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Paradigm

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Jaco Grobler

Executive summary

We are living in unprecedented times. A significant change in human consciousness (how we experience life) is starting to occur and many unsustainable trends are nearing its end, reaching a point where a massive paradigm shift starts to occur. This paradigm shift is becoming evident in the areas of capitalism, technology, environmental (incl climate change), politics, social order, conflict, natural resources and several industries in the global economy. None of the changes are isolated, but they should rather be seen as synchronicities of an interconnected and self-re-enforcing change that is in the making.

Significant paradigm shifts have occurred a few times in history, although not in recent history. The scale and extent of the current paradigm shift is significant and perhaps on par with what occurred during the latter parts of the Egyptian-Babylonian-Assyrian period.

People have difficulty observing or understanding the paradigm shift as it is complex and requires connecting of many dots and observation from a vantage point much broader than what typically gets displayed in our daily lives. The human body, societies, organisations and economies are all living systems. Analysis of the imbalances in a living system assist one to understand how dysfunction forms and corrects for the eco system to attain coherence.

Phenomena such as the Corona virus panic forms part of the change as it illustrates how deep-rooted fear in the subconscious collective of people drive behavior that becomes chaotic. The change to a new paradigm entails change of the collective resonance of humanity. As resonance change, the old patterns must be destroyed in order for new patterns to form. During this transition phase chaos is often observed as part of the process of change. It is important to note that what seems to be destruction during the chaos, is simply a transformation process to establish new ways that resonate with the new paradigm. Those who hold on to “methodologies and thinking” that resonate with the old paradigm will find it increasingly more difficult to cope with the changes. This book provides alternative thinking that enables a better understanding of the change and the new paradigm that is forming.

Financial Services are profoundly impacted by the shift to a new paradigm due to the interconnected nature of financial services with the global economy. The impacts can be broadly categorised in the following areas:

- **Financial:** Many financials trends are approaching the end of sustainable trend. The polarities are so extreme that an adjustment is inevitable. Examples of the extreme polarities include:
 - Interest rates are at its lowest levels in 670 years, levels last seen during World War II and the 1619 - Thirty years European war
 - Debt is at the record levels, the highest level since the establishment of monetary authorities. Similar record debt levels were only experienced during World War II
 - Monetary policy is losing its effectiveness. The coronavirus outbreak is forcing policy makers to use the last little bit of gas left in the tank and soon there will be no more monetary policy options left.
 - The negative interest rate phenomenon is compromising the system of rewarding lenders for the risk they take, and repayments are automatically rolled over. At some point these dynamics will challenge the very fundamentals of currency as bonds are essentially a promise to return currency.
- **Technology:** Rapid development and implementation of technology build on the principles of quantum mechanics are having a profound impact on business models and how we engage as humans. Technologies such as the laser, GPS, internet are all build on principles of quantum mechanics. Quantum mechanics work very different from conventional analogue technology forcing profound changes for those who adopt the technology. Quantum technology may be relatively new in the computing technology world, but it should be noted that the human body has been operating quantum processing system for a very long time.
- **People & organisation:** Transformation of people pose the most significant challenge for organisations today. People are conditioned to work, think and behave in “analogue” terms

resonating with an old paradigm of confinement, boundaries and hierarchical systems. People have to “upgrade their programming”, not only to enable them to resonate with the new paradigm that is forming, but also to enable them to reach their full potential and not be limited by the fears that are deeply embedded in their subconscious minds.

The sections below provide thought leadership on various aspects of the paradigm shifts that are occurring globally. The topics are complex and have been simplified as much as practically possible to allow the reader to attain a basic understanding of the dynamics and to enable a different way of thinking.

About the Author

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This book represents the views of the author in his personal capacity, the content of this book does not represent the views of FirstRand as an institution.

Why this book: I struggled with health problems since early childhood and have been seeking a deeper understanding as to the root causes and solutions for most of my adult life. This journey culminated in a massive healing crisis a few years back with complete digestive system failure. Western medicine labels such conditions names such as auto immune disease, cancer, leaky gut syndrome to name a few and attempt to treat it by flooding the human organism with poisonous chemicals in an attempt to kill the disease before the host dies. Pharmaceutical medication just made my condition worse and forced me on a journey of discovery to heal myself. Through this journey I learned that the human organism is in fact the most sophisticated piece of technology on this planet and operates a very sophisticated quantum system that has the ability to auto correct and heal itself. I also learned that disease is a result of the “software bugs” in our subconscious and cellular memory causing malfunction of the body’s natural ability to auto correct. As part of this journey I have had the privilege to work with amazing people and learned how life works, everything from the quantum field, quantum physics, power of intention, meditation practices, mind-body connection, cellular memory, bio magnetic resonance, electromagnetic fields, how to maintain a healthy environment and the list goes on. I also realised that these principles underpin all forms of life and is not limited to the human body only as it is equally relevant in the corporate work environment. Companies, societies, countries and the planet are all living organisms, and much can be learned from my experience as to how companies also become sick, and more importantly how they can be healed. I started applying these learnings in my direct work environment with remarkable positive effect. This book is my first attempt to make some of the knowledge I have gained available to a wider audience as I believe there is a great need for better understanding of the changes around us. People need to understand better how to navigate the transition to a new paradigm that is forming.

Keywords: paradigm shift, new paradigm, sovereign debt crisis, asset bubbles, risk management, digital transformation, quantum mechanics, quantum field, quantum entanglement, architecture, behavioral dynamics, organisation structure, social sciences, health, subconscious, resonance, epigenetics, auto-immune disease, corporate social order, employee wellbeing, data architecture, climate risk, environmental

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INTRODUCTION

We are living in unprecedented times. The way human civilization operates is reaching a stage where many long-term trends are no longer sustainable, not only from a capitalist and economic perspective, but also from a societal and environmental perspective. When applying a “lens” of looking at the dynamic as a living system, one has to conclude that the many living systems of economic civilization is exhibiting signs of “disease” and adjustments are required to ensure sustainability in future. To quote Albert Einstein “We cannot solve our problems with the same thinking we used when we created them”. This book does not claim to have all the answers but represents alternative thinking to mainstream thinking. We have to change the way we think in order to be able to adapt to the change that is happening. You may not initially resonate with all the content of this book; however, it should be noted that all aspects in this book have been extensively researched and proven by physicist, scientist, thought leaders, spiritual leaders and biologists to name a few. I have experienced these principles as part of my own healing journey and have come across others who have done the same. The technology and conceptual understanding required for the new paradigm already exist, but a “mindset and lifestyle” change is required more broadly to adapt to the change that is happening.

Human consciousness (how we experience life) is starting to enter a new cycle, which represents a change in resonance that creates a paradigm shift. This paradigm shift has many components, including the introduction of quantum technology. Quantum technology is not limited to the digital revolution only, but also integral to how the human mind-body and social connections work. The human body is the most sophisticated piece of technology on this planet, it operates a very sophisticated quantum field processor that regulates a bio-electro magnetic living system. Much can be learned from understanding how these living organisms works, as every social and economic collective is also a living system. The new paradigm that is forming will have a profound impact on how we experience life on this planet. In order to understand how the changes may affect us and to what extend we can respond to the change; one must look at the characteristics of the old paradigm as well as that of the new paradigm that is forming. There will be a significant amount of transition risk and the change will by no means be easy to deal with.

IS THE WORLD GOING MAD?

We need not ponder for long to ask the question “Is the world around us going mad? In some way everything around us is changing. There is a yearning to go back to “normal” and also a noticeable denial amongst many that the path we have been on as humans are no longer sustainable.

But the key question we need to ask ourselves is “Is there something else underlying all the turmoil and change that we are observing these days?” And “is there something we need to do about all of this?”

Taking a step back and looking at the change holistically, you will realise that chaos always has a pattern. Today the change is observable in many aspects of society, business and politics. Observable factors amongst others include but are not limited to:

- Rapid evolution in technology, in particular the use of quantum and distributed technology.
- Existential increase in severity and scale of natural disasters, climate and environmental change.
- Institutional structures are breaking down and governments are becoming largely ineffective.
- The pyramid system of control has become largely obsolete and is starting to become dysfunctional.
- Multitude of scandals and breakdown in governance across all sectors of business and society globally are occurring resulting in an eroding of trust in leadership.
- Continued rapid increase in mental health and other chronic diseases, irrespective of great advances in biochemistry. Most humans these days are really struggling to cope and very few can say they are thriving.

- Extreme polarization and rising populism are evident at all levels of society and happening across the world almost simultaneously. These are phenomena broader than what is caused by the wealth gap.
- Many long-term paradigms in the world of Finance is reaching its end as I will describe in more detail below.

The fact that all these changes are happening almost simultaneously is no mere coincidence but should rather be seen as synchronicities of a massive paradigm shift in human consciousness that is starting to take place. This paradigm shift is multi-faceted with changes happening at different speeds. It is also not an instant change that is easy to recognise and respond to but would rather take significant effort over prolonged periods of time in order to adapt to the changing environment. The key question that I attempt to deal with in this book is “what does it mean for Financial Institutions” and “How could we position ourselves and transform along this journey”. The topics in this book are also equally relevant for other industries.

THE PARADIGM SHIFT

A paradigm shift, a concept identified by the American physicist and philosopher Thomas Kuhn, is a fundamental change in the basic concepts and experimental practices of a scientific discipline. It can also be described as a profound change in a fundamental model or perception of events.

A Paradigm shift arise when the dominant paradigm under which normal science operates is rendered incompatible with new phenomena, facilitating the adoption of a new theory or paradigm.

Throughout history, one can observe that major scientific discoveries always lead to paradigm shifts in the consciousness of humanity, altering how we experience life on this planet. The incremental discoveries in quantum physics and the invention of quantum mechanics technologies are not only bringing about a digital revolution but are also profoundly impacting our human experience. In addition to all the technology-initiated changes, we also observe many other societal and environmental paradigm shifts that are starting to take place. All these changes are connected and informing each other.

Wrapping our minds around the concept of a paradigm shift is difficult, but for a moment give some thought to the fact that as recent as 10 years ago the following would have been unimaginable:

- The tech giant Apple’s market capitalization would be worth more than the combined market cap of all European banks combined.
- The iPad (only launched in 2010) would be used to replace paper for board meeting packs, would become the device of choice to educate children at school and be used to stream movie content anywhere.
- 3D printing technology would advance to enable printing of body parts and firearms.
- The UK would leave the European Union.
- Apple would sell more smart watches than the entire Swiss watch industry.
- Drones would not only become a game changer for military applications but would also be used for anything from agriculture, conservation, disease control, pizza delivery and become the favorite toy under the Christmas tree.
- Political leaders will communicate their opinions and policy actions via twitter.
- Consumer LED lightbulbs will largely replace incandescent bulbs.
- Tesla would have a market cap nearly as large as Volkswagen and BMW combined.
- Fax machines, maps, public payphones, phone books and movie rental stores would become obsolete.

Financial Services domains impacted

Financial Services institutions are profoundly impacted by the various paradigm shifts. Financial Services institutions will see their operating models and platforms change significantly, human capital dynamics will change and due to the integrated nature of activities in the global economy, financial assets held on balance sheet will also be impacted significantly.

The focus of this book is to amongst others provide insight on the implications in the domains of financial assets, technology and people.

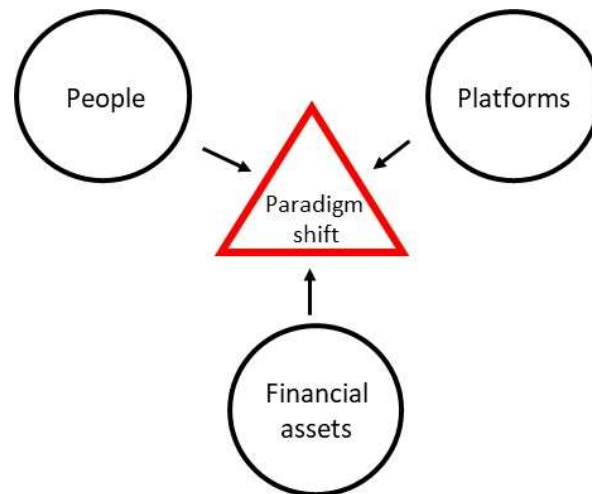


Figure 1: Illustration of Financial Services domains that will be most affected by the paradigm shift

Unsustainable long-term trends

*"I used to think the top environmental problems were biodiversity loss, ecosystem collapse and climate change. I thought that with 30 years of good science we could address those problems.
But I was wrong. The top environmental problems are selfishness, greed and apathy...
...and to deal with those we need a spiritual and cultural transformation
...and we scientists don't know how to do that"*

~ Gus Speth

There are several long-term trends that are no longer sustainable pointing to an inevitable series of paradigm shifts, most likely with chaotic transition periods. These trends have received significant coverage in various research and risk reports, and I do not wish to duplicate that information in this book. I have provided links to some of the more noteworthy publications at the end of this book. It is however worthwhile to summarize some of the most important take outs below.

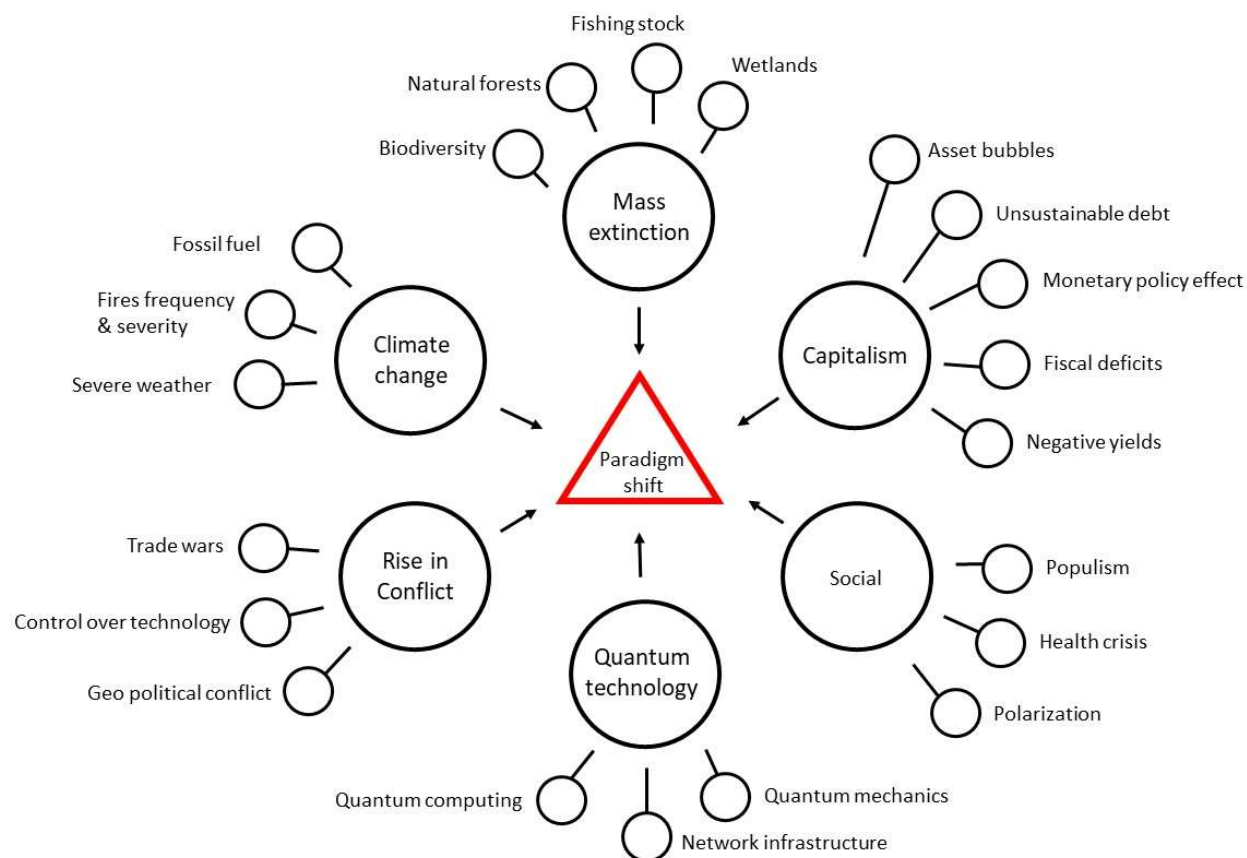


Figure 2: Illustration of the major trends influencing a paradigm shift in human consciousness.

These long-term trends fuel the dangerous cocktail where politics, populism, resource scarcity, conflicts and various societal pressures intersect with each other in a negative feedback loop to further re-enforce geopolitical risk and growing social instability. History has taught us that scenarios like this represent the make-up of a perfect storm that eventually results in a paradigm shift.

Capitalism

There are several long-term capitalist trends that are starting to reach the end of what is sustainable. The game of Monopoly is often held up as a good example of how capitalism works. We play the game to teach our children about money management and capitalism, however, few realise that when you play Monopoly to the end you reach a situation where one player ends up with all the property and money and the other players don't want to play anymore. We are living in times where interest rates are at record lows, last seen during World War II and the 1619 Thirty years war in Europe. Debt levels are at record levels last seen during World War II. Geo-political conflict is rising everywhere, and we see conflict playing out in the form of trade wars, a light version of cyber warfare and conventional military tension building in a number of regions. Clearly, we are living in unprecedented times, the current economic system must adjust in a way to a model that is more conducive to the wellbeing of the entire ecosystem. This adjustment should be viewed from the analogy of a person (business leadership and politicians) having to realizing that the current consumption lifestyle of lots of fast food and stimulants (resource exploitation & loose expenditure and easy monetary policy) is introducing serious health risks. The person has to adopt a healthy diet and lifestyle to manage the risks proactively or be forced to do so through a shock to the system, such as a heart attack or cancer (severe economic shock). Given the current trajectory of poor leadership and limited political will, we will most likely end up with a scenario where the system will be forced to adjust by means of a shock to the system, most probably prolonged. The following are some of the most notable unsustainable trends in capitalism.

- **Debt cycle:** Sovereign and corporate on balance sheet debt (someone else's asset) and off-balance sheet debt (unfunded social commitments) are at record levels and continue to increase to unprecedented levels. Refer to the section later in the book for more coverage on debt.
- **Pension and Healthcare liabilities:** Unfunded pension and medical liabilities continue to grow and will become increasingly due as populations are aging. This increases the risk of governments and institutions defaulting on these obligations as it is unlikely that they will have sufficient resources for these commitments, providing a further feedback loop to rising social tension and populism.
- **Monetary policy:** Central banks continue to buy financial assets (bonds and equities) as part of monetary stimulus in their futile attempt to stimulate economic activity and increase inflation. Instead asset bubbles are being created whilst the prospect of future returns are reducing. No real economic benefit is obtained through the process whilst the effectiveness of monetary policy is disappearing.
- **Negative yields:** The amount of sovereign debt yielding negative interest rates has reached staggering proportions and continue to grow. This phenomenon of negative yielding debt poses significant risk to Financial services institutions as it erodes profitability of banks and destroys the very foundation of banking.
- **Fiscal deficits:** Large government deficits exist that will continue to increase over time. There is no clear idea how this will be funded in future, other than central banks printing money. In the long run, this trend threatens the viability of the very foundation of currency as store of wealth and mechanism of exchange of value.
- **Asset bubbles:** Asset bubbles exist in all areas of the economy, due to cheap and easy money. In addition, lower than required tax rates, loose fiscal expenditure and ultra-low interest rates further artificially inflate the values of the assets. The other side of the coin resides on the governments balance sheet in the form of sovereign debt. When governments are eventually forced to adjust policies to manage unsustainable levels of debt, assets prices will inevitably adjust. This has happened many times in history during previous debt cycles.

Social

We are living in times where the population growth has reached levels where the planet can no longer support humanity's prosperity with the current model of consumption. Rising inequality and a number of other factors are fueling populism and social tension, thereby complicating the political landscape tremendously.

- **Population growth:** Since 1970 the global human population has more than doubled (from 3.7 to 7.6 billion), rising unevenly across countries and regions.
- **Rise of populism:** Populism used to be observed infrequently in emerging markets and almost nonexistent in developed countries for several decades. However, during the past decade, the phenomenon of populism has risen significantly across the world and are approaching levels last seen pre-World War II. Populism is not only having a significant impact on politics but also brings about dangerous levels of polarization, xenophobia, militarism, protectionism and extremism in society. Many of the trends listed in this book fuel populism in self-reinforcing ways.
- **Health crises:** Irrespective of great advances in biochemistry, we continue to see exponential increase in mental health and other forms of chronic disease. Some notable trends are.
 - o Approx. 1 in 5 adults have been diagnosed with some form of mental Health condition, and prevalence amongst children is increasing rapidly.
 - o Prescription drugs is a leading cause of death world-wide, reaching epidemic proportions.
 - o Around 7 million deaths a year can be attributed to air pollution
 - o Cancer in all forms continue to grow in prevalence. These days everyone has a close friend or family member who has been affected by cancer
 - o Antibiotic resistance is a ticking time bomb and being further aggravated by farming and food production practices that use antibiotics irresponsibly.

- **Polarization** is occurring at all levels of society across a number of countries. The rising wealth gap is a key driver of polarization. However, the phenomenon is greater than the wealth-gap effect, this is evident in areas such as a decrease in religious tolerance, rise in xenophobia, anti-Semitism, rise in opposing ideologies and broad-based conflict within societies.
- **Productivity** is profoundly impacted by the 4th industrial revolution of technology where numerous jobs are being automated and replaced with technological innovations giving rise to more social tension.

Quantum technology

The past, current and future discoveries of quantum technology will have a more profound impact on humanity than any other significant scientific discovery in history. Not only do we see some of these developments such as the internet, lasers, GPS and network technology already having a very significant impact on how we engage as humans, but the principles of how Quantum technology works, also profoundly challenge our understanding of human life, for example:

- Quantum theory works on the premises that everything is connected to everything else independent of space and time. Also referred to as the concept of **quantum entanglement**.
- All probabilities for manifestation exist simultaneously at the same time, until observed. Also referred to as the **observer effect**.

Discoveries and application of quantum mechanics not only form the foundations of the 4th Industrial revolution of technology development, but also forms the foundation of understanding how the mind-body connection works, and how it enables us to re program our “software”. More insight on this will be provided later in this book

Rise in conflict

There are several conflicts simmering across the globe that has the potential to escalate into broader geo-political and proxy conflicts. We are observing ever increasing trade war friction, Cyber warfare is in a reconnaissance phase with sporadic information manipulation incidents and as far as conventional warfare is concerned, leadership have to date demonstrated some constraint despite some very tense situations in the middle east. The past decade has seen a significant buildup of weapons and military presence by a number of leading nations. An arms race for new hypersonic nuclear and other weapons are also under way. The arms buildup is not only limited to the large superpowers, as an example, it is estimated that Hezbollah has at least 10 times more weapons stockpiled in Lebanon than prior to the previous 2006 major conflict, many of these weapons are now enabled with precision guided technology. There is an old Russian saying “if you write a gun into the first chapter of a book, you will have to use the gun before the book is finished” Those who are in control of the weapons would forever be tempted to use the weapons at some point.

- **Geo-political conflict:** Geopolitical risk has been growing for more than a decade, without manifesting into an international crisis, this may very well change as other trends such as resource constraints, reversal of globalization and conflict over technology dominance intersect with the geo-political risk dynamics. Some of the more notable flashpoints across the globe include: Middle East, Lebanon, US-China, Russia- Ukraine, North Korea, Russia-NATO, Kashmir, China-Taiwan, Latin America, Russia military buildup across Africa, European fragmentation and growing Islamic militancy in Africa and other parts of the world
- **Control over technology:** Conflict over control over technology is a major factor influencing the trade wars and geopolitical risk landscape. The rise of China as a world power with strong technological advances is in some way similar to the rise of Japan challenging US dominance pre-World War II.
- **Trade wars:** Divergence between the US and China is resulting in irreconcilable differences being amplified. Any form of trade deal announced should be seen as political positioning rather than dealing with the deep-seated conflicts that underlies the tension. These tensions are unlikely to be resolved anytime soon.

Climate change and environmental

Climate risk has been elevated considerably as an area of focus during the past few years and most leaders understand this is becoming a systemic problem. Temperatures are rising faster than the ability of natural systems and human-made infrastructure to adapt. Impacts are already being felt and are likely to grow, intensify and multiply. In addition, there will be a significant self-re-enforcing feedback loop with socio economic and political dynamics. Some of the most notable impacts are:

- **Fossil fuels** are very rapidly falling out of favor with investors, lenders and insurers. This has a significant impact for economies that have a heavy reliance on fossil fuel technology for energy production as well as those who rely on revenue from fossil fuel mining and related industries. The paradigm shift in the energy sector is enormous and will be very disruptive for a number of role players as well as for certain countries and regions.
- **Wild fires** are increasing rapidly in both frequency and severity globally. This illustrates very clearly that the impacts of climate change are already being felt and it's no longer just something to only worry about in the future. For example, California now views wildfires as an annual expected event whereas a few years ago it may have been seen as a 1 in 10-year event.
- **Severe weather:** Further warming is unavoidable for at least a few decades, even if aggressive action is taken now. This will increase the frequency and severity of severe weather conditions such as lethal heatwaves, extreme precipitation, hurricanes, drought, heat stress and rising sea levels. Countries with lower per capita GDP are more exposed, giving rise to more inequality, migration and geopolitical risk in the future.
- **Degradation of water systems;** Chemical, sewage, plastic and other forms of pollution are resulting in systemic degradation of lakes, rivers, oceans, aquifers and groundwater across the planet.

Mass Extinction

Loss of biodiversity and nature: The planet is now facing its sixth mass extinction, with consequences that will affect all life on Earth, both now and in the future. This threatens food security, human health and well-being, societal resilience, social stability and services worth an estimated USD 125-140 trillion per year. Exploitation of natural resources combined with climate risk introduces profound risk to the human habitat and way of living.

- **Natural forests** declined by 6.5 million hectares per year between 2010 and 2015 (in total, an area larger than the U.K.).
- Natural **wetlands** declined by 35% between 1970 and 2015.
- Over 30% of corals are now at risk from bleaching.
- 60% of **vertebrate populations** have disappeared since 1970 and 40% of insect species are declining rapidly.
- By 2050, Africa is expected to lose 50% of its **birds and mammals**, and Asian **fisheries** will completely collapse.

Industry paradigm shifts

Every industry in the global economy is also undergoing a paradigm shift. It is interesting to note that the speed and timing does however differ significantly, with technology (mostly Information Technology specifically) leading the change to a new paradigm and often acting as the catalyst in other industries. Financial Institutions operate across the entire ecosystem of the global economy. It is therefore important for Financial Institutions to not only understand its own transformation from Traditional Finance to Digital Finance, but to also understand that the transformation of every single other industry will impact the business models and balance sheets of Financial Institutions with massive transition risk. Depicted below with an indicative guess of how much they have progressed along this transition journey are four dominant Industries for illustration.

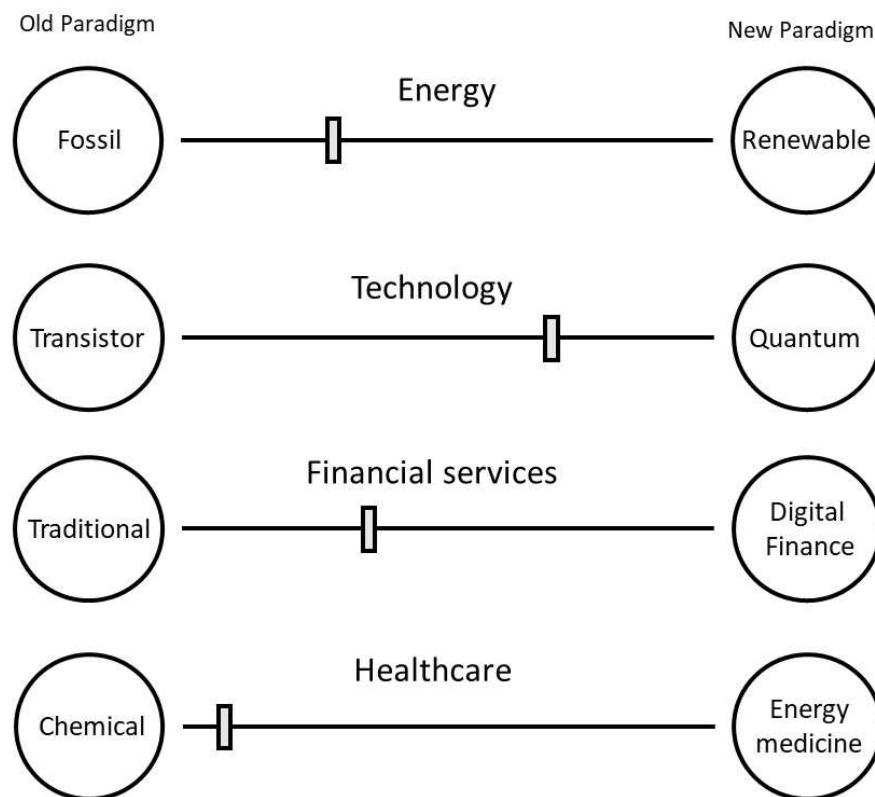


Figure 3: Illustration of the paradigm shift happening in key industries

I believe that quantum physics represent the most significant scientific discovery of our lifetime. Quantum physics, quantum mechanics and quantum field are the most dominant driving forces influencing the paradigm shift that is occurring. All the amazing new technological inventions such as the laser beam, GPS, Fiber optics and the Internet to name a few are all based on principles of Quantum Mechanics. These technological developments have had a profound impact on many industries, and more is to come. The principles underlying quantum physics are however not limited to technology and impacts behavioural sciences, energy and medical sciences amongst others in a very significant way. I believe that **Physicists today are only seeing the “tail of the Lion”** and further understanding and discovery will occur as part of the transition to a new paradigm.

Resonance and Chaos

"Everything in life is vibration,"

~ Albert Einstein.

Vibration defines the mechanism of how we experience life. It defines all forms of matter and is fundamental to all functions in the human body. The neural network in the body is nothing other than a very complex system that transmits light energy in the form of electrical currents to every one of the 50+ trillion cells in the human organism, the flow of which is integration not only to our health but also the experiences we have.

Einstein's $E = mc^2$ [Energy equals mass times the speed of light squared] also explain this dynamic.

The equation could also be read as $m = E/c^2$ [Mass of Matter is a function of the Energy divided by the speed at which it vibrates]

What is resonance

In order to better understand resonance and why change in resonance results in what appears to be chaos, a few practical examples provide useful insight.

- **Relationships:** When you say that someone resonates with you, you feel an energetic attraction to that person and will most likely be moved emotionally in some or the other way. However, if someone does not resonate with you, the opposite occurs, often with repulsive emotions and behavior. In relationships, it is common to find two individuals are attracted to each other initially, but as the resonance (vibration) between the two individuals change to a state where they no longer resonate with each other, chaos commences. It is not uncommon to find that when the parties in the relationship subsequently part ways, they meet someone new with whom they then establish a new resonance that is different than the previous relationship.
- **Science of Cymatics:** Was discovered by Swiss born Physician & natural scientist Hans Jenny. Cymatics is used to describe acoustic effects of sound wave phenomena where sound vibration directed at liquids (incl. liquid metal) creates images of hypnotic geometries and rearrange into ever more elaborate configurations when the frequency changes. It is interesting to note that once the frequency starts to change, the original geometrics patterns turns into what seem to be a chaotic pattern as it gets destroyed, until a new pattern forms again that resonates with the new frequency.
- **Tuning fork:** When one tuning fork of say 128 Hz forces another tuning fork into vibrational motion at the same natural frequency, the two forks are connected by the surrounding air particles. As the air particles surrounding the first fork begin vibrating, the pressure waves that it creates begin to impinge at a periodic and regular rate of 128 Hz upon the second tuning fork. The energy carried by this sound wave through the air is tuned to the frequency of the second tuning fork. Since the incoming sound waves share the same natural frequency as the second tuning fork, the tuning fork easily begins vibrating at its natural frequency. This is an example of resonance - when one object vibrating at the same natural frequency of a second object forces that second object into vibrational motion. A 128 Hz tuning fork would however not be able to create resonance with a 256 Hz tuning fork.

Chaos during transition

Everything on this planet vibrates. Even matter that seems to be solid and matter as small as a photon, vibrates at a specific frequency. There is a natural harmony as to how all living beings, plants and animals resonate in the global ecosystem. This resonance can however change due to reasons such as

extinction events, major technological advancements, changes in the vibration of the planet or the living beings inhabiting it.

We are at an inflection point where many trends are intersecting, and we see profound changes in several areas including the following:

- Mass extinction of large sections of natural life.
- Change in human consciousness (consciousness is the state of being aware of and responsive to one's surroundings) and human behavior.
- Significant domestic, regional or global conflict.
- Rapid evolution and adoption of digital and quantum technology.

All these changes are profound and not only has a significant impact on sustainability of human existence, but also has a fundamental impact on the resonance of life on planet earth. As these changes occur, the old resonance patterns no longer work the way it used to be, and a new a resonance must be attained in order to establish equilibrium again. When transition from one state of vibration to the next occurs, chaos tends to endure during the transition. Or at least it appears to be chaos, but in reality, it also has a pattern as it is in fact merely a transition phase to a new paradigm.

FINANCIAL RISK

An unbalanced eco system

The human body also has an economy and a currency. The currency is called Adenosine triphosphate (ATP), a complex organic chemical that provides energy to drive many processes in living cells, e.g. muscle contraction, nerve impulse propagation, and chemical synthesis. The economy is the constant synthesize, distribution, exchange and consumption of roughly 2×10^{26} transient molecules of ATP (more than the body weight - 160 kg of ATP in a day)

In order for the human body to survive, this complex system has to operate in coherence with all 50+ trillion cells in the body and there has to be an efficient and effective resource allocation.

The world economy today is characterised by disproportionate and inefficient resource allocation. Much like a person that is on a super-size fast food diet while being incentivized to keep on indulging in deep fried oversized fast food meals with limited nutrition to re-establish a healthy eco system. At some point the person either has to decide voluntarily to change his/her lifestyle or will be forced to do so through a traumatic event such as a heart attack or discovery of cancer.

Those who hold most of the resources (minority) increasingly seek compounding returns, a supersize-me fast food model, whilst those who are deprived of the resources (majority) are becoming increasingly more desperate and populist. We all know that when you keep playing the game of Monopoly, at some point one player ends up with the majority of the money and property, and then the other players don't want to play anymore. Re-distribution of wealth philosophy is not a solution as there is too much of a productivity, lack of impulse control and entitlement culture problem for this to even be considered a solution. In addition, polarity is essential to the flow of energy in all living systems, similar to that of a battery. The positive and negative forces are required to establish the flow of current, without the polarity nothing happens. Therefore, wealth and poverty will always exist, however when the polarity gets too extreme a shock event will have to occur to re-establish equilibrium. The potential solutions to the current problems are complex and will require a series of adjustments to form a new paradigm. It is important to note that the distortion in resource allocation and lack of efficiency (productivity) is creating a very unhealthy dynamic in the "living organism" of the economies of the world. History shows us that there are always adjustments, often quite violent as everything moves in cycles. When such imbalances reach the end of their inevitable unsustainable trend, an adjustment must occur.

The policies adopted during 2007/2008 to deal with the Global Financial Crises (GFC) may indeed have stemmed the downward spiral at the time, but they have also sowed the seeds of the next crises. Twelve years on we can now see how these seeds have sprouted and grown into gigantic trees of record debt, large asset bubbles and large unfunded liabilities. Banks have improved their resilience during this period with much improved risk management, better capitalization and less leverage; most of this as a result of regulatory reforms. However, the risks in the broader global eco system has increased considerably and will simply transmit back into the financial system via channels such as sovereign debt holdings as part of liquid asset requirements, increased social instability and credit impairments of loans when an economic downturn occurs. The systemic risk is now much greater than pre 2007 with less ability for policy makers to respond to the next financial crisis.

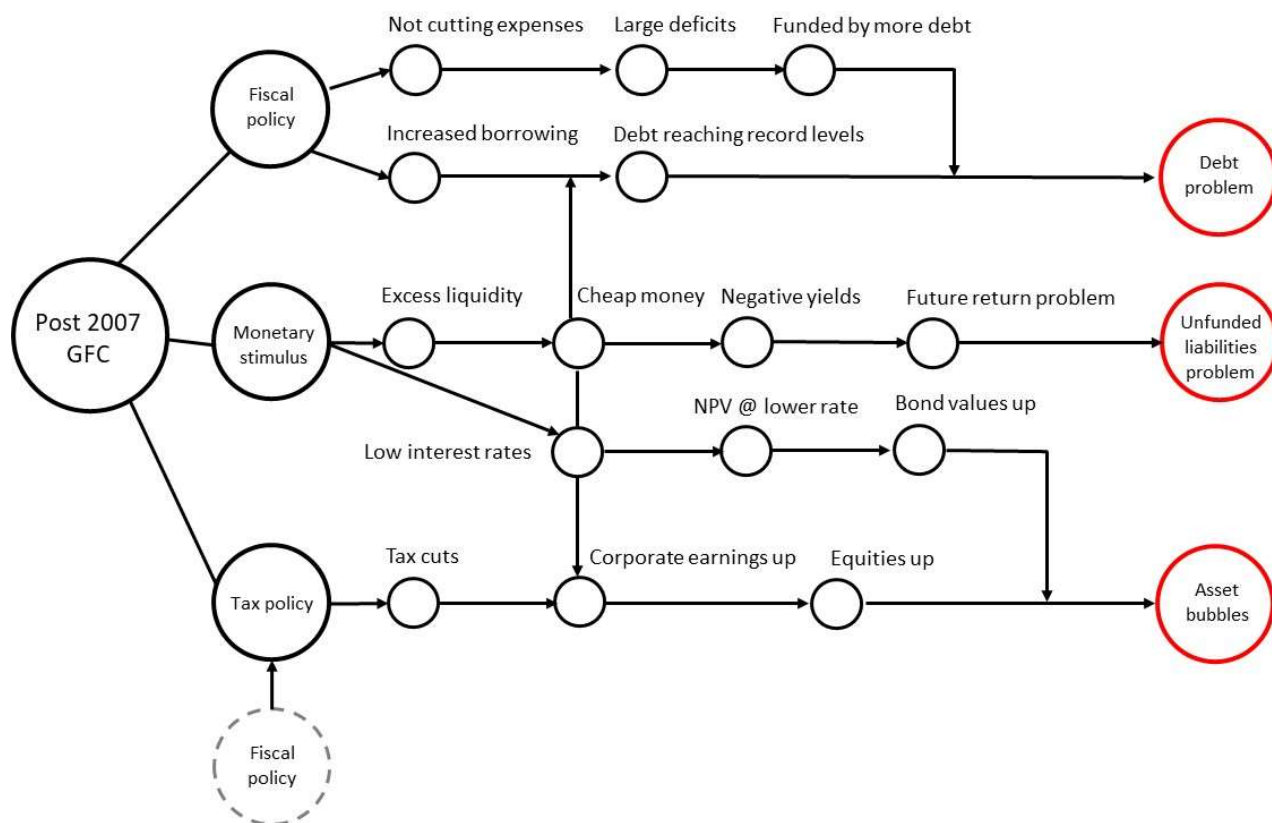


Figure 4: Simplified illustration of how the policies post 2007 led to new imbalances

Inevitable debt adjustment

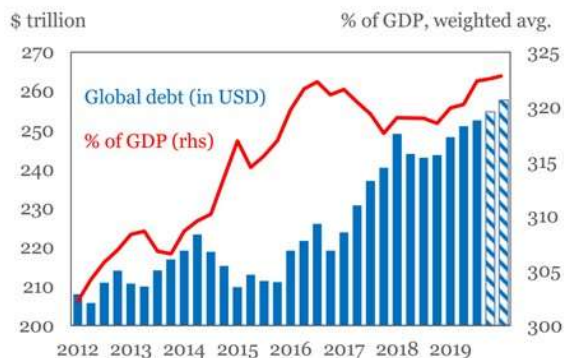
"If you owe the bank \$100 that's your problem. If you owe the bank \$100 million, that's the bank's problem."

~ J.P. Getty

Government debt as a % of GDP for most countries are now at levels last seen during World War II, the highest levels in 120 years since the establishment of modern banking and monetary authorities. At the same time, interest rates are at the lowest levels it has been in 670 years. Similar lows have only been experienced during 1941 (World War II) and 1619 (Thirty Years War - European). Clearly something is out of balance when we are experiencing war year dynamics.

The writeup below is not an attempt to explain the debt cycle fully as it is complex and not my intent to make this the key focus of this book. I merely attempt to illustrate that the current imbalances are creating a very unhealthy economic organism. For more insight into debt cycles, I would like to refer to the research published by Ray Dalio – Principles for navigating big debt crises. I believe it to be the best publication available on this topic.

Global debt hits a fresh record of 322% of GDP



Source: IIF Global Debt Monitor 13 Jan 2020

Hidden risk lurking in government and non-financial corporate sectors

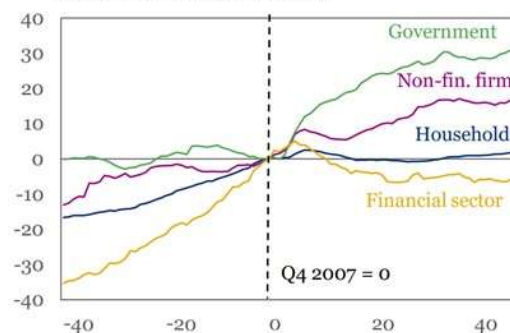


Figure 5: Debt levels reaching record levels

For emerging markets, the increase in non-financial firms' debt can predominantly be attributed to the increase in debt incurred by State owned enterprises further adding to a sovereign debt build up in emerging markets. Whereas the 2007/2008 GFC was predominantly characterised by excessive financial services leverage, what we observe today is an excessive increase in sovereign debt.

Debt/GDP ratio is at best an average

"In the long run we shall have to pay our debts at a time that may be very inconvenient for our survival."

~ Norbert Wiener

Many would argue that Debt/GDP ratios does not suggest a problem. Arguments are used that the ratio remains acceptable, yields remain good in emerging markets and the increased debt is justified as it stimulates economic growth. There are a few problems with this argument:

- There is a significant mis match between the holders of the assets and the holders of the debt. In the current dynamic playing out, the holders of the assets are those who benefit from the capitalist system (minority), whereas the increased debt is effectively held by the taxpayers (majority), a very different demographic that amplifies the wealth gap effect and further fuelling populism.
- During times when both asset bubbles and debt bubbles exist, both the numerator and denominator of the equation would be inflated. This results in debt/GDP ratio failing to signal the build-up of system risk.

Trends for budget deficits provide more insight. Much like your neighbour who is living beyond his means. If one only looks at his fancy house, expensive cars and extravagant lifestyle and compare that to his debt levels, you may get an "acceptable" ratio and reach a conclusion that the debt level is acceptable. However, if you look at his monthly budget deficit, it will provide you with an indication as to exactly how much he is living beyond his means and will never be able to sustain the situation without some significant adjustments.

Developed markets have seen a sizable increase in sovereign debt following the 2007/2008 Global Financial crisis (GFC), this is most pronounced in the US where the debt levels keep rising. Looking at data for the past 40 years, it is notable that budget deficits are usually low in times of economic boom and ramps up following a crisis to stimulate the economy. The graph below depicts this for the periods during the 2001 dot com bubble and the 2007/2008 GFC. Normally the deficit reduce as the economy recovers

so that the Government can manage its debt levels and interest payments. Since 2015 we have seen a renewed increase in the level of budget deficits for the purpose of stimulating the economy. It is unusual to have such large deficits whilst the economy is booming, unless the excessive debt and large budget deficits are the very mechanisms that is causing the economy to boom and asset prices to increase to record levels. A debt/GDP ratio alone would fail to illustrate that both the assets and the debt are inflated.

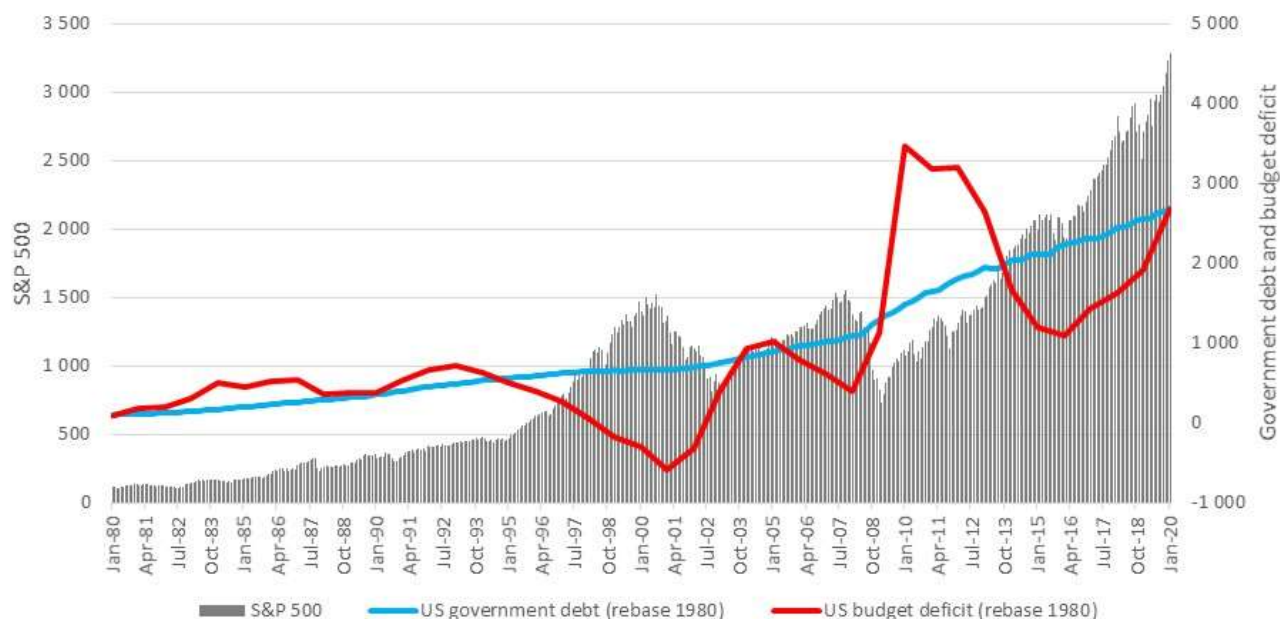


Figure 6: Illustration of US debt & deficit dynamics fuelling asset prices

The problem with excessive sovereign debt levels and budget deficits are not unique to the US, in fact it is a worldwide phenomenon and an acute problem for emerging markets where the global availability of funds searching for yield has resulted in significant increases in sovereign debt that has been used to fund mostly deficits and consumption.

The illustration below shows for example how South Africa has continued to ramp up debt and continued to increased deficits significantly subsequent to the 2007/2008 GFC. Although South Africa has scored numerous own goals with government corruption and mis management of state-owned enterprises, the availability of excessive liquidity globally searching for yield has enabled a significant build-up of sovereign debt and irresponsible fiscal practices. The debt has primarily been used to fund expenses and consumption instead of than investment. This dynamic negatively impacts the health of the economic eco system as can be seen in stock market valuation weakness the last few years, that indicates diminishing prospects of future returns.

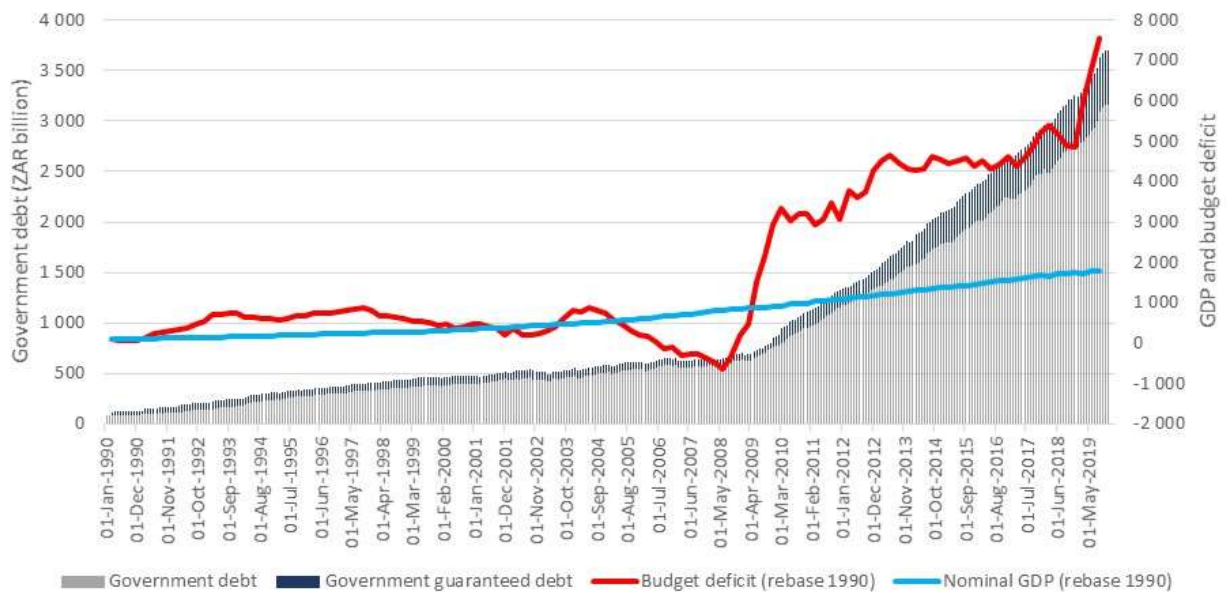


Figure 7: Illustration of how easy money searching for yield enabled South African sovereign debt and deficit build-up without corresponding economic benefit

Options for dealing with a Sovereign debt problem

Dealing with a sovereign debt problem can be particularly challenging as it impacts financial markets as well as political & social stability. Apart from a productivity led growth path, none of the other options are pleasant or without significant consequences. We currently observe a dynamic where political objectives are “out of sync” with the “hard calls” required to stabilize sovereign debt levels, simply postponing the inevitable.

The main reserve currency Governments (US, UK, Europe & Japan) have currently opted for debt monetization as the preferred option, probably because it is perceived to be politically and socially more palatable in the short to medium term. The consequences have however not been observed yet and this may very well change at some point in future.

Reducing government deficits and debt levels by means of austerity (cutting expenses) and raising taxes is very rarely politically acceptable. Political leaders whose actions such interventions rarely stay in office for long. As a result, these options are rarely considered by policy makers, in particular populist politicians, even though austerity is the most important lever to pull for fiscal stability.

Those working in the financial markets often think of a “debt default” as a default of a debt issuance, however, governments have several other obligations that they can also default against. Often these other obligations underpin social stability and the promises made by politicians during election campaigns. It is not uncommon to see these other obligations becoming center stage in populist politics.

Re-distribution of wealth could take place in several forms and should be viewed as an extreme measure to deal with a sovereign debt problem. In the emerging market world, it sometimes takes the form of nationalization and normally destroys investor confidence. This option has never had a successful outcome, however populist politicians often gravitate towards this option to address the wealth gap problem. Prescribed assets are a soft form of re-distribution of wealth.

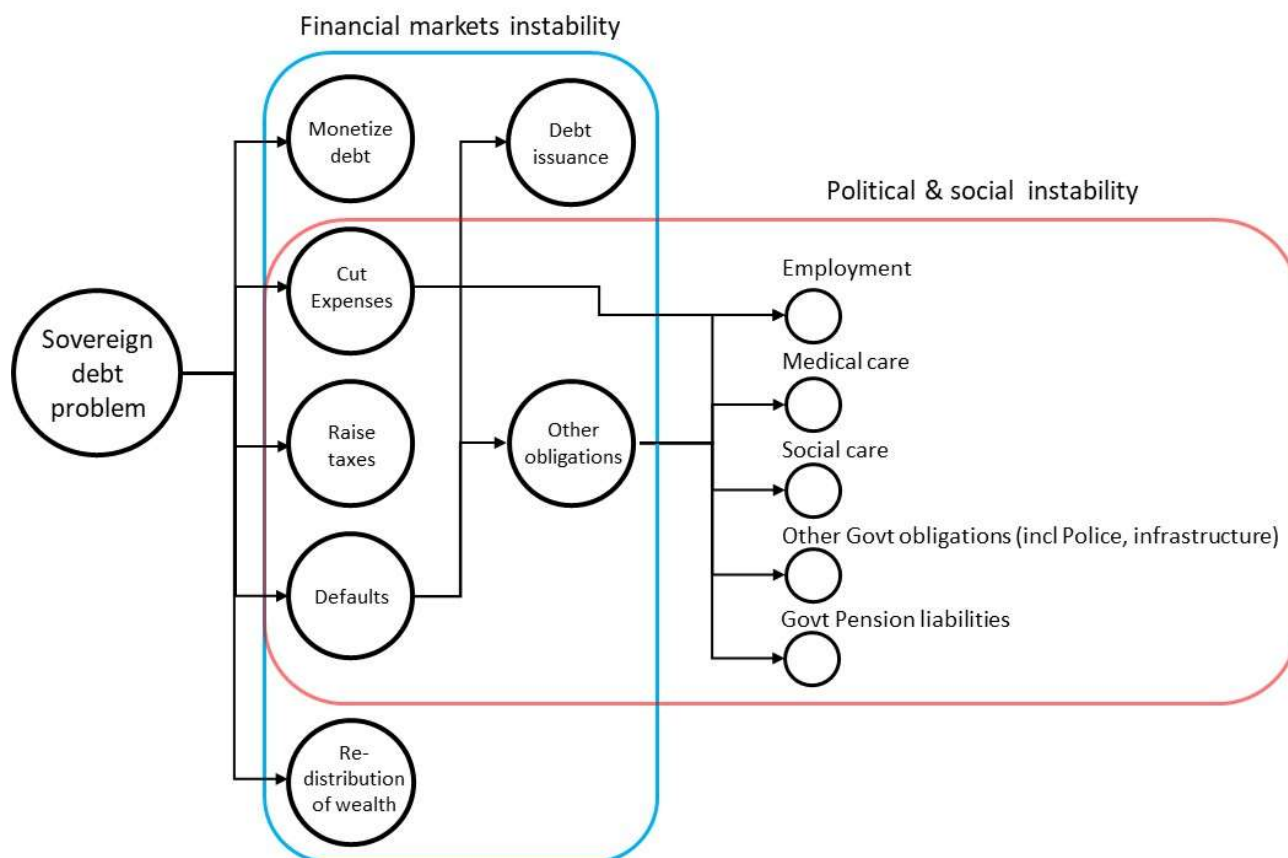


Figure 8: Simplified illustration of options for dealing with a Sovereign debt problem

Asset bubbles

“Stock market bubbles don’t grow out of thin air. They have a solid basis in reality, but reality as distorted by a misconception.”

~ George Soros

An asset bubble occurs when the price of a financial asset or commodity rises to levels that are well above either historical norms or its intrinsic value, or both. Typically, assets bubbles occur as a result of self re-enforcing upside cycles where rising spending patterns, excess liquidity and cheap funding cost generates rising incomes and rising net worth. This in turn increases valuations and borrowing capacity, which allows even more buying and spending and increased risk taking. Complacency starts to occur and debt rises faster than the future earnings prospects of the assets. At some point the limit of this unsustainable trend is reached and the cycle reverses.

What we have seen since the Global Financial Crisis (GFC) of 2007/2008 is that a combination of monetary policy stimulus, Fiscal policies and tax policy have resulted in money flooding to financial assets and increasing asset prices beyond their intrinsic value. Politicians, investors and holders of the assets feels bullish and believe that the policies that have been implemented, have created jobs and wealth and therefore must be the right approach. However, they neglect to reflect deeply on the phenomena to understand what lies behind it and why we really observe record levels in assets values. There is always a debit and a credit in the financial system, this is very much part of the foundation of accounting and financial system mechanics. The “flip-side” of the significant rise in asset values during the last decade lies in the form of sovereign debt. In accounting terms, the debit (+) has been booked to the assets and

the credit/liability (-) has been booked to the governments balance sheet in the form of sovereign debt. The government can only adjust their liability (-) by increasing taxes, cutting expenditure, defaulting on the obligation or monetizing the debt by printing money. All of these options will have a detrimental effect on the value of the assets, and one should therefore consider what the value of the assets should look like once the dynamic normalize. Holders of the assets, including financial services institutions, too often disregard the “liability” as not within their control. Using the human body as an example, this is akin to the heart not caring about the wellbeing of a dysfunctional liver and keep drinking excessive amounts of alcohol for its own enjoyment. The reality is that the global economy just like the human body, is one big eco system and everything is connected, A sovereign debt crisis most often results in a banking crisis. This happens through credit asset impairment on the bank's balance sheet through an economic shock and asset impairment of government debt held as regulatory liquid asset requirements. Bank normally have exposure to government securities well in excess of its own equity capital. The ratio of liquid assets/capital has increased since 2007 as a result of regulatory reforms. Banks are now more exposed to sovereign credit risk than ever before. Basel IV reforms have ironically forced financial institutions to be more exposed to seemingly “risk free” sovereign debt risk.

Another dynamic that can be observed, is that there tends to be an inverse correlation between the value of the assets and what we normally perceive to be good measures of risk. The illustration below shows the disconnect between PE ratios and the VIX as risk indicators vs asset value growth of the S&P index over a period of 30 years.

- A Price earnings (PE) ratio is the price of the assets divided by the earnings produced during the most recent reporting period. During times of bubbles, both asset prices as well as earnings tends to be inflated.
- VIX is a real-time market index that represents the market's expectation of 30-day forward-looking volatility. The VIX index is derived from the price inputs of the S&P 500 index options, it provides a measure of market risk and investors' sentiments.
- The S&P is a stock market index that measures the stock performance of 500 large companies listed on stock exchanges in the United States. The majority of these companies have a global footprint and therefore also acts as a good proxy for the global economy.

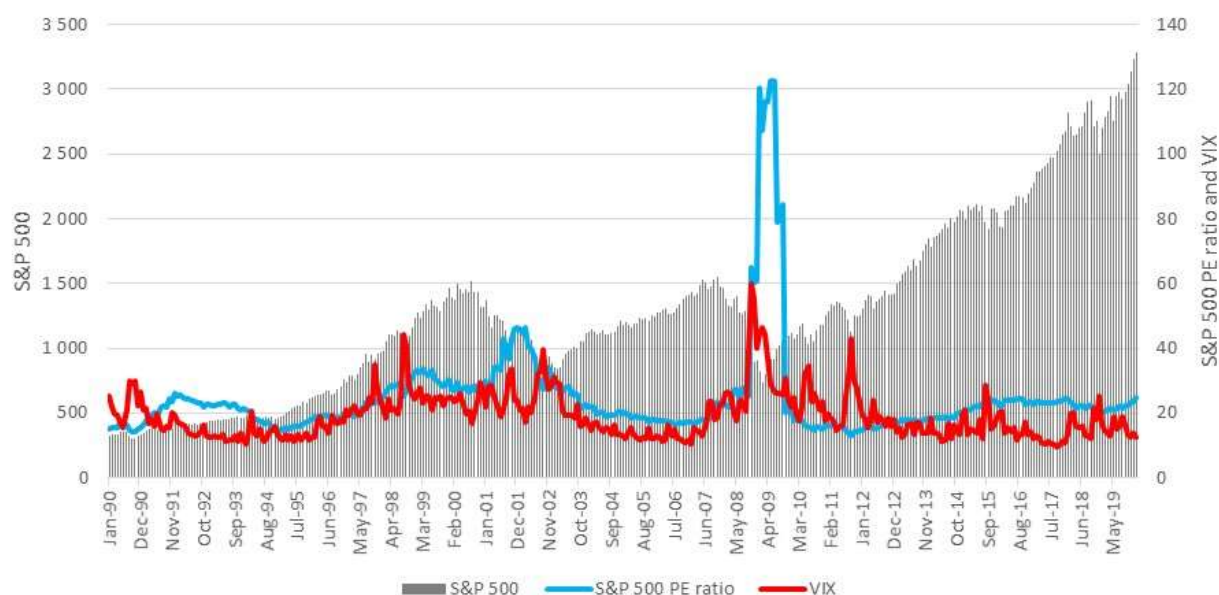


Figure 9: Illustration of the disconnect between asset values vs. common measures of risk

A number of other risk measures, including measures such as Value at Risk (VaR) works on a similar premise than PE ratio's and VIX. History shows that there is always an inverse correlation between the buildup of asset bubbles and the relative measure of risk. During times of asset bubble build up, risk indicators tend to show low levels of risk and creates high levels of confidence. Once the bubble starts bursting, risk measures will spike dramatically suggesting high levels of risk and low levels of confidence. Most risk measures used today therefore provide exquisite rear-view mirror functionality, but lack understanding of the complex interconnected dynamics that brings about systemic build-up of risk.

Unfunded future liabilities

"It does not do to leave a live dragon out of your calculations, if you live near him."

~ J.R.R. Tolkien

Quantum physics has a "time value concept" where Scientists discovered that Quantum entanglement happens independent of space and time. Albert Einstein himself also colourfully dismissed quantum entanglement as "spooky action at a distance." Sages have argued for centuries that time is a human construct and it does not exist in the metaphysical world. Refer to the Technology paradigm shift section of this book for more information on quantum entanglement.

Quantum entanglement is a very difficult concept to grasp as it contradicts our current understanding of human life, however, it does beg the question: If Physicists have proven that matter exist and behave in ways independent of space and time, is the time value of money concept used in economics still valid? This is a profound question as it challenges the very basis on which modern financial models are build.

In financial markets we observe many distortions of "time" as a result of belief systems and it is worthwhile looking at the current dynamics a bit closer, especially as far as asset values and unfunded future liabilities are concerned.

Unfunded future liabilities (pension funds, medical and various social spending liabilities) when fully accounted for far exceed the current record levels of government, consumer and corporate debt. Therefore, it is a very important dynamic to understand. The liabilities are rarely accounted for on an accrual, or even economic basis as they are often dealt with on a "pay as you go" basis, especially from a sovereign perspective. On the 'flip-side' assets are often overstated due to optimistic assumptions of their worth in future.

The following belief systems are problematic today:

- The Liabilities in the future are not really today's problem.
- The Assets we have today are worth much more given optimistic expectations of the future.

This is a global phenomenon and it is very difficult to quantify the true mis match as the recording of future government promises and the demands of the population are notoriously difficult to quantify. This is a far-reaching problem that will for many years to come be a significant factor in the social and political dynamics of every country and its economy.

The diagram below illustrates the relative size of US unfunded liabilities compared to GDP, assets and various other data points. Although US data points are more readily available than data for other countries across the world, it should be noted that similar unfunded liability dynamics exist in many other countries in the world. The size of the US unfunded liabilities is however mind boggling, by far the largest elephant in the room, for example:

- Total US debt on balance sheet + unfunded liabilities amounts to \$204 trillion; this is nearly 9.53 x US GDP or more commonly quoted 953% of US GDP.

- In order to be able to pay for the unfunded liabilities in future, it is essential to obtain cash through either a budget surplus or additional borrowing. Currently the US is running a large budget deficit (and so does most countries) whilst continuing to borrow. At some point in future either of, or a combination of the following will occur if the current trajectory is maintained:
 - a cash availability crisis
 - default on social commitments
 - debt crises
 - currency crises (via excessive monetization).
- Annual budget deficits are often compared to GDP as a single digit percentage suggesting the quantum of deficits are acceptable, rather than observing the shortfall in nominal terms as a large hole. As an example, the annual US budget deficit is larger than the entire Netherlands economy and more than twice the size of the entire US gold reserves.
- Total debt (on balance sheet + unfunded liabilities) far exceed asset values of all participants in the economy (household, small business & corporates). It should be noted that the assets are held by very different people than those who hold the liabilities. The assets values are also over valued due to optimistic assumptions of future earnings and economic conditions.
- Some often argue that re-distribution of wealth is a solution, the diagram below illustrates as an example that the combined wealth of the world's billionaires can barely solve a fraction of the problem.

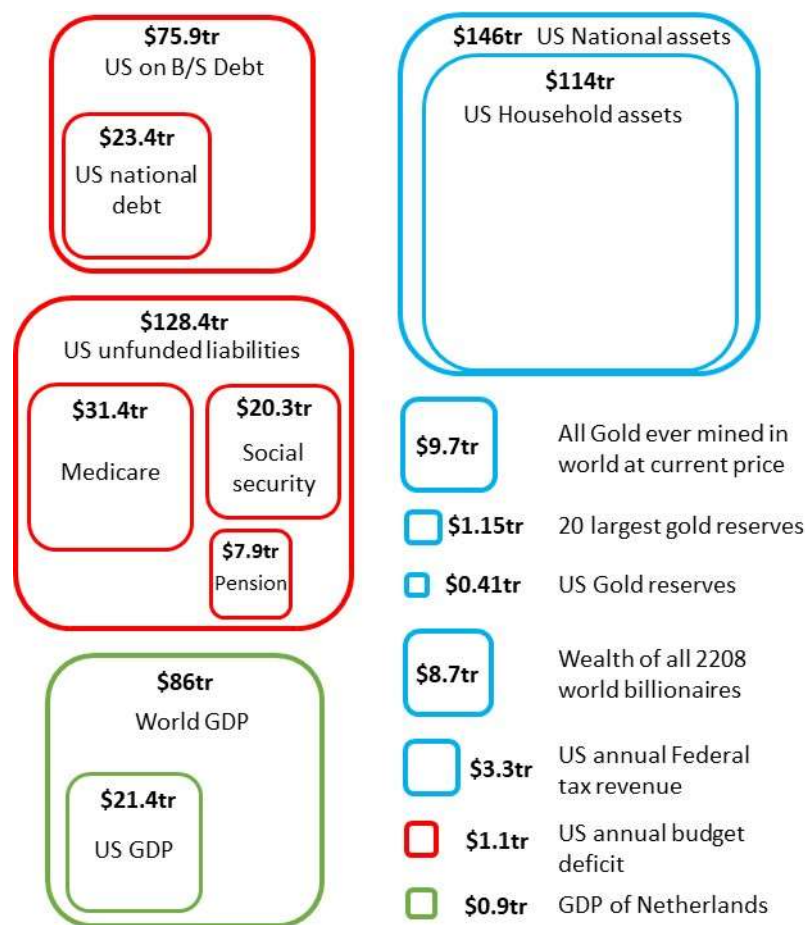


Figure 10: Illustration of the relative size of US unfunded liabilities

Many use the argument that these dynamics are not a problem as it has been going on like this for a long time without stability issues. One should always bear in mind that “The fact that you haven’t died yet does not make you immortal”. Large imbalances always correct at some point, this is a basic principle of rhythm and cycles of all things in life.

The diagram below provides an illustration of how the asset & liability profile on balance sheet (B/S), i.e. what is recognised in financial accounting, differ from what the true asset vs. liability profile look like. In cases where assets are allocated to corresponding liabilities in certain portfolios, we see that the asset values are over inflated as a result of over optimistic future return prospects. Liabilities in turn are understated and not fully accounted for, particularly in an environment where interest rates and unemployment are low due to excessive economic stimulus by policy makers.

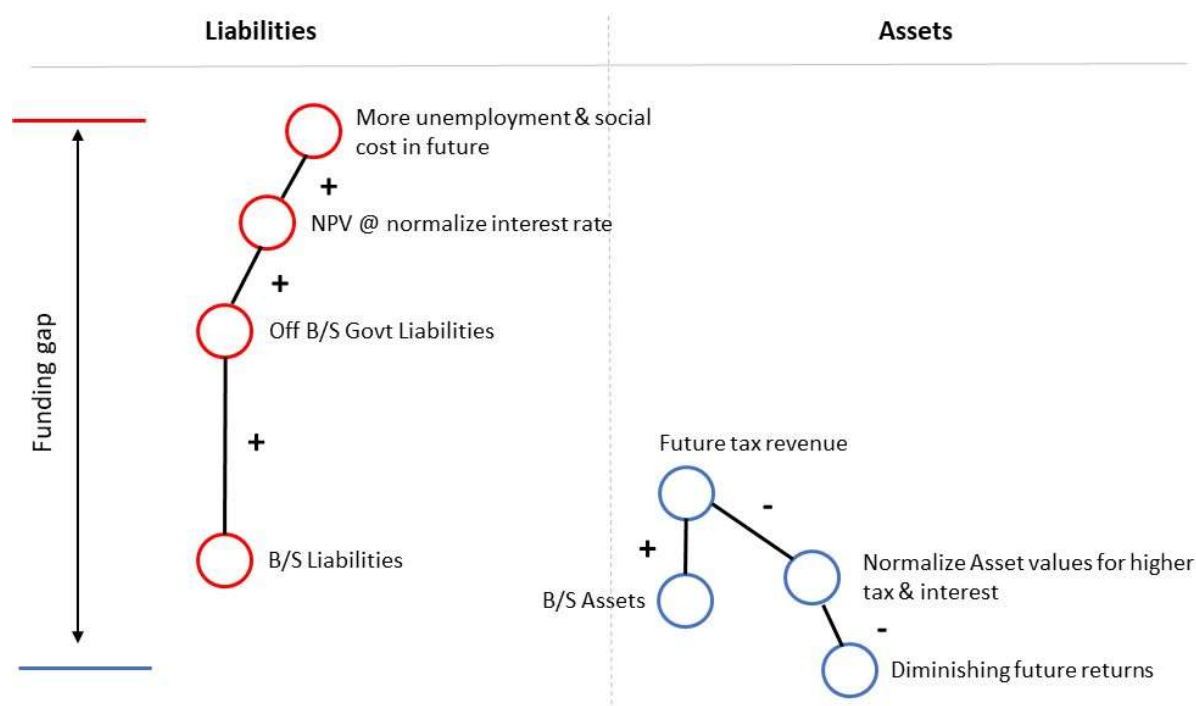


Figure 11: Simplified illustration of unfunded liabilities and supporting assets mis match

A loaded system – what happens in the event of decompression

“There is no way that we can predict the weather six months ahead beyond giving the seasonal average”

~ Stephen Hawking

A paradigm shift can either occur suddenly following a cataclysmic event or a significant change in expectations or sentiment, or gradually for example as part of significant technology developments (e.g. development of modern farming techniques). It seems like the paradigm shift in the making currently may very well be a combination of both, although we have not yet observed a shock event. History has seen many paradigm shifts. Economic paradigm shifts happen approx. once a decade, major geopolitical conflicts twice a decade, rise and fall of major empires approx. every 500 years and major extinction events once every few million years.

It is very difficult to foretell the future. Most forecasting models make use of historical data and from that infer the probabilities of future outcomes. The time series of data used in modern finance is relatively limited and usually covers no more than two decades. Most economic models we use today would for example not include the impact of unexpected events such as a major pandemic, a major global war or a major natural disaster. The institutional knowledge of such events and conditions that brings them about is limited while human behaviour tends to be biased on the experience of the most recent past.

However, it is important that one look back at history to see what type of conditions provide a fertile environment for a massive paradigm shift. There are two periods that stand out where the conditions provide many similarities with what we experience today. These are:

- The period around 1907 when the big San Francisco earthquake acted as a trigger for the 2nd largest financial crises in modern recorded history, that set off a chain of events that eventually led to World War I.
- The period of the 1930's where excessive monetary policy stimulus resulted in a series of effects that increased assets prices abnormally. A sudden tightening in fiscal policy led to a shock to the economy and a series of events unfolded including the Great depressions and eventually World War II.

As can be seen in the table below there are numerous similarities between what we see today and the events of the 1907 and 1930's periods. The conditions we experience today, even though on the surface seem rather prosperous, contains significant systemic risk that could be triggered by an unexpected event. The main differences between the 1907 & 1930's periods and today are:

- We have not yet experienced a major shock to the economy (although the Corona virus outbreak is rapidly becoming such an event).
- We have not yet experienced a debt crisis. Historical analysis of debt cycles suggest it is only a matter of time.
- We are experiencing major extinction and climate change impacts that was not a factor during earlier periods, these phenomena significantly amplify the socio-economic imbalances.
- We are experiencing significant quantum technological developments that were not prevalent in the phenomena in earlier periods. Quantum technology is all about being connected everywhere all the time, thereby creating a significantly faster and wider transmission mechanism for systemic risk.

Elements that make up a perfect storm	1907	1930's	2020
System-like architecture - Complexity makes it difficult to understand linkages that enable contagion.	X		X
Buoyant growth – creating excessive imbalances that eventually must correct	X		X
Inadequate safety buffers – overreach in use of debt, Lower margin of safety, limited or no ability for policy makers to respond	X	X	X
Adverse leadership – Political policy that raise uncertainty, impaired confidence	X	X	X
Real economic shock - Unexpected events cause economic shock, sudden reversal in outlook	X	X	
Undue fear, greed, and other behavioral aberrations. Shift from optimism to pessimism that creates a self-reinforcing downward spiral.	X	X	X
Failure of collective action - Responses inadequate to the challenge of the crisis.	X	X	X
Excessive debt - High levels of indebtedness	X	X	X
Asset bubbles - Markets discounting relatively high growth rates	X	X	X
Aggressive Monetary policy - Aggressive Monetary policy easing with interest rates close to 0%		X	X
Printing money - and currency devaluation, rises in gold prices, stock prices, and commodity prices.		X	X
Populism - Wealth gap widened, with increasing conflict between socialists and capitalists		X	X
Geopolitical conflict – rising geopolitical conflict between emerging/rising countries and established countries		X	X
Debt crisis – largely handled via defaults, guarantees, and monetization of debts along with a lot of fiscal stimulation		X	

Figure 12: Comparison of current conditions with that pre the Panic of 1907 and the 1930's

Potential triggers for an economic shock

Historically when a system is loaded to its full extent, approaching the end of unsustainable trends, there are always trigger events that cause the cycles to reverse, often resulting in a crisis. The nature of the trigger events is very difficult to forecast. Some example of past events includes:

- The Mayan civilisation, a sophisticated civilisation of approx. 19m people may have collapsed suddenly during the 9th century AD, when a severe drought, exacerbated by widespread forest logging, and **disease** appears to have triggered the mysterious Mayan demise.
- The **eruption** of Mount Vesuvius in 79 AD wiped out the ancient and prosperous city of Pompeii
- The 1906 San Francisco Earthquake was the deadliest **earthquake** in US history, and also triggered the collapse of the stock market in 1907 (referred to as the Panic of 1907) that set off a chain of events that eventually led to World War I.
- The Laki **volcanic** fissure in southern Iceland erupted in 1784 for a period of 8 months, killing a quarter of Iceland's population. The eruption darkened the sky over all of Europe for years and caused widespread crop failures in Norway, the Netherlands, the British Isles, France, Germany, Italy, Spain, North America and even Egypt due to ash and sulphur fallout. The global weather patterns were so severely affected that in America the Mississippi reportedly froze at New

Orleans during winter and is thought to have disrupted the Asian monsoon cycle. The resulting economic hardship and food poverty was a major contributing factor to the **French revolution** of 1789.

- There is a long list of **pandemics/plagues** that occurred in History, in the majority of cases, these events were also characterised by massive food shortages, unemployment, social unrest, conflict and economic activity collapse.

The following are likely triggers to consider that may result in an economic shock. These could be used for a scenario planning purposes:

- **Change in expectations/sentiment** as a result of adverse policy or political decisions. The risk of adverse policy decisions continues to increase, especially due to rising populism and governments that are becoming increasingly dysfunctional.
- **Outbreak of a major war** (trade, cyber, conventional). Regional wars occur rather frequently, at least each decade. Europe is the most violent continent in the history of mankind and have probably experienced more war than peace time. Numerous rising geo-political tensions currently increase the probability of war in some form in a number of territories (Kashmir, Middle east, Lebanon, North Africa, North Korea, Taiwan, Ukraine, Venezuela, US-China, US-Russia etc).
- Outbreak of a **major contagious disease or pandemic** (plague). There has not been a major pandemic outbreak for a long time. Humanity is more mobile now than ever before and ill prepared to deal with a major outbreak, whereas factors such as climate change increase the probability of proliferation of pathogens and disease.
- **Natural disasters** such as a **megathrust earthquake** or **major volcanic eruption**. There are numerous potential natural disasters that are statistically speaking overdue. An interesting example is the Cascadia Subduction zone megathrust fault line along North America's Pacific Northwest coast. This Faultline extends for nearly 700 miles (1,100 kilometers) from Canada's Vancouver Island to Northern California in the U.S. The last quake on this fault line happened in 1700 and caused a quake so severe that parts of the land disappeared into the ocean and it resulted in the only record of a tsunami in Japan without an earthquake in Japan, called the infamous ghost tsunami. A Cascadia subduction zone Earthquake happens approx. every 300 years and could release a mega tsunami more than 100 feet high across the entire west coast of the US and Canada. This may potentially trigger the San Andres fault line and very likely to trigger the eruption of some of the 20 major volcanos on the Cascade Volcanic Arc (similar to what happened in 1960 during the Valdivia megathrust earthquake in Chile).

Super storm formation

If one looks at nature, we find that when the conditions are right, super storms develop. Often during the formation of such super storms, one can observe extreme polarization in measures and conditions (much like we are observing in financial markets and politics today). This fuels the storm and also inevitably results in disruptive phenomena that plays out, for example severe lightning, to correct the extreme polarities. The same principle applies for megathrust earthquakes and volcanic eruptions. It is never possible to forecast how the storm forms or plays out, or where the lightning or tornado will strike. But we can recognise that the conditions are fertile for a storm to form and look at how previous super storms behaved.

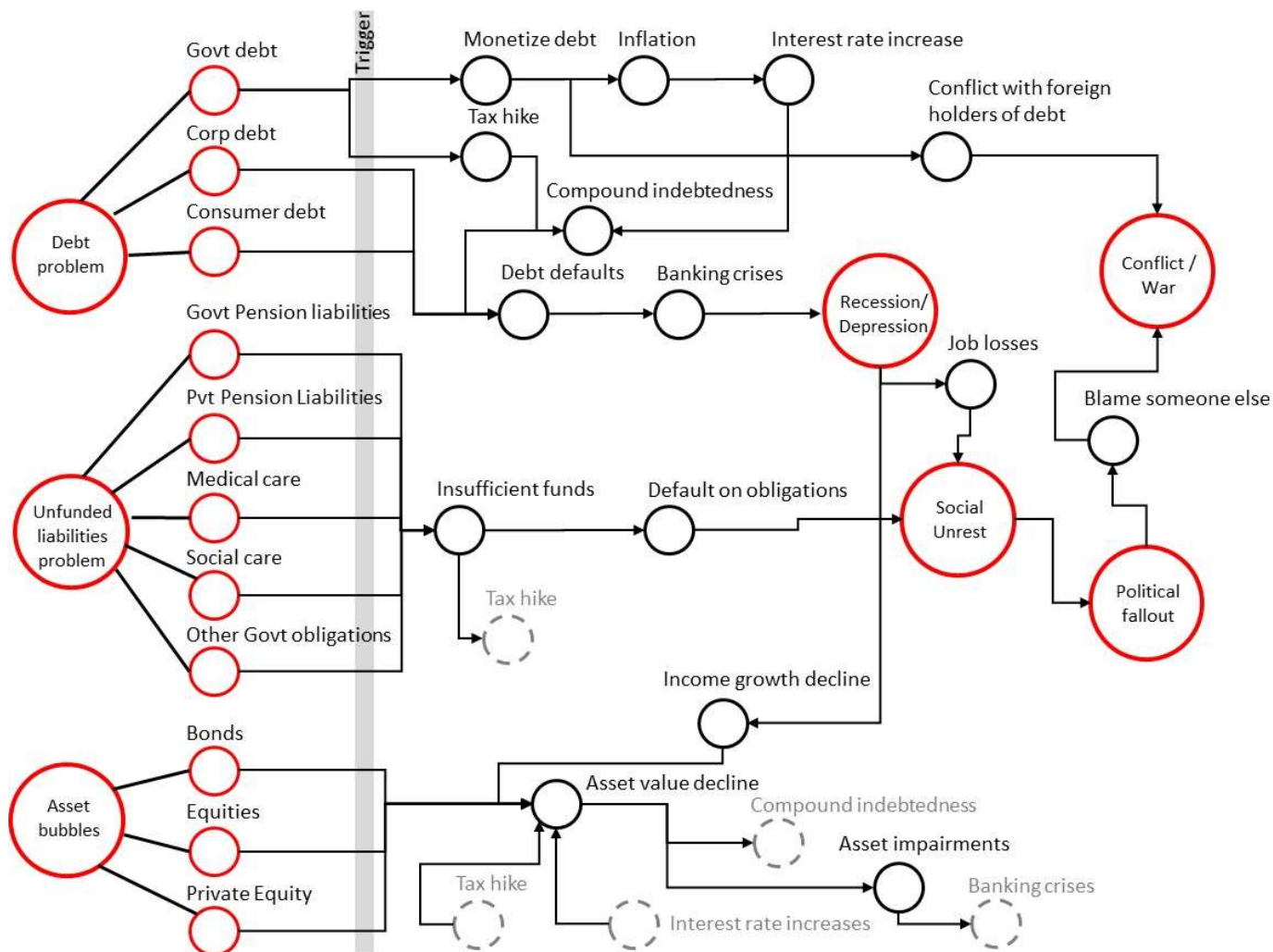


Figure 13: Simplified illustration of potential pathways for a severe crisis manifesting

The financial markets, economic, social and geo-political conditions we observe currently are extremely polarized, and it features amongst the most polarized conditions in recorded history. We have become conditioned to believe that this is a “new normal” and that it is acceptable to continue on the current trajectory, rather than identifying that these conditions represent what is required for a “perfect storm”.

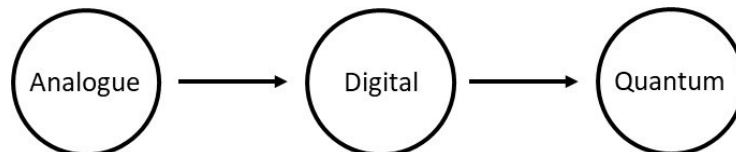
The conditions may dissipate or become even more intense, irrespective, given the severe nature of their impacts it is worthwhile to consider and plan for a high probability of a super storm manifesting at some point.

TECHNOLOGY PARADIGM SHIFT

"Technology has advanced more in the last thirty years than in the previous two thousand. The exponential increase in advancement will only continue."

~ Niels Bohr

As mentioned earlier, the paradigm shift in technology is leading the big picture paradigm shift in human consciousness. The "big picture" shift is a paradigm shift from a world build on analogue thinking and technology to world based on Quantum technology, quantum mechanics and understanding of the quantum field. The Digital part of this paradigm shift is merely a transition phase towards a Quantum world.



The differences between an "analogue" world and a quantum world is profound. It challenges our modern-day belief systems on most aspects of science and life. As an example, in the quantum world matter can exist in different states at the same time whereas with our current understanding we would argue this is impossible. Yet a laser beam consists of matter in different states at the same time, quantum mechanics in our everyday world. We believe that as humans we are only able to have an experience in a single state, yet there are countless examples of Qigong masters performing distant healing through the quantum field. These concepts are proper "mind bend stuff", the illustration below provide some key examples of differences between these worlds.

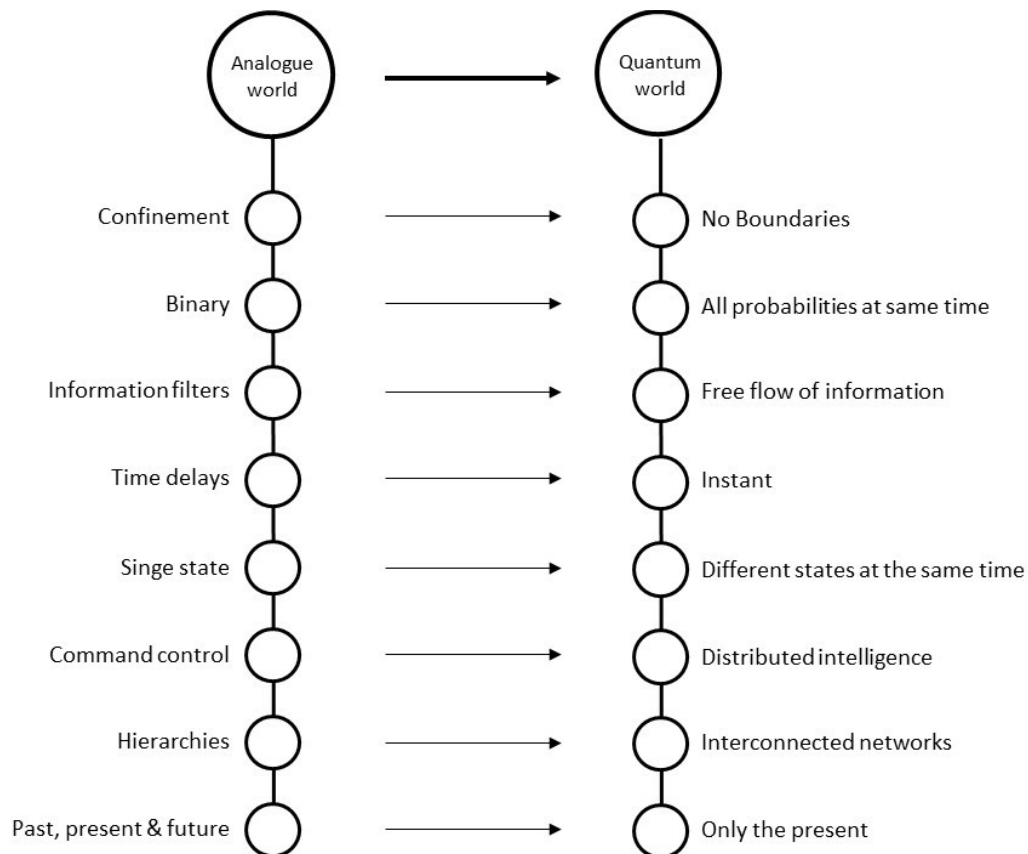


Figure 14: Illustration of Analogue vs. Quantum world

The developments in the Digital space are already having a profound impact on the financial services world as can be seen from substantial investment in digital platforms, and the rise of many FinTech players. This journey will continue and will likely speed up with exponential changes. These changes will not only transform the business platforms but will have a profound impact on how we engage in the work environment.

In order to better understand how the technology paradigm shift is unfolding, it would be useful to gain more insight into the world of quantum mechanics to understand what is driving the digital revolution.

Quantum Mechanics

So, you may ask, “what does quantum physics have to do with banking?” The answer is everything. Quantum Physics underpin everything in our reality, and it is also the most significant scientific discovery in recent history. Einstein had great difficulty wrapping his mind around Quantum theory and called phenomena such as Quantum entanglement “spooky action from a distance.” Physicist have made great discoveries the past few decades, but I believe they currently only see the “tail of the lion”. Quantum physics underpin everything in life as illustrated by the diagram below as it forms the foundation of the building blocks of matter.

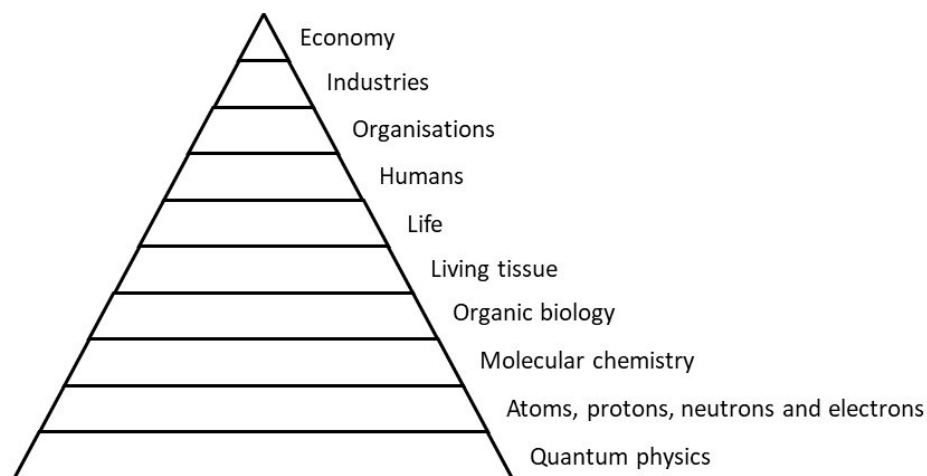


Figure 15: Illustration of how Quantum physics form the foundation of everything in life

Quantum field

The typical view of how life works today is an outdated heritage of the Newtonian world-concept. Newton theory makes us believe that everything consists of physical matter, is separate and operates like components in a machine. Physicists have found that atoms are actually 99.999999999% nothing, and only .00000000001 % matter. To stretch our minds even further, the nucleus of the atom (made up of protons & neutrons) is the most physical part of an atom and consist of another 98% of nothing. However, this nothingness, is not truly empty, instead it consists of a strong energy force that makes everything happen. This energy force consists of energy waves, stores information and represents infinite amounts of energy in the universe. For the purposes of a simplified understanding, this energy force in the space of “nothingness” should be understood as the quantum field.

Quantum entanglement

Not only is the world not solid as we were made to believe, but the beliefs that matter is separate, and nothing can move faster than the speed of light is also incorrect and outdated. Physicists have discovered that quantum entities can influence each other instantaneously across any distance of space and time, commonly referred to as Quantum entanglement.

In 1997 Nicolas Gisin performed an experiment to test how two separate particles emitted from the same source inform each other over a distance. What he found was that the measurement of A does not merely reveal an already established state of B, but it actually produces that state. The experiment also revealed that particles 10 kilometers apart, appeared to be in communication 20,000 times faster than the velocity of light.

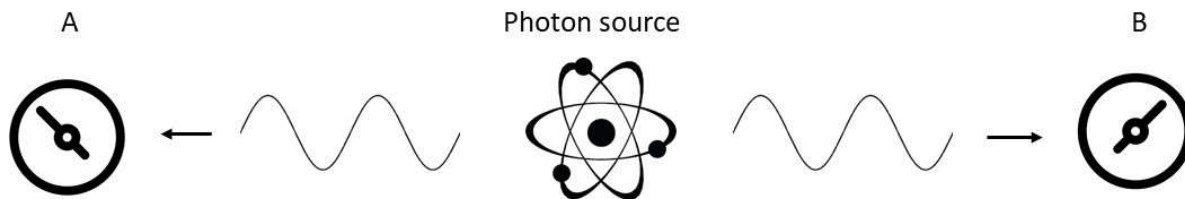


Figure 16: Simplified illustration of quantum entanglement experiment

The phenomenon of quantum entanglement is not only profound from a physics perspective, but it also has a profound impact on how we progress in our digital transformation journey towards a Quantum world. Quantum entanglement is not only core to how quantum computing works, but it also impacts how we as humans engage with each other, as our own subtle energetic frequencies also makes use of this principle. Quantum entanglement also brings about the development that technology platforms are becoming increasingly connected across space and time. Therefore, increasingly connecting customer data, transaction systems, support systems, all forms of internal and external interfaces etc. to be operating in real time.

Quantum computing

Quantum computers are based on the phenomenon of Quantum Mechanics, the phenomenon where matter exist in more than one state at a time simultaneously (superposition). Conventional computing is based on the classical phenomenon of electrical circuits being in a single state at a given time, either on or off. For conventional computers a transistor will either be in a state of 0 or 1 and all computer programming is coded in a binary fashion with these 0 and 1 permutations.

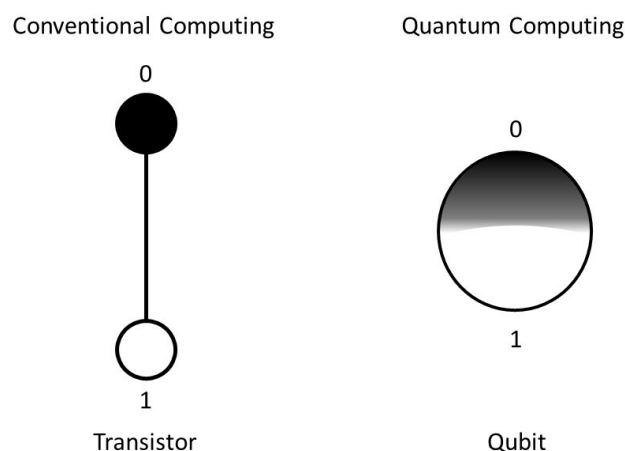


Figure 17: Difference between conventional & quantum computing

With quantum computing a whole new paradigm comes into existence, a very complex process impossible to explain fully in this book. Quantum computing makes use of quantum bits, called qubits. Quantum mechanics such as superposition and entanglement are used to perform computations. Therefore, a Qubit does not only assume the state of a 0 and 1 simultaneously, but also hold the state of all possible permutations between 0 and 1. This brings about a whole new world of possibilities as far as computing is concerned and brings about the ability to solve all permutations simultaneously. This can be best explained using the example of solving the best path out of a maze. With conventional computing each potential path is solved for in a sequence of possibilities, i.e. one after the other. With quantum computing all probable paths out of the maze is solved for simultaneously.

The implications of this is enormous, allowing quantum computers to solve more complex problems much faster. As an example, it is estimated that all current encryption used (Including RSA Encryption) will likely be cracked using quantum computing within the next 10-15 years. The world's current Quantum computers have around 50 Qubits of computing power the tipping point for practical applications in Quantum computing is estimated to be greater than 150 Qubits. In October 2019 Google claimed to have achieved a major milestone in the Quantum Computing field called "Quantum Supremacy" with its 50 Qubit supercomputer, by computing a mathematical formula in 200 seconds which would take the worlds traditional supercomputer 10 000 years to process. This has prompted a Quantum gold rush with huge investments from the private sector and governments given the strategic importance.

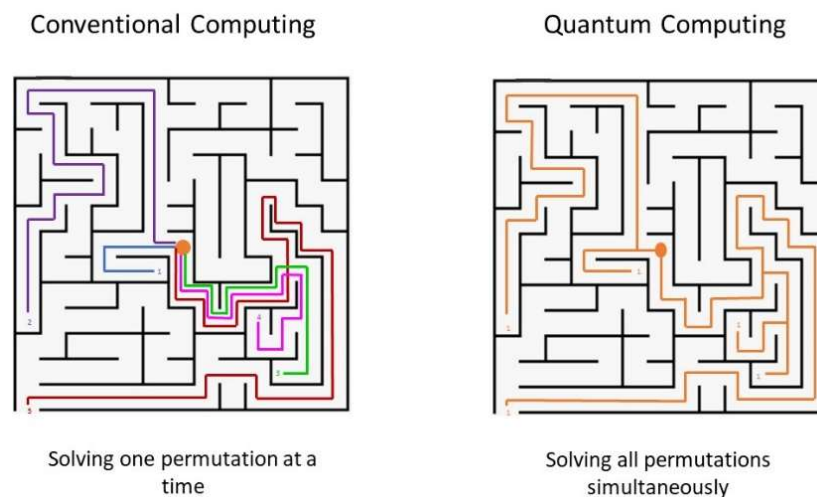


Figure 18: Example of the different approaches to solving a computing problem

Quantum computing will also bring about a new domain of Quantum Cryptography where quantum entanglement is used as a basis to create unbreakable encryption. The transition to this new paradigm will have profound implications for financial services institutions, as they will need to plan well in advance for the migration of all current systems and security measures to new forms of quantum encryption.

Implications for Financial Services

There are numerous publications available on the future of digital finance and I have no intention to duplicate what has been written in those papers as I deem most of them to be very insightful, instead I would like to focus more on the major trends towards a quantum world of operation. We have seen significant changes in customer interfaces in the financial services world, driven largely by developments

in mobile technology. Although these evolutionary developments will continue, the impact of digital transformation is yet to be seen in the back-end systems and processes that continues to be very fragmented and ineffective. The challenge for financial services institutions are to re-architect everything whilst continuing to “fly the existing plane at high altitude”

Everything will be connected

The human body is nothing other than a platform with a sophisticated quantum processor (the mind) that regulates the functioning of 50+ trillion cells in the eco system of various interconnected functions. In this human body platform, there is no duplication of functions (teams & processes), no storage of redundant cells (files), no internal rivalry, however there is constant mobility and recycling of resources. The establishment of platform business models is the first step to increase efficiency and mobility, and an essential part of the journey towards a quantum world.

In the quantum world, everything operates as an interconnected web interfacing with everything else all at the same time. This dynamic is not obvious to us as we currently see the world predominantly through the lenses of separateness. As a result, we have architected our business activities, team structures and supporting processes to be separated with numerous touch points and interfaces, often aligned to people dominated territories. Although core banking applications are largely automated, the thousands of processes and sub systems are not. These processes are maintained similar to self-reinforcing behavioural patterns because it provides purpose to those teams and leaders who are in charge and maintaining the respective domains.

Progression towards an interconnected world will result in incremental change towards a paradigm that will have the following characteristics:

- Team structures and systems architecture build around products or segments will dissolve and be replaced with technology platforms that interface across many teams and business areas.
- Technology architecture will serve the purpose of connecting all stakeholders for co-creation and optimal exchange of information and transactions.
- There will be no more space for “us vs. them”. The organisms cannot sustain in a quantum system if resources/currency is not efficiently and effectively distributed.
- Competitive advantage will not come from proprietary confinement but will come from those systems and platforms that most effectively and efficiently interact across the whole eco system.
- Human interfaces and controls will be redefined with eventual elimination to allow for seamless instant flow of information, like a fast-flowing network of water pipes.
- Human effort would shift from numerous manual activities, to focus on architecture design and analysis of exceptions.
- Periodic sample testing of controls to assess adequacy and effectiveness thereof will disappear to be replaced with continuous testing of the full suite of controls using complex network of self-regulating Artificial Intelligence (AI) and robotics.
- Risk assessments will become more objective, based on internal and external data with the application of the risk expertise focused on the validation of the risk assessment outcomes as opposed to actually conducting the risk assessment manually.
- Fraudsters will continue to be early adopters of digital innovative technology and move at speeds faster than what financial institutions are able to deal with. In order to effectively deal with this problem, authentication mechanisms will change to become predominantly behavioural intelligence based. The username and password way of authentication will become obsolete.
- Intelligence and information will be distributed. Power of information will not reside in control, but rather in terms of how well it can be utilized by all the participants of the eco system.
- Utility functions and centers of excellence will be shared across business and organisations for greater efficiency and effectiveness.
- Platforms will allow for co-sourcing and co-creation of human capital across the boundaries of the organisation. “Ownership” of employees may very well slowly dissolve over time to be replaced

with a model where people and clusters of skilled workers flex “in and out” of the organisation as required. This will be more prevalent in knowledge worker areas, for example Legal advisors.

- The ‘workforce’ will be augmented – comprising a combination of domain experts, digital labour (machine learning, predictive analytics, natural language processing, robotics) and open talent networks (e.g. freelancers, temp/contract workers). This will fundamentally shift ways of work.

Information will have no boundaries

In a quantum world, the true value lies in the information, as the information in the quantum field determines how the matter manifest. As Financial services institutions progress towards the new paradigm, the importance of information will become ever more important. Information is a concept broader than data as it also defines how the data gets used. But for practical purposes let's focus on data for now. Data in Financial services organisations are currently very fragmented, mostly as a result of fragmented business processes, functions and systems. Financial services organisations have significant amounts of valuable data, however the task to harmonize and extract value from this takes enormous effort.

The key difference between financial services institutions and technology companies are:

- Financial services institutions offer transactional and other services for which it charges a fee, and as part of this process they collect a large amount of valuable data. They are largely trusted by their customers as custodians of the data.
- Technology companies provide services for free and collect substantial amounts of valuable data. Customers don't realise that because they don't pay for the service, they are in fact becoming the product. For technology companies to make money from their activities, they have to monetize the data, often resulting in privacy and ethical use of data conflicts.

As technology companies start entering the payments value stream, and financial services companies become increasingly more technology driven, the areas of distinction will become blurred, and competition will become fiercer. Those players who are best at providing platforms that are effective, efficient and provide customers with comfort over ethical use of data, are the most likely to succeed. I have no doubt that many instances of questionable business practices will continue to emerge, and regulators will therefore also be playing an ever increasingly active role. Ethical use of data will be a critical differentiator in future.

The advent and increasing use of cloud services will slowly erode the banks direct control over data posing significant challenges in managing the data eco system.

The boundaries of control over data will also change. As an example, regulators are already considering adopting their own digitization strategies that will require direct access to risk and other data from financial services institutions to enable them to perform their own artificial intelligence based supervisory analysis. Increased levels of granularity will enable regulators to do a lot more with the data than what has been possible historically. This will introduce new challenges regarding privacy, ethics and bandwidth. For example, some regulators are already monetizing data by means of offering subscription services.

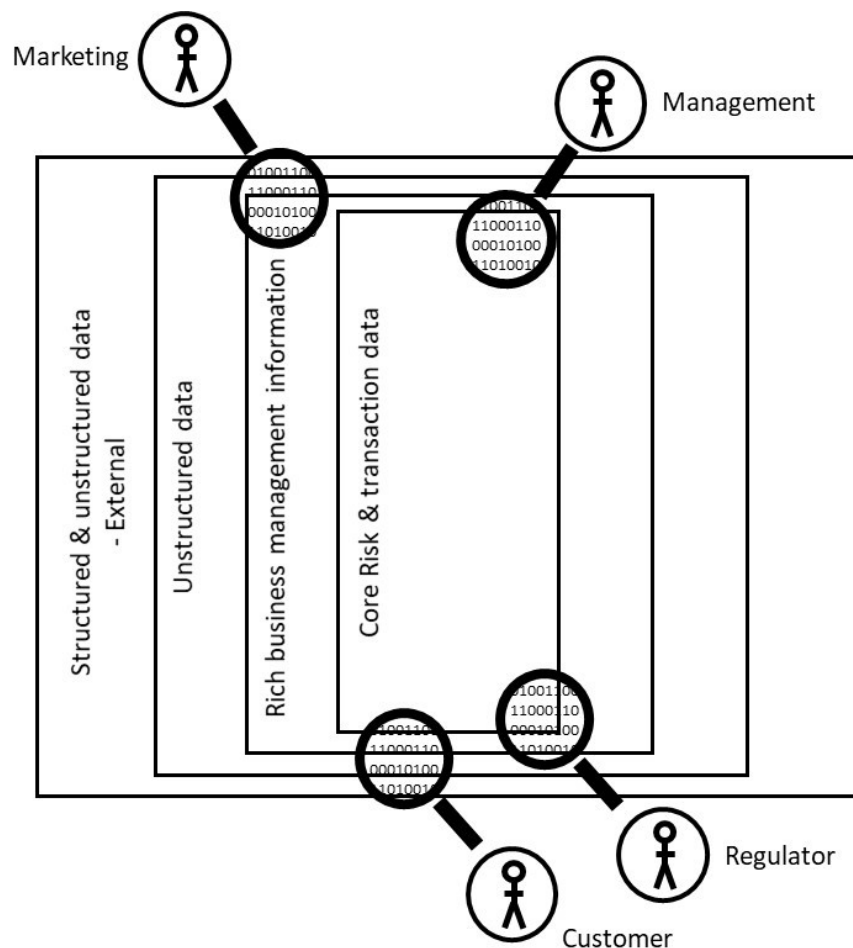


Figure 19: Illustration of different dimensions and users of data

Customers will be allowed more access to their data through initiatives such as open banking. Traditionally such data has been isolated in confined boundaries within the organisation. In order to deal with these trends, it will be required to re-architect how data is transmitted, processed, stored and used. The optimal data model will continue to evolve, however it is critical to understand that the architecture will require some form of central data “reservoir” that contains various types of data such as: core risk and transactional data, management information, internal and external unstructured data. This “reservoir” will be accessible by various users of the data, each using their own unique “lens” for the purpose required. The number of stakeholders will range considerably across the ecosystem and will amongst others include internal stakeholders, third parties engaged by customers and regulators to name a few.

Future of currency

Currency, or money as we like to call it, has been a part of human history for approximately 11,000 years. Initially a barter system was used where participants directly exchanged the goods or services for other goods or services. In the ancient empires of Egypt, Babylon, India and China, clay tokens and other materials were used to serve as evidence of a claim upon a portion of the goods stored in the warehouses. King Alyattes of Lydia (modern day Turkey) minted the first official currency coins in 600 BC and the first bank notes were printed in Sweden in 1661. For most part of history currency has been either directly commodity based, or it has been linked in some way to commodities to determine its value. The British pound de-coupled from gold in 1931 and the US dollar convertibility to gold was abandoned from 1971, forming what is commonly referred to as the Fiat currency systems used widely today.

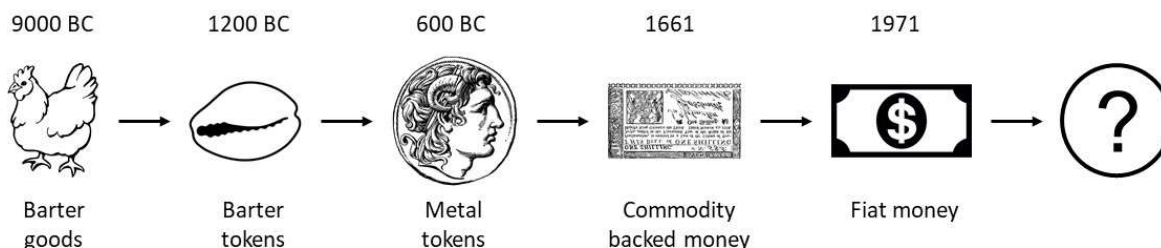


Figure 20: Simplified Illustration of the history of currency

Today we implicitly believe that the money we use has tremendous value, but when your 7 year-old-son asks you “why is paper money worth more than metal money?”, it becomes rather difficult to explain to him that the money we use today is simply a promise from the government. Fiat money is a currency that does not have intrinsic value, but rather it is money that has been established by a government who provides a “guarantee” that that the money will maintain its value. It is believed that governments can maintain the currency’s value simply because it can tax its citizens accordingly. The relative value of the various fiat currencies also gets determined by those parties in the economy who engage in exchanging of goods and services and is based on the basic principle of demand and supply.

Only the government, through its monetary authorities can control the issuance of money as per strict laws and regulation. However, the counterfeit industry is as old as money itself. It is interesting to note that when large amounts of counterfeit money enter the system, the following consequences are observed:

- Loss of buying power and a reduction in the value of the real money start to occur.
- Increase in prices (inflation) due to more money getting circulated in the economy artificially increasing the money supply.
- Decrease in the acceptability of the money. Payees may demand payment in other forms of currency.

If we look at currency more philosophically, we find that currency is essentially a mechanism that is used to exchange value and act as a store of wealth. Currency is therefore nothing other than an exchange of, and a store of energy. Physics teach us that the law of conservation of energy states that energy can neither be created nor destroyed, rather it can only be transformed or transferred from one form to another. Therefore, one can argue that money itself is only a proxy that enable the energy exchange in the economy. When governments attempt to “create” new money by “printing money” it will not create new energy for exchange in the economy but will rather create an imbalance in the system that may at some point very well end up having the same effect as introducing large amounts of counterfeit money into the system.

There are a few very important dynamics starting to play out that may suggest that a paradigm shift for currency as we know it, may be in the making in future. Some of the more important developments to note for Fiat currencies are:

- Bonds are effectively a note that promise return of currency. Increasingly debt is being rolled over automatically, interest rates are close to zero and covenants are mostly disappearing. Therefore, money is starting to become free with no intention of re-payment.
- The scale of debt monetization (printing of money) by the leading reserve currency countries is unprecedented in history. This is an enormous economic experiment for which the consequences have yet to be seen.

- Sovereign debt levels and unfunded future commitments are expanding beyond the point where citizens can support the commitments with increased taxes. This threatens the ability of governments to support the currency promise.

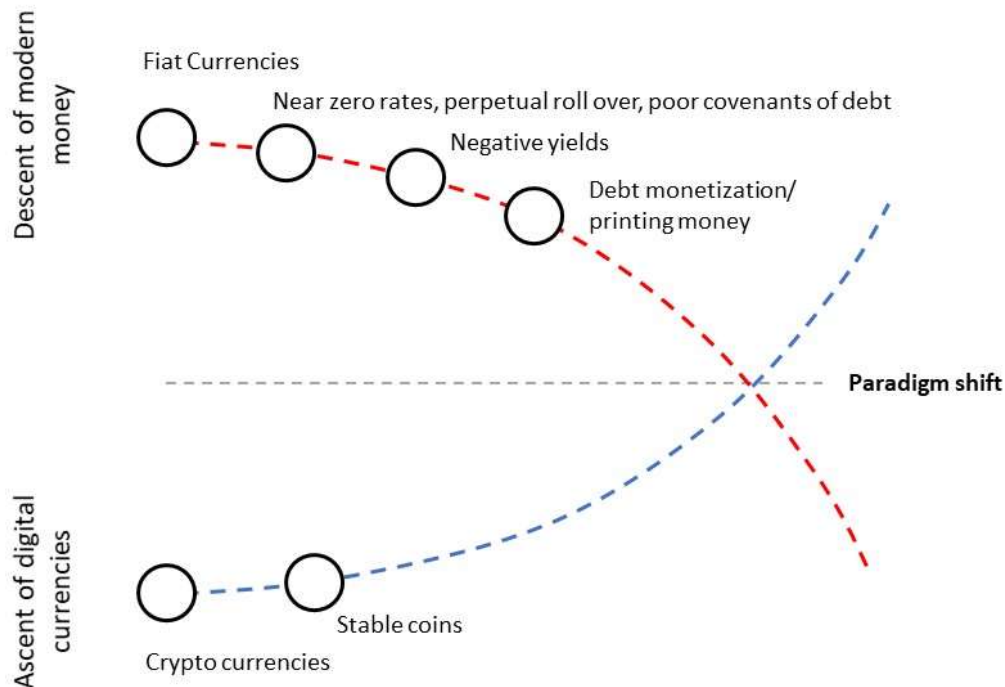


Figure 21: illustration of the descent of modern-day money

At the same time, it is also interesting to note that the rapid evolution of the digital economy is also bringing about innovation in the digital currency space. Money has been exchanged digitally since 1860 when Western Union first introduced e-money with electronic transfers. Today a small fraction of transactions are cash based and most transactions are electronic in nature. However, the introduction of crypto currencies and stable coins represent more than just electronic money, it also creates mechanisms for issuing currency, challenging the role of monetary authorities. In my view, crypto currencies such as Bitcoin should be seen as early invention phenomena, much like the Wright brothers' airplane. Bitcoin does not resonate well with the requirement for a low friction mechanism for exchange of energy in the economy. Instead Bitcoin is more akin to a belief system with an expensive processing cost base. Stable coins however are a different story, the concept has tremendous energy potential to develop into something that will provide a new paradigm for currency. The stable coin concept brings about a few very interesting and profound challenges, for example:

- Should banks develop and implement a comprehensive stable coin infrastructure, the need for a monetary authority will disappear.
- Should central banks develop and implement a comprehensive stable coin infrastructure, the need for bank accounts may very well disappear.
- Should technology companies develop and implement comprehensive stable coin infrastructure, the need for monetary authorities and banks may disappear.

Clearly, Governments would never willingly allow monetary authorities to lose control over the monetary system. But the policies of loose fiscal control, large-scale debt buildup, debt monetization (money printing), all for political gain, creates tremendous moral hazard for the custodians who are supposed to maintain the value of their currency promise. If governments continue on the current trajectory, a point

may very well be reached where the value of the currency promise will be seriously diluted, and alternatives will be considered by those active in economy. Governments would obviously not allow this willingly, but as explained earlier in this book, several paradigm shifts are intersecting with each other and Governments could at some point lose control over the monster they are creating.

There is broad consensus that the future of money is mobile and digital, the exact form is yet to be determined. We know that the “big picture” paradigm shift suggests that centrally controlled pyramid-systems such as Fiat currencies may not resonate well with distributed intelligent co-creation networks built on quantum mechanics. Perhaps the greatest paradigm shift of all, would be in the space of currency.

PEOPLE & ORGANISATIONS

The importance of People

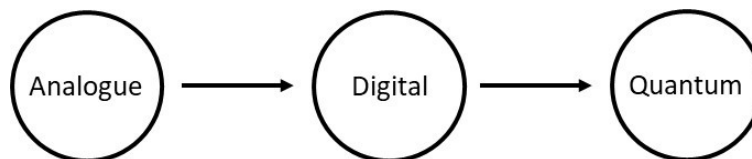
This section of the book is far removed from the usual topics that feature in the world of Finance and this section will most probably be a stretch for most people to understand. Financial institutions will be most affected by the paradigm shift in the areas of financial assets (clients), technology platforms and people.

Without people, the technology platforms won't function, clients won't be serviced, and the balance sheet cannot be managed. The wellbeing of the people is a critical success factor for any organisation. An organisation cannot be healthy if its employees are unhealthy, for the same reason that the human body cannot be healthy when it is not in coherence with its internal and external environment.

There is an abundance of information indicating that employees are increasingly having more difficulty functioning at work. Rapid increases in mental health conditions combined with an ever-increasing pressurised work environment results in conditions that are less than optimal for employees to manifest their full potential in their work and personal environments.

Most organisations apply outdated programmes that tend to place focus on when employees are in the “emergency room”, and often focus is placed on pharmaceutical chemical interventions as support mechanisms. Most of these initiatives are reactive and achieve at best numbing or masking of the symptoms. Rarely do they provide the support for a broad-based approach to assist employees in understanding how life works and how to “re-programming their own software”.

As the world around us transition from an “Analogue” model to a “Digital model” and eventually to a “Quantum model” our understanding of Human life will also evolve to higher levels of consciousness.



How humans experience life

The human body is a very sophisticated bio-mechanical and quantum energy system that dynamically operates in coherence with its internal and external environment. The human body is not a pure mechanical system where the organs operate in isolation and memories are stored in little compartments in the brain, as we are often led to believe by outdated Newtonian thinking. Instead the human body should be viewed as a very sophisticated bio mechanical electromagnetic organisms that operates a very sophisticated quantum field processor, that interface with an expanded “information energy field”. This “information energy field”, also often referred to as the Akashic field or zero point field, not only contains vast amounts of “information” about ourselves, which we continue to update and process, but also contains vast amounts of “information” on all aspects of life on this planet and the greater universe.

Our human experience is far more complex than what can be explained in simple terms in this book. However, for the benefit of setting context as to how we behave in the work environment and how “software bugs” create problems and limit our full potential, I will attempt to explain some of the key concepts below.

Consciousness is a term often used to articulate our human experience. Consciousness is the state of being aware of and responsive to one's surroundings. Consciousness entails having perceptions, thoughts, feelings, sensations and awareness of our surroundings and having a human experience. Our conscious experiences are constantly shifting and changing, mostly because of our environment

changing and the way we manifest our reality is also changing. Consciousness has different components as can be seen in the illustration below.

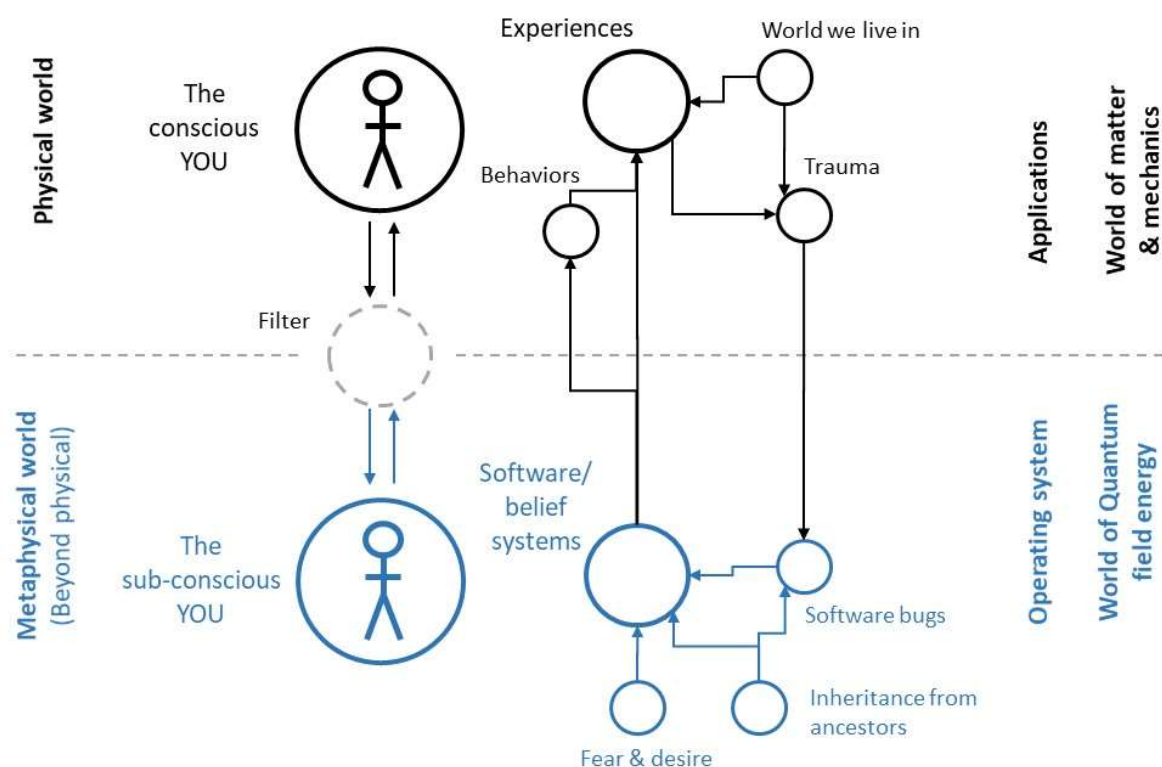


Figure 22: Simplified explanation of the human consciousness

You may ask: “what does it mean when you say that all the changes in the world should be seen as synchronicities of a paradigm shift in human consciousness”. It means that the way we feel, think, behave, experience human life is changing. We are integrally part of the big eco system of energy flow on this planet. Changes in the environment around us are having a profound impact on us and are starting to change how we as humans engage with each other and our environment. Similarly, changes in us also impact and change our environment, not always in a good way.

Human resonance cycles

As humans, we also experience changes in resonance during our lives. This typically happens in intervals of approximately 9 year cycles, with gradual transitions between the different cycles. Some transition periods are more difficult than others. As an example, transition from childhood to teenager can be particularly difficult as the child transitions from a paradigm of consumption, fast learning, lots of toys and all importance to a paradigm characterised by lots of extreme emotion, conflict, peer pressure, competition, experiencing falling in love as well as being heart broken. In some way the current paradigm shift in human consciousness globally has many similarities with this early teenager phase.

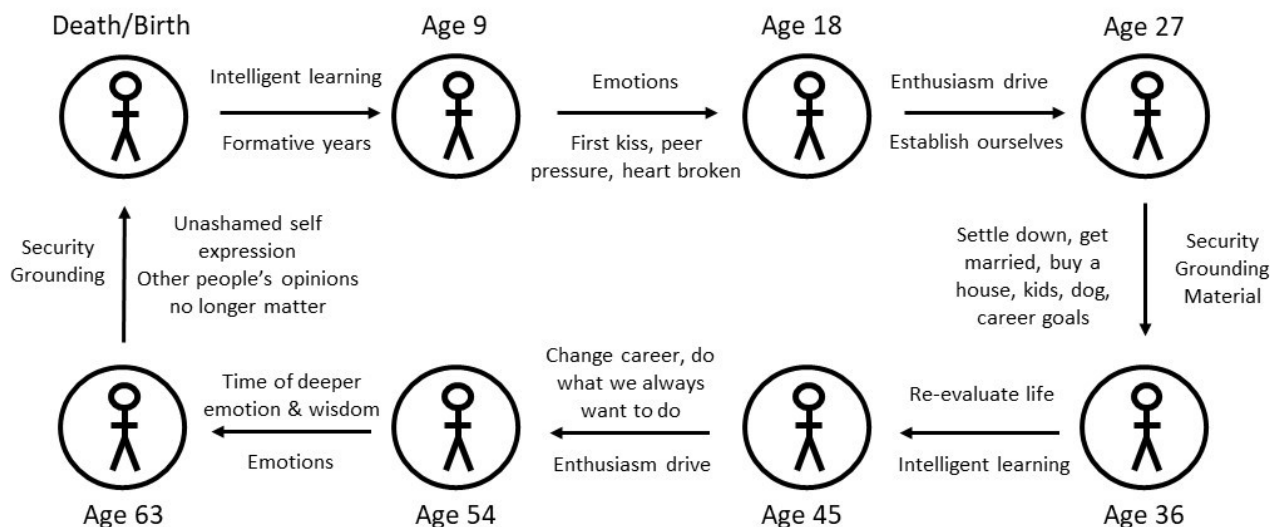


Figure 23: Cycles of human life

How the programming works

All humans are born with “version 1.0 software” that is imprinted with the energetic and emotional coding inherited from our parents and their parents’ ancestral lineage. We do not only inherit DNA, but we also inherit belief systems and the energetic code of trauma and fear that our ancestors experienced. This software code then gets updated to a newer version, let’s call it version 2.0 during early childhood, referred to as our formative years, through the various experiences and traumas that the child experiences during early childhood. Software version 1.0 and 2.0 then becomes the main operating system that determines the adult behavior and manifestation of the adult human experience. Your software code will in turn be imprinted onto your children to form part of their “software code”.

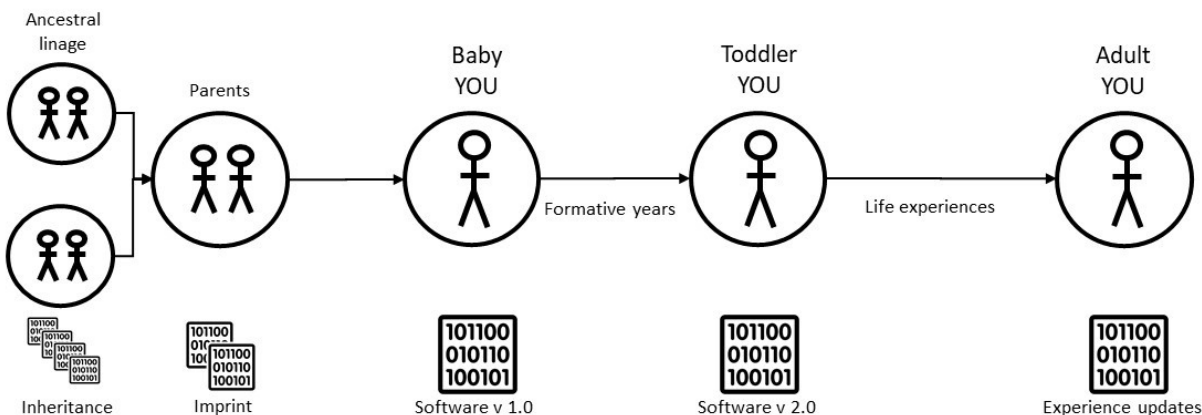


Figure 24: Process of imprinting our “software”

Our software programming determines how the human mind/ego process and behave in everyday life. The mind/ego has a default setting to try and avoid situations that it deems to be “unsafe” referencing the “what is unsafe” to the programming in the subconscious mind. This form of “operating system software coding”, much like that of a smart phone’s operating system is not easily accessible to us, maybe because we need to focus on the experience (like operating the smart phone apps) rather than fiddle with

the code. However, the programming has a profound effect on how we behave and experience life. As an example, our fears create anxiety and stress, and our impulses may make us do things that we regret in hindsight. The “software” also gets updated further through life as we undergo significant experiences, such as moments of great joy, sadness or trauma. The challenge we have is that the “traumatic” experiences often gets represented much like “software bugs” in our subconscious programming that later on, not only inhibit the healthy flow of information through the organisms causing disease, but also creates self-re-enforcing behavioural patterns that often becomes quite destructive.

We create our reality

Our thoughts create emotions in our bodies. These emotions in turn create vibrations in the cellular structure of bodies through a complex set of neurons and electrical circuits, much like an electrical current can magnetize a piece of iron. These vibrations in turn informs the creation of scalar waves, that is transmitted external to the body to attract experiences that will in turn validate these vibrations. This process then provides a feedback loop to inform our emotions based on the experiences and in turn influence our thoughts again.

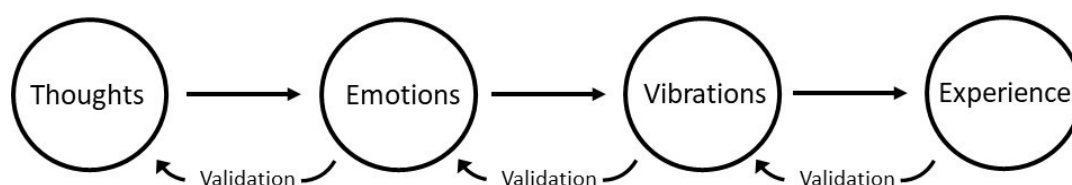


Figure 25: Illustration of how our thoughts create our experiences

In addition, our thoughts are not only a result from our desires of what we wish to experience, but also emanate from deep rooted belief systems and fears that reside in the subconscious mind. Often, we are not even aware of these. By means of an example, we may have had a traumatic experience in early childhood that has created a trauma or fear, for example abuse, that later in our lives continues to manifest in the form of being attracted to abusive partners. This is akin to the toddler driving the truck of life without us understanding or even being aware of it as adults. Because these emotions are stored in the human body in the form of cellular memory (see it as an energy charge) it creates self-re-enforcing behavioural patterns that we then act out in our adult life.

In the work environment, this is particularly important, as people will not only act and behave in accordance with their own programming, but they also inform the behavior of others around them in the work environment. This is why perceptions can become reality, why perceptions of a group of people drive culture and why perceptions of an even larger group of people drive markets and politics.

Understanding our programming

Understanding and observing our own programming is very challenging. It is like being caught up in a washing machine that is spinning around and around, repeating self-re-enforcing patterns of behavior and experiences. But we are unable to get out of the washing machine to see the program that is causing the undesirable experiences or health conditions. The good news however is that once you are able to see the “pattern” you are able to start changing it. Reprogramming a person’s “operating system” code and removing negative patterns from the code is a complex process. There are many ways to do the reprogramming of cellular memory, such as affirmations, pure will power, quantum Field therapy, neurolinguistic programming and hypnosis therapy that enable “access” to the “programming” stored in the

subconscious mind (residing in the quantum field). In order to enable a basic understanding, the diagram below illustrates the steps that are required.

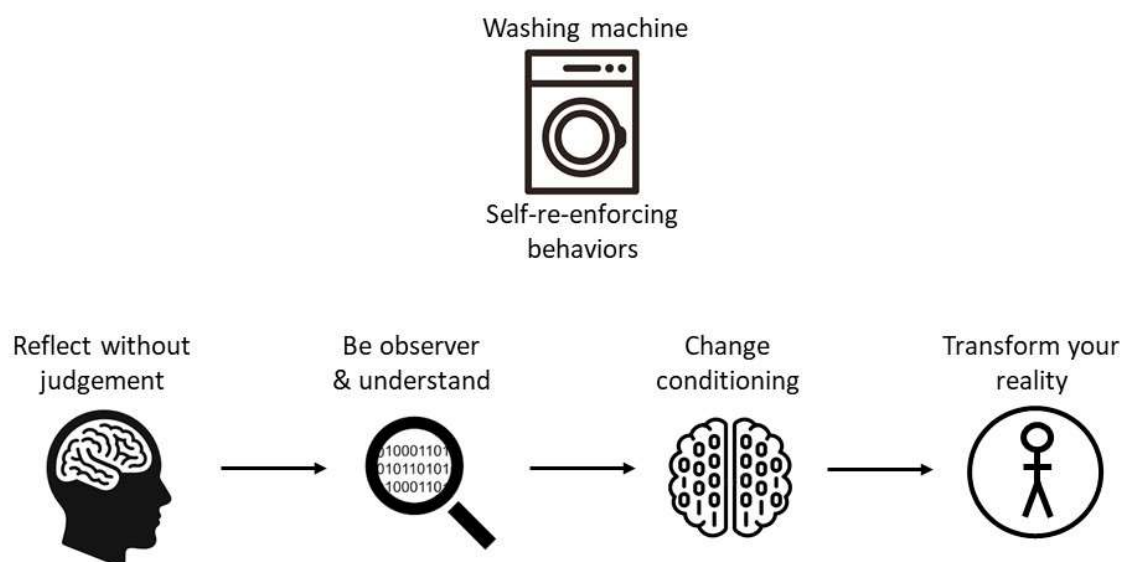


Figure 26: Simplified Illustration of process required to change your programming

Those who do not transform their “programming” as the world changes around them will be stuck in the old paradigm and the “programming” they used to apply won’t be working as effectively anymore. Much like trying to run a Digital business model with Analogue technology. Therefore, the strategic imperative for Financial Services leaders to understand this dynamic and assisting their employees to transition to the new paradigm is critical.

All humans carry cellular memory of trauma and fear

I have come to realise that all humans carry trauma and fear with them, embedded in the “software code”. This is normally a combination of own trauma of what they have experienced during their lives, often early childhood, but also through the Kinetic energy links with their ancestral lineage from their parents and their trauma.

The trauma is stored in our bodies as part of our cellular memory. Trauma creates fears and belief systems that are suppressed in the subconscious mind. These belief systems and fears then in turn results in the human mind making unhealthy choices and sets down dysfunctional habitual patterns. These patterns are not only reinforced on ourselves, but they also become part of the habitual patterns of our children imprinting on their epigenetic code. Thereby forming a kinetic chain like link from generation to generation. These fears and belief systems are kinetically carried forward for up to 7 generations and can be dealt with very effectively through quantum field reprogramming, hypnosis or family constellation therapy work. This kinetic trauma lineage energy phenomenon is by no means limited to certain segments of society. It occurs at all levels of society, irrespective of financial status.

The main problem with trauma and fear that is stored in the subconscious and cellular memory, is that it primarily results in the following:

- Prevent individuals from achieving their full potential.
- Prevent the free flow of “information energy” through the human body that eventually results in manifestation of disease and chronic illness.

Despite great advances in biochemical applications of contemporary medicine, tumoral and other chronic degenerative diseases remain rampant and on the increase. Biochemical medicine does not deal with the trauma, fear, energetic blockages and negative patterns that occur, but instead only mask the symptoms.

The human organism is designed to self-heal

The human body is not a mechanical machine as we are often led to believe, but instead of very complex bio energy system where approx. 50+ trillion cells vibrate and interact within a complex Quantum system. This system is designed to be able to self-heal from conception onwards.

A substantial portion of our DNA performs a regulatory function together with a network of molecules and proteins, this collective is called the epigenetic code. The epigenetic code regulates gene expression and is very active during embryonic development. The epigenetic code determine which genes remain active and which not, which molecular communication mechanisms remain operational and which do not; and in what way codifying genes interact with the many cells and proteins in our human bodies. This is the code that enables a totipotent embryonic stem cell to become a liver cell, kidney cell, brain cell, and so on, even though every single one of the 50+ trillion cells retains the exact same DNA code.

Cancer cells can be defined as “altered stem cells” in which mutations of DNA or epigenetic alterations are present. Epigenetic code can differentiate and regulate normal stem cells as well as cancer stem-like cells, deactivating genes that govern cancer stem-like cells and activating the pathways of differentiation that lead to normal cells. Therefore, the epigenetic code determines how cancer cells grow and how they die off, this explains the numerous examples I have come across where people are able to cure themselves from cancer with the power of their minds.

The importance of the epigenetic code cannot be emphasized enough. Twenty percent we inherit from our parents as genes and eighty percent of the epigenetic code from our nutrition, lifestyle, environment, relationship, thoughts, feelings, intentions and beliefs. All of these factors in combination influence the dynamic flow of the epigenetic process.

Quantum physicists have discovered that the universe is a “macroscopic quantum system of information vibration” and the human organism is an intrinsic segment of that “information”. The cosmic information that “forms” the universe also forms – “informs” the human organism. The alignment with the “information” that structures and forms the human organism is key to maintaining its health. Animals in the wild exhibit this dynamic quite well with dynamic self-healing.

Trauma and fear stored in cellular memory and subconscious belief systems of humans create self-repeating harmful behavioural patterns (often also via Ego behavior) and sabotage the process of “information” flow than enabled self-healing and therefore prevent humans from healing themselves.

Quantum field, quantum entanglement and quantum therapy

“If you are not completely confused by quantum mechanics, you do not understand it.”

~ John Wheeler

Most of us think of information as data or what a person knows. But the reach of information is deeper than this. Physical and life scientists are discovering that information extends far beyond the mind of an individual, or even all persons taken together. It is an inherent aspect of both physical and biological nature. The great Physicist David Bohm called it “in-formation”

The famous “ERP” experiment (the experiment originally suggested by Albert Einstein, Boris Podolski and Nathan Rosen) demonstrates that particles that at one time shared the same identical state (the same system of coordinates) remain instantly and enduringly connected. The measurement of A does not

merely reveal an already established state of B: it actually produces that state. Experiments performed in the 1997's by Nicolas Gisin showed that particles ten kilometers apart appeared to be in communication 20,000 times faster than the velocity of light, relativity theory's supposedly unbreakable speed barrier. The particles are "entangled": their correlation is not sensitive to distance in space or to difference in time. These two experiments proof with the concept of quantum entanglement.

Even though physicists have proven quantum entanglement on an elementary level, it should be noted that quantum entanglement is a pervasive occurrence in the human body as well as in relationships with others and all aspects of life on this planet. Explained in more technical terms, it has been discovered that the human organism (and for that matter all organisms) is extraordinarily coherent: all its parts are multidimensionally, dynamically and almost instantly connected with all other parts. What happens to one cell or organ also happens in some way to all other cells and organs, suggesting dynamic "quantum entanglement".

Furthermore, the human organism is also coherent with the world around it: what happens in the external milieu of the organism is reflected in some ways in its internal milieu. Also known as "as within so without, as above so below" This coherence goes beyond the coherence of a biochemical system of the human body to also attain coherence in the quantum field creating a linkage with behavior and emotions

The quantum field (also known as Akashic field referencing Sanskrit and Indian cultures, some also refer to it as the zero point field), is an all -encompassing medium that underlies all things and becomes all things. The quantum field exists within the quantum vacuum that contains the "information mechanism". Its real but so subtle that it cannot be perceived until it becomes the many things that populate the manifested world (world of matter that we experience every day). Our bodily senses do not register the Quantum field, but we can reach it through spiritual practice.

Power of the mind

"The human brain has 100 billion neurons, each neuron connected to 10 thousand other neurons. Sitting on your shoulders is the most complicated object in the known universe."

~ Michio Kaku

The energy fields in the quantum field are decoded by our brains into 3-D pictures, and this 3-dimensional hologram provides us with the illusion of a solid physical world. The human brain mathematically constructs reality by interpreting these frequencies and interface patterns that exist within information fields. This theory is supported by work done by a number of leading physicists, amongst them David Bohm.

Jill Bolte Taylor is a Neuroscientist who studied her own stroke as it happened. She did a brilliant TED talk about her experience called: "My stroke of insight". During the talk she explains how she observed the change in perception of physical matter into energy waves, as her stroke happened affecting the part of the brain that decode these energy fields.

"If you want to find the secrets of the universe, think in terms of energy, frequency and vibration."

~ Nikola Tesla

Energy waves are also transmitters of information. A very simple example of this is how the waves transmitted to your television contain all the information required to display the visuals and sound of your favourite television program.



Figure 27: Example how information gets transmitted using electromagnetic waves

Not only does the human brain have the ability to decode quantum energy fields, but it also has the ability to transmit very subtle energy vibrations, directly and via the human body. It can be transmitted to other humans or groups of humans, or even between a person and his/her dog. A very good example is transmitting of love from a mother to a child. The child will feel it very intensely without physical contact being necessary for the connection. In addition, not only does the emotions and thoughts get transmitted to another person, but a telepathic connection also forms between mother and child (quantum entanglement). There are numerous examples where for example a mother knows when a child got hurt before she gets notified.

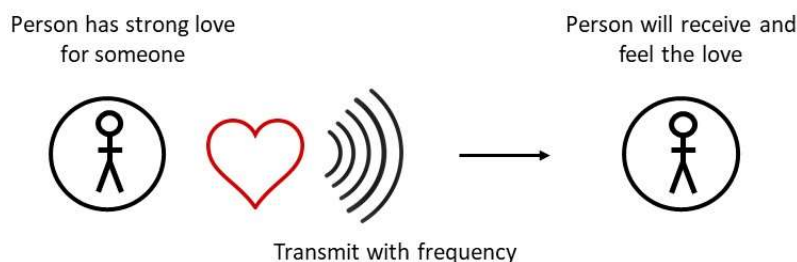


Figure 28: Example of how emotions and thought transmit with frequency

The flow of Energy, receiving and transmitting of vibrations in the human body is very much part of our everyday lives. We cannot tangibly see it, but we can very much feel it. The difference between mind blowing sex and average sex is not the actual deed, as the deed is in most cases a very basic mechanical action, it is however all about how both parties experience the intensity of the energetic vibrations from mostly their sexual, heart and mind centres. If one or more of these centres disconnect or emit low vibrations during the act, the experience will likely be more or less average.

High energy flow = high vibrations = voltage in the human body, it is all the same thing. Voltage can also be measure as pH in the body, as pH stand for Potential Hydrogen and in science this equates to voltage in the chemical solution of the organism. A body with low pH (low energy flow) is prone to cancer growth and other forms of disease. Certain parts of the human body are more prone to blockages of energy flow and therefore develop cancer. As an example, the endocrine system that is the collection of glands in the body, is more prone to energy blockages and therefore the area where cancer growth often starts (e.g. breast, prostate, pancreas, thyroid etc). Whereas the human Heart is an area in the body with a high and consistent voltage charge and therefore the reason why you don't hear of people being diagnosed with Heart cancer.

Stimulants such as caffeine and cocaine create temporary "spikes" in energy flow, making you feel as if it provides you with an energy boost. But instead, it acts more like a sudden opening of the tap from the reservoir of life force energy. In the short run it acts like a firehose, but in the long run more stimulants are required to maintain the flow, simply because the reservoir is running empty quicker every time. Stimulants also cause damage to the natural flow of energy through the body, for example, cocaine fragments the energetic unity of the connective tissue of the human body. Use of stimulants remain the choice of every person, however I think it is beneficial for people to understand the effect it has on the energetic bio-system of the human body.

There is a misconception that the power of the mind is all about how much information the mind can process and remember. In fact, the latter is important, but the true power of the mind lies in its capability to regulate and direct the energy flow, not only through the complex system of 50+ trillion cells in the human body, but also externally to its environment and interaction with other organisms on this planet.

Corporate DNA and Epigenetics

"I used to believe that culture was 'soft,' and had little bearing on our bottom line. What I believe today is that our culture has everything to do with our bottom line, now and into the future."

~ Vern Dosch, author, Wired Differently

Understanding human mind-body dynamics is also very important for the work environment. Teams are collectives of humans and any problems that humans experience with their own mind-body connections not only manifest in the work environment, but also intersect with that of others and profoundly impact the corporate behavior and culture.

The human experience (consciousness) is growing beyond the traditional boundaries of society, corporate institutions and nation-state systems. During the past few decades we have defined and organised ourselves in the work environment around boundaries and functional structures and belief systems that support structures of confinement. The majority of these structures are built around hierarchies of an outdated Darwinian belief system of "only the fittest and best survive and rise to the top". All of these structures and belief systems are now changing towards a new paradigm that is forming and the discoveries and introduction of quantum technology is exacerbating this change.

A financial services organisation is essentially the sum of the parts of People, Technology platforms and Customers. The collective belief systems and behaviors of individuals working for the organisation therefore intimately determine the belief system and behavior of the entire organisation. This often gets referred to as the Corporate DNA. As with individuals, the epigenetic code of the organisation (broadly speaking the environment, interaction, processes and functional arrangements) will determine which "DNA markers" are switched on or off. This will make all the difference between outperformance or underperformance. Most Financial services organisations are investing significant resources to transform their business platforms to be fit for a digital future, but they lack an understanding of how to invest in the transformation of their people, often assuming that people will adapt and come along with the journey automatically.

Corporate Culture

"Culture is the deeper level of basic assumptions and beliefs that are shared by members of an organisation, that operate unconsciously and define in a basic 'taken for granted' fashion an organisation's view of its self and its environment."

~ Edgar Schein, Author and former MIT professor

Teams are collectives of humans, and therefore also a collective of their vibratory energy. The same applies to organisations and societies with an exponential increase in complexity and quantum entanglement.

When we experience and emit emotions, we project wave patterns. When two wave patterns interact with each other it creates an interference pattern and form a 3rd wave pattern. In the work environment the collective wave projections of the employees forms an infinitely more complex collective wave pattern, also commonly referred to as the team dynamic.

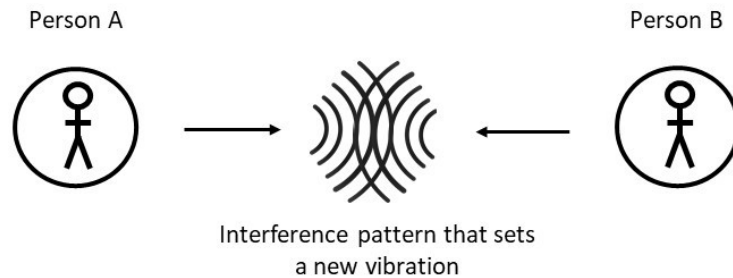


Figure 29: Example – Team of 2 - how a dynamic start to form

As the team grows in size one finds that the complexity of the team dynamic grows, as can be explained by the illustration of the interference pattern below. This interference patterns basically contains information of the team dynamic. The team dynamic will determine how people behave, what their collective belief system becomes and also how they engage with other teams. Teams with a collective high vibration will be perceived as a “high energy” team and often outperforms. Whereas a team with a low collective vibratory frequency is perceived as a “low energy” team often underperforming with many team culture issues. When a high performer person is introduced into a low vibration team dynamic, it is not uncommon to find that the person has great difficulty working in the environment and often leaves to find a team or organisation that he/she resonates with. Therefore, not only is resonance necessary between people in the work environment, but a person also needs to be able to resonate with the collective team dynamic.

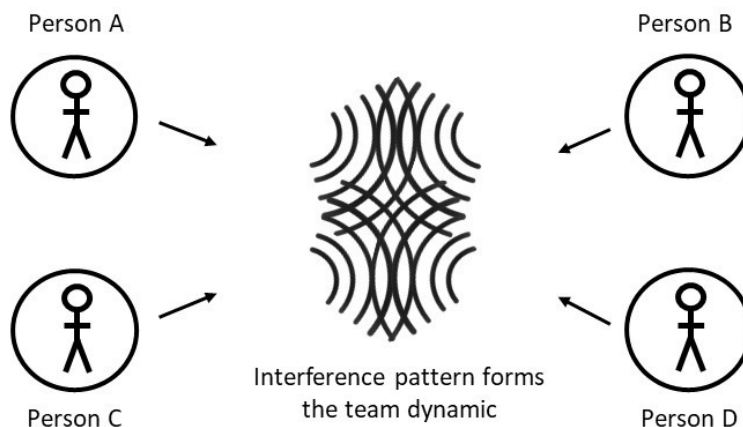


Figure 30: Example – Larger team dynamics

As you can imagine, the dynamic gets exponentially more complex as the size of the teams and the organisation grows. This dynamic collective form what we commonly referred to as the corporate culture or the DNA of an organisation. However, it is important to understand that the Epigenetic code determines which DNA markers activate or not.

Organisations also contract disease

It is not only people who get sick or contract disease. Teams, organisations and societies also display signs of either “healthy” or “disease” conditions. This is often also viewed through the lens of organisational culture. Similarly, teams and organisations also display patters of self-reinforcing negative behavior, and also suffer from negative energy blockages that prevent efficient flow of “information” to enable optimal functioning. We often refer to these dynamics as “the team does not gel” or the team is

“buzzing nicely”, or there is a “great vibe” in the team, without necessarily realizing that we are in fact describing the vibration and resonance of the team.

All the changes that we observe around us as part of the paradigm shift is having a profound impact on people in the organisation. If employees struggle with and fear the change, the organisation will also struggle. When employees suffer from disease, the organisation will also do so. Therefore, we are likely to see a continuing trend of deteriorating wellbeing amongst the employees and the wider organisation unless support is provided to the employees to enable them to deal with the change.

I would like to make use of a simple example of a toxic environment to illustrate how difficult it could be for a team to “auto-correct”. For example, you may have a team in an organisation that suffers from poor performance, high staff turnover and low morale. When you unpack the situation using the lenses of “organism health” and “quantum physics” you are likely to find the following dynamic:

- The employees may observe the culture (vibrations) as very “muddy”, like troubled water.
- Employees don’t want to “stir” anything as they fear creating backwash will make the situation even muddier.
- Employees suffer from the low energy (low vibration energy) of the team, they don’t see a clear way out of the condition and by being unable to make corrections, tend to make the situation worse.
- Some employees have the resilience to go with the flow, they do see the situation for what it is but may not have the strength to initiate any change.
- Those who are outperformers may feel trapped and leave to find a team that they resonate with.
- New recruits or even new management may be brought in, but they are overwhelmed by the low levels of energy in the team and find it very hard to change the dynamic. This is much like introducing a new healthy fish into a dirty toxic fish tank, soon the new fish will also start suffering.
- Very easily the organisation could get trapped in a negative pattern of continuous replacement of top management without being able to solve the problem.

As you could see from this example, teams can get to “chronic disease” conditions as easily as humans. I believe every large organisation has experience of this and failure to invest in the transformation of the workforce to the new paradigm, will very likely risk the whole organisation to reach a state of “chronic illness”. As with human chronic health conditions, it is always possible to remedy situations like the above, but it will require different thinking from what was used when creating the problem.

Corporate Epigenetic code

Our Environment determine how we respond to change

The human epigenetic code in brief refers to the collective of the DNA, the network of molecules and proteins, our nutrition, lifestyle, environment, relationship, thoughts, feelings, intentions and beliefs. All of these factors in combination, influence the dynamic flow of the epigenetic process and determines which genes are active and which not.

In the Corporate work environment, a similar dynamic exists. The combination of macro-economic and societal environment, office environment, team and individual behaviors, incentives, processes and management structures, communication, culture etc. will determine how the employees behave in the work environment and which “good and productive” characteristics will be activated vs. which damaging and self-re-enforcing negative behaviors will either be activated or de activated.

It is therefore important to consider the overall environment holistically and for leadership to start looking at the organisation through the lens of an “living organism”. Incentives alone are not enough of a lever to deal with the transformation of human capital that is required.

Corporate and Institutional Auto-immune disease

“As with many life-altering events, an autoimmune illness is almost guaranteed to cause you to re-evaluate your priorities.”

~ Joan Friedlander

An autoimmune disease is a condition in which the immune system mistakenly attacks the cells in the human body, i.e. when the cells are not in coherence. The immune system is meant to guard against germs like bacteria and viruses and should normally be able to tell the difference between foreign cells and your own cells. With autoimmune disease, the immune system mistakes cells in the body as foreign and releases proteins called autoantibodies that attack healthy cells. Autoimmune disease has become rampant for a number of reasons, most notable due to poor lifestyle and “software programming” problems. There are over 80 types of autoimmune disease include: Type 1 diabetes, Rheumatoid arthritis, Multiple sclerosis, Lupus, Inflammatory bowel disease and Celiac disease to name a few.

Just like the human body needs all its cells to be in coherence in order to be healthy, Corporate institutions also need its employees to be in coherence with each other and with the organisation as a whole to maintain a healthy eco-system. Most organisations will find that the human capital risk indicators that they are tracking are displaying signs of deteriorating coherence, suggesting corporate auto-immune disease. Example will include amongst others; lack of trust, infighting, damaging politics, discrimination, poor communication, unequal opportunities etc. As we progress with the transition to the new paradigm, these symptoms will most likely get worse and leadership won't know how to deal with the problem as the old recipes in the playbook does not work anymore. Corporate auto-immune disease should be viewed as a symptom of employees not being healthy and the coherence between employees and the organisation not being healthy.

“We can't solve problems by using the same kind of thinking we used when we created them.”

~ Albert Einstein

The challenge faced with transforming the workforce is an equally large challenge to transforming the technology platforms, however significantly less resources are invested for people transformation. Employees do not only need to understand how their jobs will change as a result of digital finance transformation, but they also need to be prepared for the new paradigm of consciousness in order to be balanced in their personal capacity and work environment. Failure to do so will result in worsening “workplace auto-immune disease” resulting in a dysfunctional organisation.

The traditional human capital interventions have value, but one should understand that increasingly they are becoming less effective as they are built on old paradigm principles such as hierarchical structures and the outdated Darwinian belief that only the strongest survive.

Of particular importance is to establish initiatives that enable employees to:

- Understand the changes and assist them to “reprogram their software” in order to let go of dysfunctional patterns. Corporate organisations have the resources to create the scale to make this happen, employees on their own don't.
- Build an organisational model that works on co-creation mechanics rather than command control.
- Develop initiatives that educated employees about life-style (including nutrition) and its impact on their health. It is really important that these principles are lived by managers and actively encouraged
- Establish stress management initiatives, this may include various forms and go as far as hypnotherapy that I have found to be very effective in the work environment.
- Establish positive thinking initiatives.

- Create a work environment that is conducive to coherence. This could for example be through stimulation of the 5 senses in the following areas
 - o vision oriented: quality of light, pictures of relaxing images, beautiful plants or objects
 - o audition oriented: relaxing music or tones of a meditative nature at low volume.
 - o taste oriented: snack space and fruit platters
 - o olfaction oriented: very subtle essential oils
 - o kinesthetic oriented: comfortable furniture and materials

Corporate social order

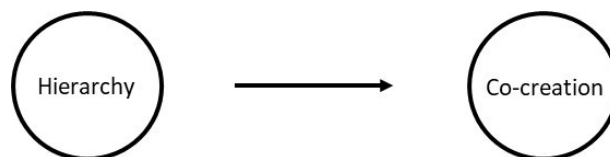
Structures for social engagement in corporate institutions have historically been built around principles of confinement, the fittest will survive and rise to the top, boundaries for confining tasks, performance objectives in well defined “boxes” etc.

As with all industrial or technological revolutions in history, it is inevitable that the way humans engage with each other will also change. The paradigm shift towards quantum technology brings about very different technological and operational dynamics, for example widely distributed social network platforms and engagement across boundaries of confinement. It is therefore inevitable that the social order structures in Corporate organisations will also have to change as part of the transition to a new paradigm.

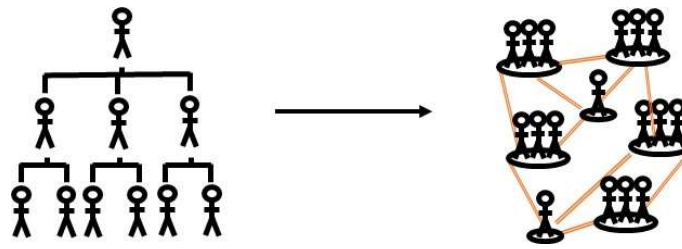
Structures of management and control

Most corporate institutions continue to manage people, performance and reward in strict hierarchical structures. Increasingly, these structures are becoming dysfunctional, with people at the top of pyramids struggling to cope with the load, often developing severe anxiety and stress (mental health) problems. People at lower ends of the pyramids increasingly become disengaged and feel that their contribution is not being valued and they are trapped.

The failure of hierarchical structures is most evident in Government institutions that are purely built of command control hierarchical models, most government departments across the world are in turmoil and becoming increasingly more inefficient. The structures of management and control therefore inevitably have to change from a hierarchy/pyramid model to a model that is much like a distributed social network, where the key focus is co-creation.

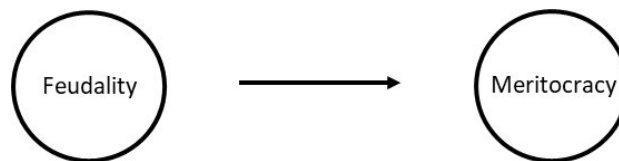


The co-creation model operates like a lattice like network of teams that co-create and collaborate with other teams and individuals. The model exists of clusters and centers of excellence working together. It's important to note that team leads are still required for practical, leadership and mentoring purposes. But the team leads ought to focus on ensuring an efficient and effective operating model, rather than accumulation of authoritative power. The co-creation model focus on shared value amongst all stakeholders and value creation is not limited to self-centered individuals.



Measures of success

As part of the transition to a new paradigm, the perceived measures of success in the corporate environment are also changing. Feudalism originates from the social system of western Europe in the Middle Ages and adopts a social structure organised according to rank. Most corporate management structures have strong elements of Feudality, for examples importance based on job title, position in a corporate hierarchy, proximity to the CEO etc. A system of Feudality resonates well with a command control and hierarchical organisation, but do not at all resonate with a distributed co-creation network model.



Meritocracy defines a system where success is achieved on the basis of talent, effort and achievement. Meritocracy resonates best with a distributed co-creation network model.

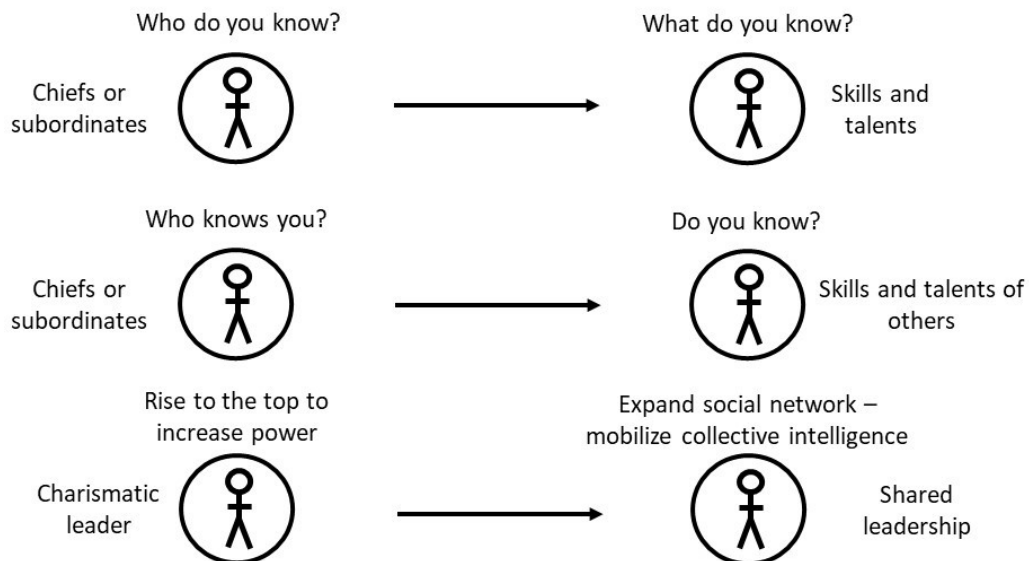


Figure 31: Illustration of changes in measures of success

Transition risk

Implementing the changes required as part of the shift from less Feudality to more Meritocracy will require careful consideration and a measured approach. Numerous transition risks exist that will negatively impact on the health of the organisation, the following challenges are most prevalent:

- The rise of populism will create a strong bias in leadership, often leading to leadership behavior worsening the situation.
- The emergence of social networks for collaboration is a strong feature of the transition.
- Toxic corporate and institutional cultures are much more prevalent during the transition.
- Political infighting and manipulation are rife during the transition, especially amongst those who wish to hold on to the Feudality models and centers of power.
- People who are unable to transform and adapt to the new paradigm will develop mental health problems, substance abuse, various forms of chronic diseases and will engage in conflict on an ongoing basis.

Employee well being

“Conventional medicine is tied up in an old belief system that the cause of illness is tied into our genetics and our Biochemistry and therefore the Pharmaceutical Industry is the great savior.”

~ Dr Bruce Lipton

Not only will industries and organisations adapt to the change at different speeds, but individuals will do so as well. Mostly because not everyone is ready to adapt to change at the same time. The subconscious programming of humans brings about deep fear of change. When change occurs, they often feel they can't control their destiny. They become deeply unsettled and not only exhibit negative behavioural patterns, but also start developing health problems. Mental health has become a prominent problem in the work environment with rapid increases during that past few years. An organisation cannot be successful and healthy if its employees are not also successful and healthy.

The 5 main causes of disease

Disease is a breakdown in the body's ability to maintain normal function. There are five primary causes for this to happen:

- **Genetic birth defect:** Only about 5% of the people are born with defects which mean the mutated genes codify dysfunctional proteins inhibiting the human organism to function optimally. It is important to note that 95% of humans arrive on this planet perfectly healthy.
- **Physical trauma:** Physical trauma from accidents or injury could impair the body's ability to transmit nervous system signals, information exchanged between the quantum field and the living organisms cells, that then result in dysfunctional cells, tissues and organs.
- **Toxicity:** Toxins and poisons in our environment result in chemical distortions in the organism that impair information flow through the complex ecosystem of the nervous system and cells. Toxins and poisons in our food and drinks are a major source of disease these days.
- **Belief system:** This is one of the most complex but most important causes of disease and deals with the belief system of the mind. Our belief systems and fears that are deeply embedded in the subconscious mind create impaired information flow in the human body leading to blockages in the nervous system, cells and organs that eventually manifest in disease.
- **Radiation:** There are various forms of electromagnetic wave radiation and the topic of cell phone radiation has attracted a lot of controversy. In summary, the human cells are designed to resonate with the Earth's natural electromagnetic field at 7.83hz whereas mobile devices tend to operate using frequencies in a range of 700-2700 MHz (similar but with less power than

microwave ovens). These high frequencies disrupt the body's ability to resonate with the healthy Earth frequency causing a breakdown in natural flow of energy in the human body.

Belief shifts biology

"Every human being is the author of his own health or disease."

~ Buddha

Placebo effect: Dr David R Hamilton is an Organic chemist who worked in the Pharmaceutical Industry to test drugs on patients for cardiovascular disease and cancer. He was amazed to find that the control groups who were given placebos often had up to 40-75% of patients improving on the placebo medication.

Nocebo effect: Japanese children allergic to a poison ivy-like plant took part in an experiment where a leaf of the poisonous plant was rubbed onto one forearm. As a control, a nonpoisonous leaf resembling the toxic plant was rubbed on the other forearm. As expected almost all of the children broke out in a rash on the arm rubbed with the toxic leaf and had no response to the imposter leaf. What the children did not know was that the leaves were purposefully mislabeled. The negative thought of being touched by the poisonous plant led to the rash produced by the nontoxic leaf! In the majority of cases, no rash resulted from contact with the toxic leaf that was thought to be the harmless control.

It is estimated that a minimum of one third of all medical healings are attributed to the placebo effect, imagine what percentage of illness and disease might be the result of negative thought in the nocebo effect.

Positive thought in the work environment: I conducted an experiment in my work environment where I asked my team to participate in writing positive thoughts and concepts on the glass wall partitions in the office space. This is a form of Neurolinguistic programming. The results were remarkable with employees commenting it made a big difference in how they feel and their overall state of mind in the work environment. Even those who did not write on the wall were positively affected since the exercise changed the resonance for everyone in the environment.

Electromagnetic frequency radiation

The Earth has an electromagnetic resonance, called the Schumann resonances, that resonates at 7.83 hz [hertz] with some variation. New research indicates that the earth's magnetic resonances vibrate at the same frequency as human heart rhythms and brainwaves. This Frequency is essential for human body functioning. Human cells develop an energy charge in the presence on the electromagnetic field. Human cells are designed to function optimally with this frequency.

The first Astronauts that went to space were plagued with "space sickness" – nausea and disorientation. And it was discovered by scientists that this was because the astronauts, upon leaving the earth's atmosphere, were deprived of the earth's "song" or electromagnetic resonance. The Russians were pioneers at developing technology to simulate the Schumann resonance, that is why they were able to stay in space so much longer during the early days of space travel. NASA also subsequently developed artificial Schuman resonance generators in Astronauts space suits and all spacecraft these days that carry humans contains a pulsed electro magnetic field (PEMF) device that generates a Schuman resonance at 7.83hz

You may be asking "what does this have to do with the work environment?" The answer is "a lot more than you think". During the 1960's the Max Planck institute conducted a number of tests to understand the effect of the earth's pulsed electromagnetic field on humans and animals. A number of animals and humans were put in a bunker in a Faraday cage to test the effect. A Faraday cage is an enclosure used to block electromagnetic fields. What they found was that when natural EMFs (including Schumann

resonance) were removed, humans developed several stress-related symptoms and mental health issues.

In the work environment today, we have two main areas where this is relevant:

- The buildings and offices in which we work act like Faraday cages blocking out the natural electromagnetic field of the Earth that we need for wellbeing.
- Bad EMF's are emitted by our everyday electronic devices such as computers, smart phones, WiFi networks, cellular transmission etc. These bad EMF's disrupt or connection with the Earth's electromagnetic field

The average modern microwave oven operates at the frequency +2,450 MHz and 1200 watts. Most cell phone networks operate on a frequency range of 700-2700 MHz and the legal limit per cell phone is 1.6 watts per kilogram. 5G networks will use spectrum in the current spectrum range of 600 MHz to 6 GHz and also in millimeter wave bands of 24–86 GHz. 1 GHz = 1 000 000 000 Hz. Although the power (watts) of the electronic devices are lower than a microwave oven, it will no doubt have an effect on the human body during periods of excessive exposure. Technology is developing much faster than the ability for the human body to adapt to these new levels of radiation. I believe it is no coincidence that the rapid increase in mental health problems, in particular for the younger generation, almost perfectly correlate with the rapid increase in screen time over the last decade.

The following are actions that can be taken to mitigate the effects to some extent

- Educate employees on the dangers of excessive screen time and exposure to “bad” electromagnetic frequencies
- Artificial PEMF devices could be introduced for employees to get sufficient exposure to the “good” 7.83hz frequency.
- Encourage employees to spend time outside, in particular over weekends, to get sufficient exposure to the Earth's electromagnetic field.
- Building and workspace environment should be designed in such a way as to not exacerbate the Faraday cage effect, blocking out “good” electromagnetic frequencies and locking in “bad” electromagnetic frequencies.

Importance of Energy flow

Qigong is an ancient Chinese method for self-healing. It has been practiced in secret for over 5000 years and only became known outside the inner circles since 1980's. The practice of Qigong is mind-blowingly simple and is all about movement of energy through the body, Qi meaning life energy, life force, life essence. Life force energy movement through the body gets impaired either by our thoughts (subconscious programming) or our lifestyle (what we eat and our environment). A limiting mindset, with bugs in the subconscious programming and or an unhealthy lifestyle will create the circumstances where the energy flow in the body is impaired, leading to disease.

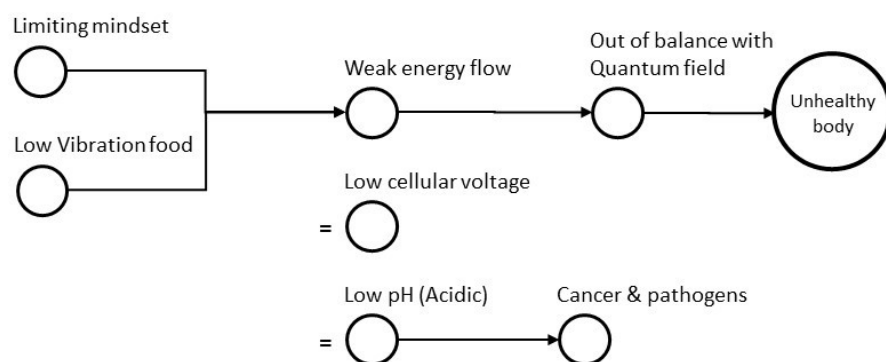


Figure 32: Illustration how impaired energy flow creates an unhealthy body

A Qigong master, Dr Pang established the world's first medicine less hospital, the HAXIA Zhineng Qigong Centre where they have treated more than 400,000 patients with 180 different diseases (including cancer), achieving a 95% success rate. As discovered by Qigong masters, the process of disease formation can be reversed, and healing could take place when the flow of life force energy is restored as illustrated below.

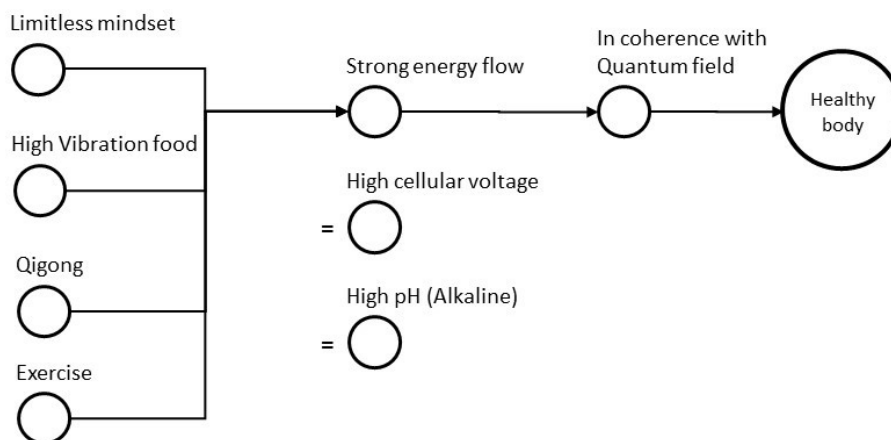


Figure 33: Illustration of how healthy energy flow maintains a healthy body

The importance of the Terrain

"I was wrong. The microbe (germ) is nothing. The terrain (milieu) is everything"

~ Louis Pasteur (recants his germ theory on his deathbed)

Louis Pasteur was the founder of pasteurization and germ theory. The concept of germ theory forms the very foundation of modern western medicine system where there is heavy reliance on drugs and surgery to solve medical conditions. Limited focus is however placed on how to maintain a healthy environment (immune system) to build resilience against for example virus infections, perhaps because of the "a patient cured is a customer lost" economic problem.

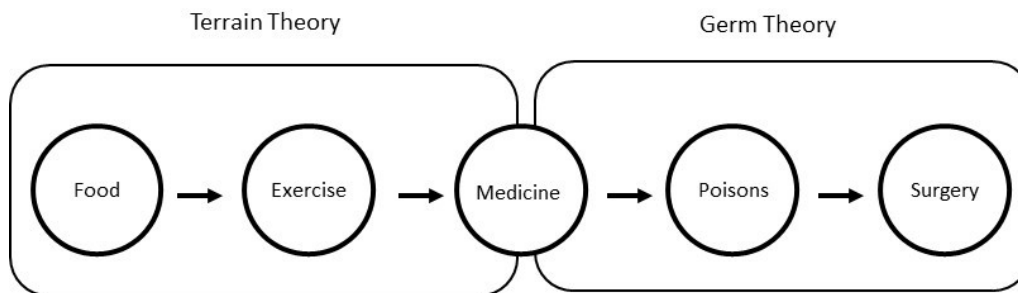


Figure 34: Different stages of medical intervention

Our environment, terrain, is however very important and will determine how the human organism will respond to all threats that it faces. This not only relates to lifestyle but also the work environment. If you treat the work environment like a fish tank, it is very important to regularly clean and maintain the fish tank (environment), otherwise even newly introduced healthy fish will get contaminated. The work environment is not only about the desks and chairs, but much more important is the energetic state of the

environment. When a team and organisation is in a state of being “in-tune” with itself and its environment, it will respond so much better to challenges imposed from within or outside the organisation.

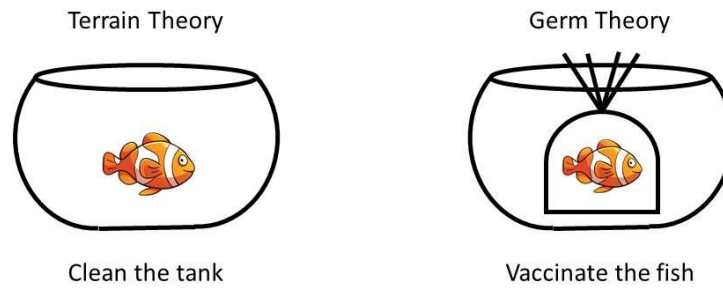


Figure 35: Illustration of germ theory vs. terrain theory

IN CONCLUSION

All Empires are susceptible to failure

“Organisation is impossible unless those who know the laws of harmony lay the foundation.”

~ Egyptian Proverb

Any person, team, organisation, institution, civilization must maintain coherence in order to survive and prosper. Coherence requires equilibrium between polarities rather than elimination of polarities. Examples of polarities are hot & cold, light and dark, wealth and poverty, war & peace, winter & summer, positive and negative etc. Polarities are essential for the flow of energy in all living systems, as an example: a battery that does not have an adequate positive and negative charge won't be able to produce an energy current. Should the polarities however become too extreme, an adjustment must occur to establish equilibrium, an excellent example being a lightning strike.

There are many lessons from history where the lack of coherence resulted in demise. One of the greatest examples of all time is the civilization of ancient Egypt. In ancient Egypt, the role of the Pharaoh was to maintain order, balance and harmony in society, this concept of balance was referred to as Ma'at. The opposite of Ma'at is called Isfet, aka chaos. Both Ma'at and Isfet are represented as deities in ancient Egyptian text. The weighing of the heart pictured on papyrus in the Book of the Dead uses the feather of Ma'at on one side of a balance scale and the image of a heart on the other side of the scale to illustrate balance and harmony. Today, Lady Liberty of justice personifies the same concept in our law and order systems. Our modern day believes created the perception that deities such as Ma'at were Gods, instead it should rather be seen as concepts and energy systems that were used at that time. During times of drought and mis fortune the Pharaoh was blamed as it was his responsibility to maintain equilibrium (Ma'at) in all aspects of society, much like the coherence of all cells in the human body through power of the mind. Pharaohs underwent extensive training on numerous teachings and were believed to have been able to use the power of their minds to connect with the quantum field to manifest rain, find water, defeat enemies etc. The prosperity and sophistication of Egyptian civilization reached its peak during the new Kingdom period (18th – 20th Dynasties), when the concept of coherence was very well understood, this is very evident in the geometrical precision of the art and sculptures during this period as well as architecture that cannot even be built with today's technology. The exhibitions in the Cairo, Louvre and the British museums display this beautifully. From the 21st Dynasty onwards the coherence, balance and harmony started to deteriorate leading to the eventual demise of one of the most significant civilizations in human history. Interestingly enough, sculptures and art from the later dynasties display how the civilization became “out of balance” as the sculptures started losing their geometrical precision.

Re- establishing coherence can be very difficult

“To shift your life in a desired direction, you must powerfully shift your subconscious.”

~ Kevin Michel

My perspective in writing this book is different from that of most economists, investors, bankers and policy makers. Instead I attempted to reflect on the systemic risk and the coherence (or lack thereof) in the system. Understanding the mechanics of the system and how it could possibly be changing, enables one to better adapt and prepare for the change to a new paradigm.

Through my own healing crisis and long journey to recovery, I have learned the following that equally applies to the health of the world's economies, financial system and corporate institutions:

1. There is always ignorance at first and denial of the fact that the organism is unhealthy.
2. Reflecting on the symptoms and understanding the root causes (incl. belief systems) enables acknowledgement of the problem.
3. Once the problem has been acknowledged, finding the right solutions are very difficult. You can never poison yourself to health.
4. Healing requires a significant change in mindset (re-programming the software) and change of lifestyle.
5. When you start implementing the changes required, the conditions will get worse, simply because the organism needs to clean out the toxicity in the system. This often creates a massive healing crisis for which there is no silver bullet.
6. Only persistence and an incredible amount of will power brings about success.
7. A journey like this, changes you forever, it is impossible to explain it all in words. There is no greater gift than to reach a point where all the pieces start coming together and one starts understanding how life works.
8. The human organism is the most sophisticated piece of technology on the planet, there is no better place to learn and understand everything a little bit better.

I appreciate that not everyone will understand or initially resonate with my perspective. I do however believe it is important to put my perspective out there for debate, as some may learn from it.

Cells, organisms, humans, families, communities, societies, companies, organisations, countries, economies and the world are all living systems. They all display conditions of healthy and disease. It is important for survival to understand the condition of the living system. If in a disease state, a correction will eventually take place in some form or the other. It is always better to identify the conditions proactively and implement the necessary remediation and preparations before the condition gets terminal.

“The measure of intelligence is the ability to change”

~ Albert Einstein

Appendix A – Worthwhile supplementary material

Macro Economic

Bridgewater publication on Populism: The Phenomenon <https://economicprinciples.org/downloads/bw-populism-the-phenomenon.pdf>

Ray Dalio (Bridgewater) publication on paradigm shifts (Financial markets focused) <https://economicprinciples.org/downloads/Paradigm-Shifts.pdf>

Ray Dalio - The World Has Gone Mad and the System Is Broken - 05 Nov 2019 <https://www.linkedin.com/pulse/world-has-gone-mad-system-broken-ray-dalio>

Principles For Navigating Big Debt Crises by Ray Dalio <https://www.principles.com/big-debt-crises/>

The Panic of 1907: Lessons Learned from the Market's Perfect Storm <https://www.amazon.com/Panic-1907-Lessons-Learned-Markets-ebook/dp/B001JPH9DQ>

Visualizing the Snowball of Government debt <https://www.visualcapitalist.com/visualizing-the-snowball-of-government-debt/>

The History of Interest Rates Over 670 Years <https://www.visualcapitalist.com/the-history-of-interest-rates-over-670-years/>

Health, Wellness & Power of the Mind

Transcendence TV Series - 5-part docu-series <https://store.foodmatters.com/products/transcendence-dvd>

HEAL documentary - Film and book about the power of the mind to heal the body, featuring Deepak Choprah, Bruce Lipton and Marianne Williamson. <https://www.healdocumentary.com/>

Jill Bolte Taylor is a Neuroscientist, Brain researcher who studied her own stroke as it happened <https://ed.ted.com/lessons/jill-bolte-taylor-s-stroke-of-insight>

Bruce Lipton – The Biology of belief https://www.bruce-lipton.com/sites/default/files/biology_of_belief_cover_1st_chap.pdf

Quantum Physics & Quantum Field

Ervin Laszlo – Science and the Akashic Field. An Integral Theory of Everything <https://eduardolbm.files.wordpress.com/2014/10/science-and-the-akashic-field-ervin-laszlo.pdf>

Bryant A. Meyers - PEMF (pulsed electromagnetic fields) - The Fifth Element of Health <https://www.amazon.com/PEMF-Element-Electromagnetic-Therapy-Supercharges/dp/1452579229>

Quantum Theory - Full Documentary https://www.youtube.com/watch?v=CBrsWPCp_rs

Quantum Riddle - Full Documentary <https://www.youtube.com/watch?v=8LEUFNuyoNY>

Climate & Environmental

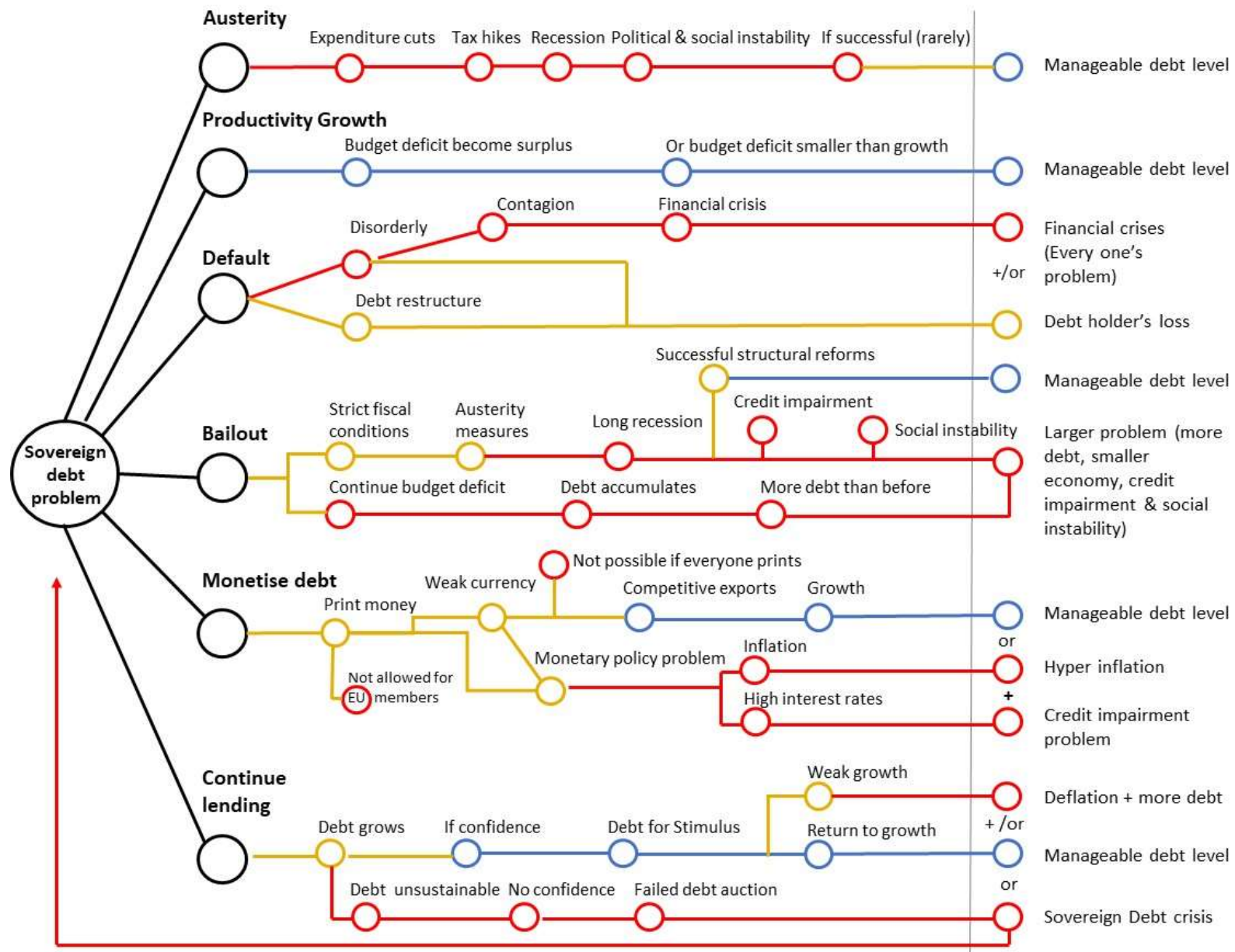
Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) - Scale of Loss of Nature <https://ipbes.net/news/Media-Release-Global-Assessment#1-Scale>

Biodiversity: Finance and the Economic and Business Case for Action <https://www.oecd.org/environment/resources/biodiversity/G7-report-Biodiversity-Finance-and-the-Economic-and-Business-Case-for-Action.pdf>

Data from December 2019 – Media release: Nature's dangerous decline; species extinction rates <https://ipbes.net/news/Media-Release-Global-Assessment#1-Scale>

McKinsey & Company: Climate risk and response: Physical hazards and socioeconomic impacts <https://www.mckinsey.com/business-functions/sustainability/our-insights/climate-risk-and-response-physical-hazards-and-socioeconomic-impacts>

Appendix B – Potential pathways to deal with a Sovereign debt problem



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Several concepts explained in this book have been simplified in order to allow the reader to understand the basic mechanics.

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