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**Family life, biotech, healthcare, demographics, and “the verge”**

***Highlights from World Future 2007: Fostering Hope  
and Vision for the 21<sup>st</sup> Century***

*by Jay Herson*



The World Future Society held its annual conference at the Hilton Hotel in Minneapolis July 29-31. Approximately 950 people attended from more than 30 countries.

As usual the opening ceremony featured two interesting and dynamic speakers. **Helen Fisher**, Research Professor of Anthropology, Rutgers University, predicted a positive future for marriage and the family in her presentation entitled “The Future of the Family: Lust, Romance and Attachment.” She began by pointing out that women have now achieved high levels of employment, economic power and literacy in 129 societies worldwide. This may appear to be a new phenomenon but in early societies women had a vital economic role and one that was equal to men. As inventions such as the plow appeared, men began to take over the farming while women were relegated to the home. Arranged marriages and multiple wives were important for the agrarian economies but deprived women of economic power.

Today we see a return to life as it was in the earliest societies. Fisher described the science of love and then developed its effect on the family. Love is a dopamine and testosterone driven phenomenon in both sexes. These chemicals generate long term attraction and permit a man and woman to tolerate one another at least as long as it takes to have children. Contrary to common beliefs, casual sex has been around for a long time but it is not random; all animals are selective in whom they choose as a partner. Long term relationships often result. Romantic love is an addiction to another person. People in love may act unrealistically but they are held together.

The double standard is disappearing and thus sexual activity is more constant over a lifetime. Worldwide trends of better education, higher income, urbanization, higher divorce rate, smaller families, healthier populations, contraception and abortion are all related to more sex and eventually to love. In agrarian societies, marriages were arranged, and god and civil duties came before love. In the twentieth century, romantic love prevailed and marriage for love became a worldwide trend. Marriage has changed more in the last 100 years than in the previous thousand years. Marriages take many forms—gay, childless, living together but not married even with children, and all forms have the partners as equals. Divorce is accepted today not as a failure but as a stepping stone to a successful marriage. Americans are

working harder on relationships, intimacy is recognized as important in a relationship and the divorce rate has been decreasing, due to later and wiser marriage. All of these trends make Fisher very positive on the future of marriage and the family.

Opening night also featured **Gregory Stock**, President of Signum Biosciences and Adjunct Professor at the UCLA School of Public Health. His topic was “Biotechnology and Health Care: The Road Ahead.” Stock claimed that health is more affected by lifestyle than by new technologies. The theme of his talk is “how can we best use these technologies, what will they consist of and how will they be developed.” Genomics is clearly the key to the future, but if the genome was sequenced in 2000, why do we not have any of the benefits today? Genomics is a key to prevention of disease but the US has never been well equipped for prevention. Competition may be a pillar to the capitalist system but it does not motivate total health care that would include prevention. It has been found that heavy coffee drinkers have lower rates of Alzheimer’s disease and Parkinson’s disease. The pharmaceutical industry should be extracting chemicals from coffee to make new drugs that would be preventive. There are many examples like this for niche markets but who will make these drugs and who will pay the presumably high price for a drug that is preventive for a disease that might never occur? Native Americans found medicinal plants by trial and error because of the freedom they had to experiment. They did not have to answer to investors or to the FDA. New chemical entities for drugs are rare today. Due to the cost of development, pharmaceutical companies are concentrating on small refinements to current drugs.

Medicine is becoming more personalized, and this further creates niche markets for therapeutics for even the more common diseases like heart disease and cancer. The FDA process is too risk averse and tied more to drugs of the 1950s than to 21<sup>st</sup> century medicines. Instead of certifying safety and efficacy, why not provide all of the information on new drugs to physicians and patients and let people take their own calculated risks? This is done for cigarettes and alcohol, why not for drugs?

Human reproduction is changing with sperm donor programs being common today and cloning and germ cell engineering not far off. Embryo screening before implantation is possible today as a prevention for certain diseases, and this will expand as we learn more about the genome. Technology is giving us our own prevention that may create a lesser dependence on drugs as we move further into the 21<sup>st</sup> Century, but it is not clear how political and regulatory issues might impede these developments.

The following morning another special event featured **Nat Irvin II**, founder of FutureFocus and professor at the Babcock Graduate School of Management, Wake Forest University, His topic was “The Demographic Singularity: The Changing Face of the Future.” In 43 years (or 1 ½ generations) there will be a big demographic shift in the US with considerable social and cultural implications. Today 50% of children are racial/ethnic minorities and 1/3 of Americans are minorities. Of the last 100 million Americans born, 30% were Hispanic. US population was 400 million in 2037, and of the next 100 million Americans 24% will be Hispanic, 8% Asian and 14% Black and half of these 100 million will be immigrants and their children. Five states today have 40% minority populations, and somewhere between 2040-2050 half of the US population should consist of what we refer to as minorities today. These “minorities” will be responsible for 90% of the growth rate and the growth of the economy. America is facing a majority of minorities. The minority groups have high birth rates, and the 1960s saying “We Shall Overcome” is becoming “We Shall Overwhelm.”

By 2050, 21% of Americans are predicted to be of mixed ancestry. The American workforce will consist of demographic hybrids and the terms “majority” and “minority” will become useless. At that time there will be more than 100 million people younger than 19 years, mostly immigrants. Black buying power alone will increase from \$779 billion today to \$1.1 trillion in 2025. While whites made up 17% of world population in 1997, they will make up only 9% in 2010.

Employers and marketers should be taking account of this shift. Political parties should be looking for minority candidates younger than Barack Obama to enter politics within the next decade. Museums and performing arts organizations like symphonies and ballet should be thinking of the implications of this demographic shift.

This highly successful conference was closed by **Joel A. Barker**, President of Infinity Limited, Inc. and Chairman, Institute for Strategic Exploration with his talk “Innovation at the Verge: New Opportunities and New Responsibilities for the 21<sup>st</sup> Century.” His thesis is that innovation is very important for the future and the concept of the “verge” is very important for innovation. The verge is a point where two products or services meet. If innovators work at the verge, there will be fewer competitors and, when a failure occurs, few will know about it. He began with a low tech verge—combining gift wrap with a paper bag to create the gift bag. The Prius is a good example—an automobile plus a big battery. FedEx combined jet planes with small packages. The Robocoaster combines a robot with a roller coaster. General Motors contacted the Centers for Disease Control to see how they find the cause of epidemics to use this technology to find “diseases” in their cars. Today the cell phone and the Internet are platforms for verges. Barker is impressed with Dubai. This country is building an island that they insist will be filled by people and organizations of many different backgrounds. This will generate ideas just from the diversity.

There will be many verges and many new products and services. Finding the successful verge is just the beginning; we must consider the long term implications of the Ipod, climate change, eBook, hybrid vehicles, etc., and we must consider the cascade of consequences as first order, second order, third order. This will be a major task for futurists in the 21<sup>st</sup> Century.

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**POINTS FOR THE CLASSROOM** (send comments to [forum@futuretakes.org](mailto:forum@futuretakes.org)):

- *Speaker Helen Fisher has observed that the double standard (between men and women) is disappearing. To what extent will this disappearance help usher feminine values into the workplace? In confluence with other trends including a return-to-nature movement, how will it impact the evolution of religion and spirituality?*
- *In 2020, what will the divorce rates be in your nation or region, and what will be the leading causes of divorce?*
- *Speaker Gregory Stock noted that health is more affected by lifestyle than by new technologies but that the capitalist system does not incentivize total health care including preventative care. Others have noted that competitive pressures in some workplaces promote a work-a-holic culture in preference to balanced lifestyles with adequate rest, exercise, nutrition, and relaxation. Characterize the economy and value systems of the future and their implications for lifestyles, and support your conclusions.*
- *Will there be new pressures for, or interest in, preventative healthcare in your part of the world within the next ten years?*
- *Characterize the pharmaceutical industry and business model that will emerge in 2025.*

- *Gregory Stock indicated that Native Americans found medicinal plants by trial and error because they had the freedom to experiment. One might add that Native Americans had a different relationship with nature and with land (that is, they did not own land individually). Today, the prevailing living patterns are different, and technology has all but disconnected many people from nature (for example, by enabling “24x7”). In your part of the world, what will be the relationship between humankind and nature in 2025? Will nature be viewed as something to conquer or as something with which to coexist?*
- *By 2025, will your part of the world experience massive demographic shifts similar to those that speaker Nat Irvin II anticipates for the US? If so, how might your everyday life change as a result?*
- *How will age demographics impact healthcare of the future, for example, with people working longer into their senior years during which health issues become more common?*
- *In addition to the “verges” identified by speaker Joel A. Barker, what “verges” do you anticipate in the next 15 years?*