

www.better-management.org provides invaluable insights that will help you understand and deliver better organizational performance.

Better-Management Newsletter 30 July 2015

An assessment of where the world is currently at, and where it appears to be going

This is probably a good time to take a step back from the events of the day and have a look at some forces that have determined both our present and our future. What is most important about this summary is that it under-pins the selection of material that I have been circulating. After all we have some sort of bias and for anyone who doesn't read all my emails, my bias may be rather obscure or disconnected. My bias has evolved due to what I have read, learned or observed.

Sadly, I was never taught any versions of history that seem relevant to the present day circumstances the world now finds itself in. So I will try to describe the facts/circumstances that I deem important – although many of these can only be estimated. This is just my take on history from my readings and I will provide a list of those books and philosophers who have influenced me. Feel free to accept, reject or comment on this stuff as you wish...

1. We are told that the universe began with a big bang, some 13.7 billion years ago, and around 4 billion years ago the Earth coalesced from gases and particles attracted by the gravitational pull of large objects in our general area. Human's pre-history was a time when continents and oceans formed and various species came and went. Some 200,000 years ago humanity ascended from the animal world. At about 10,000 BC our species started to exert influence over our environment by making and using rudimentary tools and fire. At some point the wheel was invented and we went through the copper and bronze ages as we learned to farm from seeds and domesticate animals for our purposes...mainly as a source of energy and transport. From 10,000BC onwards, human artefacts provided some indication of the conduct of primitive societies and by 1AD we had the iron age which marked the time when mankind became the apex predator and able to affect the survival of all other species. For many observers, this marked the beginning of the new Anthropogenic age.
2. Although there are many good books that chronicled the end of the Roman empire, there is just one modern book that takes the rise and fall of all civilisations and societies that occurred between about 6,000BC and the present. This was written by Joseph Tainter (an archaeologist) called "The Collapse of Complex Societies". In many places humanity has established its own various attempts at a version of civilisation, but these have been marked by over-reaching due to our main flaw – greed. We always want more and as a species we always see growth in wealth as our prime objective. The findings of archaeologists have pointed to the collapse of these numerous societies as originating from their exhaustion of accessible resources (food, water, energy etc) and the increased complexity of society which made change far too hard to achieve before collapse set in. In many cases there were competitors, but they simply appear to have taken advantage of collapse, rather than holding any military or economic superiority.

3. If we track the numerical ascent of man, we can chart population growth as being about 270 million by AD1. At that time, humans and their domesticated livestock were only between 5-7% of all land mammals. Then over time and despite plagues and feudalism our population increased to about 500 million by 1500AD. At that time, some 96% of (male) humanity was employed in finding/growing food. Most of the remaining 4% were employed in “service/military” or the “Church”. Human exploration from that point identified many oceans and lands that were available for conquest. The population only increased to 1 billion by about 1810AD when the industrial revolution had started due to the use of coal as a primary energy source and much of the population growth led to emigration into new lands where agriculture was possible, but not generally either practised or intensive. That in turn enabled the invention of many labour-saving machines. At that time the population of Europe was “full” according to the writings of Rev Dr Thomas Malthus. Emigration and the impact of the industrial revolution made Malthus’ writings quickly obsolete.

4. In 1859 the first oil well at Titusville in Pennsylvania was drilled. It only took a further 110 years for global population growth to reach 2 billion in AD1920. By then oil had become a significant energy source, with the start of the industrial age of oil able to be timed from the conversion of the British Navy from coal to oil. As a more intensive and portable energy source than coal, this fossil fuel caused economic growth from innovation to rapidly increase as other uses of the fractions of oil not suitable for transport were found (i.e. including plastics). Population growth has been exponential as a result..aided by first the development of natural gas as an energy source (and fertiliser) and nuclear energy from 1948...by which time the global population was about 2.7billion. The way the oil industry grew and came to dominate geopolitics of the 20th and 21st centuries can be seen from this Al Jazeera article ... warning...it is a bit long...

<http://www.aljazeera.com/programmes/specialseries/2013/04/201344105231487582.html>

5. As of the present day, the global population is 7.28 billion. The trend of population movements from country to cities has rapidly increased and the mechanisation and fertilisation of farms has assisted a trend from there needing to be 96% of males in Agriculture before the industrial revolution, down to 6% within developed countries today. Oceans are being extensively exploited and also used as a convenient sink for much of our waste. Productive land is for the most part being fully used where availability of water and economics allow. Any growth would need to be offset by top soil loss in existing lands. The cheapest and most accessible oil and gas is now either used up, or will be within the next 10-15 years (probably marking for future generations, the end of the industrial age of oil) and the energy needed to extract the three main fossil fuel sources is far higher, at some point leaving net energy produced from fossil fuels about to go into terminal decline, sometime in the next 15 to 20 years. Naturally we as individuals and as society, will only cease using a particular energy source, when either there are better alternatives (the stone age did not end because we ran out of stones), or the value to us of – say – oil, is less than the cost. Arguably the main sink for carbon fossil fuel residues is into the atmosphere... and from this comes the current fashionable pre-occupation with the likelihood of atmospheric wastes and pollution causing global warming as an effect dominating natural global heating and cooling cycles. This brings us to the point where humans and our livestock are

approximately 97% of all land mammals and the wild fish catch is now reducing, year on year.

6. Since 1850 the advances in the sciences have been huge, leading to greater and greater specialisation and analysis of matter, the universe and resources available to humanity. Even so, the law of diminishing returns has become evident already from human scientific achievement, where arguably the inventions of today are more associated with ease, entertainment, comfort and travel – rather than true physiological needs. Today there are apparently more scientists alive than have ever lived during the history of our species. So, despite advanced mechanisation and computers, we still have not been able to develop an inexpensive, fungible energy source to replace fossil fuels – even though, for many of the scientists working on atomic energy in the late 1940s and early 1950s, that was a primary motivation for their effort. The human condition of perpetual greed, continues to impel us towards perpetual growth despite the physical limitations of resources in our finite world. There are many places you can find writings that focus statistically on this subject, ranging from the Post Carbon Institute which tends to be doctrinaire to the writings of an actuary, Gail Tverberg at ...

<http://ourfiniteworld.com/>

The best book to explore the subject is “Limits to Growth” 2004 edition, written by Meadows, Randers and Meadows(deceased) of MIT.

7. In order to transition from historical facts to future projections, we need to gain an understanding of how societal decline affected our economic and financial affairs through history. The collapse of the Roman Empire took from about 200AD to 450AD and during this time the shortage of key resources led to the devaluation of the Roman currency. As soldiers who managed the empire were paid in silver coins, the rate of inflation was best measured in the coins where silver content fell to around 4% of the alloy. Money has always enjoyed a natural relationship to the goods and services it buys. All efforts throughout history to cheat the system by introducing more money without increasing the volume of goods and services have eventually led to hyper-inflation. Modern examples which are trotted out are the likes of Argentina or Zimbabwe. In the latter case, the national currency has been so debased as to be unacceptable for trade. The best example for those wanting to analyse the phenomenon is that of Weimar Germany in the period 1920-24. Adam Ferguson wrote an illuminating record of that in the book “When Money Dies”.
8. In 1913 (the book, “The Creature from Jekyll Island” covers the US Central bank nicely) the US Federal Reserve system was brought into being with a number of branches and ownership by the 20 prime lending banks. During the next 100 years the purchasing power of USD1 dropped to 4% of its original value. So despite the US dollar being the global reserve currency since the Bretton Woods Agreement of 1944, it was still able to be debased to that extent by 2013....far faster than the decline of Roman currency. And now, the speed of transmission of correspondence and banking transactions will likely mean the next crash will happen overnight, as with the GFC of 2008.
9. In 1999 there were two major occurrences worth noting. The first was that Britain’s North Sea oil and gas production peaked and has since dropped to such an extent that

the UK went from being a major exporter to a major importer (like 18 other former oil exporting nations). In the subsequent period from 1999 to July 2008 the price of oil soared from USD15/bbl to USD140/bblBut also the Former Goldman Sachs Chief Executive – as US Treasury Secretary, Robert Rubin, persuaded Bill Clinton in 1999 to repeal the Glass-Steagall Act. This meant that investment banks could not just take depositors' funds, but speculate with them. Previously, they could only gamble with their partners' own money. That multiplied credit available to the expanded banks. At about that time the requirement for derivatives to be regulated was also done away with. Because all major banks (banks like Barclays in UK, Deutsche Bank in Germany and five big US banks, Citigroup, Merrill Lunch, Bear Stearns, Lehman Bros, JP Morgan, Goldman Sachs and Wells Fargo) thereafter had a license to print money from nothing and the ability to gamble at their depositors' risk, money and credit creation boomed until the GFC of 2008. By then, irresponsible behaviour had made most too big to fail and while three were forcibly merged with others, Lehmans was allowed to fail with unforeseen and devastating consequences. Thereafter, the bailing out of some 25 of the world's largest banks (and many more) by their governments led to further massive credit expansion – such the global debt soared by USD57 trillion within the OECD during the period from the 2008 collapse to the end of 2014. Only a small proportion of bailouts for which all were given to benefit solely the banks (including AIG and GM), were ever subject to political approval processes. The biggest unapproved lending was by the US Federal Reserve (approximately USD23 trillion), provided to 23 global banks (including one in Australia and several in Europe) as a short term measure to kick start the global interbank system. Because they have continued to grow, none of these big banks can now be allowed to fail without the entire global financial system failing.

10. Since 2008, prudential banking controls have been restricted to periodic efforts to validate the asset backing of major counterparty banks. The Dodd-Frank Act has placed some prudential restrictions but this hasn't prevented the major banks with global reach from extensive gambling in commodity prices, to the point where banks, rather than market supply and demand now sets prices in every commodity marketplace. As "Quantitative Easing" to help banks became the norm, interest rates had to be taken to either close to zero or even beyond zero to manage profitability and money flows.
11. Since 2008 The world's biggest (relative to GDP) creator of fresh liquidity has been the People's Bank of China (at about USD27 trillion). The GFC caused mayhem in developing economies and now many of those are dependent for their survival on massive funds flows that tend to follow profitability and countries like Japan are now engaging in currency wars to try to advantage their exporters. The best book I found on this is Jim Rickards' "Currency Wars".
12. During the last decade China has employed its huge surplus of US dollars in buying foreign assets – mainly resources. This employment of excess US currency has distorted the markets in target countries and China's main objectives have clearly been to get rid of unwanted currency in exchange for locking up future scarce resources. Where these include oil and gas, the arrangement has been huge loans repayable over long terms where either energy or money becomes the currency of payment. Where food is the target, the purchase of land and its entire value chain has been the objective. For land in the Russian Federation, land is being rented rather than purchased. There can be absolutely no doubt that if/when global oil production falls

China will be supplied via existing long term agreements, where other purchasers may not.

13. Global production of anthracite coal (top grade with highest energy content) peaked several years ago, and with the crusade against coal for reasons of pollution and CO2 emissions it is reasonable to suggest that coal may be peaking now. Given that companies are going into the arctic for oil it is reasonable to suppose oil will soon peak if it hasn't done so (in terms of net Btus per year produced) already. The natural gas available in coal and oil fields means that natural gas output will continue to grow and if you want to see some numbers on that, this may prove helpful...

<http://peakoil.com/consumption/world-natural-gas-shock-model>

14. The relevance of religion has been considerable over the centuries. Most scientific endeavour in Europe during the period from 500AD to 1500AD was undertaken in monasteries. But where religious teaching has disagreed with scientific observation, all religions have tended to be reactionary. Today the main impact of religious beliefs are either supporting harmonious relations, or in the case of Islam, causing disruptions in normal market mechanisms to advantage the views of certain groups of preachers. Within the Middle East the disputes will likely cause major disruptions in the foreseeable future, but within the OECD it is more likely that marginalised and /or disaffected youths will undertake localised terrorist acts.
15. China has just transitioned from buyer of key industrial metals like tin and iron ore to be a net exporter of steel and tin etc... Factually, that means that China is in recession and this places all commodity providers to China in recession as well. Any other interpretation of impact cannot be justified by the facts.

http://seekingalpha.com/article/3367655-chinese-steel-floods-export-markets-as-poor-local-demand-and-overcapacity-take-hold?source=email_macro_view_com_1_25&ifp=0

Because of these historical observations that I dare suggest have a reasonable factual basis, my major concerns are about governments actively and uniformly pursuing policies of infinite growth in a finite world. That does not mean businesses should not grow and prosper, but it does mean that their growth is more likely to be about market share, productivity, efficiency and innovation, rather than increases in market size.

This world is affected by geopolitical disturbances and I will do my best to use well informed observers to pass their own judgements on this rather than relying on my own views. My personal expertise is in the area of business failure and reconstruction, so I find myself easily able to understand those economic events that have the ability to damage or even destroy the current global financial system – without having a doctrinaire or defensive bias. I found it easy to see what was going to happen in 2007 (Bear Stearns and derivatives as a dummy run for the GFC) and the 2008 GFC. Many economists did predict the GFC but could never admit it as many were taking financial positions that opposed the advice they were giving to clients. Some like Prof Nuriel Roubini did see what was coming then and I have no doubt they see what is coming now...as do observers employed by both BIS and IMF... who now occasionally show us the fear in the whites of their eyes. So where are we headed?

1. No-one is capable of restraining population growth. With increased wealth, fertility rates generally decrease, but that isn't where future population increases are being tipped to come from. So on the one hand we see these "wishful thinking projections" that global population will reach a point and then decline due to rising general affluence – then there is reality. Even China has decided to "up the ante" and introduce a two child limit (instead of one child) as the norm. Why? Because they know what will happen to eventually depress their GDP if they stick with the one child limit. Every five minutes there is a new survey by UN agencies...and most of the recent ones suggest that not only is our population in overshoot...we are going for broke ...

<http://www.mirror.co.uk/news/world-news/worlds-population-hit-97-billion-6161248>

That link mistakenly uses 97 instead of 9.7 billion by 2050. By either way, what cannot happen, normally will not do so. The latest figure still reflects a decline in the current rate of net population increase... At any rate, unless there is a catastrophic financial crash, resource utilisation must – by definition – increase.

2. Resource depletion will continue to have two problems. Anyone looking into the big open pit gold mines in China, West Australia or South Africa will instinctively realise the difference in cost between extracting and refining ore within 10 metres of the surface at an assay of 40 gms per tonne and extracting ore from 200-500 metres down at 5-10 gms per tonne. You could watch the huge 150 tonne trucks labouring round and round as they bring the ore to the surface, for not only a huge extra cost in plant and machinery, but also much higher fuel costs. So it is now, with most resources.
3. This is why bio-fuels are a nonsense. An Energy Return on Energy Invested of 2:1 is only viable with taxpayer subsidies. The "shale revolution" is only possible for oil and gas with high selling prices and zero base interest rates. The loans to shale drillers do not make economic sense and a 53% fall in oil prices is likely to clean out many of the junk bonds which service this industry. But industry BS and disinformation means that self delusion is still in good supply in world governments...

<http://peakoilbarrel.com/world-natural-gas-shock-model/>

4. If we look at Helium, Indium, Gallium and Hafnium, the world's proven resources are already playing out. The rare earths may not be rare but in economically extractable concentrations they are very rare, so future extraction and processing costs will soar at some point. For metals like silver, global production is already falling, even as industrial use increases. So, when do we reach an end point?
5. For subjects like climate change, I am conflicted enough to sit on the fence because while ice is melting, I am aware the planet is getting greener because of increasing levels of CO2. Perhaps this video carries that contrary argument best...

<https://www.youtube.com/watch?v=WDWEjSDYfxc>

(Editor's note: an even better video is by the 94 year old world genius Freeman Dyson
<http://wattsupwiththat.com/2015/04/06/the-vancouver-suns-video-interview-with-freeman-dyson/>*)*

So all I can promise to do is to provide substantive news as and when I can. It is over to you to form your own conclusions on that. This video is probably no more useful than any of the others I will send out J.

6. We could of course focus our hopes and fears on near term impacts from the activities of banks and global economics. A global depression reduces resource consumption, population death rates trend higher and the current drop in all commodity prices provide a signal that oil is not well. The global oil industry is seeing idle plant and staff lay-offs as greater exploration risk and increased costs are being met by falling selling prices. This could later prove the start of a depression, as has occurred before, although it is much too early to call that.
7. Our huge diversion of jobs from production to science, service, regulatory and finance type roles is fine during an era of expanding productivity, but arguably, today productivity is not growing and in many OECD countries the real average income per head of population is now falling. The OECD programme of off-shoring jobs to China and other developing countries has now been going long enough for proof to exist that the quality of careers and job opportunities in OECD countries has fallen. With jobs, much innovation has also been shipped off-shore. Governments are focused on arguing this stuff isn't happening, rather than explaining why things are happening the way they are. They rely of cheap prices for consumer goods as justification – but that doesn't matter if you have a sizeable long term unemployed to subsidise. Youth within the OECD is carrying that burden.
8. Currency wars started some years ago, so what has been their impact so far? Well of late exports from China have been weaker and exports from Japan stronger. Mitsubishi this week just decided to close its US factories, citing the impact on costs of the high US dollar.
9. The concern I will focus on will be the next big financial crash because that is likely to precede resource scarcities as a threat. Ad hoc government interventions do work as a short term expedient, but all they do is “kick the can down the road”. Whether the trigger is to be the Greek insolvency or the Chinese stock market, sooner or later procrastination won't work. My disaster probability gauge for this year is already standing at 35%. It won't take much to tip it over 50%. The only thing we can rely on, is that the governments will use all of our money to save the system and I suppose that is what makes current systemic financial threats so dangerous.

So I will keep looking and reporting on anything that could affect this big picture. Unfortunately the big picture will determine whether our kids and grandkids will have much of a future.