



VOYAGE

The Journal of an Iranian Futurist

ALIREZA HEJAZI

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Contents

| | |
|--|----|
| Foreword | 5 |
| A Typical Day in My Life in 2030 | 6 |
| How to Become a Disciplined Futurist | 7 |
| Are We Future Conscious Enough? | 10 |
| Futurists' Professional Ethics | 12 |
| Metalogue: The Future of Collective Thinking | 15 |
| New Frameworks for New Theories | 17 |
| Masters' Insights | 18 |
| Futures Terms Concept Map | 19 |
| Top 10 Attributes of FS Students | 20 |
| New Possibilities with Chronesthesia | 23 |
| The Third Lesson | 25 |
| Realistic Expectations from HVHF | 27 |
| What Really Matters for a Technologist? | 29 |
| CLEMENTIA | 31 |
| 6 Exponential Technologies of Tomorrow | 33 |
| 6 Grand Technological Challenges for 2011 and Beyond | 36 |
| Writing for the Future | 38 |
| The Future of Goodness | 40 |
| Wiki-Futures | 42 |
| Future Consequences of University Fees Hike | 44 |
| 7 Key Values for Futurists | 46 |
| Applying Futures Knowledge Consciously | 49 |
| Is it the neural system that shapes our futures? | 51 |
| Moving through time: Can it be done in a mental way? | 53 |

Foreword

The image of the future that I had in my mind during my childhood was a combination of realities and fantasies. Like many Iranian children I'd like to become a pilot. This was because of undesired impacts of Iraq-Iran war that lasted for 8 years. The Iraqi warplanes bombarded many cities of Iran, including Tehran and many young boys like me wanted eagerly to become a pilot to retaliate Iraqis' invasion in the future. As the war took a long time to finish, we assumed when we become older; we'd be still at war. So becoming a pilot seemed a real ambition to me and many other kids. Later I changed my mind for taking any revenge, concentrating on my own life.

When the war ended, I had already started to learn English at an institute. There I decided to become an English teacher, and I became in the coming years. Attending the university as a student of English translation ignited the flame of becoming a translator in addition to remaining a teacher. After receiving my BA in English translation I worked as a translator reshaping my life in new ways.

After 10 years, I became accepted as an MA student in the field of Managing Information Centers at a university of technology. There, I changed my mind drastically and made significant changes in my life for better. I found an opportunity to work simultaneously as an IT technician and a scholar of futures: A futurist.

When I look back into my life, I see many changes. The changes were both positive and negative. I had an active role in many of positive changes that happened in my life and a passive role in many negative ones that imposed on me. Anyway, my current life is the ultimate outcome of those changes. I'm pleased with my current Strategic Foresight studies at Regent University and services that I can offer as a futurist consultant. My perspective on Futures Studies today is different from what it was just 6 years ago, as I had no expert knowledge at that time. Since 2005 I started to study Futures Studies personally and that provided a basis knowledge for my current academic studies.

Now I'm a member of World Futures Studies Federation and World Future Society. I publish a monthly e-newsletter in Farsi for the members of the Iranian Society of Futures Studies. I run futuring workshops and seminars and offer consultancy services to future-oriented companies. I have also launched a personal site at: <http://www.futuresdiscovery.com> offering a set of contents in Persian and English, including this free e-book.

This is a collection of my personal notes and my blog posts from 10/19/2010 to 12/16/2011 available at: <http://www.wfs.org/blogs/alireza-hejazi> You may regard it as a journal of an Iranian futurist.

Your comments and views are appreciated at: info@futuresdiscovery.com

Happy Futuring!

Alireza Hejazi

December 17, 2011

A Typical Day in My Life in 2030

Sat, 12/17/2011 - 4:24pm

I get up 6:30 in the morning, looking at myself in my DHM "Digital Health Mirror". Digital health mirrors are intelligent interactive robots that monitor the healthy situation of people daily and offer online health services including: health info storage, creating daily personal health reports and introducing best diagnosis and remedies. They play the role of a home-based doctor 24/7.

Doing some exercises and taking a shower, I put on my dress made of intelligent textiles. My shirt is thin but keeps me cool in summer and warm in winter. I go to the kitchen to eat my breakfast preparing it with high energy small seeds, soya milk (cholesterol-free) and fresh vegetables. I take a look at morning newspaper published on flexible e-paper to read tomorrow's news and next week's and month's events. I can find enough information in the newspaper about next month's first Friday to fix my picnic with my friends.

I turn on the auto-guard kit and leave the home. Walking to the nearest metro station, I go through a passage set up on an energy harvesting platform at metro's gate. Now up to 2000 energy harvesting platforms are installed at the entrance gates of subway stations in Tehran. They harvest up to 1000 Mega Watts per day supplying a significant volume of energy for subway's internal needs.

Reaching my office in 15 minutes, I start my work by a virtual 3D teleconference arranged with my client in Malaysia for this morning. Giving my advice to my client, I leave the office for the nearby college in which I teach Strategic Foresight to a number of students. After a brief lunch with my students and co-mentors, I go to the conference hall to present my recent article on the strategic challenges of trans-humans led societies arranged for this afternoon. I offer my presentation and discuss the matter with the audience. Then I come back home. One of my PhD students comes to review the final draft of his thesis before defending it tomorrow. I review his draft and give him final instructions and recommendations.

I check the situation of my intelligent greenhouse and my newly implanted hybrid vegetables and plants. After taking a warm bath and drinking a glass of fresh milk with biscuits I turn on my super 3D TV set and watch my favorite program on Futures Discovery channel. I participate in TV panel scientific show by 3D videophone whose director is one of my students. Setting my home intelligent guard system on, I spend some minutes for meditating on tomorrow programs. I go to bed to see sweet dreams of tomorrows.

How to Become a Disciplined Futurist

Fri, 12/16/2011 - 3:48am

Anyone interested in becoming a futurist can't afford to miss these seven tipping points. In addition to the essential need of learning futures methods, theory, frameworks and philosophy, a futurist needs to be a disciplined guy in his profession.

How can we become disciplined futurists? First of all, we need to know that living a life as a futurist means spending time usefully and getting the most out of every future-oriented idea.

1. Make Every Minute Count

It is all too easy to become sidetracked from your main goal and to waste your golden research time by reading (online and offline) pages which seem interesting, but not relevant to your futuring activities in hand. That time need not be wasted if it has been invested in a possible foresight project. Make every minute of time spent futuring count by always being on the lookout for a future-related topic with enough research worth. Avoid timewasters. Checking your website or blog stats every hour, reading 500 blogs in your RSS, playing on Facebook, Twitter and etc. all day will kill your productivity. Focus on what yields results and stay disciplined to stick with that. Social media are important for building professional relations, but you have to keep them in check.

2. Create an Ideas Box

If something catches your interest on the web, make sure that you have a place where you can quickly bookmark the page and make a note of your ideas. Make an "ideas box" in your PC. Save your favorite pages and resources there. Having an idea box in your PC, with web pages to kick off research will always stand you in good stead. It's also useful to tie this in with a paper "Ideas Folder" on your desktop where you can quickly jot down a few notes. Don't spend a lot of time writing too much about a potential idea. Just take quick notes along with any useful URLs. You only need the minimum required to set you off in the right direction when you follow through with more research later. Your ideas box can serve as a wealth of useful hints. It can even shape your professional future.

3. Build a Retrieval System

Your futures endeavor will bring you huge content. You need to manage your data effectively. Making many folders based on topics, the futurists, countries, regions and ... and putting your contents inside them may be useful in the beginning, but you need a better solution as your content grows. A simple quick solution can be "Archivarius 3000" available at: <http://www.likasoft.com/>. Archivarius 3000 is an application to search documents and e-mail on computers, local network and removable drives (CD, DVD and others). The program will extract and save full information about documents. This allows you to search and view documents even if they are physically not accessible. In this way, you'll have an always ready search engine on your PC without having to get connected to the Internet.

4. Enrich Your Ideas

The other way of making your futurist profession disciplined is to see the potential for getting several ideas out of an original thought. When you do research on your first idea, try to be aware of

all the possible branches of next ideas. For example, if you are doing research about the future of work, that involves future account keeping capabilities, future marketing and promotion activities, and future work spaces; remember that the same basic information can be used to study or write articles and books for several related topics such as how to combine different jobs to make new ones, or how women will look at the future of their jobs, or how people can adjust to being self-employed from having been salaried (with so many people being made redundant in the current economic climate). Work is your first keyword, but “entrepreneurship” will be your second keyword. Give time to your initial thoughts. You see that they can bring new branches and fruits.

5. Reproduce Your Top Works

Always look at the material you have through the eyes of all the different markets that exist. As a futurist you may have some (or many) articles and books, but you know better than anyone else which ones are the best. Even if you don't write any article, bring your past notes on the table and try to make a logical relationship between them. Keep them in reserve in your “Ideas Folder” and you'll see that you have good material to write a nice article. Believe it or not, you can make your article outline easily in this way. If you are a professional futurist author, you surely have many articles and perhaps books. Always go through old articles and see if you can give them a new spin or angle. It may be possible to add to them, expanding them for another market or client in the shape of a new report. It may be that there have been new developments which mean that you can update and re-write the material in the new work. Always try to see the potential for development in all your old articles and books and try to get the most out of everything you write.

6. Be Open to More Learning

Your willingness to learn makes you different from other people who think they know every necessary thing. Stop learning and stop growing. This is more meaningful for the futurists as it is a matter of time. Our knowledge and what we unconsciously call “science”, becomes quickly obsolete by the advancement of science and technology. Who can say Futures Studies are as same as what they were last year? Perhaps well-known methods such as scenario planning or Delphi are the same, but new thoughts and ideas are also generated. It's about 20 years that I'm struggling with formal education and learning new things, from English language to website building and recently to learn Strategic Foresight at Regent University. During all these years I've learned one thing: I should never stop learning. Yes, born to be a life-long student! I have no claim of being a disciplined futurist, but I'm happy that learning different skills has turned me into a multi-function expert. At best, I can personally supply most of my own professional needs. I'm looking at the possibility of even learning more, especially working as an intern to enrich my experience as a foresight practitioner. Learning makes us always up-to-date.

7. Be Connected

If we admit that we need to learn, we will be ready to learn from other futurists who have more theoretical knowledge and practical experience. This means connection. We should keep in touch with those who can be sources of inspiration for us in terms of futures thinking. Most people think that it is easy to become a futurist, but the difficult part remains in growing as a futurist. Since the day I started my futurist voyage, I started to admit that there are many things that I don't know. This will be true until the last moment I'm alive. The solution is professional connection, especially with knowledgeable futurists. The world is bigger than what we usually assume. You may wonder that

there are many experts around the world who are not futurists, but their thoughts and ideas have been very useful for the futurists. Look at Wilber and Slaughter or Sarkar and Innayatullah. Great philosophers and thinkers of other fields have energized the futurists' thoughts and works in many ways. So we should not limit our professional connection only to the futurists. It should also cover the experts of other fields and disciplines.

There are many other attributes that can be summarized in one word: "self-control". This and other traits can turn a student of Futures Studies or Foresight into a disciplined futurist, but personally I hope by remembering above mentioned characteristics I may put myself in the line of learning more and shaping my professional future in good manner. I wish the same for you if you love futuring.

Are We Future Conscious Enough?

Wed, 11/09/2011 - 9:34am

There is a great need for fundamental change in our state of awareness and the way we feel reality, especially in terms of 'futures consciousness'.

Reading John Renesch's new book *'The Great Growing Up'* recently, I remembered this part of Eckhart Tolle's *'A New Earth'*: "You don't become good by trying to be good, but by finding the goodness that is already within you, and allowing that goodness to emerge. But it can only emerge if something fundamental changes in your state of consciousness."

Being a human is to be responsible. John Renesch's new book *The Great Growing Up* was a reminder of this for me. Those who deeply feel a sense of responsibility as human beings, not just for themselves, but also for future generations, are the main audiences of his new book.

In his last book, *Getting to the Better Future*, Renesch quotes global thinker and philanthropist Lynne Twist who says: "Taking a stand is a way of living and being that draws on a place within yourself that is at the very heart of who you are. When you take a stand, you find your place in the universe, and you have the capacity to move the world." Now, he follows this line of thought and offers a roadmap to take this kind of stand in our modern history.

Renesch believes "it's time to grow up and be responsible as adults for what we have created as adolescents". I can remember other futurists' views in this regard like Slaughter (1999) and Inayatullah (2008) who put forward ideas for 'Critical' or 'Disowned' futures. What differentiates Renesch's book as an outstanding work is a clear roadmap to action designed based on *external* and *internal* attractors that could pull us into a historic shift to more sustainable, mature futures.

Renesch has a realistic perspective. He thinks that it's a responsibility for humans, as the wisest species of living things, to accomplish the mission they are designed for: 'shaping the future'. He illuminates his ultimate goal in writing the book: "*The Great Growing Up* is about what Harman calls 'the good society we all know is possible,' which is certainly an idea whose time has come. I say this boldly because almost everyone knows we can do better." Renesch's solution is a balanced satisfaction of spiritual and material needs of humankind based on a set of futurist values.

'The Great Growing Up' asks for the revival of maturity and calls for responsibility to accompany the freedom we can enjoy as adults, not freedom without accountability like so many adolescents seek. In this sense, a new age of *Enlightenment* is on the way and it "requires explicit recognition of not only what we've been pretending we don't know, but the full recognition of our spiritual nature—our interconnectedness with a power greater than ourselves."

Authors like Renesch think that it is time to stop thinking about what might happen in the future and start thinking about what we want to happen, about what needs to occur now to bring that desired future about: 'shaping the future'. Their perspective is based on what we *think, say* and *do* for the future. They call for a "universal humanity" capable of "co-evolution with nature" and "co-creation with Spirit."

In Renesch's eyes there are real problems with our current established systems. In fact, our world today is infected with problems like: widening wealth gap, failing war on drugs, losing the war on cancer, growing lack of engagement, Economism, but worse than all is a *culture of fear and separation* that has paralyzed our world today. That culture should be replaced with a new one, a *culture of consciousness*. Such a culture may be built by the power of thought.

Renesch's strategy for making a new kind of culture is based on consciousness. He admits: "The reality we experience in the world today is the result of our consciousness. This consciousness is expressed in many negative ways, as the partial list above illustrates. To shift our consciousness we must understand the dynamics of our pathologies. To understand our pathologies we must study them and become somewhat familiar with them so we can recognize them when they surface, which they are almost certainly going to do from time to time."

It seems that Renesch is seeking for a global "inner evolution". In this way, he deals with *internal* attractors and describes a number of them including: transformative learning, the physical sciences and changing views of reality, and growth in collective wisdom.

It is time to transform the way we experience *reality*. It's about a responsible future consciousness.

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Futurists' Professional Ethics

Mon, 09/12/2011 - 1:15am

Futurists may be regarded ethical as far as their conducts are in conformity with the standards of professional moralities, but how do they define their professional ethics and to what extent do they remain really faithful to those ethics?

People use 'ethics' to evaluate morally other people's intentions, actions, and many other sorts of things in an unconscious manner. However, the term has a broad range of meanings and applications.

Ethics is often regarded as a branch of philosophy that deals with the nature and logic of what is morally good and right. However, in a post-modern sense, ethics is not just about choosing between 'good' or 'bad' based on pre-established moral mindsets. Rather it is about finding ways in which free human beings, without any obligations, whether monetary or hierarchical, can live peacefully together. Indeed, for Aristotle 'ethics' (etikos) was about finding ways for free men to construct a viable community (Arvidsson and et al, 2008).

In a deeper layer, ethics is typically broken into four different subjects, including meta-ethics, the value theory, the theory of conduct, and applied ethics (Wikipedia, 2011).

As far as the futurists are concerned, a theory of conduct may define their ethical behavior. It studies what is right, obligated, permitted, required by duty, and what is more than duty requires. It also studies the opposites of these things: what is wrong, forbidden, denied, and evil (for the futurists). Theories of conduct try to answer questions like: "How should I act as a futurist, and why?" In this sense we may debate the ultimate standards of right and wrong—standards of morality, or moral rules for the futurists.

For a futurist, ethics becomes meaningful and important in terms of his/her professional knowledge and conduct. Ethics sounds critical in Futures Studies because we are talking about a moral philosophy and its consequences on individuals, organizations, communities, environment and in one word, the globe (Burke, 2005). Pentti Malaska (2001) believes that Futures Studies is as a value-rational field of inquiry. "First it aims to be explicit in values and try to highlight value differences rather than fixed values. And secondly its questions concern not only what are the proper means to a given end in the sense of technical or instrumental rationality, but also and mainly what are the possible good ends well worth of promoting and pursuing." (p. 7)

On the other hand, Wendell Bell (2002) calls the futurists to pay attention to the ethical implications of their work and the responsibility they should take: "it is our business to be ethically concerned about what to study, how to study it (including protecting the rights of human subjects of research), the purposes for which knowledge is used, and the consequences of its use for human freedom and well-being."(p. 11).

There are other futurists having high level discussions behind the closed doors or in the public sphere of online chat rooms fixated on one question alone: "Are the futurists ethical persons?" Any

endeavor for a higher purpose, especially a well-established definition of futurists' professional ethics needs to be predicated on answering this question. In fact, there is a need for an ethical code of practice or standard. A familiar moral rule is the 'Golden Rule': "Do unto others as you would have them do unto you." Can this rule be reintroduced to the futurists?

Should we take a conservative approach dealing with our professional ethics? In this sense, should we regard it as a constant measure of all our conducts wishing to reaffirm the value of ethics, even creating codes of conduct for how to practice our foresight knowledge? Should we draw up a neoconservative view based on finding new ways in which human beings may be able to live together peacefully? Or, should we follow a relative approach and define our professional ethics reflecting what is imposed on us and what we can personally choose?

Personally, I have no interest in 'ethical relativity' that is unfortunately dominated our modern world. Philosophically, I'm either a good or a bad futurist. I cannot be both good and bad at the same time. Anyway, selecting each of aforementioned approaches (especially a neoconservative one that I strongly support) depends on our personal worldviews and values, but at professional level there are 'common purposes' and 'values' that the futurists can jointly agree upon.

Richard Slaughter (1999) reminds the 1976 Dubrovnik 5th World Conference on Futures Studies, working group 1 (on ethics) that produced a set of general guidelines. The guidelines were based on an obligation to: (a) stress explicitly your value basis; (b) develop and test theories also in other perspectives than yours; (c) give information about your work so that be understood by people in general, not just the experts.

Using Kuhn's ideas, Bell (2002) identified a trans-disciplinary matrix for Futures Studies including 'common purposes' in his Foundations of Futures Studies. That means making a better world where all human beings will have an equal and good chance of living long and satisfying lives and investigating the knowledge and ethical foundations of Futures Studies.

At the same time, Bell (1996) considers the role of the futurist as 'consultant' and provides some examples of unethical behavior. These include placing self-interest above that of the client, withholding information and padding expenses. Meanwhile, Slaughter (1999) reminds that there are types of work that futurists should avoid. Those that conflict with their professional ethics, ie., that are exploitive, dishonest, unreasonably self-promoting and which, in any way, bring the profession into disrepute.

In an interesting inquiry by Natalie Dian (2009), six foresight styles were identified keeping an eye on ethical aspects: Futurist, Activist, Opportunist, Flexist, Equilibrist and Reactionist. She warns about the opportunists as they don't attempt to solve the problems of the world, but contribute by doing the best possible for themselves and those around them.

One of the best codes of practice that is suggested for the futurists and embraces ethical considerations is offered by Dr. Michael Jackson (2010), president of Shaping Tomorrow's Foresight Network. Whenever I read its "Our beliefs" part, it touches my heart. It says:

- We believe people are basically good and wanting to contribute to a better world.
- We believe everyone has something to contribute and we inspire, engage and enable them to do so.
- We recognize and respect everyone as unique people and try to help them use all of their talents at all times.
- We encourage everyone we work with to treat others in a similar fashion.

It is worded simply, but full of respect and care for everyone interested in foresight. Such beliefs can build up great codes of ethics for the futurists. The remaining problem is to what extent are we willing to remain faithful to those ethics. Are we going to put the moralities first on our agenda?

Masini (2011) remembers how ethical elements in Futures Studies were included as part of an educational program she taught in Rome. Parts of my current Strategic Foresight studies curriculum at Regent University are founded on moral values necessary for everyone who is going to break into foresight profession. For instance, LMOL 601 that is based on Servant Leadership had a great effect on my past assumptions concerning the leadership. It reframed my paradigm in a new manner that is serving others with all I have in mind and hands.

I believe futuring cannot be separated from ethics. A futurist without moralities has nothing to do with his/her knowledge and profession. It is up to us either become ethical futurists or opportunists who put their interests above their clients' benefits. Moral futurists are ornamented with moral jewelries the best of them "love for all the humanity". Of course, our world needs actions more than chanting beautiful slogans. Futurists' professional ethics should be developed and practiced at personal and social levels as much as possible. Given its post-modern meaning, we should find ways for human beings to live peacefully together. This is the sweet fruit of futurists' professional ethics.

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Metalogue: The Future of Collective Thinking

Sun, 07/31/2011 - 10:48am

If we consider "thinking" as a cognitive process dealing with awareness, attention and process of factual, emotive and conative types of information, then we may characterize "collective thinking" (CT) as an interrelated cognitive process of such functions occurring among several individuals.

Last May (3-7), an interesting conference was held in Stockholm, Sweden. It was the eighteenth annual international, interdisciplinary conference on the fundamental question of how the brain produces conscious experience. Sponsored and organized by the Center for Consciousness Studies at the University of Arizona, other organizations like the US Air Force Office of Scientific Research supported "Toward A Science of Consciousness" conference by their scientific boards (more information available at: <http://www.consciousness.arizona.edu/>).

The topics and issues discussed at the conference were too many to be covered in this short blog post, but it was amazing that the word "**collective**" was a key term among the submitted articles. It seemed that there was a deliberate tendency among the researches towards research on human's collective thinking, consciousness, mind and mental behavior. I felt that it was better to rename the conference in this manner: "Toward A Science of Collective Consciousness"!

Meanwhile, a dispassionate evaluation of my academic conduct at college this summer concerning the impact of my dialogue posts on my personal career and life, showed new changes at least in my learning behavior compared with my past educational conducts. I have become more crafted with CT requirements. This idea ignited my mind and made me write this post on the future of CT.

Bibel (2004) believes that the processes of CT have not changed much over the last 2000 years; from let's say an assembly of nobles in the antic Athens to the board of a 21st century company. It is still based on the talking of single individuals (nowadays with the help of PowerPoint presentations), each at his/her turn, and the others listening. It is well-known that in this style of debate the information transfer is extremely poor. So we may need a stronger shape of thought expression that can be realized through "dialogue".

Jens Allwood, a linguist at Göteborg University studied the role of "dialogue" as a behavior exhibiting CT having a premise in mind: "collective thinking" is a real phenomenon and it occurs in dialog (Allwood, 1997). He believes that language is an instrument for collective activation of thinking. According to Allwood, dialog can very well relate to and perhaps even take place on a low level of intentionality and/or awareness. Through the intimate connection between dialog and CT, collective thinking can also be factual, emotional, volitional and occur on many levels of intentionality and awareness.

In a broader effort, William N. Isaacs studied the same topic in the light of organizational learning at MIT. He got a constructive idea with dialogue. He used it as a means of creativity and suggested that "people may find it hard to talk together using the rigid categories of previous understanding. The net of their existing thought is not fine enough to begin to capture the subtle and delicate understandings that begin to emerge. This too may be unfamiliar or disorienting. People may find

that they do not have adequate words and fall silent. Yet the silence is not an empty void, but one replete with richness." (Isaacs, Center for Organizational Learning).

Rumi, a 13th century Iranian poet, captured this experience:

*Out beyond ideas of rightdoing,
and wrongdoing;
There is a field,
I will meet you there.
When the soul lies down in that grass,
The world is too full to talk about.*

In Rumi's experience, the world is too full to talk about; too full to use language to analyze. Even in the richest dialogues, the words may not accomplish their information transferring function successfully and as we expect so. In this case, we may experience a higher level of CT that may be called "Metalogue".

Dialogue may have few words to describe such experiences, but increases the possibility of conversation that embraces subtle meaning, instead of words merely pointing to it. Isaacs calls this kind of experience "Metalogue" or "meaning following with". Metalogue shows a conscious, intimate, and subtle relationship between the structure and content of an information exchange and its meaning. In this sense, the medium and the message are linked. The processed information conveys as much meaning as the content of the words exchanged. Metalogue deals with human's creative side, a kind of creativity that may find meaning in a collective silent world.

Given the limits of words we use to transfer our desired meanings and the ultimate nature of Metalogue that is beyond conventional information transferring conducts, the future of CT is a matter of breaking current thinking and communicating paradigms. Metalogue is on the path of progress and it will be evolved to a level in which conventional languages and spoken-written words will become more or less futile. On that level, meanings will be transmitted by new means such as mind waves or mindwares.

I don't know how long it will take for us to reach that level of scientific-technological progress, but I'm sure the growing enhancement of current multimedia capabilities that have made our writing and speaking functions less valuable (compared with what we did in past years) will finally transform the way we communicate our collective thinking with each other. There will be a meaningful silence over the world full of unprecedented meanings and thoughts.

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New Frameworks for New Theories

Tue, 07/05/2011 - 1:34am

Developing frameworks for new theories in Futures Studies (FS) has been a field of interest among futurists. They make different efforts in finding new ways to deal with this interest.

One of the reasons for this is an increasing enthusiasm of empowering contemporary FS so that it may be able to solve societies' today and tomorrow problems. It has appeared as a growing need reflected in many futurists' works in recent years.

This is the essence of an article that I've offered at "WorldFuture 2011" and is published in the conference articles volume (The printed copy can be requested from conference organizers.). In this article, I've discussed the need for improving futures thinking by establishing frameworks for new theories in FS. It aims at facilitating the process of developing those new theories and dealing with paradigms; it uses a set of futures knowledge tools as part of a conceptual approach and contributes to empowering contemporary futures thinking in developing frameworks for new theories.

The approach is composed of components which are discussed through four main Causal Layered Analysis (CLA) questions

1. How have different paradigms have been shaped?
2. What has made developing new theories a real need?
3. How can new FS theories can be generated?
4. How futures thinking can be improved by new theories?

The process of developing frameworks for new theories in FS goes through these stages:

1. Understanding the components of this framework (Interacting variables that model a phenomena or problem);
2. Goal setting for the framework (Helping futures thinking practiced in a better way);
3. Going along with main kinds of futures thinking (Definite, Speculative and Visionary futures thinking).

It's time to go beyond contemporary paradigms. We are in the midst of a fundamental world transformation, with a set of different theories and values systems attempting to define and guide the direction for tomorrow. The future will be greatly influenced by emerging theories and paradigms. Theoretical challenges can play a constructive role through promoting dialogue. What's needed is an ongoing evolution of our understanding of where we are and where we are going. Theories of FS often focus on some particular theme or themes considered of central importance in the nature and organization of future events.

As the issue of developing frameworks for new theories in FS may have other aspects rather than those discussed in this article, more research can be done in the future especially with keeping epistemological and ontological considerations in mind.

Masters' Insights

Fri, 06/24/2011 - 3:24am

"Masters' Insights" provides a theoretical basis for the students of Futures Studies and Strategic Foresight to grab common issues in the Futures field in a structured and constructive manner.

In learning about the futures profession, there is no substitute for having professionals' insights. This report gives you an opportunity to discover the remarkable insights of the best professional futurists of our time to understand the field from their perspective and to learn about the skills needed to be a successful futurist.

"Masters' Insights" is the tangible result of following process. First, I concentrated on a number of leading futurists' works (books, articles and completed questionnaires) to gather my study material. Bell, Miles, Cornish, Slaughter, Inayatullah, Gary, Bishop, Hines and Jackson are my favorite futurists and I've been always inspired by their perspectives in my academic studies.

I scanned a number of books, articles and journal reports to find their different perspectives on the Futures Field. Secondly, following each scan, I extracted their insights to clarify my desired points and objectives. And finally, I summarized their views to shape "Masters' Insights".

This report addresses the most important lessons we can learn from their perspectives regarding:

(a) The benefit of professional networking;

The greatest benefit of professional networking is becoming familiar with leading futurists and becoming informed of their studies, researches and activities.

(b) The practice of futurists;

The leading futurists have similar points of view on the practice of futurism, but some of them clearly affirm the practical roles that the futurists could and should play in their societies. More attention is devoted to futurists' functions in their professional communities.

(c) Their unique perspectives on the field;

The leading futurists have unique perspectives on the field. The differentiating factor is a combination of their world views, mindsets and values they define for themselves and their societies.

(d) Their counsel about getting into the field.

They have general recommendations in this regard (usually found in journal articles), but those futurists who have teaching backgrounds offer more useful suggestions.

I offer my sincere thanks to all of aforementioned futurists for their constructive views and their great roles in advancing my favorite field of study: Strategic Foresight.

The report can be downloaded at:

<http://www.futuresdiscovery.com/Newsletter/MastersInsights.pdf>

Futures Terms Concept Map

Fri, 06/03/2011 - 10:34am

Organizing my thoughts about the futures, I did a little concepts exercise. The exercise helped me identify what I think is most important in Futures Studies (FS): Developing my mental model of FS; or a futurist's futures thinking, or strategic foresight diagramed as an organizational function. Now, the output is a concept map that can be downloaded for free.

As a student of Strategic Foresight, I identified the most important concepts and terms in FS and I related those terms to each other. The process was very simple, but it took considerable time and work to go through all of following phases:

1. I reviewed available futures terms and their definitions that I had submitted as part of my project, Futurist Terms.
2. I created a file of the terms, writing all the terms in bold (those that received three or more mentions and some that received two in my glossaries) on a card or slip of paper.
3. Then, I arranged the cards (7-14) on a large sheet of paper to show the relations of the terms to each other—which ones are the same; which are different; which are bigger or lesser scope; which cause or follow from others, etc.
4. Drawing lines and shapes to group the terms and show their relation to each other, I could label the lines and shapes to make the arrangement clear, such as "is a subset of" or "methods group."
5. I transferred the terms, line, shapes and annotations to a PowerPoint file to shape and publish my desired poster on my website.

Now, it is available to be downloaded by you and everyone who is interested in a concise map of futures terms. It covers more than 70 important futures terms arranged and connected to each other in a rational manner. It can be used as a model for teaching futures terms and their connections to the students of Futures Studies or Strategic Foresight.

I should offer my special thanks to my dear professor Dr. Gary for his constructive feedback and encouragement to publish the map as a tangible output of my studies. However, I think that the map is not a comprehensive one and only covers the most important terms that are usually used in futuring. It needs more work. Your comments and views are highly appreciated as they may help me revise the map, make necessary corrections and update it in the coming future.

You may download the "Futures Terms Concept Map" at:

<http://www.futuresdiscovery.com/Newsletter/ConceptMap.pdf>

Top 10 Attributes of FS Students

Thu, 04/28/2011 - 2:28am

Becoming a student of Futures Studies (FS) is a challenging endeavor that should be navigated not only by the academic leaders and professors, but also personally by the students.

In recent years a number of FS programs has been launched in different universities and colleges around the world, especially in the US; from University of Huston, University of Arizona, and ... to Hawaii Research Center for FS and Regent University. Among these programs and courses, those that are based on research have more attraction for the students who are going to shape their professional tomorrows not just by theoretical foundations, but by the spirit of inquiry.

Since FS is a continuous process of research, it commits every student of the field to set out a serious plan of study and work after picking up nuts and bolts and absorbing basic knowledge. How that plan can be developed and how can we follow it as FS students? Good questions. Reviewing one of my e-books published last year available for download at:

<http://www.futuresdiscovery.com/Newsletter/SyllabusEbook.pdf>, made me summarize top 10 attributes that may shape the academic identity of FS students either in MA or PhD level as following.

1. Become a skillful questioner. As a student of FS you need to ask good questions. Asking good questions at good times is an art and one of the missions that FS students should accomplish is mastering with this art. Different questions can be raised in different areas and times, but a good question is one that is targeted at a definite goal at the most appropriate time. FS is like an ocean of questions, but as skillful fishers (futurists) we should collect those in our net that are enough fat to satisfy our hunger for new knowledge. By raising good questions we may also advance FS as the field we really love to know more about.

2. Rationalize your expectations. A futurist is a rational person. FS students need to rationalize the expectations they have from others and themselves. Our expectations should be based on logical and reasonable foundations. We are not going to solve all of the world's problems in just one night. We are not going to become Super heroes or saviors of the universe. We should accept our limitations and work realistically within our personal capabilities. This will embrace both our studies and research. Our professors may lead us in this endeavor, but it is completely up to us choose the most appropriate way in rationalizing our academic expectations from them and ourselves.

3. Develop your unique qualities. Every individual has his/her own physical and psychological capabilities. They are different both in quantity and quality. As an FS student you should provide a realistic list of capabilities you have or you feel to have—existent and potential. Then work on developing those that you may find stronger than others. You may have a good talent in speaking or writing or even thinking about the future. You should get the most of your natural talents. Converging your talents and getting synergic outputs is a good suggestion. But develop your unique attributes. As a buddy who is going to practice FS in a professional manner in the future, you should have something different compared to other futurists. Think about it and you'll surely explore it in your intellectual capacities.

4. Globalize your mind and work. We are grabbed in our geographical limitations, but thanks to the Internet and social media we can and should unshackle ourselves from these limitations. As a futurist, your works and results do not necessarily belong to your local community, they also belong to the world. All who need the outcomes of your research and study should be entitled to the merits of your works regardless of their nationality, religious ideas, race and other differentiating criteria. The universe is a big village and we are its habitants. As an FS student you need to globalize your mind. This means that firstly you should remove all psychological factors that give you a feeling of separateness from other people who live on this planet just like you. Secondly, you should work through channels that may provide you a capability of globalizing your works in both your study and research.

5. Redefine your goals and values. When we accept that we are connected to other people whose home is the Earth, then we may redefine our goals and values. In this case, global brotherhood gets the place of attributes like selfishness and other negative dogmas that different societies hold for themselves based on individual or collective ideologies. The futurists study, research and think for the entire world and all the people. All the nations take the advantages of our good works. Such a global perspective will make us redefine our goals and values in a new way for the goodness of all people.

6. Learn to teach FS to others. As an FS student you are not going to remain a student all the time. Lifelong education is needed for all of us, but our college years are definite. After some years of education you'll graduate and perhaps find an opportunity to teach FS to others in both academic and informal ways. During your college years you need to learn how to conduct and lead FS workshops and seminars. You should also learn how to manage scientific round tables and brain storming sessions. You need to learn how to write and publish your research articles and books. You should also publish and distribute your e-books personally. An MA or PhD FS student can be regarded competent if he/she is really prepared to teach FS to others anytime he/she is asked to do so.

7. Foresight your profession. After graduation, you'll have professional responsibilities. You'll not only have to accomplish different foresight projects, but also foresight your own profession: Futuring. The futurists have the great responsibility of advancing their own field of study. As a graduate of FS field, you should accomplish your post-graduate responsibilities in an effective manner. Defining a multilateral framework of cooperation with other futurist friends gives you more insight and also enough motivation to publicize your own ideas or complete others' works. The futurists always get better results when they cooperate with their colleagues, rather than just pursuing their researches lonely.

8. Develop your personal strategic plan. Not only as a futurist, but also as a usual person you need to develop your personal strategic plan. You may be always asked to forecast for others, but firstly you should learn to foresight for yourself. After or during your college years you should learn how to apply FS tools and techniques in your personal strategic planning. Designing such a plan gives you necessary direction and leads you through your life and your futuring endeavor. An old saying: "If you are a physician, heal yourself first." reminds us the necessity of personal futuring before forecasting for others' lives and works.

9. Work for collective consciousness. The fruit of knowledge is wisdom and consciousness. All we study and learn by FS should be directed toward a global goal that is the enhancement of collective consciousness. We live in a diverse but a unified world. Our knowledge and wisdom should help to remove global problems that have plagued our world today. The world is suffering from the problems that are made by ill-minded hands. As an FS student you should put your studies and research in the line of serving the humanity and this requires a sound leadership based on universal ethical values. What makes this leadership capable enough to realize that goal is “collective consciousness”. We should work, study and research to elevate collective consciousness.

10. Become a leading futurist. Back to one of my past posts “Self-assessment: What kinds of futurists are we going to be?” available at: <http://www.futuresdiscovery.com/Articles/selfassessment.htm> , I should remind once again the important role that a futurist may play not only in his/her society, but also in global scale. The leading futurists are usually oriented with three remarkable attributes: 1) Developing a new FS thesis, methodology or concept; 2) Nurturing a number of FS students through their thesis, methodology or concept; 3) Accomplishing STEEP missions successfully in national, regional and global levels. Aiming at becoming a leading futurist, an FS student may focus his/her studies on re-evaluating the society he/she lives in. The ability to change or so-called “future fitness” is the core competency of a leading futurist. Meanwhile, creating social visions as “a taste for the potential of the future society” is another significant capability.

This can be only regarded as a personal selective list of characteristics that FS students would like to have during or after their college years. Many other larger lists may be developed based on other intellectual qualifications that FS students should have after graduation.

New Possibilities with Chronesthesia

Sat, 03/26/2011 - 2:52am

The neuropsychologists are studying the ability of remembering the past, present, and imagining the future, i.e. "Chronesthesia". Their tangible results may affect our decisions in life, yet there are questions over practical aspects of Chronesthesia.

It's a long time since the scientists began to study the brain's ability to think about the past, present, and future. If we suspend our past beliefs about time and accept that the brain is capable of reaching into the future, the next question becomes "how does it do this?" Chronesthesia or mental time travel is little known to people and the neuroscientists are busy with studying those parts of the brain that are responsible for these conscious experiences.

Last year a group of researchers used functional magnetic resonance imaging (fMRI) to investigate the neural correlates of mental time travel and better understand the nature of Chronesthesia in which the metaphorical travel occurs.

They found out that Chronesthesia consists of two independent sets of processes: 1) those that determine the contents of any act of such travel: what happens, who are the actors, where does the action occur; it is similar to the contents of watching a movie— everything that you see on the screen; and 2) those that determine the subjective moment of time in which the action takes place— past, present, or future.

When you remember something that you did last night, you are consciously aware not only that the event happened and that you were there, as an observer or participant ("episodic memory"), but also that it happened yesterday, that is, at a time that is no more. The question that is raised here is, "how do you know that it happened at a time other than 'now'?"

The researchers asked several subjects to repeatedly think about taking a short walk in a familiar environment in either the imagined past, the real past, the present, or the imagined future. By keeping the content the same and changing only the mental time in which it occurs, the researchers could identify which areas of the brain are correlated with thinking about the same event at different times.

The results showed that certain regions in the left lateral parietal cortex, left frontal cortex, and cerebellum, as well as the thalamus, were activated differently when the subjects thought about the past and future compared with the present. Notably, brain activity was very similar for thinking about all of the non-present times (the imagined past, real past, and imagined future).

Chronesthesia, by definition, is a form of consciousness that allows people to think about this subjective time and to mentally travel in it. The new results suggest that the brain's ability to conceive of a subjective time is in fact necessary to explain how we think about the past and future. There seem to exist brain regions that are more active in the (imagined) past and the (imagined) future than they are in the (imagined) present.

It may be early to talk about potential implications or applications of understanding how the brain thinks about the past, present, and future. But their findings may be extended to other conditions, situations and probable implications or applications.

Many scientific discoveries were once considered outlandish and more suited to science fiction. Future research is greatly needed to explore the exact reasons for Chronesthesia, especially if it is going to be experienced in a trained manner. There may be a kind of relationship between physical and neural processes that are taking place in our neural systems. I remember an explanation that may help to understand the potential connections.

Modern quantum physics has demonstrated that light particles seem to know what lies ahead of them and will adjust their behavior accordingly, even though the future event hasn't occurred yet. For example, in the classic "double slit experiment," physicists discovered that light particles respond differently when they are observed. But in 1999, researchers pushed this experiment to the limits by asking "what if the observation occurred after the light particles were deployed." Surprisingly, they found the particles acted the same way, as if they knew they were going to be observed in the future even though it hadn't happened yet.

Such trippy time effects seem to contradict common sense and trying to make sense of them may give the average person a headache, but physicists have just had to accept it. So although humans perceive time as linear, it doesn't necessarily mean it is so. And as futurists, we shouldn't let out preconceived beliefs and biases influence what we study, even if these preconceived beliefs reflect our basic assumptions about how time and space work.

Does all of time really co-exist simultaneously? Is the way we experience time (with one moment following another) just an illusion? Are all moments of time hanging around together? Is our consciousness threading its way through moments of time? Are there an infinite number of variations of each possible moment? And if there are, what is the true nature of "parallel universes" just as what we've seen in the science fiction movies such as Dr. Who? And above all, how a conscious experience of Chronesthesia may help us finding appropriate answers for mentioned questions?

We may not be enough sure about the practical aspects of Chronesthesia in the coming future, but there is one way to perceive them. It's our intuition (or imagination). We can tune our mind into a talent we haven't fully mastered with, but would love to, and we can attract it to us.

The Third Lesson

Tue, 03/15/2011 - 2:49am

The recent massive earthquake accompanied by a devastating tsunami and, worse, by the explosion of nuclear reactors endangered the lives of many Japanese. It proved once again that the future is not in control. It is as uncertain as before.

With hindsight, it is clear that the current disaster emerged out of the blue—it is a manifestation of pressures built up by vibrant layers of the earth. But don't we need to consider how the world will be different in coming years? Before this crisis subsides, we should begin to think about how our environmental strategies need to readapt. Remember that the same thing may happen to you and me in other deferent ways—living on earth is a kind of peaceful coexistence with natural disasters. Do you remember Katrina?

We know that weak signals are current oddities, strange issues that are thought to be in key position in anticipating future changes in different environments. Most of the scientists agree with the notion that the behaviors of nature are different from ours and most of the time it cannot be predicted or anticipated as we do with our own actions. Nature is usually unpredictable. Even the most accurate weather forecasts experience degrees of uncontrollable delays or inaccuracies. We are facing two different systems: 1) Uncontrollable Nature; 2) Controllable Human Factors.

However, defining weak signals is problematic, and various authors term the concept differently. The debate about the characteristics of weak signals has been active especially in recent years. As early as 1975, Ansoff, who was among the first people contributing to the field of weak signals, wrote about the issue in order to overcome some problems in strategic planning. Ansoff described weak signals as "... warnings (external or internal), events and developments which are still too incomplete to permit an accurate estimation of their impact and/or to determine their full-fledged responses."

Coffman and others have also put emphasis on the practical aspects of using weak signals in the business environment. Several other authors have also considered the business environment and organizational viewpoints of weak signals. Surely geologists and natural scientists have their own patterns of identifying weak signals, but how can they blow into their horns on time?

A day before the accident, another quake had shocked some parts of the country, with just one injured. Could it be analyzed carefully to find out other probable quakes that were on the way? I'm neither a geologist nor a crisis manager, but if I were an authority responsible for the safety of the people I would let them be informed of what was going on just beneath their feet.

No one can be blamed for natural disasters and no one can justify his/her unaccomplished responsibility and duties. The problem lays in the way we behave with nature, not its uncontrollable behavior toward us. We should control our own living and performance, not nature's. Have we built our homes in safe areas? Have we considered reliable distances from seashores? How seriously are the standards of construction taken in our buildings and cities? We may have a great volume of knowledge on the standards of planning cities or building houses, but how much of that knowledge is applied in our construction activities?

I remember the third lesson of great explorers that once Edward Cornish taught us in his great book, *Futuring*: “Use poor information when necessary.” Obviously, we want to use the best available, but when required to make decisions we must not disdain information just because it may not be adequately detailed or may contain errors. Almost everything we don’t know about the future has little practical importance to us, whereas the little that we can know is extremely important, because it can help us make better decisions. Remember that our business with the future is to improve it, not to predict it—at least not infallibly. We may have erroneous or insufficient information about the place we live in, but even that piece of information can save our and many others’ lives if it is used wisely and on time.

In my point of view, tomorrow’s urban decision makers will have to work in a climate of reduced response time and increased disaster potential. There will likely be less public tolerance for casualties, continuing confusion over the lengths and limits of crisis, new subliminal forms of tolerance, and further confusion over decisions from state actors to non-state entities such as relief agencies or regional authorities.

By the way, do you know that “tsunami” is a Japanese word?

Realistic Expectations from HVHF

Sun, 03/06/2011 - 9:09am

Scientists are studying human-systems interactions in order to design systems that are compatible with human behavioral limitations in stressful moments. This field of study is called High Velocity Human Factors (HVHF) and it seems that more developments are on the way.

This morning, during a friendly chat with one of my friends who is a researcher at a technology research institute, we talked about the future of technologies, especially what may be unfolded by VHHF in the near future. In fact, the conversation took place when he asked me “You’ve never heard of Human Factors Sciences (HFS), have you?” I remembered a project that was done by Moin Rahman a researcher at Motorola about two years ago. So I replied: “Yes, I’ve read something about it. I think that it deals with a better understanding about human performance during peak and critical moments of a decision or a mission.” Seeing that I knew something about HFS, my friend gave a brief about his current activities and what is going on at their research lab for the future. I found a part of this chat useful enough to shape this post.

The VHHF is an emerging specialty within the discipline of Human Factors Sciences and Psychology (HFSP). It combines and applies knowledge about human senses (including vision, hearing and touch), cognition/thinking (such as memory and decision-making) and physiology (load bearing, force exerting capacity and so on) to maximize the human-machine fit.

One of the greatest challenges that the technologists are facing today is inventing technologies that may enhance human capabilities and reduce his limitations. These technologies may shape the next generation of technology that we’ll surely need in the coming future. For example, HFSP finds that the size of the text on a cell phone should be at least 2.5 cm tall – to be readable at arm’s length by a person with normal vision. Other applications include everything from the optimal placement-location-size-form of control buttons on a kitchen stove to configuring the information displays inside the cockpit of an F-16. The goal is make the technology and the technology-user interface as sensible and easy to use as possible.

Now HVHF takes HFSP to a higher level or a new environment. The purpose of HVHF is to address human performance in the contexts of mission critical domains such as military combat, law enforcement, firefighting and etc., when it experiences nonequilibrium. The domain in the human factors standpoint is said to experience nonequilibrium when the situation is perceived by the human agent as being volatile, uncertain, complex and ambiguous. This is usually accompanied by stress caused by time pressure and emotional reactions (high stakes, little time) inherent to the event or situation. In such situations even the most sensitive and accurate technologies become ineffective due to human inefficiency.

The HVHF analyzes human performance by positing three dimensions:

1. Velocity differential (lag in information processing between situational demands and capacity of the human agent);
2. Psychophysiological reactions (cardiac defense, attentional tunneling, functional decortication, etc.); and
3. Decision making (heuristics, recognition-primed decision making).

Knowing my love for neuroscience, my friend asked about my real expectations from the future developments of this field of study. Remembering that the HVHF looks at ways to manage a detrimental speeding up or to maintain adequate function despite the increased velocity in human behavior, I arranged my expectations and prospects as following:

1. Aversive emotions of high-stress situations like fear and anger affect cognition and therefore affect behavior and performance in such situations in a negative way. So, the first challenge is psychological, rather than just a technological one. How such emotions can be controlled intentionally by the person who experiences them? And how this kind of control may be evolved in the future? Will it be available to all, or only to a limited number of people who are skillfully trained or utilized with certain equipments?

2. Events or aspects of events that have a high emotional intensity can “grab attention” or distract a person from more critical aspects or important information in the situation. So, situational awareness should be a typical area of research in HVHF. In fact, HVHF should aim at finding new ways to prevent or counteract such distractions. How reliable a new method can appear? Stressful events may be inevitable, but can we really reduce the side effects of such events on our behavior?

3. This new area of study can be compelling, fascinating and useful for those with a view to the next generation of technologies: Futurist Technologists. Certainly, input and ideas from the HVHF scientists may help futurist technologists experience a new field of research. Meanwhile, the futurists may share their concerns with the HVHF scientists through a fruitful mutual partnership. How can we shape a certain framework of cooperation between the scientists and the futurists?

We are in the midst of a revolution. A meaningful combination of cognitive science, psychology, neuroscience and even nano-robotics will realize many of our old dreams. In my point of view; the HVHF has provided a new opportunity for the advancement of technology, realizing new technologies that might seem as magic in past decades. How can we set up our expectations in a realistic frame?

What Really Matters for a Technologist?

Tue, 02/22/2011 - 3:27am

Talking to a number of students at a university of technology recently, I found their enthusiasm for new ideas remarkable. It extended well beyond just learning technical knowledge.

These days many students in technological fields breeze through their lessons at the university or college. Instead, they are more thirsty for new ideas—ideas that may shape the technologies of tomorrow. At a summit on the future applications of new technologies at a technical university, I gave a brief about probable usages of NBIC tech. At the end of the session, the students began to raise some questions regarding other potential applications of future technologies.

Their problem is “how to think like a futurist?” not “how to do like a technologist?” They should learn futurist thinking rather than just applying their technological knowledge.

Technologies in their primitive forms are nothing, but simple thoughts. Have you ever thought about the technology of shoelaces? It is really simple and incomparable with sophisticated technologies such as space or nanotechnology, but without shoelaces, you won't be able to walk or run with your shoes. In my point of view, a technology should not be necessarily too complex to be considered as a useful one. Besides, a technologist must pass from the reactive to the creative mind; he/she must form a clear mental picture of the technology he/she wants to shape, and hold this picture in his/her thoughts with the fixed purpose to get what he/she wants. How can we do it? Is there a rational way to a logical outcome? Yes, there is.

Experts usually agree: The best place to look for ideas is to start with what you know. Everything you learn is ultimately for the purpose of being able to create your reality better. When you take everything that you know and observe it from a perspective of reality creation, you will find what it really is about and how it all fits into the whole picture. Technologies are going to serve humanity needs and this requires a serious concentration.

A technologist may focus economically all his/her mind on answering following questions before thinking about a new technology or a new technological application:

- What problem does my technology solve?
- Who will buy my technology?
- Why will they buy it?
- Where will they buy it—universities, research labs, manufacturing companies, or online?
- What other technologies may compete with mine?

After finding vivid answers to the above questions, we may start our main technological endeavor. When Henley wrote the prophetic lines, “I am the Master of my Fate, I am the Captain of my Soul,” he should have informed us that we are the Masters of our Fate, the Captains of our Souls, because we have the power to control our thoughts. We should direct our thoughts to the ultimate goal of our desired technology: “What problem is going to be solved by our designed technology?”

Psychologists have correctly said that “when one is truly ready for a thing, it puts in its appearance.” As a technologist, are you really ready for your technology? I think that the art of a futurist is to build such a readiness among the students of technology now or tomorrow.

Meanwhile, the future keeps coming along faster than we expect. We should always keep in mind that many of technologies we usually regard as futuristic may not really belong to the future. It takes some time to introduce technologies to our clients or users. If we don't update our technological road maps, we'll need to retitle future technologies as past technologies.

CLEMENTIA

Tue, 02/08/2011 - 5:36am

Professional futurists seek to achieve the highest standards of expert performance in all that they do and endeavor to live up to constructive thoughts at all times.

Professional futurists are often consultants who must meet their clients' needs; they help draw the "maps" of the future and identify the obstacles (and opportunities) along the way, yet they rarely articulate their models of thought. They are engaged in a wide range of intellectual activities to provide useful information and to advise decision makers on the possible consequences of proposed actions or inactions. They continuously improve their methods as they do their work, but usually they are undecided on following optimum models of thinking.

Once Verne Wheelwright said: "There are no professional standards, no code of ethics, no professional organizations and little public recognition or acceptance [for the futurists]." (Wheelwright, 2000). After 11 years the situation is only marginally different, yet there are similarities to what he said at that time, especially lack of futures thinking models for professional futurists that could be evolved over a period of time and get recognized by a wide range of futurist professionals and organizations.

To develop evolving models for futures thinking, some questions should be addressed firstly in relation to the nature of such models. Thinking about these questions will help us develop suggestive models in a more pragmatic manner. Answering these questions makes our minds sensitive to the social necessity of a comprehensive model for the futurist thought and leads us toward professional standards of Futures Studies (FS) in the coming future. Here are some questions:

- In what ways do futures thinking models challenge and/or support other ways of futures thinking?
- What role do these models play in the theoretical function of futurists?
- How does a notion of "futurist thought" (as evolutionary and progressive, or discontinuous and contingent) figure in such models?
- How do the models understand the relations between individual and social structures of FS or foresight?
- What are the implicit or explicit epistemological assumptions of such models—what gets to count as "futurist thought", and how is such knowledge produced?
- What aspects of FS are embedded and made visible in these models, and what aspects are excluded or rendered as invisible?
- How does the literary style or "writerliness" of the modelers imply notions of their audience and intention?
- What can we know of the specific policies shaping the theoretical desires and practices of different models of futures thinking?
- Finally, how can we contact with these models to influence usefully our own notions of futures thought, theory, research, and practice?

There is always an evolving need for developing new models of futures thinking so that be used for innovative thinking in the fields of futures thought and work. We always need new concepts that may improve the way we accomplish our missions and also the results we achieve. This can be done

through moderating our thinking behavior. I've selected the Latin word of "CLEMENTIA" which means "moderation" to name my desired conceptual framework, as it is going to make equilibrium in the futurists' thoughts against common utopian or dystopian perspectives.

Besides, it's an acronym that stands for the first letters of nine conceptual components including: Creativity, Learning, Envisioning, Measurement, Experience, Nurturing, Teaching, Intelligence, and Analysis that all can shape reliable futures thinking models. My ultimate goal is encouraging the rise of a collective wisdom among professional futurists to follow the equilibrium found in CLEMENTIA in order to develop evolving models of futures thinking. Intelligence, Creativity, Learning, and Teaching are more remarkable items among above mentioned elements. Here, I'd like to give you a brief note about them.

A review on the literature of FS reveals that there are a number of common factors which has been considered as the constituents of futures thinking models. The first and the most important factor is "Intelligence". One of the central features of intelligence is the ability to make models of the world, which allows more accurate predictions about the consequences of one's actions. These models, shared with one's group and passed on to one's children, allow us to predict the behavior of people and the natural world. Intelligence makes it also possible to envision the future.

Meanwhile, "Creativity" is the most cited factor for futures thinking. In fact, without creativity we have nothing to do with the future and futurist thought. Foresight is derived from listening for, sensing, and characterizing futures that provoke our own creativity. Even creativity is regarded as a facilitating factor of cognition. According to Postrel, instead of trying to control and direct the future from a top-down authoritarian position, we should allow free-flowing creativity and diverse points of view to generate the future.

"Learning" is another essential element of a futures thinking model. The ability to anticipate the future begins early in life, as soon as a newborn child learns that his/her crying results in reactions from parents. Later we learn to think about the future through comprehending FS principles, rules, techniques and methods. When we try the impossible and fail, we often learn.

On the other hand, a person may change his/her learning experience into "Teaching" by "Envisioning". In fact, a futurist is envisioning what he/she has learned by teaching FS to another person. When teaching is repeated specially by FS instructors, it "Nurtures" their futurist minds and prepares them for higher thinking.

Futures higher thinking is related to evolved futurist thinking attributes such as synthesizing futuristic thesis and antithesis by establishing new perspectives. Obviously every synthesis passes through different process of "Experience", "Measurement" and "Analysis" and then it may be reflected in a futurist's thinking behavior.

I think that we've a long way to go raising FS standards and access to FS education worldwide before we would reach the limits of how much intelligence can be "Nurtured" and sustained for futures thinking. It seems that a valuable futurist thought is a product of CLEMENTIA.

6 Exponential Technologies of Tomorrow

Tue, 02/01/2011 - 3:20am

In my last post “6 Grand Technological Challenges for 2011 and Beyond” I summarized 6 important challenges that might impact at least one billion people’s lives over the next decade. Now, I’ve build up my preferred list of answers embracing a set of exponential technologies.

The mentioned challenges couldn’t be separated entirely and so their solutions. However, I’ve done my best to give a vivid answer to each one as far as possible. As you may see, in each of these challenges there are potential opportunities for jobseekers that may help them overcome their hiring or income obstacles. So, they are interlinked especially when considered as job openings.

The challenges embraced these areas: energy, poverty, global health, education, security, and space.

Here is a list of suggestive technologies.

1. Energy: In addition to well-known renewable sources of energy like sunlight, wind, water and so on; we should learn to think about other sources such as the kinetic energy of humans that can be collected through the materials they usually come in contact with, from floors to everyday objects, and even clothing.

The power created by an individual could operate his/her personal energy consuming devices. In a broader range, the power accumulated by a group of people (office employees, factory workers, apartment dwellers) could run a city block. The remaining problem is designing proper repositories and batteries to save unused energy for later times. We may really need what Ms. Wagner named “Energy Harvesters” in the latest issue of the Futurist (January-February 2011) in the coming years. So an energy harvester or an engineer who can design energy storage systems may be potential jobs for those who will be interested in saving energy in new ways.

2. Poverty: Poverty usually depends on unemployment. So we should think simultaneously about a dual solution.

There may be no common problem greater than unemployment in both developed and undeveloped countries. A global intelligent network of employers and potential employees (unemployed people) and new jobseekers under the UN’s supervision may seem a reasonable response to this challenge. The network will have regional and local branches equipped with proper communication technologies and sensors detecting job markets and potential candidates, bringing them through a qualifying process to a joint point: “employment”.

A second approach may be envisioned in the process of inventing new jobs. A hybrid approach composed of three elements: “retrofitting, blending and problem solving” may help both the entrepreneurs and unemployed people in defining and introducing new jobs.

Just like the problem of unemployment, this time a global intelligent network of entrepreneurship may be required to fix the problem. The network will monitor both the entrepreneurs and the poor’s problems bringing them together so that meeting each other’s needs. The entrepreneurs usually need cheap working force (human resources) and the poor need money not a very high income. They can satisfy each other effectively.

Meanwhile, education will play a great role in this regard and thereby reducing the level of poverty. Through education, people can find themselves in new positions helping each other produce more income by working together or using each other's resources at cooperatives. Credit cooperatives and unions may form a new popular technology of saving-lending contributing the people pass over their business and revenue hurdles faster than what it was usually done in the past. New credit cooperative professionals will save financially injured people and recover them at monetary health centers or clinics.

3. Global Health: With the number of overweight people in the world now equal to the number of underfed, and with more children growing up in the grip of chronic diseases that will last a lifetime, noninfectious disease will become the leading health threat. And with new technologies for repairing and extending the human body, health will become a domain for discovering the future of the human species.

Emerging technologies in health care have altered the way health care is delivered and the Internet and the media have been instrumental in making consumers more and more knowledgeable about health care. Increasingly these well-informed consumers believe that they should be able to get the best value possible for every dollar spent. We should remember that health care and related technologies are changing at an amazing rate across the globe.

Information technology is and will continue to be a central enabler that ties together the disparate functions of health care by empowering consumers as active participants and decision makers in their personal care process, and enhancing communication between and among patients and providers.

A solution to the great challenge of global health can be envisioned by a new technology called "digital health mirror". Digital health mirrors are intelligent interactive robots that monitor the healthy situation of people daily and offer online health services including: health info storage, creating daily personal health reports and introducing best diagnosis and remedies. They will play the role of a home-based doctor 24/7.

Another technology may be conceived as body-manufactured drugs. Through a set of intelligent agents and Nano-robots implanted in patient's bodies, they'll receive body-manufactured drugs just according to their personal curing needs. It will be a significant step toward the personalized health care.

4. Education: Education is like the food for hungry minds. People with no education are starving intellectually and suffering from the emptiness of their minds. In the same way that we usually fix problems of starvation or undernourishment by making and distributing packages of food, we may be also able to solve intellectual hunger by designing and distributing educational kits.

A solution to this problem can be shaped by offering self-education kits equipped with not so expensive communication utilities bringing them under a global network of education in different areas of the world. When a person (pupil) opens up the self-energized kit, it will be connected automatically to the nearest satellite-controlled post and give him/her necessary instructions to be entitled to required education according to his/her immediate needs. In case of no available

connection, a series of built in softwares and rich content can provide on time response to emergency educational needs.

5. Security: Security imposes huge costs on many societies yet it is hard to imagine an entirely secure society. If we cannot get rid of security costs, then we should think about new ways which makes security less costly and more effective for all societies to handle.

A new kind of “DNA-implanted RFID” that can be activated or deactivated chemically or electronically inside the body could be created. A prisoner, suspect or detainee may drink sweet syrup containing RFID Nano-robots. After swallowing the syrup, RFID Nano-robots will target a certain range of cells smartly and infiltrate their nucleus. They will be patched to the DNA structure and will be connected to related detective networks. As far as the RFID Nano-robots are active and the suspect is in the range of monitoring, he/she can be traced anywhere, anytime.

6. Space: Remembering that there are many undiscovered resources in our planet, I prefer to concentrate on the most important precondition of using material resources of space: “Space Exploration”.

The most important challenge regarding the outer space is space transportation. Observing UFOs once in a while, leads me to think about a new source of energy used to travel into the space. Whatever the UFO’s source of energy could be, it seems that they have managed their energies successfully for enduring travels, no need to refuel as we usually need to do on this planet.

We may design a new technology for absorbing environmental wandering energies, condensing them in certain focal points (capsules) and releasing them in desired direction to attain reasonable movement, hovering or maneuver.

The researchers and innovators have already produced machines for producing drinking water (material) from humidity (material) of normal air. Now it’s time to produce energy from energy (or energetic elements) by capturing and releasing environmental wandering energies. Someday in the future we’ll regret that we’d missed huge amounts of energy just because of our delay in inventing energy absorber devices and technologies.

Through mentioned above suggestions, I think that we may be able to solve a number of problems among the most pressing of today's grand challenges. I hope we will.

6 Grand Technological Challenges for 2011 and Beyond

Tue, 01/25/2011 - 3:44am

While different futurist-technologist teams and projects are focused on a wide range of topics, 6 grand challenges are more remarkable as they will impact at least one billion people's lives over the next decade.

Where Are We Going?

According to a recent consensus at a future-oriented university, the most challenging areas of research and work especially for the futurist technologists may be categorized as: Energy, Poverty, Global Health, Education, Security, and Space. The technologists are busy with finding proper responses for mentioned challenges as we've just started the first year of second decade in the new millennium. What are the questions and what are they going to put on the table?

- 1. Energy:** How can exponential technologies be used to provide humanity with low-cost and abundant energy to meet their needs for prosperity?
- 2. Poverty:** How can exponential technologies be leveraged to create new jobs and wealth to alleviate poverty?
- 3. Global Health:** How can technology be used to provide billions with low-cost, ubiquitous healthcare, and help to identify and prevent pandemics?
- 4. Education:** How can technology be used to provide personalized education to the world's developing areas?
- 5. Security:** How can exponential technology be used to address global issues around wars, terrorism, crime, genocide, and corruption?
- 6. Space:** How can the vast and abundant energy and material resources of space be used to address humanity's grand challenges?

How these questions can be addressed? Good question. The top method is simply to stay keenly attuned to trends in technology laboratories and research centers around the world, taking note of even things that seem impractical or useless. You then ask yourself: "What if they found a way to do that thing ten thousand times as quickly/powerfully/well? What if someone weaponized it? Monopolized it? Or commercialized it, enabling millions of people to do this new thing, routinely? What would society look like, if everybody took this new thing for granted?"

We have the challenges in one hand, and their related technological questions in the other hand. Whatever your personal answers may be (and I fully respect them), the reality is that we can never underestimate the great power of global change. These challenges are not going to be fixed. They usually appear as the most important challenges we may ever face within the next decade, but we may face with new challenges with more priorities in the future. At least, it seems that these areas are among the most pressing of today's grand challenges.

As a futurist you may work on your personal responses for these questions, but the challenges are enough big not to be solved by just an individual's point of view. No one can play the role of

Superman in this matter and they should be discussed through a collective wisdom and treated accordingly by a global determination, not just by a bunch of selected organizations or countries' will. I think that these challenges can make up a good pool of ideas for the next issues of the Futurist magazine in the coming months. Anyway, think about them and share your ideas with me or the Futurist' editors.

Where Should We Go?

Living in a changing world makes it always necessary to review our past priorities in all levels and make sure that we've made necessary alignments to live in a more calibrated world. The futurist technologists are just a group of experts among the world's ocean of researchers and thinkers who are going to be ready to develop future-focused and innovative solutions required to effectively address mentioned challenges. As the technologists deal with different aspects of implementing technology for today and tomorrow problems, others especially the philosophers are busy with finding new approaches to control these challenges and solve their related problems in more wisely ways. Most of the times, they think that technology-related problems cannot be solved by the same technology which has caused so many troubles.

Energy, Global Health, Security and Space are those areas which are affected directly by the consequences of using the technology in uncontrolled ways. In the past (not so long ago), we had cleaner cities, lower levels of consuming different sources of energy, and more security. Believe it or not, a great number of our today's challenges and problems are caused just by using the technology in an uncontrollable manner. Now, don't misunderstand me here, when I ask this: How can we remove them by the same technology? There is no doubt about the merits of technology. I'm not against the wise usage of technology, but I think it's time to rethink the ways in which we have been using technologies. It's so good to make new exponential technologies capable of facing with mentioned above challenges, but shouldn't we make a new balance between our simple natural lives and our technology-intensified civilization?

In my point of view, life is so much bigger compared to our small hand-made technologies. We have to keep our minds open to new ideas and see things on a different perspective now. In this way, I think we'll be able to bring our technology-squeezed world back to life again. I've realized everything is up to us whether we want to live with these challenges, or we are strong enough to get up and become new wise futurist technologists.

Writing for the Future

Thu, 01/13/2011 - 2:23am

Writing for the future is an exciting experience (and perhaps a fabulous job), especially for the futurists. In fact, the futurists explain their thoughts and ideas through writing articles, books and blog posts.

Generally speaking, writing is an effective tool of self-expression and many writers use this tool successfully to express themselves in their related societies. As a futurist, you may be interested in expressing yourself and your experiences among other futurist colleagues or futurist societies. There are some simple secrets that may help you improve your writing, especially when you are going to write professionally about the future.

Specialization in writing, just as in medicine or law, helps focus writers and allows them to build an identifiable “brand.” Writers who have developed professional specialties have treasuries of effective practices which can offer tips for writers seeking a niche. But we are living in an era engaged with such questions: “What will the media of the future be, and what kinds of writing will they demand? How can we explore the effects our bit-sized culture is having on our work, as well as the new narrative that is being formed at unabridged speeds around us?”

To answer these questions, we should remember that advances in science and technology have changed the societies almost overnight. Writers and reporters have to document that change, as they have done in the past. But to do their job, writers will need to understand and to a certain extent foresee—or predict—the future.

In my point of view, futurist writers equipped with creative arts are today striving to shape next generation of writers. I applaud them, and perhaps join them. It is time to be a modern creative writer, and as the scientific fiction writers have shown us, we should not underestimate the effect of the arts in writing futurist articles or books. At the same time, increasingly I have come to see the limitations of writing as a unique art. I have found that the art of writing should be accompanied with other arts, especially the creative ones. In modern times, we impose limits on the artists, and as we do so we draw walls around our subcultures. The creativity is portrayed in art and art can be found not just in cultures, but also in subcultures that are usually underestimated.

In my new e-book available at: FuturesDiscovery.com for free, I’ve summarized some of useful tips of effective writing for the future. The book is designed in 19 short chapters, each chapter dedicated to a topic.

Life is a journey toward the future. If you agree with the idea that “writing about the future” is an art, you’re warmly welcome to the second chapter of my e-book. In the third chapter, I’ve given a summarization of what the futurists believe. Fourth chapter is a collection of questions answered by W. Warren Wagar, a well-known futurist and writer. In the fifth section, a code of practice is provided for futurist writers.

Common mistakes in exploring the future are detailed in the sixth chapter. Seventh part of the book is dedicated to the importance of having a plan before doing any kind of writing. The eighth chapter is on finding bright ideas around the future. Then I’ve offered ten points on “How to Write an E-

book?”. If you are interested in web-based writing, the tenth chapter is eagerly waiting for you to be read. And if you like to know how you can improve your writing through using useful softwares, chapter eleven is suitable for you.

The reality of self-publishing is another topic that is of futurist writers’ interest nowadays. Besides, you may like to know how to get your books published, or become a published author. You can find necessary information in this regard through chapters 12 to 14. Three next chapters are chapters of numbers, including: 5 Steps toward Fast Writing, 3 Essentials to Plain English, and 10 Ways to Remove Your Writing Anxieties. I’ve ended the book with the future of books and inspiring quotes.

Please check: <http://www.futuresdiscovery.com/> for the e-book.

The Future of Goodness

Thu, 01/06/2011 - 2:44am

As William Law once wrote, “perpetual inspiration is as necessary to the life of goodness, holiness and happiness as perpetual respiration is necessary to animal life”.

While everyone celebrated the New Year, our Australian fellows were busy with the consequences of a massive flood washed away their lives and plans just at the beginning of 2011. Any kind of condolence offered to our futurist colleagues (especially those residing in New South Wales) wouldn't fix the problem, but it might show a feeling of sympathy to those guys whose efforts were brilliant and well-known in the advancement of futures studies.

You know that critical futures studies arose decades ago as a response to the crisis that came to face human civilization during the 20th century. Many people, even some of the futurists didn't take it so seriously at that time and amused themselves with other topics such as globalization. The globalization embraced our civilization as the natural impact of human's scientific and technological development, while real global challenges such as climate change revolutionized our environmental conditions in an undesired manner.

Regardless of who is really responsible for such a disastrous situation, the reality is that the consequences are threatening all, both the killers and the victims. In fact, we're all responsible for what is happening to our planet. The challenge is to grasp our destiny on this small planet and to work toward consciously chosen futures, rather than drift further into crisis and devastation. Why did we reach here? Why the environmentalists couldn't realize their dreams? And why our world seems so doomed? We usually seek for the answers in unknown and known aspects of industrialization, but it has other origins—reasons and causes rooted in deepest layers of our humanity. It's simple: we've missed our goodness.

Think about those days when we had cleaner cities and countries. We might not be as advanced as today, but we had more good fellows who had kind hearts for each other and the planet they were living in. Don't make a mistake. I'm not talking about utopian or dystopian cities or civilizations. I'm neither talking about religious or spiritual values. I'm just reminding the value of goodness for us, the animals and other creatures that have a shared environment: the Earth.

What do I exactly mean by “goodness”? In my point of view, goodness is a natural code of practice in living and benefiting from the planet without imposing any harm regardless of ethical or religious beliefs we may have. As far as we go on with current way of life (spoiling the planet by producing CO2 and other pollutants) there will be no way out of this crisis.

Shouldn't we purchase a new future? Is our image of the future based on the goodness I mentioned above? Or is it unconsciously directed in the same old ways? When we look at our cities, we see that they tend to follow the same pattern of urban development that cities did decades ago. And yet many, if not most, now believe that they were mistaken. Instead of spending billions on uncontrolled growth, we should focus now on creating livable communities.

Is there a future (hope) for the goodness? Surely, there is. We should invest on our green public spaces rather than our skyscrapers. We may understand that our image of preferable environmental

futures depends on less wastes, CO2 and pollution. We may have forgotten the goodness we had sometime in the past, but we should remember our contemporary conditions where our cities and lives are exposed to the direct dangers of climate change.

Now we must find ways to create new futures, or continue to go along with a future discarded some decades ago. This discarded future has led us to a global crisis of climate change. The easiest thing that we can do at personal level is producing less waste and spoiling less water. It's time for a new future: the future of goodness.

Wiki-Futures

Tue, 12/21/2010 - 2:28am

2010 is coming to a noisy end made by Julian Assange and his WikiLeaks. Regardless of positive and negative implications that Assange's revelations may have for the future of mass media, the Internet, freedom of expression and global politics; different scenarios can be conceived in what I call: "Wiki-Futures".

1. Game Over. While Assange is under house arrest in England for an upcoming not-so-serious trial, there are some weak and strong signals of further prosecution waiting for him either in Sweden or in the US in the coming weeks or months. If the prosecutors become successful in convicting Assange, then he may be forced to limit his activities and suspend WikiLeaks for a period of time or even forever. On the other hand, as the authenticity of information has not yet admitted by any government. Many commentators are skeptical about the real secrecy of the matter and consider it a funny game played by WikiLeaks under the supervision of global powers to shape the future of international relations and politics. If their desired dreams do not come true, then the game will be over and "wiki-politics" can be no longer used as an effective tool. Assange used the information he had found successfully (regardless of ethical and political considerations) right out of the box. Remember, once he's thrown it in the garbage, the game is over!

2. A Safe WikiLeaks. There have been civilized reactions from most of the governments in response to Assange. They may not take him and his WikiLeaks so seriously, as any harsh reaction will give color and a patina of credibility to the information he has revealed. They want to take it easy and let the time fix the crisis. So, many prefer not to highlight the scandal, but to make a little tweak here or there to reduce undesired effects. This may give Assange and his supporters a reasonable incentive to save WikiLeaks for the future and thereby take a more conservative approach in their duelling. But a safe WikiLeaks won't be as attractive as before and will gradually lose its audience and readers. Knowing this, Assange and his team may embark on a new strategy for their survival at the price of missing many of their readers.

3. Underground Wikis. Since no one knows the exact volume and extent of (so called secret) data Assange has obtained, probably new wikis may appear from underground websites. Given the cyber-attacks organized and conducted by Wikileaks's fans as a protest against monetary transaction hubs, it seems that similar invasions may be on the way upon Assange's conviction. In addition, more information may be published at underground wikis by unknown wiki owners. As I mentioned earlier (Future World Shapers, The Futurist, January-February 2011, P. 40-41), a new generation of wikis is on the way, embracing multimedia and interactive capabilities. Multimedia will have broader effects. Besides, Wiki writers will be quite an active community, and they will have to produce more articles in response to their users' needs. This makes the evaluation of information they publish a hard job, as fake information cannot be distinguished easily from what is authentic.

4. Wiki Competitors. Knowledge is power and there are always people who seek power. A wild card scenario may be conceived when another wiki site or several other wikis enter the scene, revealing more secret information in the cyberspace. It may change into a new business and shape a new market for power customers in many areas of economics, politics, industry, technology and Both the governmental and private sectors in different countries will have to review their information

storage and retrieval processes and take new steps and measures to reduce the leak of their information as effectively as possible. Hackers and anti-hack professionals will be popular characters or heroes in an unequal race for information and power and the attractive part of the story will be unfolded when a super-informant comes into the ring. He or she can be a real wiki competitor!

Is it a work of technology or politics? Are we doomed to tolerate inevitable consequences of technological progress? How about legal and jurisdictional aspects of the matter? Should they be interpreted locally or globally? In any case, it deserves attention and should be regarded as one of the real challenges affecting the future of mass media, the Internet, freedom of expression and the global relations and politics. If our thoughts and actions don't investigate the urgency of the matter, wikis will change our contemporary world faster than we can read their headlines or leads, let alone with reading their full articles.

Future Consequences of University Fees Hike

Fri, 12/10/2010 - 8:53am

Big cuts by the UK government and a tripling of university tuition fees pushed British students to protest. Passing tuition fees rise by the British parliament may have implications that will affect the future of higher education in the UK and elsewhere.

Naturally, students regard the increase of educational fees as a nightmare that may endanger the routine pace of their studies. On the other hand, the governments including the European ones have to increase their domestic incomes (due to the current economic recession) through the sources they have control over. This may make a clash of interests between the governments and the students (people), leading them to natural reactions that are not always controllable. The ultimate result will be a significant change in the nature of higher education in the UK and perhaps in other countries.

If the academies take the upper hand in this standoff and increase the tuition fees and the students' protests lead to no (tangible) result in reversing the British government's decisions over the increase of fees, then a cascade of implications will be inevitable for the future of higher education and the students whose futures are affected by the related decisions. Here is a predictive list of implications that may appear over the next weeks and months:

1. Students' Immigration. Universities with lower fees will be attractive for the students who are concerned about their academic futures. The universities in countries like India and the Philippines may face a rush of applications sent by the students who are eager to continue their education in cheaper ways. New rules and regulations may be established by these countries to monitor the process of admissions more carefully. They may be also willing to increase tuition fees by seeing so many applicants!

2. Lower Quality Education. Those higher education institutes who are eligible to arrange and run academic programs may provide courses with lower costs and qualities. The students who attend such programs will have many problems after graduation (and receiving related certificates), especially in the market. Meanwhile, a number of profit seeker institutes will grow up and threaten future of universities (as civil societies' knowledge-based institutions) in an unjustified competition.

3. Rise of E-learners. Given the fact that the tuition fees of e-learning (distance learning) courses are usually lower than conventional academic courses; there may be a rise of interest among students for attending such programs. Those universities who offer such programs may enhance their e-learning courses and even lower their prices in order to grab more students. There may be a real competition among the universities and colleges to snatch the applicants.

4. Professors Unemployment. If the cuts in educational budgets and the increase in tuition fees continue, many universities may not be able to afford to pay their staffs and professors' wages. Unpaid professors will not find a good reason to remain at the universities. They may join the unemployed population of the nation or try other occupations to secure their living costs.

5. Revival of Retired Professors. By the increase of educational costs, those students who are busy with final phases of their studies may prefer to receive cheaper help. So they may refer to those

instructors and professors who have been retired in recent years in order to finalize their thesis or projects through their advice and guidance. By increasing the number of these students, the professors feel a sense of revival and this brings them to the field of higher education again. They may arrange private classes at their homes or colleges.

6. Home-based Higher Education. Financial limitations may lead a number of students to leave the universities against their will and continue their education at home in an informal manner. Home-based education will embrace a set of unique and new characteristics such as home-made syllabuses copied by the students from what they have found at their universities or colleges curriculums. Informal higher education becomes a new trend in the field of self-education and experience in performing related jobs (effectively) becomes a criterion instead of receiving and showing conventional certificates.

7. New Text-book Stores & Clubs. After occurring a meaningful fall in the number of students (because of tuition fees rise), publishers of academic text-books will have difficulties in selling their products. They may have to offer their text-books in new markets established by opportunist dealers who can find potential buyers. New text-book stores and clubs will appear including the online ones who may sell text-books with different percentages off the actual price. They will have to charm the prices and thereby drop the quality of papers and inks they use in publishing the books.

8. Fake Certificates. Before the increase of tuition fees some institutions were offering fake academic certificates to customers around the globe. This (unethical) service may find new clients and the copiers may be encouraged to improve the quality of certificates they produce. New measures may be required to distinguish the real academic documents from the fake ones.

9. Increase in Crimes. Youth are always more likely than other age cohorts for committing crime. When they become students, they are busy with their studies and find more little time to wander around the streets. Leaving the university because of financial problems, gives a young man/woman ample time to do everything he/she likes.

The universities should ask themselves: "how can we make our educational services as effective as possible?" not "how can we gain more tuition with current services". No pain, no gain.

7 Key Values for Futurists

Wed, 12/08/2010 - 2:37am

In a competitive job market with limited openings, futurists need to add value to what they do, beyond certificates.

Today many futurists are looking for new careers or concerned with or keeping safe their current positions. Even novice futurists graduated from well-known universities and colleges, seek for professional experience that may add vital skills to their formal education in foresight and futures studies fields. Wherever their journey leads, the reality is that adding value is keys to success in finding and maintaining a satisfactory position in our world. Any job search, whether in academia, industry, government, or the nonprofit world, always begins with the basics. These basics should be regarded seriously, if we are going to realize our goals and dreams.

1. Unique Perspective. The first and the most important step toward your professional future is adopting a unique perspective. In fact, your personal perspective on futures related topics makes your identity as a futurist. Today employers don't read your CV to hire you, but look for something new in your profession and skills. You should maintain something new that other futurists might not have. Think about what others have not thought about or accomplished yet. Consider people's problems and needs. For instance, climate change is already well covered. Find new problems and concentrate on their probable answers. You may find new relationships between similar questions and their related answers. Highlight these relationships in new ways and establish new paradigms. As soon as you get tangible results, they may be worthy of mention in your CV or articles as remarkable findings. In addition to adopting a unique perspective or establishing a personal school of futurist thought, a futurist does need to learn to offer proposals for his/her new ideas and find co-thinkers around the world.

2. Art of Interviewing. The second qualification is the art of interviewing and mastering necessary techniques and skills that result in (sometimes unbelievable) offers. An employer does not pay you for what you have studied at college, but for what he/she finds in your professional activities. Social contacts with different groups of people teach you how to behave effectively with different people at different companies and institutions. Many books are written on conducting successful formal interviews, but sometimes an informal interview may be more profitable than a formal one. When you are talking with people who have enough interest and capital to invest in future plans, remember you can shape these cases to what you desire through the art of (formal and informal) interviewing.

3. Connecting through Networking. Futurist social networks are useful venues for you to represent your skills and learn about opportunities. Besides, these networks function as multidisciplinary societies for future-related professionals. Some networks, like the World Future Society, are dedicated to helping qualified futurists to prestigious and meaningful careers at all stages. You may find ads and reports on futures careers detailing new opportunities in various countries and regions. Do not limit your options to physical positions or jobs. Think about online collaboration, too. Online collaboration with other futurists, futurist think tanks, and organizations offers a wide range of career development options, including fellowships and internships, as well as links to unique programs and partners. Next wave of jobs will be conducted through online collaboration (in a

virtual world) in coming years. You can be an expert “tele-futurist” if you develop your networking skills intelligently and timely.

4. Self-publishing. One of the most important qualifications that may be regarded as an added value for a futurist is his/her self-publishing capability. A self-sufficient futurist can show how he/she manage his/her written (published) works. If you are going to be recognized futurist you should not wait for someone else to publish your articles and books. You should become a self-publisher. Every futurist has a number of published (or unpublished) books and articles. You may prefer to see your books as paper printed copies, but you can also regenerate your writings in different formats such as e-books or e-newsletters and distribute them among targeted groups. Your publications can be valuable information if you find the right user at the right place and time. The articles or books should be carefully selected from your past works when you are using them as attractive prey for hunting new clients or employers. A freely accessible website (full of articles and e-books) or weblog that offers information about your desired career can be a useful tool in changing you to a self-publisher futurist. The only thing you need is a little IT knowledge.

5. Hybrid Research. A futurist should remember that he/she is not just a futurist. As a futurist you may have other scientific skills to call upon. Bring them into the circle of future and futures studies and form a hybrid research approach. You’ll find new colleagues and futurist friends who have similar and shared concerns as yours. My personal interest in cognitive science made me study theoretical aspects of futures thinking while keeping an eye on neural aspects of this matter. I’m neither a psychologist nor a neuroscientist, but I love to understand the natural mechanism of thinking about the future and be entitled to its most useful outcome that is applying futures knowledge consciously. I call it: “Futures Metacognition”. In recent years a number of neurobiologists have begun to study the neural processes of futures thinking. My ambition is that someday in the near future “Futures Metacognition” be defined as an academic field of study. I don’t know exactly how this field of study can be taught at universities, but I’m sure there would be many futurists who love to know what happens in their neural-cognitive systems when they think about the future and apply the knowledge in their studies and activities. Futures neuropsychology can be a fruitful job in the coming future. Think about other hybrid researches that may transform the future of humankind and intelligent civilization.

6. Project Management. Logically, employers prefer to hire one person instead of two. A futurist who is capable of managing his/her projects is offering a great service to the employer. This becomes a real added value when the number of people you are working with is remarkable and you have a considerable volume of futuring work. In fact, a competent futurist needs to manage his/her projects personally. Project management provides the tools you need to systematize the management of your activities, to make sure the risks you take are calculated. Best of all, you’re likely to find that taking a structured approach to managing the futures projects nurtures, rather than inhibits, creativity. Today’s project management is less an arcane technical discipline than a set of principles intended to provide a structured approach to making the everyday decisions that keep a business running, even a small business. Project management begins, as it should, by defining its subject: A project, according to project management theory, is an activity with three characteristics: a) Specific outcomes or results; b) Definite start and end dates; and c) Established resource budgets. Working with well-known and approved soft wares such as MS Project gives you necessary knowledge and experience.

7. Principal Investigation. The futurists are coming to terms with the fact that running a futuring project really is running a business. Yet, in looking for inspiration, most futurists find management and business leadership books -- with their bottom line of sell, sell, and sell -- less than palatable. Futures research is a service, but for most of us it isn't all about the money. It's about the science and the challenge. When it comes to management and leadership tomes, we want to read about leadership motivated by needs other than getting rich and pleasing stockholders. A futurist chooses to become a principal investigator (PI) or an expedition head because of technical skills, but success depends on emotional resilience and communication skills. Futures research is not done in a vacuum; if the expedition leader or PI doesn't know how to choose and get the most out of team members, a futuring project has little chance of success.

In my view, these seven items provide considerable added value for a futurist especially in competitive environments. Each of them can be regarded as a cornerstone within our self-actualization architecture.

Applying Futures Knowledge Consciously

Thu, 11/25/2010 - 9:23am

Trying to understand how futures thinking works cannot be separated from trying to understand how a futurist applies his/her knowledge in futures works.

Human thinking is probably the most complex process in the universe. But, very much like the phenomenon of time in which we are also comprehensively embedded in our existence; it is both extremely close to us and also extremely difficult to grasp conceptually. While recent insights from cognitive neuroscience (including cognitive psychology, neuroinformatics and evolutionary anthropology) help us to understand the neural process of futures thinking, theoretical explanations may expose other aspects which are usually overlooked by most of the futurists when they apply their knowledge unconsciously.

Futures cognition has to do with what an individual knows or learns about the future and how he/she feels about it. But, Futures metacognition deals with an individual's knowledge about his/her own futures thought processes, his/her self-awareness, self-regulation, and control of his/her own futures thought processes, and his/her beliefs about all of these matters. That is, futures metacognition has to do with the how, when, and why an individual uses what he/she knows in futures thinking and how he/she feels about the future.

The use of metacognitive behaviors in problem solving by a futurist can be well documented. To be a self-aware futurist one must possess three things: 1) Skill; 2) Meta-skill; and 3) Will. When presented with a novel problem, knowledge of the prerequisite futures skills is necessary but not sufficient for success. A futurist must be able to "orchestrate" various cognitive components to be a successful problem solver. He must be able to control his or her cognitive processes in context. Meanwhile, monitoring of progress towards a goal and understanding the task at hand along with knowing when and how to apply/change strategies, heuristics or algorithms, help a futurist to plan a course of action.

The cognitive activity of a futurist does not stop here. Evaluating the success or failure of a strategy and revising or abandoning strategies midstream based on the evaluation are more important than previous steps.

It has been shown that knowledge of metacognitive techniques is not as elective in futurists lacking the necessary prerequisite futures skills (cognitive components) to complete a task. In my point of view, high metacognitive function can compensate for IQ. In fact metacognitive ability is not strongly correlated with conventional ability. Metacognitive awareness contributes more than IQ in solving the problems of the future.

During my time as a student I found out that writing is a constructive process. There is research out there showing that writing is one way to improve the metacognitive skills in the self-regulation category necessary for the futurists to become better problem solvers. The connection between writing and futures metacognition is a two-way street. That is, as an individual's futures metacognitive awareness improves, so does his/her ability to communicate what they know about the future. Writing is also a powerful tool for making connections between old and new futures knowledge. That is why I continue blogging at WFS and why I love to know more about futures

metacognition as it increases my self-awareness and also enables me to apply my futures knowledge in a conscious way.

Is it the neural system that shapes our futures?

Sun, 11/07/2010 - 8:46am

Neurobiology is revealing the mechanisms that show who we are created: how we make decisions and control our emotions, how our genes shape our desires and how our personal futures are being shaped by a reward system that adapts in response to satisfying experiences.

Neuroscientists have found that maternal attachment is mediated by the peptide Oxytocin, released in the brains of both mother and child during lactation and cuddling. Oxytocin binds to neurons, and the reward pathways record and reinforce the interaction. Mate attachment in females is also mediated by Oxytocin and in males by a similar peptide, vasopressin. In other words, parts of our behavior are inevitable outcomes of neural-hormonal interactions.

As neuroscience discovers these and other mechanisms regulating choices and behavior, we may wonder whether anyone really chooses anything. In this case, answering this question "Is nature deterministic?". becomes more difficult than ever. Given that, I think that free will in its traditional concept should be re-examined again. Any statement on free will needs to be updated according to what we know today about our neural system. New descriptions will reflect our natural need for an effective definition of responsibility, especially in relation to building our preferred futures.

The concept of "free will" has historically been a source of controversy and different schools of thoughts have been developed by philosophers or the psychologists to account for it. With all of these schools, we can learn what a voluntary action means and what an obligatory one is. So we can never excuse Hitler as he was completely free no to commit those brutal actions, but there can be find always a pardon for a sleeping kid who wets his bed. Through such clichés, our brains manage to extract a meaning by which we can talk about free will.

Since personal futures are made by free will, it can be a turning point in understanding a voluntary process of making the future. Neuroscientists believe that self-control is mediated by pathways in the prefrontal cortex, shaped by structures regulating emotions and drives, and it matures as the organism develops. A person learns to inhibit self-defeating impulses, such as biting the mother when it should suck, grasping a burning ember or getting milk when the cows are angry.

Although little is known so far about the nature of these mechanisms, it has become clear that neurons are sensitive to rewards and punishments, on the generation of fear responses by neurons in the Amygdala, and on the response profiles of "decision" neurons in parietal regions of cortex when a person makes a choice after accumulating evidence. Riskier and more profitable exploratory decisions probably depend heavily on the prefrontal cortex. The mechanisms of this area may explain the decisions we make about our future.

The rewards and punishments we imagine as the result of our actions, shape our decisions and so our futures. In other words, we are naturally made so that we can calculate the consequences of our actions. In fact, the same attribute is being used in rewarding systems used for managing the staffs and the organizations.

Big organizations don't have a problem rewarding good decisions or punishing bad ones. In our personal lives, the story is different. While we often remember to punish ourselves for poor decisions, we sometimes forget to reward ourselves for good ones. Today's neuroscience findings

tell us that rewarding ourselves when we make good decisions helps us build the capacity to make more good decisions. Did you make a good decision today? Give a gift to yourself and you'll be more likely to repeat the performance.

Moving through time: Can it be done in a mental way?

Tue, 10/19/2010 - 7:37pm

Researchers have recently looked at how time travel is represented psychologically in the sensorimotor systems that regulate human movement. Technically we may not have a means for moving through time (yet), but when we think of the past or the future, our brains engage in a sort of mental time travel. It turns out our perceptions of space and time are tightly coupled. This natural ability to mentally travel through time differentiates us from other species.

Recently a group of researchers at the University of Aberdeen conducted a study to measure this ability in the lab. They fitted participants with a motion sensor while the participants imagined either future or past events. The researchers found that thinking about past or future events can literally move us: Engaging in mental time travel resulted in physical movements corresponding to the metaphorical direction of time. Those who thought of the past swayed backward while those who thought of the future moved forward. These findings suggest that mental time travel may be grounded in processes that link spatial and temporal metaphors (e.g., future= forward, past= backward) to our systems of perception and action. The researchers claim that the embodiment of time and space yields an overt behavioral marker of an otherwise invisible mental operation.

It seems that there is an intact time travel machine just inside our skulls that could be explored by cognitive scientists in the future. Until then, we may develop our own time travel machine as the futurists. I remember an article written by Mr. Oliver W. Markley titled: "mental time travel" for Futures in 2007. He had introduced innovatively a futures research method using focused imagination in the "theater of the mind" to visualize and explore contingent future patterns. It was a practical approach for wise choice-making, and represents a clear way to improve conventional scenario forecasting, strategic planning and marketing research methods—especially when dealing with just in time (JiT) business environments.

Questions

The questions to be proactively explored in mental time travel can take many forms, depending on the purpose of the researcher and/or client. For instance:

- What may happen if "X" (a decision or policy option) is chosen, versus is not chosen and implemented?
- Which of two policy options or possible decisions looks and feels better, "X" or "Y"?
- In a future involving a specific scenario, what significant impacts are likely, but perhaps are as yet unrecognized?

In fact Markley was going to present a working set of ideas and methodological guidelines to enable professional futurists and other professionals. He had also considered a set of somatic, affective, cognitive, general and specific sensations in his proposed method. Markley and other similar researchers believe that it is important to experience bodily, mentally and emotionally affective or cognitive impressions of a work team, a client organization, a competitor, a society or a system.

Research on mental time travel is probably both multi-faceted and open-ended. Multi-faceted as it embraces a range of different sciences and technologies such as: cognitive science, computer science, futures studies, and even philosophy of mind, and open-ended as human's psych has an evolutionary nature and everyday something new is discovered in this field. Fascinating scientific

evidences touch our minds drastically as what we understand from the time is an outcome of our comprehension regarding the environmental conditions.

Albert Einstein once said: "When a man sits with a pretty girl for an hour, it seems like a minute. But let him sit on a hot stove for a minute, and it's longer than any hour." Einstein was describing one of the most profound implications of his Theory of General Relativity - that the perception of time is subjective. It is simple: time flies when we are enjoying ourselves, but seems to drag on when we are doing something tedious.

The subjective experience of time can also be manipulated experimentally. Researchers have found that visual stimuli which appear to be approaching are perceived to be longer in duration than when viewed as static or moving away. Similarly, participants presented with a stream of otherwise identical stimuli, but including one oddball, or "deviant", stimulus, tend to perceive the deviant stimulus as lasting longer than the others. The underlying neural mechanisms of this are unknown, but neuroimaging study of this phenomenon implicates the involvement of brain structures which are thought to be required for cognitive control and subjective awareness.

This was just a glimpse on the complex world of neural system and mental capabilities that the humans have just as one of evolving (not evolved) species living on this planet and many other findings are in the way. Obviously mind is not limited as technology and everything is possible in the world of theory even moving through time.

Notes:

1. "Moving through time". January 21st, 2010. www.physorg.com/news183297421.html
2. "Does time dilate during a threatening situation?". January 23, 2010. <http://scienceblogs.com/neurophilosophy/2010/01/>
3. Markley, Oliver W. "Mental time travel: A practical business and personal research tool for looking ahead", *Futures* 40 (2008) 17–24, doi:10.1016/j.futures.2007.06.006

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