hurt or enhance their businesses.

Chapter members and friends at the discussion generally agreed with the vast potential of nanotech for economic and social good. However, they thought the authors were too optimistic about when the predicted nanotechnology developments would actually happen. They also noted an almost complete failure of the authors to discuss potential illicit uses of nanotechnology such as to aid in criminal enterprises.

The July 7 discussion marked the beginning of a new approach to this long-standing chapter program. Previously, we held discussions in chapter members' homes. With the series that began July 7, we are holding them at **Politics and Prose**, a well-known independent bookstore, at 5519 Connecticut Ave., NW. **Politics and Prose** has generously reserved its book discussion space on the lower level for our discussions on the first Wednesday of the month. It also sells discussion books at a 20 percent discount if you mention The Futurist Bookgroup.

Cyborgization

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voice communications. In contrast, copper wire phone lines that were never intended to support the information age are still prevalent in parts of the US.

Since much of the world's population increase is in these developing countries, Bayliss sees considerable markets there. For example, in Africa, the jobs and money are on the coast, and people must travel there to make money to support their families. They can benefit immeasurably from cyber cafes. South America and the Middle East can similarly benefit.

SO WHAT WILL WE SEE?

One envisioned consequence is mobile education - classrooms with Web cybercasting capabilities, online learning portals, and mobile instructor stations. On the more mundane side, the technology may change our dining habits, by enabling one to order food before actually going to the restaurant.

A wired third world, enabled by small, wearable computers that are communications-capable, will bring numerous consequences of its own. Right now, conventional IT and power generation technology help maintain the digital divide. Power generators require too much maintenance and are too expensive to power conventional computers in other parts of the world. For their part, our computers heat our office buildings, and then we use air conditioning to maintain human comfort! In India, the cost for a T1 line is high, continued Bayliss, such that relatively few lines must serve many people. So, the only affordable basing for conventional computers on a large scale is in the US and Europe - where in some places, the copper wire infrastructure maintains its rule. Bayliss envisions that the wearable computers can be powered by improved solar arrays that are relatively small, thereby obviating the need for batteries that must be discarded when spent. Similarly, removable computer cores will do their part to minimize waste disposal. There is the additional possi-

bility that wearable computers can reduce computer power consumption in other parts of the world - a welcome development in light of the energy crisis.

Combined communication/geolocation capabilities will facilitate emergency response by finding the closest responders. When dispatched, these responders can then train "just in time" for an emergency situation, predicted Bayliss. Continuing, he noted that voice recognition technology may not be reliable during emergencies, when there is a stress factor, and that present-day voice recognition technology might not even recognize voice commands when one is in a bad mood.

Bayliss indicated that certain technologies such as voice recognition / activation technologies are still largely premature for deployment, even though they are more prevalent. Humans can hear one word from among several conversations and "tune in" to the conversation of interest. Computers are nowhere near this capability.

As always, the real future rests with those who are now children or who are yet to be born. Children, already accustomed to keyboards, typing, and chat rooms - even though they are too busy to clean their bedrooms - are already interested in digital wearable communications. As Bayliss indicated, there is increased connectivity among youth, as opposed to increased isolation. This may eventually lead to more international communications among children. Bayliss speculated that while communication among children might now center around social trivia and be largely devoid of content, the children will eventually have to deal with communications content.

BACK TO THE PRESENT

Coming back down to earth from the age of the Borg was not easy for the attendees. Yet, they resigned themselves to the fact that while linear spacetime will never limit the imaginations of futurists, it - and the "real world" - continue to hold sway over their physical bodies. And so, some attendees departed by Metro, perhaps

sadly wishing that they could check their e-mails, obtain stock quotes, and catch up on the news like their counterparts in Japan. The larger numbers who departed by "iron horse" might well have fared better in the news department, depending on their timing and their choices of radio station, but even they could not "best" their Metro colleagues in news-on-demand - that is, unless they were Web-enabled passengers. Thus, the quest to squeeze more productivity - or for some, more stimulation - into the day continues. For now, the stimulation crowd has its answers in FM and AM radio, CD players, or hand-held video games, depending on whether they are driving or riding. Until the Borg is truly here, the productivity crowd will have to settle for tapes or CDs that convert their respective vehicles into "universities on wheels"!

[Editor's note: Now it's your turn to continue the saga. Consider the following potential consequences of mobile, wearable computers and of the capability to be constantly "plugged in." Will the capability become a mandate? How will the mobile education capability, or IT in general, change universities and schools as we know them? How will it change academic research? What are the implications to quiet, contemplative "down time"? To vacations? To social life? To information overload? To stress in general? To cultural diversity? Will it alleviate or aggravate the "not enough hours in the day" problem? Also, considering that the drivers of these communications technologies have included the real estate market, police and emergency response forces, postal workers, and time-challenged commuters - what technologies will next be driven, and who will drive them? Give your neurons some exercise, and send your insights to futuretak@cs.com, so that our worldwide constituency can also benefit from your words of wisdom.]

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Does sex have a future? The Future of Sex

Synopsis of the June 17, 2004 chapter dinner program presented by former chapter president Eric Garland; summarized by Dave Stein

The blockbuster murder mystery *The DaVinci Code* centers on communion with God though the holy act of sex instead of through a formal church structure. Religious leaders offer only a tepid response to the author, and few if any boycotts.

A leading automotive manufacturer became one of the world's top distributors of adult entertainment, a \$1 billion per year industry, through its satellite television business. But this does not show up on their ledgers.

What's going on here?

Sex in America is going through fascinating changes, according to Eric Garland, past president of the NatCapWFS, as he shared his research for his forthcoming book, *The Future of Sex in America*, at the chapter's June 2004 dinner program. America is at the crossroads as trends in family, religion, health, education, and technology interact to change sex and what it means to our lives, noted Garland in his futuristic analysis.

THE SEXUAL EVOLUTION - ALIVE AND WELL

"There are major changes taking place today in sexual behavior, even though we perceive the 'sexual revolution' to have happened in the 60's," says Garland. "But sex is evolving in fascinating ways. Macho NASCAR drivers and NFL coaches now talk freely about the physical shortcomings of their sex lives in TV ads for pharmaceuticals. Studies show a majority of nursing home residents are sexually active. Pornography is mainstreaming, and our communication about sex is opening up in the media."

Nowadays, as Garland has observed, every third TV commercial during a sports event relates to sexual dysfunction. All the while, there are teen sex parties; yet teen pregnancy has dropped by 40% in the last decade.

Garland began his futuristic study of sex in America by examining trends in lifestyle elements, including transportation, personal wealth, family life, and leisure. While indeed, the sexual revolution is often associated with "the pill" that (at least in part) freed people from the worry of "oops babies," four present social trends and three technology trends promise substantial impact of their own.

SOCIAL DRIVERS

A major driver is the reduced impact of church orthodoxy. In 1955, 49% of the US population were churchgoers. By 2003, this number had dropped to 41%. At one time, noted Garland, the church was an accepted authority on matters of social behavior, in some cases going beyond Biblical proscription. Holding hands was bad, particularly if you "liked" doing it - but do people hold hands when they don't like it? Girls were admonished to carry a Bible and a phone book whenever they had to ride in the back of a car with a boy - never mind that Garland was unable to find the term "phone book" in the Bible. Today, with a do-it-yourself morality and moral relativism holding sway and the church's impact correspondingly reduced, even the Judeo-Christian prohibition against coveting your neighbor's wife is heeded less often than before. Garland also noted that members of abstinence groups are more likely to be pregnant than are non-members, because the members are not taught birth control.

Another driver is demographics, particularly aging Americans. Today, there are 35 million Americans over 65 years of age. In 2020, this number will be 70 million. Nursing home populations generally range from 80 to 102 years of age, with a median age of 80.1. Furthermore, 88% of the people there at least think about sex, and there is high activity. Also, there are syphilis outbreaks in nursing homes, and men in nursing homes buy Viagra. Another shocking statistic - the #1

growth market segment in Planned Parenthood consists of women older than 65 who are divorced or who are single again. Why is this, considering that we think of sex as a young person's game? After all, who do we show on TV?

Notes Garland, the answer may lie in the fact that there is more time for people to explore sex as they live longer, in some cases approaching 50 years after the children are grown and out of the house. As a result, the older people are more active.

Not to be outdone, the younger people are impacted by a third driver, the information age, extending to internet dating. Younger people are more comfortable with IT media. IT facilitates their communication and helps them meet other people, usually with more psychological safety.

Then there are fewer taboos on discussions about sex. At one time,

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Cyborgization

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It's not over yet!

Brought from the chapter's interactive Web forum straight to Future Takes - just for you!

Carl Pinches

Backcasting.

Assume it is 2025 and that 50% of adults are wearing computes at any give point in time. The line between working and not working has blurred. Instead of stopping for two 15 minute coffee breaks out of an 8 hour day to talk to your friends and family many workers take one-hundred 15 second breaks for continuing Chats (using text messaging for the most part). This requires wearable computers so you do not need to drop off a chat just to move around. Every few minutes during work related meetings and conference calls, an interrupt will be standard so participants can check their Chats.

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television might well have adhered to a rule that when they show two people kissing, one foot must remain on the floor. Contrast that with what is shown now on programs that receive good ratings, for example, two women and one man in a hot tub on cable TV. Other behaviors and lifestyles including gay and lesbian lifestyles are also presented more openly on TV. There is also ... well, I'll stop here. When people hear others talking about these behaviors, their willingness to discuss their own behaviors is less inhibited.

TECHNOLOGY DRIVERS

Shifting gears, Garland then discussed the impact of various technology drivers on sex in America. One such driver is increased image technology and bandwidth, now extending to cameras in cell phones and thereby impacting privacy. With a cellphone camera, a girl might see her boyfriend with another girl (if someone snaps and e-mails the picture), and a breakup occurs. As Garland noted, however, privacy is relatively new, as it never existed in small villages. Even so, image technology can support surveillance by the "morality police" as well as a new level of voyeurism. On this point, Garland half-jokingly asked, "Where do you apply to watch the watcher?"

Another application of image technology is pornography. As Garland observed, we are the most pornography-soaked society in history, and there is no longer a scarcity of erotic images. In fact, children can use search engines to find pornography and then clear their history bars and caches. With nothing more than a relatively commonplace wireless device, a 7th grade boy can wire in pornography.

Improved healthcare is a second technology driver. Garland stated that people of his own generation once associated casual sex with the threat of death. Some of the risks of casual sex are now mitigated by improved healthcare. However, it doesn't stop here.

Garland envisions that in the future, one might know if he/she has a sexually transmitted disease (STD) before potentially putting others at risk. He further anticipates that someday, devices in one's home will indicate if a person there (presumably a house-guest) is interested. After all, costs are down for computer processing and memory chips. Garland boldly predicted that this may happen sooner than five years from now.

The remaining frontier is sex toys. Garland predicts that one day we will have the "orgasmatron." Noting the research being done on spinal column injuries, he explored the possibility of implantable devices that are wired into the spinal column. In addition, there are already virtual devices that let one experience the pressure and texture of an object, and development is marching on. For example, you might someday experience a virtual apple via goggles and virtual reality gloves. When you grasp the virtual apple, the glove provides the physical resistance and tactile sensations. Imagine shaking hands with Abraham Lincoln and feeling the pressure of his grip! Where is this leading, asked Garland - to a full-body virtual reality suit?

WHERE DO THESE TRENDS CONVERGE?

Garland concluded by speculating on possible convergence and interactions of these trends. For example, with fewer inhibitions against discussing one's own behavior, groups of people who think that a certain behavior is OK can get together in cyberspace. Finding a partner online is more acceptable now, but Garland also noted that IT also facilitates unacceptable behavior such as child pornography. Finally, he suggested that people might treat each other more humanely but that sex may become more dehumanized.

The good news, says Garland, is that Americans will explore sex for decades with less threat of disease, fewer unwanted pregnancies, and more emotional confidence, and they will continue healthy sexuality longer than any previous generations.

Q&A (and comments!)

C. *The threshold of what is pornographic will increase such that nothing is so pornographic anymore.*

A. One can't judge tomorrow by today's values.

C. *We might someday have the capability for a person to record all of his/her sensations and sell them.*

A. Yes, but first there will need to be more research in biotechnology and neurotransmitters.

Q. *Are there any mitigating trends or countertrends?*

A. Yes. For example, there is increased fundamentalism in various religions including Judaism, Christianity, and Islam. This may be a response to a decline in church, synagogue, and mosque relevance. With the shrinking adherence, those people who remain followers of mainstream religion are more vocal. Also, as a backlash, some people identify more with religion. "I follow God." Furthermore, some people want to raise their children in a way that they deem right, or they see society falling apart.

During the Q&A period, Garland also presented point-of-sale data for adult video sales and rentals. According to the data, which are not always indicative on the end users, the largest customer group is middle-age women. Next are younger men, followed by older men. Fourth place goes to college age girls.

BACK TO THE PRESENT

Like all of the NatCapWFS dinner programs, this one did not last forever. However, it provided an evening of insight and provocation about one of the principal facets of life as a human. If you missed it, then you missed the time of your life. As the incumbent chapter president, Limor Schafman, had stated prior to the program, "We invited Mr. Garland because his talk on the future of sex illustrates an

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important aspect of the World Future Society's role as a center for study, exploration and analysis of world trends that affect our lives, and which we can use to create the future we want."

[Editor's note: Yes, we think of sex as a young person's game, as evidenced by the people we show on TV and in advertisements. However, is this universal? Oriental cultures traditionally value age over youth. Is this changing? What about virtual communities in general - connecting more with people across the world who share your interests (including sex) and with correspondingly fewer people in your own neighborhood? Garland points out the possibility that you will know you have a disease (presumably an STD) before you transmit it. How does this relate to the smart toilets, smart houses, and smart clothes of Dick Smith's talk, also synopsized in this issue? Put your neurons to work, and let us hear from you. Send your commentary to futuretakes@cs.com, so that our greater constituency can hear from you as well.]

The Program Goes On!

How could we possibly end a program like this one? Here's some follow-on discussion from the chapter's interactive Web forum, just for you!

Eric Garland

posted Fri June 18 2004 12:34 PM

Hello NatCapWFS members,

OK, so what struck you as interesting, unusual, wrong, insane, true, or prosaic about my talk on June 17?

The one thing I think *even more* is that this topic requires more research, and more original research at that.

Human beings are complex, and I have increasing respect for them!

THREAD 1

Dave Montgomery

posted Sat June 19 2004 12:18 PM

In response to the concern that you should know more about previous research: You may want to find a book by Esther Gwinnell, *Online Seductions: Falling in Love with Strangers on the Internet* (Kodansha International). Gwinnell is a psychiatrist who has analyzed romance by email.

Eric Garland

posted Sat June 19 2004 03:57 PM

Fascinating! I shall give it a look.

Also, there's a book on the neuro-chemistry of love and lust that I am really into.

Ken Harris

posted Mon June 21 2004 06:43 AM

I much enjoyed Eric's talk. It is the kind of lively meeting we need to have to attract attendance at the beginning of summer. He has obviously done a lot of research on the subject. However, I still think he needs to respond more adequately to the question I asked on what could turn the trends he has discovered around. Trends are not usually immutable; there are counterforces working against them. If they were immutable, anyone could be a futurist. A key to being a futurist professional is to be able to spot the things that may make the future unlike the recent past.

There have been major changes in sexual mores in history (e.g., the restoration period in 17th century England); these probably can happen again.

Eric Garland

posted Mon June 21 2004 08:58 AM

Ken, thanks for your kind comments and I agree with you on the need for a deeper understanding of how these existing trends could be further diverted in the future. I think that Joe made similar comments.

For example, I wonder what the overall trend of more personalized health information will do. I have made identified trends in the possibility of telemedicine where you know if you have STDs. Planned Parenthood,

on the other hand, recommends that you have counselors give you this information so that you don't freak out if you are told you have a health condition - especially HIV. Perhaps we will have public health campaigns to make sure you share health information with your doctors instead of just keeping it to yourself.

Also, I was watching history channel program on the history of sex last night - it was fascinating! Especially about the fact that sexual mores have changed several times throughout the past. I am careful to make the distinction that we are living "traditionally" and that we're moving into some brave new world - I think there have been changes throughout, I would like to describe the next round of changes.

Jay Herson

posted Tue June 29 2004 04:01 AM

Eric didn't mention anything about legalization of prostitution at his talk. Do you see that as something that is coming in at least some states in the US, foreign countries?

Dave Stein

posted Wed August 04 2004 06:44 PM

Eric, your presentation on the future of sex was indeed enlightening! Although the subject of divorce was not a major element of your talk, I'm interested in your views on factors that influence divorce rates.

According to the *Pocket World in Figures, 2004 Edition*, published by *The Economist*, the United States has the highest divorce rates in the world. Might this not be a consequence, at least in part, of our being a "throw away" society? Examples: long ago, people tried to repair and preserve their belongings whenever possible, but now, replacement is often more economical and more convenient than repair. Furthermore, many people buy new cars and throw away (trade in) their old ones. More recently, a number of corporations have begun throwing away (laying off) workers who no longer add to the bottom line. Has the

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"throw away" mindset now migrated to marriage?

THREAD 2

Eric Garland

posted Mon June 21 2004 11:45 AM

I was wondering what kinds of trends, forces, and events you are all seeing that intrigue you about where the future of sex is going.

For example, it was brought up at the meeting that today's teens have a more tolerant attitude toward oral sex, that it has become "advanced kissing." What could that mean?

My favorite is noticing that somewhere along the line, it became cool to talk about erectile dysfunction.

I still don't know thought that Mike Ditka, coach of the Chicago Bears, was an effective advocate for anything to do with sex.

Anything fun you all are picking up?

John Meagher

posted Tue June 22 2004 10:24 AM

Eric,

I think research into mental health states, happiness and sexual activity or its lack thereof would be very useful. Perhaps this has been done.

Will Aldous Huxley's prediction in *Brave New World*, where he proclaimed "promiscuity is a public duty" or something very similar become the new sexual moral after life threatening diseases are conquered or controlled?

Will science support a link between great health, mentally and physically and sexual activity? Similar to nutrition, do humans need a certain amount of sexual activity to remain healthy? What is the variants in individuals, some need more and perhaps others less - do we have parameters to determine what is best? Does celibacy lead to physical and mental dysfunction for the many, while some reap its benefits? Ergo - some of the problems that the Catholic church is experiencing, and other religions as well that restrict sexual activity severely may simply be a normal bell curve reaction over time to

humans living under excessive constraint.

Are there serious epidemiologists researching or looking for associations in these questions, at all? If so, that may reveal some new and interesting trends and associations useful for your text.

I found your research that single men have sex in recent survey once every three months, compared to married folk with about once a week to be low from what I remember way back in the 70's and 80's. I have seen some shows and articles that indicate that the two earner family has added stress and sex activity is down for marrieds with kids substantially, perhaps life in general is more busy. For your book it may be interesting to compare sexual activity trends in different nations, different decades and uncover if there is a relationship to reduced anxiety, tension, stress or depression or increased wellness and happiness related to sex activity in those societies.

John M

Eric Garland

posted Tue June 22 2004 12:55 PM

The relative sexual frequency of single men did strike me as a little low, but I think that there are some cultural issues associated with the statistics. The study was global and not just America. For example, in cultures where there are more restrictions for females before marriage, single males may not engage in the same type of premarital sex that has become common. You add that in with those who don't date much, and the average for single men may drop to that low of once every three months.

Jonathan Peck

posted Fri June 25 2004 01:44 PM

The averages in sexual activity and the distribution are discussed in a very interesting way by Barabasi in his book *Linked*. The majority of people have between one and ten sexual partners during their lives, while a minority has dozens. A few (Gaetan Dugas reportedly had 250 sexual partners a year and Wilt Chamberlain claimed to have sex with 20,000 women) outliers

have many more. I think the distribution across cultures and ages may be much more illuminating than the averages.

Eric Garland

posted Sat June 26 2004 08:41 AM

Yes, statistics are really misleading here in many cases. For example, I think the "once a fiscal quarter" averages is distributed around the world by culture - if your village will violently aggress women for premarital sex, then as a male, premarital sex is less regular than, say, at an American university.

Bill Wyman, bass player for the Rolling Stones, reported a number of partners similar to Wilt Chamberlain. This must be distorted, since...hey...he's the bass player... I can attest to the unlikeliness of such a claim.

THREAD 3

Eric Garland

posted Mon June 21 2004 09:07 AM

In my presentation, I assert that strict church dogma is losing its influence in guiding how individuals pursue their sex lives. I believe that fewer people choose their behaviors because of the notion of sin and more on a variety of right/wrong and "personal choice" credos.

And yet, we have a sitting president who is actively pursuing policies of abstinence for teenagers.

Is the church losing steam?

Are fundamentalists gaining power or just a louder voice?

When Gen X has teenagers who grew up without this dogma, how will morality feature into their sexual decisions?

John Meagher

posted Tue June 22 2004 10:55 AM

Eric,

I think this weeks issue of *Time* talks about faith and politics and delves into issues of influence on morals and sex tangentially. A split in the Republican party to form an Evangelical wing of the GOP was dis-

See Future of Sex, continued on page 17

Future of Sex

continued from page 16

cussed as a possibility, not in the near future of months but perhaps sometime soon because of the heavy influence of religion on platform positions causing a rift between moderates in GOP.

Stanley Greenberg in the Two Americas found similar evidence to what you presented that church going is on a decline since a peak in 1980 ish. However those that are faithful are ardently so and lines seem to be hardening in terms of philosophy between church goers and non-goers in political terms, and this gets into sexually charged issues of abortion, gay marriage, stem cell research/new reproduction methods and sex education in schools heavily.

Over the weekend we saw the movie "Saved." It raised some interesting points regarding U.S. teens and the influences of modern adaptations of religion on their current thinking about sex. For some populations in our society church will have major influence for some time to come.

We may see a bifurcated society, where church influence is strong and another sector where it is very weak on sexual mores. How big of a difference and how this will change is an interesting question.

I think in the INTERNET age more individuals will be making their own decisions on sex and less reliant on church dictates. This will carry over to other areas as well as more people read and interpret various faith traditions more as individuals with less than 100% conformity to church dogma.

This will have profound impacts in our society but the effects in more religious/politically linked societies will be even greater.

John M

THREAD 4

Eric Garland

posted Mon June 21 2004 11:41 AM

A comment from the audience was very interesting. More people are relating by way of online communi-

ties, but is this leading us to dehumanizing one another?

When people are represented by pixels, does this lead people to a lack of empathy, and if so, what could be the implications of this?

THREAD 5

Eric Garland

posted Mon June 21 2004 11:39 AM

My third point was on the open discussion of behaviors that were formerly taboo, such as homosexuality and other alternative lifestyles. Far from the days when Luci and Desi couldn't be shown sleeping in a double bed, mass media features open examination of many issues in sexuality that have not been discussed on public airwaves.

Do you think this kind of open discussion is a first in America?

Is this really getting beyond Victorian prudery?

What will future generations take to be taboo? Or will the notion of feeling bad about your sexual proclivities be antiquated for them?

THREAD 6

Eric Garland

posted Mon June 21 2004 09:17 AM

Between haptics ("telefeel") and VR goggles, we are approaching software simulations of sex that could fool our brains quite convincingly.

The implications of this as a sex toy are somewhat obvious. But I wonder, when these virtual fantasies can be created entirely by software simulation, how will we deal with potential for "thought crimes?"

Violent adult films and child pornography, unfortunately, have a market. These films are illegal primarily because those involved in the making of these films are criminally harmed.

As animation software achieves a level at which images can be mistake for reality - fooling our ideas as to color, light, shadow, depth, and flowing movement - we won't know the difference between real films, real actors, and simulations.

How will we as a society deal with virtual snuff films or child

pornography? While technically nobody will be harmed in the making of these films, will we outlaw the encouragement of heinous behavior? Or might we say, "Your fantasies are your own business, we will judge your behavior."

My guess is that by 2020 animation software and display technologies will push us toward some of these questions.

THREAD 7

Eric Garland

posted Mon June 21 2004 09:03 AM

At the WFS meeting we talked about how this generation will be the first not to experience a relative scarcity of erotic material - porn/erotica of a number of types is everywhere online, and only a click away for anyone interested.

I'd like to expand on Joe's point: What will be the definition of "pornography"? We Americans become so used to the video/audio depictions of sex that it will not be segregated as a form of entertainment?

I'd be interested in what year you think that explicit adult material will appear on basic cable or other mainstream content channels.

I wager 2018.

THREAD 8

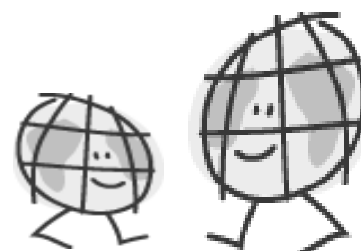
Eric Garland

posted Mon June 21 2004 06:36 AM

Hello NatCapWFS,

So in my presentation I outlined a number of aspects of how society is changing in regards to sex. But as Joe Coates pointed out, it's important not to rest on thinking the future will be "today + better."

Given the shifts in society and technology, how do you think teenagers of 2022 might have different beliefs about sex? What could change in terms of our values?



Think Small! From Housecalls to House Calls

Synopsis of the May 20, 2004 chapter dinner program presented by Dick Smith; summarized by Dave Stein

"My toilet sent me," you might someday find yourself saying when you visit your doctor. Or perhaps it was your house or even your clothes that made the referral. So predicted leading futurist Dick Smith in his address to the National Capital Region World Future Society on May 20, 2004, in which he described how nanotechnology (NT) will revolutionize healthcare and the practice of medicine.

IT'S A SMALL WORLD, BECOMING SMALLER

The roadmap starts with the advent of molecular sized structures that are as complex as a human cell and yet 100 times as strong as steel. According to Mr. Smith, this may happen within 10-20 years as nanotechnology becomes a mature science. While nanobots are not near-term, important developments have already been made. For example, passive "fullerene" materials that conduct electricity exist now. Actually, passive nanodevices were first developed around the year 2000. They are useful for preliminary software design and simulation. Other implementations of passive nanotechnology include nanolasers as well as "Buckyballs" that can contain and deliver medicines.

Active nanodevices can be expected around 2014, said Smith. The first active nanodevices may be disassemblers as opposed to full nanobots. Self-assembler (replicating) nanodevices can be expected after 2020. Mr. Smith was careful to explain the nanoscale, which is larger than the molecular scale but smaller than the dimensions that characterize viruses, microbes, or cells.

The envisioned applications of NT are pervasive as well as diverse. Potential information technology (IT) applications include semiconductors, memory, displays (Buckytube ele-

ments), microelectromechanical systems (MEMS) and nano-electromechanical systems (NEMS) processors for "the laptop after next," and digital signal processing for communication. Both MEMS and NEMS devices can be built today, and medical diagnostic as well as therapeutic applications are envisioned.

Materials applications include smart and controllable materials or fabrics, including clothing (with temperature adjustment capability, for example), combinatorial chemistry, clear aluminum, paint, plastic, steel, glass, and conductive polymers, as well as bodies for cars, airplanes, and

boats. Possible energy and environmental applications include water purification and desalinization (which will become increasingly important as sea levels rise and contaminate fresh water plants), catalysts and filters for brown field remediation, solar cells that are cheap and efficient (perhaps made from plastic sheets not much thicker than Saran wrap), safe and efficient fuel cells (that store hydrogen safely without the need for a heavy container), and perhaps even safe fusion.

Then there is homeland defense. Potential NT applications here include

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Future Lite

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- * (HYSTERICAL LAUGHTER)
- * "We've tried that before... it didn't work."
- * "Harris tried that before. Harris was fired."
- * (DEAD SILENCE)
- * "Let's create a committee to look into that."
- * "Put it on the back burner for now."
- * "Table it for the moment."
- * "Put it on ice."
- * "Deep six it."
- * "Let's see the way the wind is blowing first."
- * "Here's why it won't work..."
- * "Show us the benchmark surveys."
- * "We've already thought of that."
- * "We're already going with another idea."
- * "What's so original about that?"
- * "Anyone could come up with that."
- * "Let's just wait and see what happens."
- * "We've gotten along just fine without it so far."
- * "We'll get back to you about your idea as soon as it's gone through proper channels."

FUTURIST: "Well, that was extraordinary. Look how many ways we came up with to kill off that one idea and in

record time. Now that we've gotten them all out of our system, I'm going to ask you to put away your weapons because we won't be using them for the rest of the session. Now let's get back to some real storming of brains."

SMITH: "Righto. So about the box... how will it be delivered?"

JONES: "FedEx."

POTTER: "U.P.S."

HATFIELD: (LOOKING MCCOY IN THE EYE) "Bicycle courier..."

MCCOY: (JUMPING UP ON CONFERENCE TABLE) "THAT'S THE STUPIDEST IDEA I'VE EVER HEARD YOU SAY- "

Technical Note: At this point due to furniture being thrown and general chaos in the conference room the FUTURIST and TRANSCRIPTIONIST left and sought safe shelter.

Note: Please feel free to send in your favorite quotes, predictions, anecdotes, topic du jour, scandals, pet peeves, gossip and rumors and you may find yourself captured in Future-Lite: AREA 51! lindanlee@hotmail.com

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detection of nuclear, biological, and chemical agents (including detection of dirty bombs), nuclear shielding (for nuclear materials being sent to storage), and soldier enhancements (including lighter batteries). Even oil-free energy is a possibility, as are weapons development and weapons suppression technologies. Mr. Smith noted that the US accounts for only one-sixth of the total investment in NT.

MEDICAL APPLICATIONS

So what's in it for medicine? Mr. Smith envisions improved, better-performing, and more reliable diagnostic devices and sensors that will detect diseases earlier, when they are less expensive to treat. Custom pharmaceuticals are another possibility. Today, pharmaceuticals are often too strong for some people and not strong enough for others. Worse yet, in some people they have side effects. Tomorrow's pharmaceuticals, if based on NT, can be tailor made for you instead of being mass-produced for "generic" people like you.

Still another promising application, according to Smith, is to early detection and treatment of cancer. The present approach uses biopsies and mammograms for diagnosis, followed by surgery, radiation therapy, or chemotherapy for treatment. The results of the biopsies and mammograms are often delayed, giving the cancer time to spread further. In contrast, NT-based detection offers the prospect of diagnostic test results that are immediately available. On the treatment side, one might see a light-activated Buckyball electron gun that attaches to cancer cells and kills them with low dose radiation - "smart bomb" style without adverse effect on the healthy cells.

The future might see improved burn and wound therapy that will save lives, lead to faster recovery, and result in fewer cases of disfigurement. Improved body parts may also be "in the cards." Stress levels might be

monitored along with the conventional vital signs. There is even the possibility that new food packaging technologies might warn of food that has spoiled.

Although not exactly a medical application, NT may lead to improved public safety by monitoring structural stresses in bridges and buildings. Even special clothing that reduces impact trauma has been envisioned.

RADIO DOCTOR

The radio doctor concept is not new. In fact, it dates back to 1924. Back then, however, it was not viable, because bandwidths sufficiently wide to provide pictures were not available. Furthermore, licensing arrangements were not in place to permit doctors to practice medicine across state lines. For example, a resident of Maryland might want to obtain the services of a physician in Virginia, but the physician might not be licensed to practice in Maryland and might not even meet Maryland's licensing requirements, or vice versa. That world contrasts profoundly with the age of the Internet, in which (short of the restrictions on Internet access imposed on citizens of totalitarian countries), it is difficult to stop the flow of medical or other information across national boundaries. As a result, the technology is in place for a US citizen to obtain medical advice, diagnosis, and treatment from a physician in India.

NEW PARADIGMS

Today, when you get sick, you make an appointment to see a physician, or perhaps you go to the emergency room. In either case you wait, the difference being that one wait is measured in days while the other wait is measured in hours or fractions of an hour. Then you see the doctor, get tested, and wait again, this time for the test results. These waits give the illness or other condition time to get worse. Finally, when you are given pharmaceuticals, you are given the "one size fits all" drugs that everyone else gets.

In tomorrow's world, your house or clothing may monitor your health

on a constant basis, provide administrative telediagnosics, and automatically call the doctor when necessary. Armed with the telediagnostic information, the doctor or clinic will have remote triage capability. Information on the success rates of all doctors may also be readily available. In situations involving mass casualties, instant triage will likewise be possible. Japan already has "smart toilets" that monitor the health conditions of their users. Imagine going to a doctor or hospital saying, "My toilet sent me." Just imagine!

The new paradigm is envisioned to make healthcare more affordable and available. You will visit your doctor only when you are sick, not to find out if you are sick. The doctor hours thereby saved can enable more patients to be seen as needed. At the same time, NT-supported telediagnosics will support earlier interventions that can avert the need for prolonged treatment regimens and expensive medicines. An added payoff is that people will benefit from monitoring their own health through NT-enabled feedback loops.

AT THE CELLULAR LEVEL

In five years, NT may make possible "cellular stethoscopes" - sensors that measure the health of individual cells. Diabetics may benefit from continuous monitoring of blood sugar levels, with automatic insulin injection when needed. NT may find a role in assisting the filtration processes performed by the liver and kidneys and in otherwise filtering the blood as needed. For defense against anthrax, NT may offer sensors, phages, and filters.

Improved pharmaceuticals may include deep lung inhalation drugs to fight pulmonary disorders as well as blood brain barrier crossing drugs to cure multiple sclerosis and Alzheimer's disease. NT medical payoffs of a more structural nature may include rejection-proof new organs, improved bone-bonding capabilities that reduce fractures among the elderly, computerized stents for the circulatory system, and

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perhaps even printed arteries and joints.

HOW DO WE GET THERE FROM HERE - AND WHERE IS "THERE"?

Mr. Smith envisioned that eventually, 80% of diagnoses will be at the molecular level and that 75% of treatments will be by nurse practitioners and other non-physicians. Modeling change by the formula

$change = dissatisfaction \times vision \times first\ steps,$
he postulated the condition for change as

$pressure\ to\ change > resistance\ to\ change$

As Smith observed, several factors drive dissatisfaction. Chief among these factors are the high costs of healthcare and the large number of uninsured people. In addition, people are living longer, and statistically, they experience more diseases and disorders after retirement, when they can least afford healthcare. The opposing force is resistance to change, which can be anticipated from those who prosper under the current system.

Q&A

Q. *Which advances depend on nanotechnology and which ones will happen anyway with NT being a "best supporting actor"?*

A. Telemedicine does not depend on NT. However, home-based diagnostics are more likely to be effective if patients don't have to do anything complicated like hook up to the equipment. Perhaps it will be as simple as putting on a monthly patch, and such patches can be inexpensive as well as easy to distribute. Nanotechnology doesn't draw blood, and a nanotechnology diagnostic device may have enough wells to perform comprehensive analyses. It is also possible that diagnostic tests can be done in pharmacies, without appointments. In addition, 80% of homes in the United States have computers that may support remote diagnostics, and kiosks

offer still another possibility. Another possible outcome is that pharmacies as we know them may go away, to be replaced by shipping companies that deliver your medicines to your door.

Q. *Moral question - if self-replicating machines are developed, who will have access to them?*

A. It is not too soon to begin asking such questions.

Q. *The present health care system is actually an illness system. What in NT is prevention-oriented?*

A. Feedback loops. "Your pulse is too high (or low)." "Your blood pressure is too high (or low)." "You didn't walk far enough today." "You should be eating more salad today."

Q. *Who would be a "resistance" function?*

A. Those who benefit from the status quo.

Q. *How do you see the "resistance" breaking down?*

A. That's the 64,000 dollar question. Maybe you arrange for the devices to be sold by the pharmaceutical companies, to get their buy in.

ALL GOOD THINGS COME TO AN END

And so, with renewed hope for affordable and timely healthcare - perhaps tempered by apprehension that their vehicles might refer (or take?) them to their respective doctors - the participants began their trips homeward, and back to the year 2004, as closing time approached. Like all monthly dinner programs sponsored by the NatCapWFS, the evening was an opportunity to learn from a leading futurist, meet and talk with amazing people, expand one's horizons, and expand one's waistline by overindulging in the delicious faire!

[Editor's note: What relationships might exist between health demographics, healthcare needs, and factors that may drive an increase in the retirement age? How might these relationships vary among various

countries of the world? Also, given the opportunities for unintended adverse consequences (which good futurists take into consideration), who will certify the NT application as safe, and how will the testing agency ensure that its results are accepted by the stakeholders? "Chime in." Send your comments to futuretakes@cs.com.]

...but not just yet!

Follow-on discussion from our post-program interactive Web forum

Carl Pinches

Registered: Thu May 20 2004

One area of interest that can up during discussion period was impact on current rolls. Nanotech will enable remote diagnostics and eventually remote treatment then how will the following roles be transformed: Who are you going to calling: Nurse, Doctor, Pharmacist, Lab Technician, Paramedic, Equipment Vendor's Hardware or Software Technician, Morgue. Any other ideas for this list?

John Meagher

posted Tue June 22 2004 11:23 AM

Carl,

You raise a good point on the need to have qualified folks in the IT medicine loop for this to work.

You might be interested in an article by Dr. Barbara Starfield from Johns-Hopkins, I think in JAMA around 1998. It was updated by others last year. She and her colleagues found that the third leading cause of death in the U.S. is medical treatment. Her numbers were low and just hit the obvious (example: wrong med, wrong organ-oops your dead). Morbidity was not counted in her article, only death from medical treatment (here's a treatment, oops you don't need it, oops you had a stroke-but you live on with poor quality of life and dozens of other goofs too numerous to mention) because its difficult to get data on performance outcomes and in fairness it

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A Holistic Approach

Integral Futures: What This Is and How to Employ the Theory

Summary of the September 30, 2004 luncheon with Professor Richard Alan Slaughter; summarized by Natalie Ambrose

On September 30th, noted futurist Professor Richard Alan Slaughter presented a noontime lecture on Integral Futures Theory, a new more holistic approach to environmental scanning and to achieving strategic foresight. The event was co-sponsored by the WFS US National Capital Region Chapter and the Woodrow Wilson International Center for Scholars in downtown Washington DC.

Dr. Slaughter is professor of Foresight Studies at Swinburne (Australia) University of Technology as well as Director of the consulting firm Foresight International located in Brisbane. He is a leading developer and advocate of the Integral Futures method, and his personal and professional mission is "to understand, teach and in cooperation with many others, achieve strategic social foresight capacity" on a global scale.

Integral Futures Theory provides a new meta-perspective for creating and then organizing knowledge in order to understand emerging issues in greater depth. It provides four windows onto reality - the inner and outer (subjective and objective) factors, the individual and the collective. Using a four-quadrant model, it encompasses these four different perspectives - self and consciousness (I), brain and organism (it), culture and worldview (we), social system and environment (its). So, important questions get asked such as: "In considering the future, how can we consider individuals and collectives? How can we differentiate and consider the external physical and social environment and the interior, psychological and spiritual reality in futures work?" Unlike traditional environmental scanning, an integral approach

also considers the non-empirical world of intuition and interpretation. Much of the foundational thinking behind Integral Futures Theory is based on the work of Ken Wilbur, a provocative author and philosopher on topics such as global consciousness and spirituality as well as a master at synthesizing knowledge.

Slaughter also briefly discussed two other new techniques - **Causal Layered Analysis (CLA)** and **Transformative Cycles**. Both help to circumvent the tendency for most new ideas/innovations to get rejected

before ever coming to fruition because of society's and people's aversion to risk. CLA, pioneered by futurist Sohail Inayatullah, provides a way of looking both more broadly and in depth (meta) at the various layers of an issue and helps to unearth deeper insights. Transformative Cycles (or T-cycles), used by futurist Hazel Henderson, incorporate a process of identifying the problem or breakdown, then developing new ideas/proposals, dealing with conflict using negotiation, and then selecting an approach and giving it legitimacy.

To learn more:

Integral Scenario Development: Introducing an AQAL Root Questions Method, by Chris C Stewart, 2003.
<http://207.44.196.94/~wilber/pdf/stewart2.pdf>

Australian Foresight Institute, Swinburne University, P.O. Box 218, Hawthorn, Vic. 3122, Australia
<http://www.swin.edu.au/afi/welcome.htm>

Integral Futures: A New Model for Futures Enquiry and Practice
http://www.foresightinternational.com.au/07resources/Integral_Futures.pdf

K. Wilber, 'An integral theory of consciousness', *Journal of Consciousness Studies*, vol.4, no.1, pp.71-92, 1997. Online at <http://www.imprint.co.uk/Wilber.htm>. See also <http://wilber.shambhala.com> and <http://www.integralworld.net> for other sources.

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is gray area in terms of treatment/performance/outcome.

However, U.S. medical treatment could be vastly better and Dick is on the right track.

I think the best solution is quality control and removing the error prone human being from the medical process except where necessary, or it is deemed that is the best treatment option. Hospitals / medical staff are

very well intentioned, capable people, but I think they are overworked and are in sore need of better quality control and relief through IT/nanotech to do no harm, and do medical good.

I hope Dick's nanomedicine and other inventions of home med become a reality soon, we need it. The system of medical care now is not changing fast enough to improve treatment quality to reduce malpractice liability. We do not want to carry forward the quality problems of today into the future.

John M.

2004 State of the Future

By Jerome C. Glenn and Theodore J. Gordon

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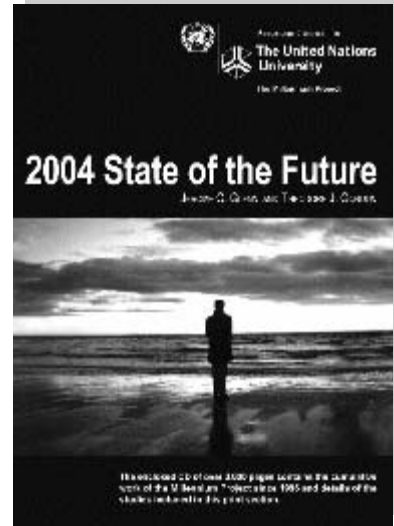
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Sustainable development is a concept that should be applied to decisions of all nations to the benefit of all people. It includes the right to and availability of **safe water, energy, food, and health services**. To achieve sustainable development, population and resources must be balanced by **forward-looking, democratic governance**. In turn, improved decisionmaking should be based on proper information and a new global sensitivity to **ethics**. Decisions that encourage sustainable development will work to counter **terrorism and organized**

crime. Improved **decisionmaking** will help close the **rich-poor gap**, and support the changing **role of women**. **Science and technology**, properly managed, will benefit humanity. But we lack full understand of the complexities of the global situation at any time, the inter-relationships that determine the outcomes-expected and unexpected-of strategies at all levels.

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World Future Society US National Capital Region Chapter *Committee Descriptions*

The World Future Society U.S. National Capital Region Chapter invites you to get involved. We have a number of different committees offering interesting ways to participate in building the Chapter. We look forward to having you on board!

Digital Media

The Digital Media Committee designs, develops and manages the Chapter website and all forms of digital communication.

Contact: Eric Garland 202-487-0092
eric-a_garland@yahoo.com
Carl Pinches 703-620-6220
cpinches@worldnet.att.net

Finance

The finance committee is responsible for the Chapter's financial well-being. It not only administers the funds for Chapter activities and growth but also plays an active role in the Chapter's program and development strategy process, being responsible for budgeting, event and dues pricing, and investing funds not required for near-term operations.

Contact: Ken Harris 301-657-3731
harriskw@erols.com

Future Takes (Chapter Newsletter)

Future Takes publishes thought-provoking articles, authored by Chapter members and nonmembers alike, on the future-related topics and on futurist methodologies. Reaching beyond our own ranks, we provide a platform for members of other professional societies who want to share their perspectives and insights on future-related aspects of their organizations' areas of interest. As an interdisciplinary, future studies related newsletter that serves several organizations, we provide authors with cross-organizational and cross-disciplinary exposure.

Contact: Dave Stein 202-452-5592
futuretakes@cs.com

Membership

The Membership Committee helps develop and maintain a strong membership community in the National Capital Region. We do this by identifying and welcoming prospective members and by reaching out to a wider range of individuals.

Contact: Sue Snyder 410-757-3752
redynss@comcast.net

Outreach

The Outreach Committee develops and maintains ties with other professional institutions, government agencies and organizations. These ties enable our Chapter to sponsor speakers and other programs of mutual interest, which in turn help Chapter members to deepen their understanding of particular aspects of the future. They likewise provide a futurist perspective to members of the other organizations.

Contact: Limor Schafman 703-205-0729
limors@keystonetechgroup.com

Program

The Program Committee plans and manages educational program for the Chapter. Responsibilities include speaker selection and outreach, program planning and event production.

Contact: Richard Smith 703-447-8784
rhsmith@nanoverse.net
Ken Harris (book club) 301-657-3731
harriskw@erols.com

Public Relations

The Public Relations Committee's mission is to publicize our Chapters events to the greater Washington, Northern Virginia and Eastern Maryland area. We seek to make our Chapter visible to the many audiences that can benefit from futurism in our community, and we invite their participation in Chapter events.

Contact: John Meagher 703-734-1454
jmeagher@intercet.com

Sponsorship

The Sponsorship Committee works with Outreach, Programs and Finance to find companies and organizations interested in collaborating in the production and funding of events produced by the Chapter.

Contact: Limor Schafman 703-205-0729
limors@keystonetechgroup.com

Future (Re) Takes

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cars, taxis, school buses, delivery trucks, cross-country freight delivery traffic and personal-rapid transit vehicles.

A high percentage of private dual-mode commuting vehicles will be small, two-passenger vehicles. Small cars tend to be more dangerous on highways, where they have to compete with heavier cars and trucks. Size won't affect safety on the guideways because all vehicles will travel at an identical speed. "Slick roads" won't be a problem. The automatic system will always "see" perfectly in any kind of weather. Driver will never fatigue or fall asleep.

Dual-mode vehicles will travel on streets and on the guideways. But cross-country buses and long-distance freight vehicles will be single mode, operating only on the guideways with no drivers. The driver-less freight vehicles will be more like autonomous cargo containers than trucks.

A constant speed of 60 mph in and around cities and 200 mph between cities will decrease travel time, increase safety and increase road utilization. Synchronized vehicles may travel less than one foot apart.

These speeds offer enormous system capacity. With vehicles moving at 60 mph, a single guideway lane could carry the traffic of 12 highway lanes; at 200 mph, one guideway lane would be equivalent to 40 highways lanes. The need to build more lanes will become a thing of the past, and one lane of guideway should cost far less than 12 or 40 lanes of conventional highway.

Vehicles enter the guideway system by driving onto an entry stop. The driver then shuts off their motor and enters the number of their desired guideway exit into a keypad on their dashboard. The exit number will tell the navigation computer where to send the vehicle and enable the billing computer to charge for the particular trip.

Computers in the entry stop will record the vehicle's identity by reading an on-board identification chip.

Simultaneously, the automatic system will verify vehicle safety and emission requirements. The guideways system will denied access and returned all vehicles to the streets if the vehicles fail to pass these tests.

These preliminaries will take about 30 seconds. The vehicle will then automatically accelerate and merge with the guideway traffic. "Switching" action will initiate automatically in the vehicles, not by switching the tracks as is done on railroads. The vehicles will switch from one guideway to another at full speed, just as we enter and leave freeways at full speed today.

A global dual-mode system will solve most transportation and transportation-related environmental problems. Dual-mode systems will reduce highway traffic and traffic jams. Guideway vehicles traveling into the city will not exit on the downtown streets. These vehicles will automatically park directly from the guideways. The dual-mode system will alleviate or reduce street traffic and street-parking problems.

Dual-mode vehicles will be battery-electric or fuel-cell powered for street use. Since these vehicles will use guideway power for most of their travel, batteries or hydrogen tanks that are now inadequate for highway use will be more than adequate for dual-mode limited street use. However, in the early years of the system, vehicles with internal-combustion engines will remain in street use, since these vehicles will need to travel on existing highways until guideways are widely available.

Electricity for the guideways can come from any energy source, whereas internal combustion engines demand fuels that are environmentally damaging and in short supply. In the future, the percentage of electric power from wind turbines and solar arrays will increase, and nuclear fusion may also be a viable source. We will have many options in generating electricity; but with internal combustion automobiles we will have very few. Even if we burn more coal to boost power for the guideways, the overall dual-mode

system will be roughly twice as efficient as automobiles. So transportation will burn less fuel and therefore generate less carbon dioxide than it now does.

Air-bearing technology (related to hovercraft) may support the vehicles on the guideways. Many dual-mode system inventors propose maglev guideways. The concept of magnetic levitation has interesting advantages for dual-mode systems. If the vehicles are floating with their street motors off, they won't be wearing out. Neither will the guideways wear, so they won't develop faulty rails or pot-holes.

The guideways will use linear synchronous motors, enabling all of the vehicles to run at precisely the same speed at all times; like boxes on a conveyor belt. The spacing between vehicles will never change, so it will be virtually impossible for collisions to occur. In a dual-mode system, synchronous propulsion will eliminate a large number of the sensors and controls needed to maintain individual vehicles' speed and distance from each other if the vehicles controlled the system instead of the guideways.

An interim period will exist when only part of the dual-mode guideways is complete, and only a few people will own the non-polluting dual-mode vehicles. In order to make the available guideways useful to all during this period, existing automobiles will drive onto pallets designed to run on the guideways. Even after most people have true dual-mode vehicles and most of the guideways are complete, classic automobiles, boats and other trailer loads will still use pallets.

A huge dual-mode system for the United States will cost \$20 to \$50 million per mile of guideway – hundreds of billions for the whole nationwide system. But unlike trains, the dual-mode vehicles will not belong to the guideway company, so the cost of the system will not include vehicles. Every vehicle that uses the guideway system will help pay for the system, and guideway-use fees will be far less

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than the cost of gasoline powered transportation in the future. Private vehicles and freight will pay the major cost of the guideway system. To encourage environment responsibility transit's share will be small.

Update

Denmark is currently studying the RUF EV (electric vehicle) Intelligent Auto/Transit concept. RUF means "go fast" in Danish. Small and medium-sized electric intelligent vehicles operate on the conventional roadway as well as on an automated guideways system. In the manual mode, vehicles are powered by on-board batteries that have a range of up to 50 km on the conventional street. A hybrid version of the vehicle has also been conceptualized that would extend this off-rail range. In the automated mode, the vehicles take power from the rail system and operate at high speed over longer distances. This combination of integrated operating modes would provide the user with the ability to reach the vast majority of destinations in a large metropolitan region quickly and without having to deal with the congestion delays and accident hazards that exist on conventional freeway/arterial systems.

The RUF concept also accommodates larger vehicles, called MaxiRUFs. These vehicles operate on conventional streets, in either a demand-responsive or scheduled mode, as well as the RUF-rail facility in an automated mode.

The RUF vehicle may be owned by both individuals and the public. Personal RUF vehicles would normally be kept at a person's residence or parked near their workplace. Public vehicles will be available at all rail system stations and could be rented as needed by individuals or small groups. Larger MaxiRUF vehicles would be operated like small buses (10 persons) on the automated rail system; special versions could be used by businesses to move goods.

This summer the first RUF proto-

type rolled onto a 24 meter-long test track outside of Ballerup, Denmark. Looking nothing like the sleek 1998 concept mockup that gave physical form to the idea or the more conventional-looking Z-9 and Z-11 concept vehicles, the RUF mechanical test bed sports a clear plastic canopy and a heavy steel tube frame. It boasts eight wheels; four normal road wheels and four smaller track wheels hidden discretely along either side of the vehicle's centerline. There are also separate steel drive wheels that propel the vehicle along the guide rail.

The RUF system is the brainchild of Danish inventor Palle Jensen. First presented in 1988, Jensen has successfully garnered the support of a number of major sponsors including three Danish ministries (Energy, Environment and Education) and a number of multinational corporations including Siemens, Hawker and Mannesmann.

According to RUF International's

calculations, a single highway lane can accommodate a maximum of 2,000 vehicles per hour per lane. By contrast, they say the RUF system could handle as many as 3,600 vehicles per hour per rail. In addition, four rails can be installed in the same space as three highway lanes, making it possible to move many more passengers much more efficiently than our current system and with far less pollution and wasted energy.

As might be imagined, the RUF system will also be heavily dependent on smart vehicle technology that automatically routes the vehicle and directs its switching to other tracks. The "driver" simply programs into the vehicle where it is they want to go and the computer handles the rest. It will even communicate with other vehicles to see if they are going to the same destination and automatically form "trains" to increase traffic density and reduce energy usage by "drafting".

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Civilizations

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major destruction of war allowed them the opportunity to forgo the revenge on enemies in the settlements after WWII, and their leadership, wealth and idealism allowed them to create the Marshall Plan, which further helped to ensure that there would be no rise of another Nazi Germany in the near future.

“Our Gallant Russian Allies” turned out to be our committed enemy for the next four decades, stirring up trouble, but also providing a unifying focus on a common enemy through the Cold War. Again, our industrial and economic might allowed us to out-spend and out-produce them in almost every aspect of modern life. The lesson not learned from the implosion of the Soviet Union was that a serf nation is apparently incapable of jumping directly from despotism to democracy.

The decade and a half since the end of the Cold war has turned our sight inward, to compete for individual aggrandizement at the expense of the collective. Perhaps we are reverting to the mercantilism of zero sum games, even though we make the claim that “a rising tide lifts all boats.”

1984 TO WORLD FEDERATION – WHAT FUTURES AHEAD?

This article originated in a question – where is the United States now in the flow of history, the rise and fall of empires? So we now examine some possible futures over the next few decades.

There is no definable Empire of the United States, but national power, wealth, and a civil society have allowed us to take on a leadership role in the world. The last century saw growth as a world power, saving the world from fascism and communism. Implosion of the USSR removed a credible opposition threat, and the US became clearly the major military power – invincible in a 20th century type of war. Events leading up to the turn of the century and the suicide attack of 9/11 constitute a turning point of conflict, with which we have

shown no great aptitude for coping. Does the last decade include another turning point – a degradation in the constitutional balance of powers coupled with an apathetic electorate and polarization of the less than half of those who do choose to vote? Has a lust for individual and party aggrandizement distorted the American Dream?

If we are indeed at a major turning point, we can expect significant changes in the future, and look at history, at the current situation, at trends pointing through the next few decades. We can create possible scenarios and assess them for probability, desirability, and the possibility of influencing the course to the future.

The Pessimistic Scenario – 1984 a few decades behind schedule. This scenario starts with the lust for power of a group of men who exploit the gullibility of youth with no useful mission or traditional role in modern society. The means used is the distortion of the Islamic religion to support a holy war, a jihad. Their strategy is the building of their own hegemony; their tactics of suicide and terror ignore the Geneva Convention or civilized traditions of previous wars. Attacks are deliberately directed against civilian populations. The response is, necessarily, enhanced constraints of the freedoms previously enjoyed by citizens, but with oversights and accountability slowly eroded in the name of security. US concentration on fighting off the jihad allows other powers to enter and ultimately create the situation described in 1984.

The Conventional Wisdom Scenario. In the last decades of Empire, the British had a reputation for muddling through, derived from centuries of a stable society. The US checks and balances and the influence of the Constitution retain their stabilizing influence, we recognize and repair the polarization which has been growing over the past decade. We create the civil acceptance of the fact that in the new form of warfare we are all frontline troops, and our casualties will quite likely be far less than annual highway deaths involving alcohol. We

find the willingness to prioritize the current social needs in conjunction with the needs to ensure protection and survival, balancing constraints on the populace with the need for security.

The Optimistic Scenario. This is a variation on the previous scenario, which says that other world powers, including the Arab and other Islamic countries recognize their hazards from jihad, and join in denying resources and safe haven to the organizers and perpetrators of terror. In the course of events, jihad becomes obviously a failed thrust and is reduced to the status of a nuisance, in the sense of being criminal activity covered by police powers of civilized countries.

The Wild Card Scenario. This is a variation of the conventional wisdom scenario, in which the many diverse and conflicting business, religious, social and political interests are helped to recognize that we all hang together, or we may be decapitated separately. We figure out how to accept the threat of terror and deal with it. More importantly, over the course of a decade or two, we go back into history and recreate the environment of the founding fathers to effectively establish a modern equivalent of the Constitutional Convention with a major update suitable for carrying not only the US, but perhaps the civilized world, through the 21st century and beyond into a new future. Such an approach clearly involves major changes in culture, what we consider to be acceptable in liberty and the pursuit of happiness, and what constraints might be needed for a civil and harmonious society. A wild card indeed.

Editor's suggested points for consideration and commentary:

What insights can you offer on the questions raised by the author?

* *Does the current world turmoil have the potential to initiate an accelerating decline of Western Civilization (and with it our American hegemony), or – is this an opportunity to exploit*

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all our advantages to start a new direction, and create the first ever recorded history of an all powerful Western civilization morphing into a first “World Civilization”?

** Where is the United States now in the flow of history, the rise and fall of empires?*

** [paraphrased] Do the events of the last decade – a degradation in the constitutional balance of powers, coupled with an apathetic electorate and polarization of the less than half of those who do choose to vote – constitute a turning point?*

** [paraphrased] Does the future lead to a global civilization, or does it lead to a return to a modern version of chaos and the dark ages – or is the future cyclical between these two extremes?*

Additional “neuron exercises”:

** To expand on the author’s first question – will the world be characterized by increasing universalism of Western civilization or by an acceptance of the diversity that can characterize a world civilization? To what extent will Western civilization change in the process?*

** Are there limits to economic, sociopolitical, and other polarization (haves vs. have-nots)?*

** Is it true that a rising tide always lifts all boats? If not, then under what circumstances does it do so?*

** Several factors can impact where the United States is in the flow of history. What will be the impact of the environment (recalling the author’s comments on irrigation systems and the San Joaquin valley)? Of free movement of people, goods, and especially ideas (as facilitated by the Internet)?*

** The author discusses the way in which Great Britain created capital” through the idea of buying raw resources cheap and maintaining monopolies in selling manufactured goods dear” and that their attempt to*

restrict manufacturing in the American colonies contributed to the American Revolution. Are there any parallels in contemporary international trade?

** The author states that the isolation of the United States from the major destruction of WWII “allowed them the opportunity to forgo the revenge on enemies.” A similar observation applies to the period after WWI, when France and Great Britain insisted on measures toward Germany that were more punitive than those favored by the United States. What are the consequences of not being nearly as isolated from war now, given the advent of terrorism and the possibility of cyber-attacks and economic warfare?*

** Among the various civilizations in*

decline discussed by the author, to what extent was the nature of the external threat (that is, a unitary threat from a peer competitor vs. a more nebulous or multipolar threat) a factor in the decline of each one?

Also, to what extent do hegemonies fall because they are envied by other civilizations?

** Are there any common underlying reasons for the decline of the civilizations discussed herein?*

Share your thoughts with our readership among other local professional societies and within other WFS chapters worldwide! Send them to futuretakes@cs.com.

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Department Chairpersons

<p>DIGITAL MEDIA Eric Garland 202-487-0092 eric-a_garland@yahoo.com</p> <p>Carl Pinches 703-620-6220 cpinches@worldnet.att.net</p> <p>FINANCE Ken Harris 301-657-3731 harriskw@erols.com</p> <p>OUTREACH vacant</p> <p>PUBLICATIONS Dave Stein 410-385-3315 futuretakes@cs.com</p>	<p>PROGRAM Richard Smith 703-447-8784 rsmith@nanoverse.net</p> <p>Ken Harris (Book Club) 301-657-3731 harriskw@erols.com</p> <p>MEMBERSHIP Sue Snyder 410-757-3752 redynss@comcast.net</p> <p>PUBLIC RELATIONS John Meagher 703-734-1454, ext. 128 jmeagher@intercet.com</p> <p>SPONSORSHIP vacant</p>
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