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Back to the Future: Projects & Project Management to Meet
Basic Human & Social Needs
or
Malthus and Maslow Revisited!

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Introduction

In the northern hemisphere, this is harvest time, the Autumn season when crops are harvested, children return to schools, thanksgiving celebrations are held and families begin preparations for the winter months. Shopping for food and clothing is common; elections are held; governments reconvene; routines are renewed throughout modern society. This is the world that many of us live and work in. But it is not the reality for much of the world's population.

According to a report from the US General Accountability Office on 29 October 2009, the number of undernourished people worldwide now exceeds 1 billion. According to the United Nations (UN) Food and Agriculture Organization, in sub-Saharan Africa 1 out of every 3 persons is undernourished or starving. [1] While the UN, the World Bank, many governments and many non-governmental organizations (NGOs) are trying to address global hunger, the problem is not being solved very rapidly, and not quickly enough for those who are starving. Is this due to rapid population growth (e.g. Malthusian projections?), lack of global coordination, regional politics, or other reasons?

Population growth and acute poverty result in more than just hunger; many people are homeless or otherwise without shelter. Many do not have clothing, healthcare for themselves or their children, personal safety or security, education and other basic services. For a huge percentage of the global population, basic human needs are going unmet. The developed world is beginning to help, but developing economies and nations continue to struggle with these twin problems – population growth and poverty. For some countries, population growth is leveling out, as education has become more available, as birth control increases and fertility rates decline, women enter the work force, and standards of living begin to increase – however slightly. According to *The Economist* news magazine, fertility rates are dropping rapidly in some parts of the world and “the population problem is solving itself”. [2]

So what does this have to do with project management?

Over the last 18 months, I have given a lot of thought to new industries where projects and project management are bound to grow, representing future opportunities for project management and project managers. Several of those exciting new areas of application have been featured in previous editorials in this publication, for example, nanotechnology [3], future energy [4], earth sciences and climate control [5].

It has now occurred to me, however, that much older industries might actually offer even bigger opportunities for project management to grow and to have a major impact on society. That is, industries that provide basic human products and services such as agriculture, food production, water, housing, basic medical care, basic energy, education and other basic services represent enormous future demand for projects and project management. In order to address the needs of 20-30% of the world's populations, massive investments in these industries will be required. Literally all of that investment is likely to be in the form of programs and projects, many financed by international institutions and governmental bodies. All of those programs and projects will need PM.

In order to fully appreciate this topic, however, some historical perspective is needed and some global trends revisited.

Thomas Malthus and Global Population Growth

According to *Encyclopedia Britannica*, **Thomas Robert Malthus** was an eighteenth century English Economist and Demographer (1766 - 1834) "who is best known for his theory that population growth will always tend to outrun the food supply and that betterment of humankind is impossible without stern limits on reproduction. This thinking is commonly referred to as Malthusianism." [6]



According to the same article, "In 1798 Malthus published anonymously the first edition of *An Essay on the Principle of Population as It Affects the Future Improvement of Society, with Remarks on the Speculations of Mr. Godwin, M. Condorcet, and Other Writers.*" The work received wide notice. Briefly, crudely, yet strikingly, Malthus argued that infinite human hopes for social happiness must be vain, for population will always tend to outrun the growth of production. The increase of population will take place, if unchecked, in a geometric progression, while the means of subsistence will increase in only an arithmetic progression. Population will always expand to the limit of subsistence and will be held there by famine, war, and ill health. [6]

Believing that one could not change human nature, and that egalitarian societies were prone to over-population, Malthus wrote in dramatic terms: "epidemics, pestilence and plague advance in terrific array, and sweep off their thousands and ten thousands. Should success be still incomplete, gigantic famine stalks in the rear, and with one mighty blow, levels the population with the food of the world." Malthus became hugely influential, and controversial, in economic, political, social and scientific thought. Many of those whom subsequent centuries sometimes term "evolutionary biologists" also read him, notably Charles Darwin and Alfred Russel Wallace, for each of whom Malthusianism became an intellectual stepping-stone to the idea of natural selection. Malthus remains a writer of great significance, and debate continues as to whether his direst expectations will come about. [7]

Malthus noted "that while food production tends to increase arithmetically, population tends to increase naturally at a (faster) geometric rate... The adjective "Malthusian" is used today to describe a pessimistic prediction of the lock-step demise of a humanity doomed to starvation via overpopulation.." [8]

Malthusian predictions suggest that as population growth continues, so will hunger, famine, disease, war and other consequences increase to bring population into equilibrium with food production. But clearly we have the knowledge and technical ability now to feed the world's entire population, so what is the real problem?

Donald McNeil described the situation brilliantly in his New York Times article in June 2008 entitled "Malthus Redux: Is Doomsday Upon Us, Again?" According to McNeil's article last year, *"While Americans grumble about gasoline prices, food riots have seared Bangladesh, Egypt and African countries. In Haiti, they cost the prime minister his job... countries like China, India and Indonesia have restricted exports and rice is shipped under armed guard... And again, Thomas Malthus, a British economist and demographer at the turn of the 19th century, is being recalled to duty. His basic theory was that populations, which grow geometrically, will inevitably outpace food production, which grows arithmetically. Famine would result. The thought has underlain doomsday scenarios both real and imagined, from the Great Irish Famine of 1845 to the Population Bomb of 1968. But over the last 200 years, with the Industrial Revolution, the Transportation Revolution, the Green Revolution and the Biotech Revolution, Malthus has been largely discredited..."* [8]

He continued, *"The whole world has never come close to outpacing its ability to produce food. Right now, there is enough grain grown on earth to feed 10 billion vegetarians, said Joel E. Cohen, professor of populations at Rockefeller University and the author of "How Many People Can the Earth Support?"... Theoretically, there is enough acreage already planted to keep the planet fed forever, because 10 billion humans is roughly where the United Nations predicts that the world population will plateau in 2060... Even if fertility rates rose again, many agronomists think the world could easily support 20 billion to 30 billion people... Anyone who has ever*

flown across the United States can see how that's possible: there's a lot of empty land down there. The world's entire population, with 1,000 square feet of living space each, could fit into Texas..." [8]

If *The Economist* is right, education and economic growth in some parts of the world are leading to dramatic declines in fertility and birth rates in many countries. The fertility rate in half the world (3.5 billion of 7.0 billion) will be at or below 2.1 (the theoretical replacement level) by 2015 – including Brazil, China, Iran, Japan, Russia and most of Europe and North America. Benefits of lower fertility, and lower population growth rates, include more women in the workforce, fewer dependents at home, higher productivity, higher economic output, higher savings rates and disposable income, and more rapid economic growth. [10]



So the world's population is now expected to stabilize around 9 billion around 2050. What measures and investments are needed, and what programs and projects will be initiated to feed the world's entire population?

Why should we care? And is food the only problem?

Abraham Maslow's Hierarchy of Human Needs

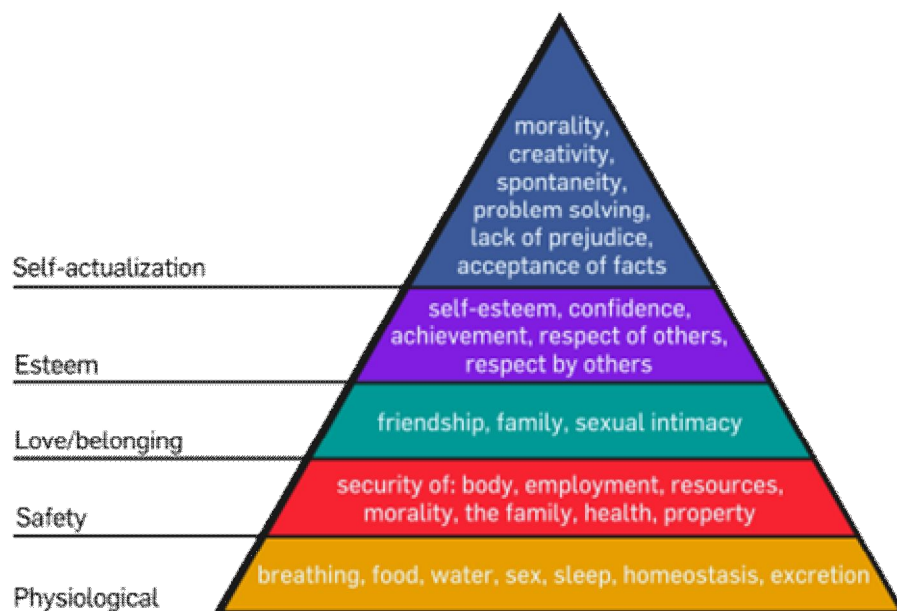
According to Wikipedia, and for those who did not have to study Maslow at University at some point like I did 40 years ago, **Abraham Harold Maslow** (April 1, 1908 – June 8, 1970) was an American psychologist. He is noted for his conceptualization of a "hierarchy of human needs", and is considered the founder of humanistic psychology. [11]



Humanistic Psychologists believe that in every person there is a strong desire to realize his or her full potential, to reach a level of Self-actualization. To prove that humans are not simply blindly reacting to situations, but trying to accomplish something greater. To prove this Maslow studied mentally healthy individuals instead of people with serious psychological issues. He realized through his studies that individuals experienced "peak experiences" which are the high points of life, when the individuals believe they are at harmony with themselves and their surroundings. [11]

Maslow created a visual aid to explain his theories; he called it the Hierarchy of Needs. It is a pyramid that depicts the levels of humanistic needs, psychological and physical. When a human being executes the steps of the pyramid then that individual will have reached self actualization. The bottom of the pyramid is the “Basic needs” of a human being, food and water. The next level is “Security and Stability.” These two steps are important to the survival of the person physically. Once the individual has basic nutrition and shelter then they instantly look to accomplish more. The third level is “Love and Belonging,” this is a psychological need, once the individual has taken care of themselves physically then they are ready to share themselves with others. The fourth step occurs when the person feels comfortable with what they have accomplished then they have reached the “Esteem” level. This level is success and status. The top of the pyramid is “Self-actualization” that occurs when it is believed that the individual has reached a state of harmony and understanding. [11]

Maslow's hierarchy of needs is predetermined in order of importance. It is often depicted as a pyramid consisting of five levels: the lowest level is associated with physiological needs, while the uppermost level is associated with self-actualization needs, particularly those related to identity and purpose. The higher needs in this hierarchy only come into focus when the lower needs in the pyramid are met. Once an individual has moved upwards to the next level, needs in the lower level will no longer be prioritized. If a lower set of needs is no longer being met, the individual will temporarily re-prioritize those needs by focusing attention on the unfulfilled needs, but will not permanently regress to the lower level. [12]



Maslow's Hierarchy of Needs

According to Maslow's model, with physical needs relatively satisfied, the individual's safety needs take over and dominate behavior. These needs have to do with people's yearning for a predictable, orderly world in which injustice and inconsistency are under control. Safety and Security needs include:

- Personal security
- Financial security
- Health and well-being
- Safety net against accidents/illness and the adverse impacts [12]

While many psychologist dispute or downplay Maslow's model and influence, it has become part of our lexicon because it seems logical. It makes sense that those who don't have food, water, homes or security cannot and will not be thinking about very much else. People who are struggling to survive will not be thinking about productive work, solving social problems, achieving personal 'self esteem", or worrying about too many other people (or society at large).

Now, returning to the topic of population growth and the 20+% of the world's population who are undernourished, it seems to me that the needs are more than just food. According to Maslow's hierarchy, and common sense (and many news articles every day), the needs are food, water, safety, beds and homes to sleep in, basic medical treatment, and so forth – for both parents and children. If you consider Maslow's safety issues, there is also the need for education, employment, safety, security, family health, emotional and psychological health, and other basic social services – for the same population or more.

Context – Some Global Trends Revisited

Now when we consider population growth, hunger, poverty and the basic needs mentioned above in the context of some well established global trends, the relevance becomes more apparent to me. Here are a few:

Economic Globalization – As local, national and regional economies become more integrated, local and regional social problems can be felt around the world. That is, social and economic turmoil due to unbalanced populations, poverty, famine, or social unrest can disrupt economic activity worldwide.

Geopolitical Trends – Population imbalances, extreme poverty and social problems due to basic human needs not being met lead to economic and political instability, regional conflicts and international strife. Whether in the Horn of Africa, flooded delta of Bangladesh, or slums near large cities around the world, conditions of destitute and desperate humans breed crime, disease, extremism, futility and other problems – that create instability and problems elsewhere.

Refugees & Migrations – Local and regional conflicts create refugees that lead to homelessness, poverty, crime and other social problems. Poor people are also migrating on a global basis in search of better lives, often seeking solutions to Maslow's lowest level of needs – food, shelter, life.

Climate and Environmental Changes – Whether we believe that global warming is due to human activity or not, we are all more aware of climate change and the potential impact on the environment caused by certain industries and activities. The environmental effects of economic activity, and poverty, are also becoming more clear; its all related after all. And the effects are often global – the glaciers in Ecuador and Greenland are melting; the Snows of Kilimanjaro are all but gone.

Extreme Weather – Natural disasters also seem to be increasing on a global basis, including earthquakes, fires, floods, hurricanes, tornadoes, tsunamis, and typhoons. The sea levels are rising; the land is sinking. And every natural disaster causes death, homelessness, hunger, diseases, economic impacts and other problems – in developed and developing countries alike.

Global Communications – People everywhere are connected now, by telephones, television and the internet. More people worldwide now know where the poverty and famines are, where overpopulation exists, where disasters hit, and where the big social problems and needs are. We can no longer claim ignorance of the world's problems, of so many people dying from lack of food and water. And besides, poor people in remote villages now have cell phones and laptop computers – and CNN has implemented "iReports"; anyone can report the news from anywhere.

Rapid Technological Changes – Technology continues to advance. Today technology offers potential solutions to population growth, food production and distribution, shelter, communications, basic healthcare, safety, security and all other needs at the bottom of Maslow's hierarchy. How can that technology be brought to bear on these global problems? How can technology help satisfy basic human and social needs?

Implications

The following implications emerge from the above:

- As predicted by Malthus, population growth continues to lead to food shortages, famines, conflicts, population imbalances and migrations, and other social problems in some parts of the world.
- Famines, homelessness, diseases and other physiological needs are created by natural disasters, regional conflicts (and wars), social unrest, economic imbalances and even local politics.

- Those suffering from hunger generally also have the basic physiological needs identified in the bottom two levels of Maslow's Hierarchy of Needs.
- Extreme hunger, homelessness, poverty and instability among major segments of the world's population lead to crime, diseases, extremism and negative economic impacts on other parts of the world – basically draining resources, even causing additional environmental harm.
- Hungry, undernourished, homeless, unhealthy and insecure people do not and cannot focus on contributing to the economic or social well being of society – therefore, an economic drain rather than adding value.
- Technology already exists to solve or resolve all of the issues associated with population growth, hunger and poverty; we have enough land and resources to feed everyone now.
- Global population, hunger and poverty problems are highly visible, due to modern global telecommunications technology.

As awareness and knowledge grow, regarding both the problems and the potential solutions, I believe that more investment will be directed to addressing these issues. That investment will necessarily occur via programs and projects, financed by international donors and institutions.

Back to the Future: Programs and Projects in Old Industries

The global economic downturn in 2008/2009 led to massive public investment, aimed at stimulating economies and creating jobs. Much of that investment has been into infrastructure. In North America and Europe, that infrastructure has included transportation (roads, rail, air, ports, etc.), internet and telecoms, healthcare and education. The architectural, engineering and construction industries have benefited from these programs. But investment across the spectrum of human and social services is needed in much of the world, and in particular in Africa, Asia and Latin America.

Many of the industries affected have existed since before the industrial revolution; all industries, however, have benefited from technology and especially the information age. Because basic human needs are met by basic industries, many that have existed for decades (if not centuries), I call them "old industries". I believe these old industries are poised for massive investment in programs and projects. This is why I call it "back to the future", it is back to the future of PM in old industries. Here are a few examples.

- **Agriculture and Food Production** – Revolutionary changes are underway in agriculture today, as information technologies, genetic engineering,

improved meteorology, weather predictions and other advances are changing farming methods, increasing productivity and leading to higher yields and production. This is occurring worldwide, but especially in Africa where food production needs are great. Food production and distribution is also changing, due to increased trade, global transfers of technology, global mergers and acquisitions, global governmental cooperation, and other measures are taken. The bottom line, however, is that the increased global population needs more food. Of course, advances occur in developed economies, in cuisines, food sourcing, food quality, nutrition, transportation, processing, and other factors associated with food safety and supplies. Like other industries, more programs and projects could use professional PM.

- **Water Supply & Treatment** – Water and wastewater treatment is a large and growing industry worldwide. Every community in the world needs potable water and sewage treatment. In addition, portable water treatment technology continues to advance. Like food, water is a universal need. More clean and drinkable water is needed in many parts of the world. In addition, climate change, droughts and floods have affected water supplies in many locations. This is an industry that should continue to grow for many decades.
- **Clothing** – Clothing is an often overlooked commodity in developed economies, which many of us take for granted. Clothing, however, satisfies basic human needs for body coverage, and to keep us warm and protected, especially for young and elderly people. Fashion is a luxury in many countries; clothing is a basic need among the homeless and poverty stricken. The clothing industry represents a big manufacturing opportunity in many regions where overpopulation and poverty exist. More investment is needed in many areas, and projects will include business startups, new facilities and plant, new technologies and designs, human resource projects, business development and others.
- **Housing & Shelter** – Housing is also a constant need for humans. This is an old industry that will continue to grow and change over time, and represents enormous future investment worldwide. While homeless and poverty stricken people need shelter, everyone in the world needs a building to live in. In the United States, the housing industry represents a huge portion of the economy; witness the impact on the US economy when the mortgage and housing industries tanked in 2008. The same was true in Europe and elsewhere. The entire housing industry is project-oriented; the industry needs everything the project management profession has to offer.
- **Medical & Health Care** – A major topic in the USA this year, basic medical and health care is a massive need worldwide. The World Bank and UN have large investment portfolios; NGOs are also financing medical and healthcare initiatives, programs and projects. In those countries where medical care is

being introduced, however, projects and programs are the norm. Whether to establish a new clinic, new service or new treatment, medical projects are widespread among

- **Education** – Basic education is needed for more children worldwide. There is a great need for more and better schools in many communities in North America. In many parts of the world, however, there are no schools at all, no education available. This seems shocking in the 21st century, but education is simply another basic need among the homeless, displaced, and poverty stricken populations in many countries. New schools are needed, new classes, entire new programs, new teachers, new technologies – many programs and investments in all aspects of the education field are needed.
- **Transportation** – Personal and public transportation are needed in every community, everywhere in the world. Transportation leads to economic activity, which leads to growth and other solutions. Massive investment are needed in public transportation infrastructure; as populations increase, even more public transportation options will be required. Every transportation project needs professional PM, and employs many organizations and project managers. The personal transport industry is also poised for massive change and investment, as transportation fuel changes from oil to renewables.
- **Energy** – Sources of energy are needed in half the world, but especially among poor and rural communities in developing countries. Energy is a basic requirement for cooking, heating shelters, and basic economic activity. Without energy, economic growth is impossible. New, renewable and portable energy supplies are needed wherever hunger and poverty exist. In the modern world, energy is a basic need.
- **Communications** – Communications is also now considered a basic right in many countries; just this month, internet access became a universal right in several Scandinavian countries, with more expected to follow. In North America, cellular phones are considered a basic security requirement for most women – they are in my family – and are extremely useful everywhere. In much of the world cell phones are widespread, leading to economic development. Both the UN and World Bank are emphasizing investments in Information and Communications Technologies (ICT) in emerging economies.
- **Security** – Basic security services are needed in every community, no matter how rich or poor. Police forces are being formed, trained and improved worldwide, to prevent crime, to protect people and property, and to stabilize populations. This is an under-appreciated field where massive investment will occur in the future as more attention is provided to security rather than national defense. As wars become less common, global cooperation for security purposes will increase. More programs and projects will result.

When we consider the investments, programs and projects needed in these industries to satisfy the basic needs of several billion people worldwide, the potential impact becomes more obvious. Each of these industries will see trillions of dollars of investment worldwide in coming decades; and nearly all will be implemented with programs and projects.

Opportunities for Program and Project Management

Needless to say, where there are programs and projects, there will be a need for program and project management. The need for PM in these sectors will grow dramatically over the next few decades, in my opinion, and especially in developing economies. But the need and opportunities will exist up and down the supply chain, from the financial organizations/donors at the top to the implementing agencies and governmental bodies in the middle, to the suppliers at the bottom who implement the projects.

Mature and experienced project managers who are also well versed with program and portfolio management concepts and knowledge should be in high demand. Certainly the need for their expertise should be obvious; the question is whether policy makers and industry leaders will recognize this fact.

Conclusion

This article was an opportunity for me to voice an opinion on this important topic. I think the world will begin to address global hunger, poverty and social problems in a more serious manner in the future. These problems are becoming more visible each year, as global communications improve and our interconnectedness becomes more apparent. Solving these problems will be in our own best interest. It seems to me that if we can help more people become healthier, more productive, and more integrated into the global community, the planet will be better off.

We should all see ourselves as global citizens now. Better program and project management can help us all make the world a better, more secure place to live.

If you have a comment, question or reaction to this article, please let me know.

Good luck with your projects!

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