

Turning Points - Tipping – Unpredictability

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There is anxiety and fear for many at the moment confronted with what appear to be monumental changes in: the Christian Churches especially for us in the Roman Catholic Church, the global and economic crisis, climate change, rising levels in carbon dioxide, demands for energy in excess of possible production, improved health care and increases in population with rising numbers of the elderly, escalation of military activity and military technology, genetic food forms, rising uncontrolled digital processing, communication, and intelligence gathering etc. etc.

These unstable, uncontrollable, and unpredicted turning points, when carefully examined, shockingly challenge our frequently held beliefs about life and our understanding about God and our nature.

It was during the late 19th century and the early part of the 20th century that observations about unpredictability began with accidental moments and stumblings that led slowly to analysis, studies, and then finally confirmations. The mathematical foundation for these studies of change arguably may be found thousands of years earlier in India's Hindu culture that had the view that everything emerges by a creative act from nothing. Hence nothing is something. The symbol we use to denote nothing is 0. We have all been taught that $1 \times 0 = 0$, $0 \times 1 = 0$, $1 + 0 = 1$, $0 + 1 = 1$, $0/1 = 0$, and by deduction $1/0 =$ an infinitely large number. In practice the handling of the ideas of 0 and infinity mathematically are complex and full of pitfalls to the unwary. It is therefore important to recognise that mathematics until the late 19th century was assumed to be able to predict what would happen. It did and continues to do this using measurements from for example taken from: geological surveys, astronomical observations, sub-atomic explorations, atomic and molecular manipulations, climatology, etc. to describe an active evolving world that was considered stable or cyclical, predictably subject to laws of cause and effect. The hopes of the consequences of such research are that we will be able to track changes using computers and very complex forms of remainder deductions, probability theorems, complex number theorems, calculus, matrix algebra, statistical analysis, algorithms, and today multidimensional concepts etc. and see ahead outcomes that would emerge. It is this kind of linearity that is beguiling because it has led us for a long time to expect that we would be able to understand and predict and

hence control the world about us if we observed, measured, modelled and understood enough. In brief, in the western and developed world, we are a humanity that believes that we will in time finally be in charge of life itself.

This secure hopeful view of life is now in question. Partly because of the certainty of evolution. But also perhaps more importantly because the reasons for unexpected changes in the Church, climate change, increasing carbon dioxide emissions, and economic chaos etc, are not entirely due to human behaviour. There is a great deal more than human greed, arrogance, and ineptitude to understand about these and many other sudden unpredictable tipping points that we are experiencing today.

So what is it that shockingly challenges us about sudden chaotic events? The recognition and the unravelling of chaotic changes have arguably a western origin, perhaps with Poincaré who speculated mathematically about change and disorder. Followed by Heisenberg who mathematically formulated in 1933 what we now call the "Uncertainty Principle" – that is if we know a great deal about something then necessarily at the same time we are proportionately ignorant of something else. Scientifically there were at the time extreme hostilities to his declaration; that is until it was observed in sub-atomic physics. Lorentz later when analysing and processing huge amounts of data gathered from observations of a very complex system, discovered by complete accident that when he entered the same data again and again into the computer, the computer gave widely different answers – in fact a few of the results were hugely different. After checking everything he discovered that the computer, unknown to him, was rounding up some of the data by very very small amounts. Further analysis showed that some of the very very small changes did give widely changed results that were beyond the expected range of errors. It is this reality of very small changes sometimes giving rise to massive changes in complex systems that is now called the "Butterfly Effect". It is frequently expressed in the apparently illogical picture of "when the butterfly in Tokyo flaps its wings a hurricane may occur in London".

The expected search attempting to understand and measure the amounts of turbulence and unpredictability, and find ways to identify and then predict what kinds of small changes would bring about a rapid avalanche of changes have been and continue today to be carried out; not only for

academic interests but also in the hopeful expectation of gaining control over nature. For example, trickles of sand onto heaps are observed and the quantities and the times and directions of the slippages are recorded etc. Other work studies complex interconnected driven moving pendulums. There are research studies reviewing geological data, past climate measurements, and ocean currents etc. The results show that these rapid "catastrophic" rearrangements in complex systems are predictable as events but not when or where, and certainly not what new forms of systems will emerge. You may have seen computer generated pictures of fractals. These are often coloured moving and changing shapes which when zoomed in on show in their smallest structures shapes and forms similar to forms of the whole. This suggests that changes in a system extend throughout the system leaving no part of the system unaffected.

It is this unpredictability of change that given our ways of thinking is so difficult to accept. If we cling on to our hope, for ourselves and our descendants, of the illusion of a future time of stability and control we will continue to plunge into deeper depths of hopelessness, panic and fear. And if it is true that there is no stability for us to control or predictability to find, and that our dream of controlling our lives and the world around is trashed, then where are we? We are I think somewhere new in our thoughts and our beliefs and in our moral behaviours.

A pencil balanced on its point is clearly an unstable state. A small movement of air brushes the pencil and it falls. What makes it fall? No, it is not the movement of the air; it is the instability of the pencil which may have been standing on its point for years or millions of years only appearing to be stable because it does not move or change. The pencil furthermore illustrates that once it is on its point it will inevitably fall. When and in what direction we are not able to predict, but fall it inevitably will. Or we might consider the present panic over increasing levels of man-made carbon dioxide which raise air temperatures. And we think this is linked to ice melting everywhere and releasing the methane and carbon dioxide trapped inside it for sometimes millions of years. The amount of greenhouse gas exuding from melting ice exceeds many times our human industrial pollution which is perhaps like the tiny breeze that tipped the pencil. The ice, like the pencil, has conditions for unpredictable changes.

These are two simple but good examples of a characteristic of turbulent tipping and slipping. Once the change begins and gathers momentum nothing will reverse the process of change. The pencil starts to tilt and continues its fall. The ice begins to melt and will continue to melt no matter

what we do. Even if the industrial pollution had not occurred or if today we reduce the carbon dioxide emissions the ice was waiting for a small change to begin the melt and once begun, as it has in the past, it will today inevitably continue.

The same is true for changes in the Church, genocide, war, the rich becoming richer and the poor being more abused. These events are the result of the way complex systems are and how small changes sometimes a long way back in time trigger the tipping.

I have presented very briefly the essence of what we know about changes in our lives and the world about us. And if these are pointing towards some emerging truth, then clinging on to a stable predictable life style is an illusionary hope. Consequently we must face the reality of change, and catastrophic change, as the norm. The way of life that proceeds from "we have got it right and we know what will happen" is fallacious.

So if we were to embrace this new understanding of unpredictability what might we believe and how might we behave? This is a question about the meaning of life itself and what it means to exist. Can we face the question? Furthermore are we able to consider some possible answers? Let us try to do this perhaps inadequately.

If we are not able to be in control of our changing selves and the changing world around us then we are either into chance and chaos and consequently terror and despair, or we are in the hands of God. But what kind of God brings us into existence through such unpredictable chaos? Why is life itself so changeable? Is there a good reason for our frequent states of fear and sometimes states of terror? The truth may be that God, who is in control and is the designer of change, needs us to experience these painful states so that we live in a relation of need and dependence on God and each other. The changing nature of life may be to push us against our desires and hopes of control toward accepting our existence as one of dependence and fragility in turbulence. We may indeed be discovering that we come out of the big vast nothing of God that the Hindu culture expresses.

But what then, if this is some aspect of the case, is the purpose of the anointed One risen from the dead, named Jesus of Nazareth? He cannot, I think, be about a sacrifice for sin; a making up for the destructiveness of humanity. On the contrary he appears expectedly but also unpredictably and strangely. Is he perhaps about a vast, intense, passionate love for us that never leaves us alone despite our fears and terrors? Is he a visibility of the creative action of God continuing to bring us into existence? He seems to travel so closely alongside us and he never seems to prevent or avoid, when he lived among us before his death,

the cataclysmic changes that engulf him and us. He appears to plunge into them, seemingly surging ahead of us while we behind him are usually attempting to avoid the pain of the changes. He is an extraordinary pathfinder way ahead of us, then before he died, and now among us, living and moving for us 24/7.

God's presence among us is not dependent on our knowledge or our weakness. God's commitment to us is not determined by the level of our commitment to him. The unpredictability of events in our lives and the manner and our experience of death are not under our control. It is the savagery of these unpredictable encounters beyond our control in the world that declares the complete superiority of God beside us. We always feel naked and fragile before God. We are always held by God.

My experiences in the NHS mental health acute wards over many years humbled me. Before the broken and rejected, the abused and used and utterly screwed up, the humiliated and defeated, I was forced to bow low in awe of God who travelled beside these men and women and children. And also bow in respectful reverence to these brothers and sisters entrusted to me because they showed me and shared their journeys with me.

These men and women and all who suffer know that they have little or no control over what has happened to them. They know fear and terror, loneliness and hatred, even their hatred of themselves. It is I think in this place, a paradoxically privileged place of loneliness, that God is discovered. Here there is no Church or at least the Church, we are generally familiar with, no meaningful stocks and shares, no concerns about genetic engineering or climate change, and there is no interest in self either – just pain and an extraordinary sense of the present, of dying and still being alive.

There is something else also about being with the broken when they meet together. Having knowledge of their tragic moments and real pain beyond the imagination of the observers who look upon them from another life, often with fear and horror and disgust, when they meet, they share and communicate if supported. But this in my experience is for them a steep and often long painful learning curve.

In brief then, calamitous situations that unpredictably embrace us isolate us from persons who are comfortable. Until, that is the pain, of those hurting near to us enters us and we begin acceptingly to hurt and are frightened. If this happens those suffering know we are coming closer to them and beginning to understand. The broken draw us to them and become dependent upon us and we likewise become dependent in time upon them. These suffering women and men and young peo-

ple are precious and surprisingly necessary moments in our lives.

It is not being accepted or understood that is hardest for those broken. Particularly when the world they were in before the change was so confident and sure of itself and so affluent that when in it they would buy and acquire, take out mortgages (a strange word with death in it), borrow money they were certain they would be able pay back later; a lot of us spend spend spend with little saving. We live only for today. We expect everything to be at our disposal or acquisition tomorrow and the next day.

But this is an illusion – it will not necessarily be the same tomorrow. The nature of life is unpredictable and uncontrollable.

This unpredictability is a certain condition of the way things are. It is the way God wants it to be for us. Some mystics describe God as an experience of "Darkness" because the light and power and love of God being so immense overwhelms us and we are unable to sense or see; we are in the dark.

Today 19th October 2008 is the feast of St Philip Howard who died a horrendous death by hanging and then while still alive had his guts sliced open followed by a brutal quartering. His father the Duke of Norfolk was executed by Queen Elizabeth in 1572 when Philip was 15. Philip was married when he was 14, and in the years that followed neglected her and God. But in 1581, present at a disputation in the Tower of London over Catholic prisoners Edmund Campion and Ralph Sherwin and others, he was much moved. Consequently he decided to seek religious liberty abroad but was betrayed and caught at sea and incarcerated in the Tower of London. Philip died when he was 39 years old, and was eleven years in the Tower of London. His life is a stream of unpredictable events. The apt reading today is from Paul to the Corinthians in a Roman major trading port who are only still emerging from a brutalising culture of fornication, bestiality, murder, drunkenness, thieving, and whoring etc. Paul writes as follows (Ch.4, 7....):

"We are only the earthenware jars that hold this treasure, to make it clear that such an overwhelming power comes from God and not from us. We are in difficulties on all sides, but never cornered; we see no answer to our problems, but never despair; we have been persecuted, but never deserted; knocked down, but never killed; always, wherever we may be, we carry with us in our body the death of Jesus, so that the life of Jesus (*risen*), too, may openly be shown. So death is at work in us, but life (*is also*) in you."