

## **Futures Studies**

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### **Who Are Futurists, and What Do They Do?**

It is a common cliché to assert that all humans are futurists. Without a doubt a distinct human capability is to dream, scheme, plan ahead, and then create the technologies necessary to strive for and perhaps attain the dream. But many other species do so as well. Humans are not unique in this except for the scope of their dreams and the power of their technologies.

But if all humans are futurists, then humans are also chemists, physicists, historians, priests and everything else. Yet we still needed physicists and engineers to get to the Moon in spite of eons of dreams and stories about space flight, and it seems even the most fundamental and protestant among us still feel the need for some kind of priests to keep us out of hell, and so it probably is the case that futurists can be useful in helping us think more clearly about the causes and consequences of our dreams and fears about the futures.

No one can accurately "predict" exactly what "the future" of anything of consequence will be, though there are many charlatans who say they can, and who are paid big bucks for their "predictions", almost all of which prove not only to be false, but dangerously so. What responsible futurists do is not try to "predict" "the future" but to "forecast" "alternative futures" for study and evaluation, and then to help individuals, corporations, governments, and other groups to envision and to move towards their preferred futures--the best, possible, "real" world they can imagine--and to do so on a continuing basis, constantly re-envisioning as new information, technologies, challenges, and opportunities, and the desires, hopes and fears of new people, emerge.

### **Futurists and Contemporary Futures Studies.**

This kind of futures studies with these kinds of futurists is quite recent in the evolution of human society from small, nomadic, hunting and gathering societies, to relatively stable and sedentary agricultural societies, to recent, urbanized industrial societies, to current global information societies, to... whatever kind of "society" lies ahead. Historians, futurists, and other scholars have differing classifications and justifications for the manifest increase in human populations and social complexity over the past 50,000, 10,000, 300, and 75 years, respectively. But, broadly speaking, the idea of "the future" as an arena over which humans have some kind of influence and control, and to which they therefore have some kind of obligation to future generations, is a very new idea.

This is not to say that some historical periods did not also produce exceptional individuals who conceived of the future as different from the past. Most cultures have stories about voyages to strange places--or visits by entities from strange places and times--but once the industrial revolution hits a community, science and space fiction on the one hand and a kind of futures studies on the other explodes into public consciousness, eventually formalized by the public school system and the modern university system, both of which (under the command of centralized governments) have the task of transforming sedentary, traditional, "backward", present-focused individuals and communities into mobile, advanced, progressive, and future-focused individuals and communities who are energized by the vision of and the skills necessary to create "a world that always moves forward". That (in the narration that accompanied the movie, *New Horizons*, of the General Motors 1939-40 New York World's Fair Exhibit depicting the "Wonderful World of 1960") is a world "where man constantly seeks to replace the old with the new"; where there is a perpetual "search for new horizons" which always lead us "onward to ever-new horizons", "endlessly, ceaselessly moving forward"!

Though there were many voices raised and forces struggling against this kind of future of "progress and development", from the 18<sup>th</sup> century onward until roughly the middle of the 20<sup>th</sup> century, the only future that mattered--the future underlying all modern education, government, religion, and family life, and eventually everywhere in the world--was continued economic growth. But then, beginning in the late 1950s and early 60s, and swelling to a crescendo in the early 1970s, some scholars began to notice that policies and actions of continued economic growth were leading to unanticipated consequences, some of which were viewed as exciting and good while others were said to be frightening and quite undesirable.

Among the first were people like Daniel Bell who noticed that in the US more and more people were no longer employed in agricultural or industrial type jobs (or those related to them) but rather were in service jobs like lawyers, teachers, secretaries, accountants, and white collar workers generally on the one hand, and waiters, maids, fast-food workers and the like on the other. Bell and others suggested the world was moving from an "industrial" society into a "post-industrial" society that eventually came to be designated an "information" society.

At the same time, other people were focused not on changes in how and where people worked, but on their numbers and what that meant for the natural environment upon which all life on Earth depended. Pioneers in what broadly could be called "The Environmental Movement" were Rachel Carson, Paul Ehrlich, Aurelio Peccei, Edward Goldsmith, among many others, while the seminal book representing a synthesis of all these concerns was the work commissioned by the Club of Rome and called *The Limits to Growth* (1972).

To many people, however, "the future" in the 60s and 70s meant Space. Everything "futuristic" was designated as a "space age" something or other. Indeed, no image of the future is as permanently and deeply imbedded in the American consciousness as images of flying cars in gleaming, ultra-high tech, vast three-dimensional cities floating in space. *Buck Rogers*, *The Jetsons*, and *Atom Boy* still signify "the future" to many people. And indeed, given our limited progress in space since the Moon landings that ended in the 1970s, it arguably still is.

Other futurists looked at high technologies generally as instruments of social transformation, especially electronic communications technology leading to automation, robotics, artificial intelligence and artificial life on the one hand, and biological technologies leading to cyborgs, posthumans, and transhumans on the other, with nanotechnology causing hyperminiaturized technologies to "vanish in the woodwork" as Arthur C. Clarke once put it. When one considered what the effects of prolonged space travel and settlement would do to biologies and cultures nurtured on Earth, one easily could contemplate a high tech transformational society fundamentally unlike anything previously experienced on Earth, while others, focusing on New Age or renewed spiritual beliefs, imagined high-spirit transformations.

The anti-war (especially nuclear weapons), civil rights, and women's rights/feminist movements of this same period also deeply influenced much thinking about the future, one way or another. However, the person probably most strongly identified with "the future" in the United States is Alvin Toffler whose books, primarily *Future Shock* (1970) and *The Third Wave* (1980), tended to define the field in the popular mind, in spite of the existence of many other concerns and emphases.

For example, serious interest in the future as an arena of scholarly activities, social action, and public policy arguably emerged first in Europe in the late 1940s and 50s with Ossip Flechtheim (Germany), Fred Polak (Netherlands), Radovan Richta (Czechoslovakia), and especially Bertrand de Jouvenel (France), and then from the 1960s with Robert Jungk (Austria), Johan Galtung (Norway) John and Magda McHale (Scotland and Hungary), Eleonora Masini (Italy), Igor Bestuzhev-Lada (USSR), Pavel Apostol (Romania), and Andrzej Sicinski (Poland).

At the same time, scholarly as well as popular interest in the future was arising in Japan and Korea in the 1960s with Yujiro Hayashi, Yoneji Masuda, Saburo Okita, and Hidetoshi Kato exemplars in Japan and Hahn Been Lee in Korea.

Futures organizations in Europe in the early 1960s-70s included Mankind 2000, Futuribles, and IRADES, among many others. These led to a series of world futures conferences, the first of which was in Oslo in 1967, followed by another in Kyoto in 1970 and the creation of the World Futures Studies Federation (WFSF) in Paris in 1973.

Similar processes were at work in the United States where Edward Cornish, John Dixon, Charles Williams, and David Goldberg, among others, created the World Future Society (WFS) in Washington, DC in 1966. Many of the founders of the WFS were also founders of the WFSF and vice versa. However, the WFS has grown to a large open-membership organization with a heavy concentration of members from North America while the WFSF is still a much smaller, somewhat more professional, and heavily globally-focused organization.

Special mention must be given to Jerry Glenn and Ted Gordon who have led The Millennium Project of the American Council for the United Nations University into being the most prominent and active futures organization in the world today with "nodes" in almost all parts of the world. The project has produced an annual "State of the Future Report" for almost two decades.

Futures studies early made its way into academia but has not yet established itself as a core discipline. During the 1970s, there was a flurry of futures courses and a few coherent programs in the United States and Canada, but many of them died out. Two that have endured and graduated many highly-successful consulting futurists are The Program

on the Future at the University of Houston, Texas, located originally at the Clear Lake campus since 1982. All programs are online and face-to-face. The second is the Alternative Futures Graduate Option in the Department of Political Science of the University of Hawaii at Manoa in Honolulu. It houses the Hawaii Research Center for Futures Studies created by the Hawaii State Legislature in 1971.

There is a renewal of interest in futures studies worldwide:  
 Ann Arundle Community College, Maryland, futures center;  
 Corvinus University of Budapest, Hungary, Undergraduate and Graduate Futures Courses;  
 Fullerton College, California, Center for the Future;  
 Nanyang Technological University, Singapore, S. Rajaratnam School of International Studies, Futures Studies;  
 Oxford University, UK, James Martin 21<sup>st</sup> Century School, Future of Humanity Institute;  
 Regent University, Virginia, Certificate of Graduate Studies in Strategic Foresight / M.A. in Strategic Foresight;  
 San Diego Community College, California, futures certificate;  
 Stellenbosch University, South Africa, M.Phil. in Futures Studies / Ph.D. in Futures Studies;  
 Swinburne University of Technology, Australia, Master of Management (Strategic Foresight);  
 Tamkang University, Taiwan, Graduate Institute of Futures Studies;  
 Turku School of Economics, Finland, Futures Research Center;  
 Universidad Externado de Columbia, Bogota, Masteria en Pensamiento Estratégico y Prospectiva;  
 Universita' Telematica Leonardo da Vinci, Italy, Master di Secondo Livello in Management per Scenari Partecipati;  
 University of Notre Dame, Indiana, Mendoza College of Business, Required futures studies course;  
 University of Southern California, Annenberg School for Communication and Journalism, Scenario Lab;  
 University of the Sunshine Coast, Australia, Futures courses.

The Association of Professional Futurists is a community of graduates of futures programs and others who earn their living as professional consulting futurists. The corporate world of big business has never doubted the value of information about the futures and has either had in-house futures foresight capabilities or, more typically, purchased foresight from a variety of sources, some of which are highly regarded futures consulting firms such as the Institute for Alternative Futures, the Institute for the Future, the Global Business Network, The Arlington Institute, and many more.

In contrast with the kinds of futures studies mentioned above which is concerned with broad public futures, corporations are understandably very narrowly focused on futures from the point of view of new product development and/or obtaining a competitive advantage over other enterprises. A lion's share of the civilian futures work

being done in the world today is of this practical, focused sort, much of it proprietary in nature and entirely hidden from public and even academic view.

Similarly, all military groups, most certainly including the US military, are heavy producers and consumers of futures work much of it also strategic, proprietary, and secret. Indeed, many people would have begun the story of the history of futures studies by citing work done during the Second World War by the Research and Development unit of the US Air Force that eventually became the very influential think tank called RAND. Some of the people working in RAND later started futures consulting firms after the war, including Ted Gordon's Futures Group. By far the most powerful and influential futures think tank is the Hudson Institute founded by Herman Kahn in 1961. There is a direct intellectual line between the Hudson Institute and the Heritage Foundation which was a leading contributor to the ideas and policies that led to the electoral victory and subsequent actions of Ronald Reagan's presidency in 1980 and the victory of neo-conservative economic policies over the old Keynesian liberal policies that had been dominant from the end of World War Two until the late 1970s.

Moreover, researchers affiliated with the Hudson Institute and the like played a significant part in marginalizing the concerns of environmentalists and "the limits to growth" in American national policy. The *Global 2000 Report to the President* (1980) commissioned by President Jimmy Carter and compiled by Gerald Barney, was never released officially by the Reagan administration, preferring instead the views of the future in publications of the Hudson Institute, such as Julian Simon's *The Ultimate Resource* (1981) and especially *The Resourceful Earth* (1984) edited by Julian Simon and Herman Kahn. They sought explicitly to demonstrate that the concerns of *The Global 2000 Report* were wrong, or could be best solved by corporations operating in a free market economy. Similarly, futurists involved in The Project for the New American Century substantially enabled the election and informed the policies of the administration of George W. Bush.

One of the most important figures in American futures studies is Newt Gingrich who, as a professor of history at West Georgia College, became affiliated with Alvin Toffler early on. After being elected to the House of Representatives in 1978, Gingrich devised a highly successful strategy for using the election of Ronald Reagan in 1980 to turn the Republican Party into the dominant political party for the rest of the 20<sup>th</sup> Century. By using the new and underutilized C-Span network and talk radio to get then-marginalized content into public acceptance while reforming the Republican Party structurally, Gingrich proved to be one of the most successful applied futurists in the US when he became Speaker of the House of Representatives in 1994, ending forty years of Democratic Party control.

One conclusion to be derived here is that futures studies *per se* is not identified in the United States with any particular political perspective. While specific concerns may be more closely associated with one ideology or another, futures studies as such is neutral ideologically and thus should be distinguished from other perspectives only by the fact that it is specifically futures-oriented and not by the content of any particular futures-orientation.

### **Futures Studies and Governmental Foresight.**

This discussion of futures studies and governance suggests yet another way of understanding the rise, scope, and utility of futures studies. For most of human history, social and human-caused environmental change was so slight that past, present and future were essentially the same. The task of government was to help the community, or certain individuals or groups within it, to achieve within a fundamentally fixed environment. The best way to "look ahead" was to "look backwards and outwards"--to understand the past and the dominant forces of the present. Governments and individuals did of course innovate from time to time, or respond to novel circumstances, but generally speaking this could be and was done without any specific foresight involved. This "lack of foresight"--simply "muddling through"--served all government, groups, and individuals sufficiently-well for millennia.

When the first modern governments were formed for the agricultural societies of Europe and North America in the late 18<sup>th</sup> century, the pace of social and environmental change was still very slow. These new governments were designed to be small and part-time in their operation. However, within 50 years, the scientific-industrial revolution was well underway with new technologies, businesses, institutions, and values emerging almost daily. In the US it was determined that the way to cope with this new and unanticipated situation was not to rethink and re-create governance on the basis of new cosmologies, technologies, and challenges, but simply to add institutions--often called "independent regulatory agencies"--to the government in ways that ignored and often undermined the operations of government as created by the Constitution. These agencies were always created in response to new challenges or opportunities, and sought to "regulate" them. None of them was charged with the duty of foresight. No specifically foresightful governmental agencies were created until well after the Second World War (Social Security--inspired by Bismarck's Germany--might be an exception).

In the 1960s, when a few scholars first became aware that the pace of social change was accelerating, and permanently so, some of them pointed out that governments needed to establish "look outs" or "institutions of foresight" in order to make policies on the basis of the future and not just the past or present. In France, Bertrand de Jouvenel proposed "The Surmising Forum", a public institution "to which experts from many different fields will bring special forecasts so that they may be formed into general forecasts" for public debate and discussion, and then for legislative action.

In *Future Shock*, Toffler presented for the first time a suggestion for a new mode of government called "Anticipatory Democracy". It was an idea that he, Clement Bezold, and others experimentally elaborated in Hawaii, Washington State, Iowa, New York and indeed in Washington DC with the creation of a Committee on Anticipatory Democracy. Representative and later Senator John Culver, of Iowa, inspired by Toffler's work, enabled changes in the rules of the House of Representatives in 1974 to require that all standing committees of the House (except Appropriations and Budget) "on a continuing basis undertake futures research and forecasting on matters within the jurisdiction of that committee". Unfortunately, House Rule X, Sect. 2(b)(1) has seldom if ever been evoked, and standing committees do not achieve the level of foresight the rule intended--though the Rule still stands. Senator Culver also helped establish the US Congressional Clearinghouse on the Future that facilitated futures-oriented discussions among the members of Congress for many years. While he was in the House in the earlier days, the Republican Newt Gingrich often joined with Albert Gore, Jr., a Democrat in the Senate,

to sponsor many futures-oriented pieces of legislation, including one call for a national institute of foresight. Both were very active in the futures community.

Judiciaries in common law jurisdictions, such as the US, exercise considerable policy making powers, and it was the state courts in the US that first began to add futures theories and methods to their strategic planning processes and products. For the decade of the 1990s, the State Justice Institute, a federal agency helping to improve judicial administration in the states, had a separate funding category called "Futures and the Courts" which spurred foresight activities in all of the US state courts, and inspired some work in the federal judiciary as well.

Many nations have created futures-oriented institutions within their existing governance structures. During the 1970s, Sweden had a Secretariat for the Future within the Office of the Prime Minister that in the 1980s eventually became a private think-tank in keeping with the privatization mood of the time. The Scientific Council for Government Policy (abbreviated WRR in Dutch) provided the government of the Netherlands with excellent futures material. They reviewed 25 years of their work in 1997 in a publication titled very cleverly "Wise before the event"--which surely should be a goal of any government, corporation or individual. A national Commission for the Future was created in New Zealand in 1980 and by the government of Australia in 1986. In the United Kingdom, since 1994 a Foresight Programme has been administered the Government Office for Science in the Department for Business, Innovation and Skills, responsible to the Prime Minister.

Perhaps the most futures-oriented governance systems are Singapore and Finland. In Singapore, the Scenarios Planning Office is a division of the Public Service Division, Prime Minister's Office. The Office promotes the use of scenario planning and has published several sets of National Scenarios for Singapore. The Subordinate Courts of Singapore also develops scenarios tailored to the administration of justice in relation to the national scenarios.

Finland has even more comprehensive futures-oriented governmental processes. In October 1993, the Finnish Parliament appointed a Committee for the Future on a temporary basis. The purpose of the Committee was to assist the parliament in evaluating and replying to the Government's proposals on long-term issues. Because of the usefulness of the Committee's work, Parliament decided that the Government should present a Futures Report to Parliament at least once during each electoral period. This resolution generated a unique political dialogue between the Government and Parliament regarding the nation's central future-related issues. In conjunction with a constitutional revision, on December 17, 1999 the Parliament of Finland granted the Committee for the Future permanent status. That Committee continues to do impressive and useful work for the Government and Parliament.

### **Theories of Social Stability and Change.**

In order for anyone to offer advice about the future--whether one is a parent, a teacher, a priest, or a futurist--one needs to have some clear idea of how the world works--what "society" is; what causes society to change; what parts of society change easily and what with difficulty or not at all, and a long list of other facets that must be part of a theory of social stability and change. Unfortunately, many futurists do not have a clearly articulated theory of social change that underlies their forecasts and work in general. This

is probably one reason futures studies has not become a well-established part of academia since academic disciplines should be founded on one or more theories.

However, there are some clear theories of social change, often based on the assumption that changing technologies cause people to behave differently, which changes their values, which then conflict with existing values and institutions which are based on past technologies. Thus many futurists focus on understanding how technological change caused social and environmental change in the past, and how new or diffused technologies might do so in the future.

Other futurists might focus on population growth (and/or decline), energy availability or scarcity, environmental change, climate change, or human agency (most typically "leadership") as the cause of social and environmental change. These theories might themselves be viewed as factors that were themselves caused primarily by new technologies.

### **Methods Futurists Use.**

On the matter of methods, the situation is quite different. There are a large number of methods that futurists use, some of which are unique to futures studies and others of which are common throughout the social and natural sciences. Probably the most frequently used method is "genius forecasting". This technique is typical among people who do not consider themselves "futurists" in any way, but who do somehow feel capable of making pronouncements about the future in the last chapter or paragraphs of what is often an otherwise theory-based, methodologically-rigorous, and heavily-documented book or article. But even the statements of many admitted futurists seem to be based on their individual insights and not on any obvious methodologically-derived foresight. This is an empirical observation and not a judgment. The insights of geniuses may be more useful than the conclusions of methodologists.

The next most common formal method used to make statements about the future is trend analysis, typically linear extrapolations based on the slope of the curve of past and present quantitative data, extended into the future. Many demographic, environmental, and economic forecasts are based upon some kind of extrapolation from past and present data, often resulting in three future trend lines showing high, medium and low values. Typically, these trend lines are projected so as to appear to continue "forever" into the future, being arbitrarily truncated at some particular future date. Of course, social and environmental trends do not continue forever. They typically are "unexpectedly" interrupted, reversed, or transcended by other trends or events. Trend analysis may thus better illustrate the limits of extrapolation rather than providing truly useful information about the future, however widespread trend analysis might be in practice and regardless of how many policies are based solely, alas, on the continuation of trends.

Trend analysis is often part of a number of techniques used in what is broadly called "environmental scanning"--metaphorically looking at and over the horizon for trends and, often, emerging issues, sometimes called "wild cards". Trends track continuities in historically measurable variables. Emerging issues look for developments in their earliest stages of appearance. Emerging issues analysis derives from the fact that everything that now is, at one time did not exist. Everything that is starts as a small "seed" that barely pops into visibility before eventually taking off and becoming a full-

blown problem or opportunity for decision-makers and the general public to deal with, either then to persist, die out, or loop down only to re-emerge again in the future.

Many futurists look for things in their earliest stage of development by scanning for new ideas, technological prototypes, new lifestyles, and other indicators of what might eventually become trends and then problem/opportunities. Because emerging issues are by definition hard to find, generally not acknowledge to exist, and often something shockingly novel, many people (including decision-makers) often reject information about emerging issues, unable or unwilling to be concerned with them until they are at least empirical trends or full-blown problem/opportunities by which time they have become so shaped and structured as to be difficult to manage.

The next step in the development and use of methods is to recognize that "the future" is composed of more than just one growing, stable, or declining variable, and to seek to find mathematical and otherwise formal ways to combine several variables into single or multiple indicators showing the interrelations and feedback mechanisms of the many variables upon each other according to differing rates of inputs and flows throughout the system. These frequently are dependent on computer modeling of some kind, and are widely used in economics, weather and climate change, technological, and military forecasting, with varying degrees of success or failure in terms of "prediction". In the end, computer models of social change are probably better at helping the modeler clarify her assumptions about the way the world works than in reliably predicting the future of a system, as the failure of the highly complex models used by fiscal advisors and economic policy makers revealed in late 2007. Nonetheless carefully constructed and transparent computer models are of great utility, especially when not uncritically believed, and when used with other methods.

Given the limitations of mathematical modeling and the complexity of social futures, the most frequent way to bundle together a number of variables is to construct scenarios--formal stories about how a number of variables might interact to result in some kind of future. Typically, several different scenarios are written with the values of the components of each scenario varying according to certain assumptions and possibilities. A preferred scenario might then be created and used as the basis of planning and policy making--something then called scenario planning.

Scenario planning is very widespread in business and in some government organizations. An important variation of scenario planning is alternative futures analysis, the core difference being (1) the futures are based on profoundly different theories of how the world works (whereas the range of most scenarios is generally quite narrow and "realistic"--often the result of a two-by-two matrix) and (2) the futures are examples of one of four "generic alternative futures" empirically based on images of the future found dominant in societies and other organizations. Alternative futures are typically also used in futures visioning workshops where participants "experience" different futures, and discuss what new and old challenges and opportunities they might present, compared to the present. Sometimes the alternative futures are not merely written down, but are complex simulations with entire rooms designed to represent different futures, with actors and props heightening the verisimilitude. Experiencing alternative futures should come before visioning preferred futures.

Delphi is probably the first true futures methods, having been invented by the scientists and engineers at RAND who were more comfortable with quantitative methods

and yet had to work with fuzzy human opinions in arenas of great uncertainty. Delphi is a way to get a group of anonymous people (usually experts in a relevant field) to engage in an iterative series of questionnaires, typically about when some technological breakthrough will occur and what might happen if breakthrough A occurs before or after breakthrough B. The method attempts to get experts to argue their positions publicly, but without revealing their identities, until the group agrees on a forecast without allowing the prestige (or unpopularity) of any particular experts to influence the judgment of rest. Delphi is one of the most frequently used specifically futures methods, and has assisted many corporations and governmental agencies in forming policies for the future.

A related method, simple enough that any child can use it, and yet often yielding valuable and unexpected insights, is the futures wheel. It is a way to identify some primary, secondary, tertiary (or more) consequences of a specific technology, event, or trend. Like Delphi, this is a technique specific to futures studies, and was invented by Jerome Glenn when he was a graduate student at Antioch University New England in 1971. It can be used by individuals or groups and by school children or CEOs with equal ease. A technology, event, trend or the like is written in the middle of a piece of paper and a circle drawn around it. Initial consequences of that development are then brainstormed and written around the initial event. They are also circled, and straight lines drawn from them to the initial event, the result looking like the spokes of a wheel. The event might have both positive and negative--and indeed contradictory--impacts and these are all written around the event until all initial impacts that can be thought of are listed. Then, each of the initial impacts is considered separately as an event, and all of the impacts from each of the initial impacts are similarly written around each of them with spoke-like lines drawn to them--and so on until a more or less complex set of primary, secondary, tertiary or other impacts from the initial event are listed on the paper.

The primary purpose of a futures wheel is simply to begin to think about the possible consequences of some new or impending development. These impacts can then be used as data for the creation of alternative future scenarios about the impacts of the initial event in order to develop a logic of the interrelationship of variables and the consequence of one temporal sequence compared to others.

A more recent strictly futures method (or at least formal perspective) is causal layered analysis (CLA) developed by Sohail Inayatullah. CLA is a structured way of looking past the surface issues that concern most popular futures thinking, and coming to grips with the deeper layers of understanding and misunderstanding that may more fundamentally constrain or define the surface issues. CLA asks futures-oriented persons to consider four levels of analysis. The first level is the "litany"--the typical list of woes (or glories) that someone says lie ahead that we absolutely must prevent (or grasp) before they overwhelm us. Even though we are urged to act, we often are made to feel helpless, and thus become immune and apathetic, waiting for the next Cassandra (or Pollyanna) to proclaim tomorrow's new tragedy (or triumph). Our news media thrive on the litany often provided by pop futurists.

Of course, their concerns are often not wrong. It is only that they tend to be exaggerated, and the superficial analysis offered never gets below the surface to possible underlying causes (and solutions) found at the second level of analysis where scholarly, political, or ideological interpretations are provided. This is the level of reason and rational discourse and debate, of futures think tanks and policy wonks.

Often ignored are the third and fourth levels. The third is the foundation of fundamental beliefs and worldviews, widely held and seldom examined. Differing interpretations of the litany and its causes and cures are found submerged at this third level so that people holding differing perspectives speak across each other, never heard or understood because of the mystification as well as insight their worldviews provide. Unpacking this level is the domain of futurists with rich grounding in history, philosophy, religion, anthropology and the arts and humanities.

The fourth layer is that of myth, of profoundly affective reoccurring themes that go deep into the epic stories and struggles of one's culture, unconsciously framing everything we see, say, or do at the upper levels. Eric Fromm's notion of the collective unconscious is one example of the mythic layer. Myths and mythic metaphors are beyond reason and rationality and are the seat of emotional, visual, intuitive understandings.

Another comparatively new development in futures studies was the rise of future generations analysis in the late 1980s and early 90s. One compelling definition is that "future generations" are not primarily one's own children and grandchildren but rather people whose lives we will influence by the way we live our lives, but who we will never meet nor they us, and who thus can never thank or chide us for what we have done to or for them. Since all ethics is based on reciprocity (*i.e.*, "Do unto others as you would have them do unto you"), we live in a world where (because of our powerful technologies) "we" can "do" to future generations, but "they" can not "do back" to us. Scholars concerned with future generations seek to find ways to encourage present generations to recognize and act on their ethical obligations to future generations--a new ethical issue and a gigantic human challenge.

Age-cohort analysis derives from the observation that people born during the same time interval and effected by similar child rearing practices, food availability and habits, wars or there absence, new technologies, fads and fashions, and "galvanizing experiences" that define them as an "age-cohort" may differ, often significantly, from cohorts somewhat older or younger than they who experienced different child rearing practices, food, wars, technologies and experiences. This is fairly well-known in sociology and while it can explain differences, it can not anticipate what the features of future cohorts might be in contrast with present or past cohorts.

In their book, *Generations: The history of America's future, 1584 to 2069* (1991), William Strauss and Neil Howe offered a convincing theory with considerable evidence that America's history from the earliest times and into the future was, is and will be characterized by four generic types of age-cohorts that follow in predictable succession. The four were initially labeled "Idealists", "Reactives," "Civics", and "Adaptives". To put it crudely, Idealists have a bright new idea, but are not able to bring it to dominance. Reactives go back to the ideals of earlier generations. Civics live the ideals that the Idealists could not. And Adpatives try unsuccessfully to live by the now-worn-out ideals but have no new ideals of their own--until a new generation of Idealists are born and the cycle sets on again.

While the theory has been criticized, it has also been widely used, both popularly and professionally in many parts of the world beyond the US, and seems to have some compelling utility since it is an example of how manifest generational differences might have an underlying cyclical basis that enables strong statements to be made about the values and behavior of future generations.

Probably the most famous and respected theory and method of social change analysis based on cycles is that of the Russian Nikolai Kondratieff. His is a theory of economic long waves found in society, a cycle of rise-> prosperity-> decline-> depression-> recovery-> and rise again. Even though Kondratieff did not say so, his theory may be related to the life-cycles of technologies, especially to historical fundamental shifts in sources of energy beginning with water power, then the steam engine, coal, and now oil (an energy source nearing its end). Kondratieff Long Waves (KWaves) are approximately 50-60 years long.

The first long wave that Kondratieff identified began around 1789 and peaked in 1814. The second began in 1843 and peaked in 1864. The third long wave began in 1897 and peaked in 1920, while the fourth began in 1932, peaked in 1974, and reached its end around 2002, when a new, 5th wave began, based on some energy/technology yet uncertain. If KWaves are mapped with Strauss and Howe's age-cohorts, then the world of the early 21<sup>st</sup> Century might be in the initial stages of a rising KWave that will be managed by a generation of highly-motivated, well-educated, and team-playing Civics (often called "The Millennials").

### **A Few Concluding Words on Terminology.**

Few terms that futurists use are commonly defined by all futurists. We have tried to distinguish in this essay between a “prediction” which intends to be a true or accurate statement about the future, from a “forecast” which (while not intending to be false) aims to be logical and useful. We argue that while “prediction” is impossible, “forecasting” is possible and essential before proceeding to “envisioning and inventing preferred future” which is the main point of most futures work. Not all futurists make this clear distinction.

Also, from this understanding, futures activities are intended to be useful to policy-makers and day-to-day decision makers, but seldom directly so. Rather, futures activities should precede and inform planning and policy making which then guides decision-makers in their day-to-day activities. Since most planning is done without any rigorous futures work of any kind, this may be one reason why so many plans quickly fail, as the future that is hidden but implicit in a plan quickly is rendered obsolete by developments wholly unanticipated by the plan—but which might well have been identified and planned for if prior futures activities had been undertaken.

A complete set of activities for determining the preferred future and strategic plan of an organization (corporation, nonprofit, community, nation) might follow this sequence:

1. Articulation of the guiding **theory of social change**.
2. Identification of the **categories for the major driving forces** according to theory.
3. Understanding the **history** of these forces and of the organization/factor
4. The **present** condition of the organization/factor and the forces.
5. **Summary of existing forecasts** on the future of X in terms of existing "images of the future" and the four generic futures.
6. Dominant **trends** as identified using some futures methods (there are many possible methods useful for this)
7. Dominant **emerging issues** or other factors that might interrupt trends and/or create new ones (using the Molitor/Dator method).

8. Creation of and experience in specific examples of **generic four alternative futures**.
9. **Futures visioning** workshop.
10. Creation of one or more **preferred futures**.
11. Development of **strategic plan/sector plans** based on preferred future(s).
12. Determination of specific **personnel, policies, and funds** for carrying out the plans.
13. Day-to-day **decisions by personnel** on the basis of the policies.
14. **Institutionalization of futures research**.
15. **Continuous evaluation** of the preferred futures and plans, and periodic **repeating of the entire process**.

Many years ago, Richard Slaughter developed a continuum of futures work that put hard-core quantitative work at one end, segueing gradually into soft-core qualitative work and then on to futurism (futures movements) on the other. Generally speaking, “futures research” is found at the quantitative, largely "objective" research end; “futures studies” is in the softer, qualitative and often academic and/or applied middle; while "futurism" calls for action towards (or against) some specific future. There are probably more examples of futurism than of either futures research or futures studies, but keeping futurism separate from both futures research and futures studies is important.

Futures, with an “s”, is sometimes used as a generic term for the field, with the “s” capturing the fundamental plurality and openness of the futures in contrast to the narrowness and predictability of a single “future. The term "futurology" is sometimes used but somehow sounds wrong in English though acceptable in many other languages--which also use terms like prognosis, prognostics, and prospectiva. "Futuristics", once popular, has fallen out of favor. "Futuribles" is a French term indicating that the future is the realm of "possible" "Foresight", widely used to describe attempts by governments to look ahead, is also sometimes used to describe the entire field.

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