

The Birth of Now

How the world became rich and free

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1. THE QUESTION

In 1870, more than 4,000 years after it was built, the Great Pyramid at Giza in Egypt was still the world's tallest man-made structure. By 2010, only 140 years later, there were more than 10,000 buildings taller than the Great Pyramid. This book is about what caused this change and what will change next.

The tallest building is not, in itself, a matter of great importance, but it has great symbolism. In the Nineteenth Century, until 1889, all the 100 tallest structures in the world, apart from the Great Pyramid, were in Europe and they were all churches; reflecting both Europe's dominance of the world and the power of religion in Europe. Later, from 1930 until 1998, all the world's tallest buildings were in the USA and they were all commercial: an equally fair reflection of the US take-over of world power in the Twentieth Century and the importance of commerce within America. Currently, early in the Twenty-First Century, the world's tallest building itself and 60 of the other top-100 tallest buildings, are in Asia. This record itself may not be profound but it does reflect changes in power and influence with considerable accuracy.

On a graph showing the height of the tallest man-made structures in the world through history, the line runs flat for 3,800 years before anything taller than the Great Pyramid is built. Over the following 500 years, until 1870CE, there are a couple of tiny bobbles in the line of our graph, as a few medieval cathedrals are built with spires just taller than the Great Pyramid, reflecting the great culture of the European High Middle Ages. But all these spires fall down, reflecting the way that the memory of that culture has all but vanished since, and the Great Pyramid is left, once again, as the highest. Then, after 1870, the line of the graph takes off, climbing almost vertically, until we get to the present; the Burg Khalifa in Dubai, 828 metres tall, 2,000 miles east of the Great Pyramid and well over five times its height.

The height of buildings illustrates a huge question in history: what turned thousands of years of aching slow advance, into two centuries of dramatically rapid progress? The changes that did happen between the building of the Great Pyramid

and a couple of centuries ago took an astonishing amount of time. For example, the first Roman Emperor, Augustus, who died over two thousand years ago, had central heating, piped water, a secretariat and a postal system, in a world that had vast factories, carefully planned military arsenals, with siege engines, a well-organised navy and a substantial merchant marine. Moving 1700 years forward to the Georgian era in Britain and America and it would take a bold individual to claim that their era had surpassed the sophistication of Augustus's classical Romans. Learning had moved forward a little since but the material position, even of the rich, was virtually unchanged and some would say it had gone backwards - Georgian roads were nothing like so good as the Romans' roads nor were their drains and their largest cities were a fraction of the size of Augustus's Rome. Many aristocrats of the Georgian period around 1750 still *aspired* to the lifestyle of a Roman senator of 50BC and self-consciously tried to imitate forms of Roman lifestyle. They built their houses in styles imitating Roman models, but they never managed to include the under-floor heating that the Roman villas of Britain had. The Americans of the period went further and copied not only Roman buildings but also their institutions, like the 'Senate' in the 'Capitol' building.

Over the vast span of history, great men and women have thought and fought, empires have risen and died, temples have been built, destroyed, re-built and destroyed again, but all these changes made little difference to the way ordinary people lived their daily lives until 250 years ago. The peasant toiling in fields of 1750 was does not seem any better off, or any worse-off than the peasant who lived 5,000 years earlier. Both peasants, wherever they came from, lived with their families in single-room, earthen-floor huts, working in the fields, with the occasional help of animals, fetching their water from open streams and ponds and subject to malnutrition if the harvest failed. In both periods, the vast majority of the population were peasants or similar, small-scale tillers of the soil - something else that was to change drastically after 1800.

This theme runs through many areas of life: 5,000 years with very little progress followed by sudden, dramatic change, starting sometime between 1750 and 1850: technological change, political change and social change. Sometime between 1750

and 1850 some kind of human earthquake started in North-West Europe and a process of continual development and progress began. Economic progress, centuries of borderline malnutrition became decades of plenty; social progress, from ten per cent literacy to ninety per cent literacy; community change, from village to city; technical progress, from watermill to steam engine to smart phone; humanitarian progress, from child-labour to welfare state; political progress, from monarchy to democracy. All these started to transform around the same time and all of them have progressed together alongside each other, spreading out across the world as they develop.

A term that has been used to refer to this period is 'The Industrial Revolution'. This term was created by French historians because they wanted to draw a parallel between the French, political, revolution and the British 'Industrial Revolution' of the same period. (It was popularized in English later by the historian, Arnold Toynbee). But this change was across much more than just industry: it was much bigger than just an industrial revolution. It transformed politics, agriculture, transport, finance, education and health as well as industry. Nor did the industrial change come first, it was, as clearly as you can make the comparisons, moving in parallel alongside all the other changes. The changes multiplied energy consumption per head and it enabled the population to increase seven-fold. Popular sports were invented, basic education became universal and mass literacy arrived, allowing reading for leisure and the novel to be developed as a form. Professions began and science started to be applied to real-world problems. Slavery, child labour, mass malnutrition and the death penalty were gradually abolished and murder rates dropped to a fraction of traditional levels. The revolution in industry was only one part of a much bigger historical earthquake.

As well as being misleadingly narrow, the term 'Industrial Revolution' offers no sense of what caused this huge change. General histories of the period are full of stories of canals and railways, of the spinning Jenny and the weaving frame, figures about how the railways grew by thousands of miles a decade and tales about how the great inventors struggled but triumphed in the end. But this is all 'what' happened not 'why' it happened. A few reasons have been put forward rather tentatively, and we will look at these later, but most histories prefer to simply describe the changes and, slightly awestruck, to leave them unexplained.

But, although few present any theory to explain the it, all the histories of the period agree that the speed of change in North West Europe increased many times over, starting sometime between 1750 and 1850. This view is not dependent on individual facts or figures, or even the exact date, but on the sheer scale of the break between the two periods, one of very slow change over eras of time, the other of very rapid change over decades.

We can see how slow progress was before the break by looking at Sumer (now central/south Iraq) 5000 years ago. Sumer is the first civilisation that we know, starting a little before the Old Kingdom of Egypt. A civilisation is an area where towns have developed, not just villages (a town is '*civis*' in Latin, hence the term 'civilisation'). To be a town, rather than a large village, there must be specialised buildings, such as temples, palaces and markets and clear evidence of defined professions, that is, priests and kings, as well as craftsmen. Sumer is the first area we know for sure that had all these. Sumer was also the first area where we can find written records of society, mostly accounting-type records of ownership and taxes. The best-known towns of Sumer were Ur, Lagash, Uruk, Nippur and Eridu, but later these gave way to Babylon, which lasted for over two thousand years as the capital of the region and was the world's first city of over half a million people. To give an idea of the time scale, the first period of Sumerian greatness was longer before the first Emperor of Rome, Augustus, than we are after him: about 1,000 years longer. Sumer's rise was also nearly 1,500 years before the (believed) time of Moses, 2,600 years before the Buddha, 3,000 years before Jesus of Nazareth and nearly 4,000 years before the Prophet Mohammad.

The Sumerians not only had writing but also arithmetic, astronomy, kings, priests, drains, metals, glass, pottery, mass-produced bowls, sailing boats with long trading routes and trading links over land that meant that they could import decorative lapis lazuli from 2,500 miles away.

Only four indisputable 'inventions' were devised between 3000BCE and the Birth of Now after 1700CE: smelted ironⁱ, about 2000BCE in Turkey; the magnetic compass, about 200BCE; paper, four hundred years later in 200CE; and gunpowder, sometime after 1000CE, all first recorded in China. Other ideas put forward as

inventions, made after 3000BCE were only first recorded after 3000BCE. But before 500BCE very little is written or pictured anywhere about the everyday things of daily life¹, so many devices that are first recorded after that date are just as likely to go back to the start of civilisation². Items like watermills, stirrups and wheel-barrows do not leave distinctive remains, so although the first windmill to be recorded in writing dates from Persia around 650BCE and the first stirrup around 500BCE and the first recorded water mill around 250BCE, they are all are likely to be much older. Equally, other 'inventions' are relatively obvious, once conditions are right. The plough mould board, for example, appears in Europe around 1,000CE has been hailed as a breakthrough 'invention'. But it arrived only after there were large enough horses to pull ploughs, horses probably originally bred to carry knights in armour. The plough mould board was used much earlier in Chinese paddy-fields, where the wet soil is soft enough for oxen to pull it. When we go through the list of supposed inventions we find that, again and again, the earliest known examples date from the times around 500BCE when writing started to be used for things other than legal and religious affairs. An exception may be Archimedes' screw of around 250BCE. It is both an unobvious idea and famous as an invention in the ancient world so it may be a real 'invention' to add to our list of four between 3000BCE and 1700CE.

Even if every item mentioned is accepted as having been invented after 5000BCE, it is a much smaller list than most would guess. This is true even if we add in one or two other pet candidates for crucial inventions - the invention of hay, dried grass used for winter animal fodder, is championed by some as a crucial invention that made life in northern Europe better, for example. Even with all these added in, it is a challenging task to identify any of these developments that made life for the Romans noticeably different to life for the Sumerians and, as we have seen, there is not much that separates the Roman lifestyle from the Georgian lifestyle of 1750.

¹ Why would you write about, say, a crank handle. There is no printing or royalties. It is not surprising that they are not written about before 500BCE, what is surprising is that, after 500BCE, these things are sometimes mentioned.

² An invention is a working piece of machinery, not a theory, method, or discovery. So, for example, Pythagoras' theorem, the Alphabet and America are not included as 'inventions'.

Drains are a particularly useful marker of development because, where they exist, they are, naturally, underground and so often remain relatively undisturbed and can be found in archaeological digs. Drains also help create a pleasant and healthy life to the people that built them. To make the point about how little development there was over nearly 5,000 years, the temple of Uruk in Sumeria had drains before 3000BC but the great Palace of Versailles in France, completed by Louis XIV in 1714CE, did not have drains. With its population of several thousand, the smell was said to be 'unique'ⁱⁱ.

If a citizen of early Babylon, were transported in time to anywhere in the world on a warm day in 1750, he or she would have found little to be astonished about, apart from the fashions of the period (in Europe at the time, rich men wore elaborate wigs covered in white powder). People riding horses would probably have been the biggest surprise, as the Sumerians had little knowledge of horses, which do not prosper in their hot river valley, although they used donkeys for carrying - and horses were already domesticated elsewhere in Asia at the time. Also, the Sumerians did not have cannons or gunpowder but they probably used fire-arrows and clay pots filled with lit tar as grenades - crude oil and tar were widely available in Sumer - although the first actual pictures of fire weapons being used date from 1000BCEⁱⁱⁱ.

Even suppose that our Babylonian were transported to one of the great European cities on the cusp of the Birth of Now - London or Paris in 1750 - he would have felt little surprise; by 1500BCE, Babylon had a population of half a million or more, similar to or larger than Georgian London or Paris^{iv}. All three of these cities were only half the size of Rome during its Empire or Chang An, the capital of Tang Dynasty China, c. 700CE.

Overall, our Babylonian would probably have found little in the Paris of Rousseau or the London of Dr Johnson that would have been more surprising than people riding horses. There is nothing particular about the houses or palaces of 1750 that can be pointed to as an advance on those of Babylon or Rome. People still ate what food could be grown in the area around the town, they excreted into pots or in public, they communicated only by voice and pen, they travelled by foot or horse, they suffered from disease and died as young and mysteriously as they always had. If the

Babylonian were a scholar, there would be information that was new to him - the existence of America, for example³. But, in all that learning, there would be little or nothing that made everyday life any different to the Babylonian experience of life nearly 4,000 years earlier. Perhaps there was a tiny hint of what was very shortly to come in London, as even the common folk were beginning to drink drinks that came from the far side of the world, tea and coffee, sweetened with sugar, from another far land.

But if the Babylonian were transported to a developed city around 1900 - Paris, perhaps - they would be astonished by much of what they saw: trains, gas light, newspapers, self-propelled iron ships, the Eiffel Tower, schools everywhere and the sheer, endless size of the city (around four times its population in 1750). If we take another time-travelling peasant from much more recent times, they would have much the same reaction as our ancient Babylonian, the same things would have astonished them, even if they came from as late as 1700CE. They would have the same background experience of life as the Babylonian, so they would experience the same astonishment at the extraordinary advances and changes from what they knew. If either traveller were then transported to any major city today. there is no describing their astonishment at the high buildings, the cleanliness, cars, lights, air-conditioning, airplanes, televisions and phones. The effect of the changes of the last 250 years dwarf all the changes of the previous 5,000 years put together by a huge amount.

So something started to happen between 1750 and 1850, to transform the human world totally. In our current generation, only 250 or so years after the changes started, the majority of humankind has become city dwelling; using human energy to cultivate (planting, harvesting, etc.) has already disappeared from the developed part of the world. Soon we may hope that the job of peasant will follow a long line of dreary jobs now declining and into history: labourer, washerwoman, porter, clerk, miner,

³ The size of the Earth was measured by Eratosthenes (with remarkable accuracy) around 240BC although the suggestion that it was spherical comes much earlier. The Babylonians has excellent astronomy - much better than the Romans, for example - so it was probably considered as a possibility then. We get our 60 minutes in an hour/24 hours a day, as well as our 360 degrees in a circle from the Babylonians.

typist and bookkeeper. Starvation, infection, illiteracy and other grim constants of all previous lives still afflict humanity, but now only the minority suffer and that number is shrinking rapidly. If we continue as we are, without disaster or losing direction, we can hope that freedom from mass deprivation will happen within a current lifespan and that, finally, starvation, like smallpox, will be just a miserable footnote in history.

There is, then, an enormous divide between what we will call 'Then', the period before this change, and 'Now', the period after it. The change to 'Now' was initially confined to a small region of the world in North-West Europe, but it has since extended, rapidly in historic terms, to many other parts of the world. There are, today, still some countries stuck in the 'Then' phase, countries that we call 'developing' or 'third-world', co-existing uncomfortably alongside the growing number of 'Now' societies. The people stuck in 'Then' societies are largely prevented from escaping by strongly policed borders preventing entry into the 'Now' world. The split between 'Then' and 'Now' was originally a split between two different eras of time; now it is a geographical split between two different kinds of country. Fortunately, the area still in 'Then' is shrinking and, one day, it should finally disappear.

In the period before the change, the constants were hunger, disease, poverty, sudden death, extreme inequality, exposure to the elements, slavery, injustice and cruelty. Sometimes, perhaps for a few years, acute suffering was kept at bay, but it always returned when times were bad. After 'Now' started, shortage of food became unknown in the leading countries, good health started to become an expectation, the law began to strive for fairness, weather-proof housing gradually became near-universal and society aspired towards an ideal of equality and personal respect for all. We will call the start of this change the 'Birth of Now'; the moment or period when the process started that got us from the old way of living, 'nasty, brutish and short', to the way we live 'Now'.

None of this is to say that the level of development was stationary for the 5,000 years before the Birth of Now: far from it. It is just that it went backwards as well as forwards. For Westerners, the most obvious decline was after the fall of the Roman Empire in North-West Europe: the slump into the 'Dark Ages'. The effect is much more familiar, and frequent, in China, where prosperous years under a successful Emperor

or two seem always to be followed by the decline of the dynasty, anarchy and collapse back to a primitive state before the establishment of a new Dynasty starts the process again. At the most recent extreme, much of China had sunk back to a primitive level of existence (with guns added) as late as the 1950's. Periods of development and growth before the Birth of Now are centred on towns and on the wealthy; they bring few changes for the great mass of toiling peasants and what improvements there are eventually decline yet again, back to the same, miserable starting level of development.

The suddenness of the Birth of Now is a little disguised because North West Europe, where it occurred, had been on an upswing in development in the period before it started - not a coincidence, as we shall see. But, apart from the purely intellectual advances of Newton, Descartes and company and the artistic and architectural rediscovery of classical designs, the practical advances are few indeed and bear no comparison to those after the Birth of Now. Mostly North West Europe, led by the Netherlands, was just catching up with Italy, which itself had just got back to classical Roman levels of wealth and comfort. For example, London's St Paul's Cathedral (North-West Europe) was rebuilt around 1700, using a domed format pioneered by Florence Cathedral (Italy), built around 1400 - in fact, Florence Cathedral is three metres taller than the new St Paul's⁴. But the dome over Florence's cathedral is itself a metre or so smaller in diameter than the classical Roman dome of the Pantheon, a dome that you can still see today and completed in 126CE.

Despite all these examples, our histories tend to assume - without normally justifying it - that earlier civilisations were always more primitive than later civilisations; that there might at times have been one step back, but this was always followed, sooner or later, by two steps forward. Now there is some evidence to be found for this point of view. For example: Mycenae was a leading city of the Greece in about 1200BCE. Its ruins show that it was much smaller and more primitive than nearby classical Athens, a leading city of Greece between 500 and 300BCE. The progress achieved in the seven hundred years between the two is visible in every way.

⁴ The previous St Paul's, which had been completed four hundred years earlier, was also markedly larger than the new one, another reflection on the, often ignored, wealth of the high middle ages.

But the problem is that Greek Mycenae is also smaller and more primitive than Greek Knossos on the island of Crete, which flourished five hundred years *earlier* than Mycenae: that is, until about 1700BCE. This civilisation, in turn, is less grandiose than the nearby Old Kingdom Egypt, five hundred years earlier still, the period when the great Pyramids were built. In terms of buildings and graphic art, the civilisation of Old Kingdom Egypt equals or surpasses empires of a much later period, such as the Han Empire of China, 2,000 years later and the Empire of Charlemagne in Western Europe, more than 3,000 years later.

In contrast to ourselves, Egyptians of the Middle and New Kingdoms, both of them ending long before the Current Era started, saw history as a steadily decline, starting from a golden age, through a silver age, to the copper age of their own day. The Chinese tradition is to see history as repeating itself, going round in circles, starting with a unified empire of China, the decline of the empire and its splitting up into separate kingdoms, followed by anarchy and then Empire again, with the overall cycle unchanging. The idea that history has a regular direction of progress is a new assumption. Often things seem to go downhill and sometimes even specific advances have been lost: we still do not know what 'Greek Fire' was made of - it was a substance that burned on the water, setting enemy ships on fire. The Roman use of concrete in building only returned in the 20th century. The idea that things become more developed gains strength only after the Birth of Now, when progress became self-evident.

The rise, decline, fall and rise again in living standards, has happened many, many times in the one part of the world where we have a reasonable written record: the Middle-East, where the Sumerians started it all. The Sumerians were replaced in turn by (simplified list): the Akkadians, the Amorites, the Kassites, locals from Isin, the Aramites, the Aramaens, the Assyrians, the Chaldeans (locals again, sometimes known as the neo-Babylonians), the Persians, the Greeks, the Romans, the Parthians, the Sassanians (a family of Persians), the Arab Rashidun Caliphs, the Umayyads, the Abbasids, the Seljuks, the Mongols, the Osmanlis (Ottoman Turks), the British, more locals and the Americans - the last technically ruling through local leaders. There has been war and peace, bad times and better times, but in all the 5,000 years of recorded

history, the only long-term difference has been made in the last 100 years by the introduction of modern technology, washing-over from the Birth of Now in Europe.

The poet Shelley saw the effect:

*I met a traveller from an antique land who said:
'Two vast and trunkless legs of stone stand in the desert.
Near them, on the sand, Half sunk, a shattered visage lies, whose frown,
And wrinkled lip, and sneer of cold command,
Tell that its sculptor well those passions read
Which yet survive, stamped on these lifeless things,
The hand that mocked them and the heart that fed:
And on the pedestal these words appear -
"My name is Ozymandias, king of kings:
Look on my works, ye Mighty, and despair!"
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare
The lone and level sands stretch far away.'*

Not all civilisations declined all the ways to basics or bounced back again; some just stayed where they were. The Eastern half of the Roman Empire lasted for more than fifteen hundred years, although in the later period it is frequently known as the Byzantine Empire after its capital of Byzantium (aka, Constantinople, later Istanbul). This Empire continued, reinvigorated, after the fall of Byzantium to Mehmet the Conqueror in 1456, now called the Ottoman Empire, which then gradually declining in cohesion, power and influence until 1918. Yet through all the continuity of more than 2,000 years, very little 'progress' happened. The historian of the Roman Empire, Edward Gibbon points out that, despite speaking Greek, the language of "*the sublime masters who had pleased or instructed the first of nations....In the revolution of ten centuries, not a single discovery was made to exalt the dignity or promote the happiness of mankind. Not a single idea has been added to the speculative systems of antiquity....*"^v.

Ancient Egypt showed the same spirit, copying the ways of the Old Kingdom and striving to reach its heights for 2,500 years, literally in the case of the Great Pyramid. One of the reasons it is difficult to date Egyptian artefacts is that they imitate the designs and patterns of long, long before. The same is more-or-less true of China, which also tended to see itself as having declined from the Han golden age of 100BCE. The 'Forbidden City' in Beijing is a giant palace built in the 1400s and largely rebuilt in the 1600s but in the style of the Han dynasty and using the methods of their period. In China, to become a ruling official (Mandarin) you needed to pass examinations: the books which needed to be studied to pass these remained essentially the same from the Eighth Century Tang Dynasty, right up to the Twentieth Century. Despite 'Good Kings', and, for that matter, bad kings and wicked Dowager Empresses and eunuchs and revolutions and invasions and Dynasties, nothing fundamental changed in China until way after the Birth of Now - you have to be a real expert to tell a bronze casting from 1300BCE from one of 1300CE. Equally, although the capital of the area that was Sumer and that we now call Iraq⁵ moved away from Babylon itself after a couple of thousand years, there was always a major city close to the site. Today's capital, Baghdad, is only 85 kilometres from Babylon. Given the length of time, the thousands of years that they existed, why did none of these places make any life-changing advances, technical, social or political - and few enough advances of any kind - until after they were affected by the wash-over from the Birth of Now?

Before the Birth of Now, many of the political events, the wars, the growth and the decline of empires, changed only the names and faces on the statues. Perhaps different ceremonial clothing was worn and the location of the capital moved but, like changing the cast in a long-running play, while the faces changed the plot stayed the same. After a time, the new players, in their turn, were subsumed in the next invasion or decline or break-up. The structures of the old regime may have fallen; people, buildings, laws and religions alike, but the rubble formed the foundation of the new regime. The lost past repeats itself like the stubble of a crop being ploughed back into the soil to feed next year's growth.

⁵ The name Iraq may derive from Uruk in the original Sumer. The area has sometimes been called Mesopotamia, a Greek word of 2-3,000 years later than Uruk that seems less appropriate.

So we seem justified in splitting history into two phases: one of glacially slow change for over 5,000 years from the dawn of civilisation to some time roughly around 1750 to 1800. Then the other phase starts, with continual and rapid changes taking us through to today. During the first phase, the period that we call 'Then', such advance as there was had little or no impact on the daily life of the mass of peasants. In the second phase, 'Now' in our terminology, everything changed. Typical statistics for the world since 1800 - and there are a number of sources for these, all in rough agreement - are: population has increased by seven-fold, total output of goods has increased by one hundred and twenty times and energy consumption by sixty times. The scale of change is so huge that the figures do not have to be exact to make the point.

Two questions arise: what made the change from 'Then' to 'Now' happen and why did it happen when it did?

The first issue that arises is that we do not know what sort of change it was. What was the first thing, the bit that started all the other changes going? Coal, for example, was not a new fuel; people had been using it in China for over a thousand years before 1800 and in England they had certainly been using it for over two hundred years before 1800 and probably started using it much earlier in areas where it could be simply picked up from the surface of the land or, as in Northumbria, from the beaches at the bottom of the cliffs. Why was it only in 1712 that the first steam engine was installed, when a working model of a steam engine had been shown 2,000 years earlier by Hero of Alexandria? Alternatively, why did steam power start then, in 1712, and not centuries later? Why that particular period? No definitive answer to questions like these has been agreed so far; indeed, it is very rare for this question to be posed in these kind of terms at all. 'What caused the Industrial Revolution', is often presented as a story of the right people being around at the right time. Luck then? But, even if some of the stories of individual engineering heroism are true, and maybe some are, they do not explain why they all came about in a rush at the same time. Anyone who put forward the idea that the Roman Empire gained its great size due to a lucky run of brilliant generals would be thought very naive.

The idea that there was a singular turning point in historical development is widely acknowledged as, at least, the 'Industrial and Agricultural Revolutions', but it is

then left at that. It is widely assumed - without being specifically stated - that the path of recorded history is one of gentle, if wobbly, progress in an 'upward' direction. We can call it the theory of Constant Slow Progress (CSP). Two steps forward, one step back, maybe; but progress in the long run none-the-less. This assumption has to be unstated as it is quite in defiance of the historical evidence, not only of the one-off step-change of the Birth of Now but also of the many and lengthy development downturns recorded in history: the five hundred year Western European 'Dark Age', again. The assumption of 'Progress' was also famously mocked over eighty years ago as 'Whig History', history written by historians determined to find progress, whatever the facts.

What caused the Birth of Now? We want an answer to be something that unmistakably results in effects like those we see at the Birth of Now. Not mysterious pseudo-answers such as a 'change in the spirit of the age' nor a fluke, 'suddenly inventions started to happen', nor a sleight-of-hand 'the decline of church dominance that freed the spirit of originality'. We must find a cause that only existed just before the Birth of Now and only in North Western Europe and especially in Britain, the leading area in the first stage of the Birth of Now. The cause must be known from other evidence to stimulate economic growth and social transformation, the cause must explain how its effects could then spread to the rest of the world. We are looking for solid evidence supporting a well-constructed case. A good murder-mystery does not end with the Detective putting forward a hypothesis: he produces the murder weapon, he explains whodunit and howdunit, fitting all the facts that were presented earlier in the story. So here we want to find clear, unmistakable evidence - ideally, high quality numerical evidence - of a single main cause of all the effects we observe at the Birth of Now.

Once the cause of this abrupt change of direction in history is established, it changes the way we see both our own period and our future. Knowing the cause of the Birth of Now suggests when our current era of continuous change will end and what will come after the period we live in, what comes after 'Now'. Understanding what made the changes start leads to a better understanding of what will make them stop.

We are running ahead of the story though. The point is to emphasise that some *thing* happened, that there was a definite event, an event that started across a short period - a decade or two at most - a Birth of Now. Despite being the most significant change in history and the only change of Era since the dawn of civilisation, we have had little idea what the Birth of Now is and no convincing thoughts about what could have caused it. We shall remain in this uncomfortable position for several chapters. This is not because, like a murder-mystery, the fun is lost if you know whodunit too early, but because, like a thriller, the ending makes no sense if you haven't followed the plot.

Before we ask what started the Birth of Now, we need to ask why it didn't happen earlier? Many of the devices that are seen as central to the Birth of Now were 'invented' much earlier. A form of printing - stamping - was developed alongside the first writing around 3,000BCE and printing was big business in Song China before 1000CE. We have seen that a steam engine was demonstrated in classical Alexandria around 1700 years before the first commercial steam engines came into use. There are examples of the most elaborate clockwork machinery from ancient Greece - the best known is the 'Antikythera mechanism'. The short-sighted Emperor Nero used eye-glasses to watch gladiators and there are examples of things that look like electric batteries from Parthia around 250BCE^{vi}.

Why did development not take off when Rome was at its peak? There seems to be nothing obvious in Georgian England, when the Birth of Now did take off, that Rome did not have bigger and better 2,000 years earlier. There must be some crucial difference we can find. Or the Birth of Now could have lifted off from the wealth and development of Yuan China that so stunned Marco Polo, or it could even have started when the Pharaohs built the Great Pyramid, back near the dawn of civilisation? Or in Maya America in its heyday, the High Middle Ages, the vast city of medieval Patna? Why not? Mankind is an ingenious animal that shares good ideas around and seeks to better his circumstances in this world. Why did the millions of people over the thousands of years not start to solve their problems the way they did sometime after 1700? Why did the developments of the Birth of Now not start much, much earlier? What stopped them? What prevented development happening for so long?

2. A Simple Model

Before the Birth of Now the history of every region of the world has a consistent overall pattern. Its culture and material sophistication rises to something like the point where drains are built, and then either stays stuck there, like Byzantium or Babylon, or falls back into a relatively primitive state, as, for example, much of the Maya civilisation of Central America did between 700 and 900CE or Europe in the 'Dark Ages'. Such a consistent pattern suggests that there is a limiting factor, some force that prevents civilisations from developing further, that allows the development of technology up to something like water wheels and allows the advance of thought up to complex belief systems but then stops them going further and into steam engines or science.

Whatever this limiting factor is, it has to be extraordinarily universal. It has to work across all the ages, from before Sumer and Old Kingdom Egypt in 2500BCE, until after 1700, when Peter the Great ruled Russia and Louis XIV ruled France. This factor has to apply everywhere across the globe from the Ganges plain of India to the Pacific North-West of America. This limiting factor works in so many different periods of time and across so wide an area that no specific issue of history, geography, culture or personality can be involved. So we need to find something that both limits development and that applies to every society, everywhere, every time (before the BoN). There can't be many social structures that apply so far and so wide. To understand what it might be we will start with simple Game Theory.

Game Theory is a way of thinking about conflict and cooperation between animals and humans. It is a powerful way to understand how the world works when the interests of different individuals or groups clash. Game Theory was developed mathematically but can be used non-mathematically to illustrate the processes involved in real-life challenges: what the outcomes of a conflict can be and why. Perhaps the best-known non-mathematical use of Game Theory is in helping us to understand how animal conflicts over feeding, mating and breeding play out. Richard Dawkins in his classic book, 'The Selfish Gene', used simplified

Game Theory to provide a vivid explanation of how animal conflict can be understood. A similar, simple analysis can shed light on human social issues.

A core concept of Game Theory is the idea of a 'strategy'. A 'strategy' is a simple rule that a 'player' follows in a conflict, rules like: 'Always give in immediately' or 'Fight until you can physically fight no longer' or 'If your opponent is smaller than you fight, if they are larger, run away' and so on. As a rule these strategies are not consciously worked out but come across to us as the character of the individual: we describe them as cowardly or aggressive or, perhaps, full of braggadocio, making aggressive displays but running away if the opponent stands firm. With the strategies defined, we can then list the possible results from a conflict between two 'players', people or animals, following different strategies. Taking the simple example of a fight between two identical animals for a piece of food, there are four possible outcomes for each: win the food, win the food plus get injured, lose the food, lose the food plus get injured. Mathematical Game Theory can find which strategies work best for an animal if it is constantly getting involved in such fights - as many are. But we can use the ideas behind this process to provide an understanding without needing to work out solutions mathematically.

We start with only one kind of 'player': a family unit. Each family unit consists of a man and a woman who started single, merge with each other and have children. All families are treated as identical, except for their strategy and there are only two strategies: 'MYOB', short for 'Minding Your Own Business', and 'Stealing'. MYOB is a simple strategy to collect or grow whatever food the family needs, perhaps helping other families from time-to-time in return for them helping you. 'Stealing' is a strategy of using violence or the threat of violence to take food from MYOB people.

Let us see how these two strategies play out in a typical group of somewhere between fifty and one hundred individuals; a village or tribe, an ancient form of human social existence. Across history, groups of this size have found three different ways to get food: hunter-gathering, herding and settled farming, the three oldest forms of economic existence.

The simplest thought-experiment is with hunter-gatherer societies. Rare today, societies like these probably dominated human history before the New Stone (Neolithic) Age that started around 12,000 years ago. Hunter-gatherer societies are based on groups of linked families - tribes - that live in a food-rich environment. A common pattern is for the women to look after the children and tend the home fire while also gathering herbs, fruit and roots. The

men hunt for meat and fish and seek luxuries, such as honey. In these societies only the MYOB strategy works. People don't keep much food, they mostly get it afresh every day or so, and they have little else you could steal. To hunt large animals, the whole tribe - or most of the men at any rate - may have to work together as a team, sharing the kill. Anyway, the food does not keep, so there is little point in taking more than you can eat, even if you were allowed to. So, where the environment is rich enough to support a hunter-gatherer lifestyle - in the rainforest, for example - we would expect to see an all-MYOB, fairly equal society, with most grown-up, mid-life, people having roughly the same role and status. The general observation is that such societies, both now and in the past, do, indeed, have quite equal structures between the family units, often using a committee of 'elders' as the group decision makers.^{vii}

'Herders', in our thought experiment, are tribes of a similar size to our hunter-gatherers that follow or lead a group of grazing animals - cows, sheep, or camels - animals that provide the majority of the tribe's diet of meat and milk. Herder tribes, too, are diminishing rapidly in numbers, but once they dominated the grass plains of Asia and America, as well as the savannahs of Arabia and Africa, where they still exist today. With herders we get the same outcome as that for the hunter-gathers: all MYOB and no Stealers. This is the only 'split' that works - but this time it works only within the tribe. You can't steal animals from other members of the tribe without it being completely obvious whodunit and the rest of the tribe forcing restoration to keep the peace. The need to move to new grazing with the herds prevents the development of walls that could shelter the Stealer effectively. However, if you can steal animals from another tribe, it is a serious gain: you get more animals - that is, food or food producers - at no cost to yourself. So we would expect herder groups to have close and equal all-MYOB societies within the tribe and a policy of 'Stealing' as much as they can get away with outside the tribe. This pattern is obviously complicated by the fact that each tribe has the same dual policy, bringing the additional need to protect your own tribe and its animals from other tribes coming to steal. The predicted pattern is found in fact to be almost universal in herding societies: strong family and tribal ties, spiced with endless inter-tribal Stealing and vendettas.

Finally, we come to fixed farmers - farmers who plant and reap their own crops. An MYOB strategy works well enough and, under many circumstances, an MYOB family can produce more than sufficient for their food requirements. There are three snags: they have to remain in the same, cultivable location for a long time to grow the food, they have to store

some of the food they grow and locations that are good for agriculture are not generally the best defensively. They need to store food, not only because they need it as seed-corn to plant for next season, but also because nature creates short periods of harvest, where the food all comes at once, so most of the crop needs to be kept back to feed the family until the next harvest. This means there is something for a Stealer to steal and the Stealer strategy becomes viable.

To make a Stealer strategy work, Stealers need to combine with other Stealers, so that MYOB families can be successfully threatened or beaten into giving up their surplus. Stealers need to protect themselves from vengeful or ambitious MYOBers or junior Stealers looking to become top dog. Specialist military equipment too expensive for everyone to possess - swords, castles, armour, horses, chariots - helps consolidate Stealer power. Stealers also need to defend their food sources, that is, they need to defend 'their' MYOBers, from other Stealers. Finally, Stealers need to limit their own theft within their community, leaving enough so that the MYOB people can still live, ready to be robbed another day.

Of course, if a group of Stealers raids a village ruled by another Stealer, the raiding Stealers will not worry about leaving anything at all for MYOBers to live on. This is why MYOBers will tend to prefer their existing Stealers to incoming Stealers, who have no interest in leaving them with anything. The existing local Stealers have to discipline, protect and tend their MYOBers much as a herdsman tends his animals and for much the same reason, to ensure there is something left for tomorrow. As a result, local Stealers provide some social co-ordination and law in their own districts. This has led some who have lived through times of anarchy to see powerful Stealers as a blessing⁶.

So the patterns described above are roughly how societies of these three types are observed to behave. In hunter-gatherer tribes in the jungle or the outback families have relatively equal status and roles. They are often 'governed' by a council of village/tribal elders - the chief's role being more of a chairman than a boss. Herder tribes, like those of old Arabia and Mongolia, have a similar internal equality with an informal council of Sheiks (elders) making group decisions while the tribe is engaged in perpetual raiding and blood feuds with other tribes. Finally, every single settled agricultural society that has ever existed, as far as we

⁶ Notably the Legalist school in China and Thomas Hobbs in England, both of whom came up with a very similar support for unrestricted Chief Stealers, despite the 2,000 year time gap between them, as a result of living through the grim anarchies of the Warring States Period and the British Isles civil wars respectively.

can tell, has a split between the farmers/labourers that we have called MYOBers and lords/nobility, Stealers. No tribe, no society, no culture, no civilisation, if based on agriculture, has ever avoided a crystal-clear split of classes between labourers and non-labourers - until after the Birth of Now⁷.

So far, so good, for our simple model. We now drop the hunter-gatherers and the herders and look in more detail at the group we know leads on to 'civilisation', the settled farmers and their overlords.

Because the MYOB/Stealer split is universal, we don't generally see it as peculiar. Its grotesque unfairness, with different rules for palpably similar people, together with its one-sided cruelty, are both taken for granted as a fact of life, like the need for water or the long human childhood. We do celebrate, as beacons of the better future to come after the Birth of Now, those few and short-lived societies where the split of the two classes was slightly softened, societies such as Classical Athens or Rashidun Arabia. But the almost universal fact of settled societies is the division of mankind into, on one side: Nobility, Boyars, Samurai, Kshatriyas, *Gui zu*, Grandees, *Dvoryane*, the Quality, *Parişadabarga*, Officers, *Manya*, Lords, Patricians, *Aristokratia*, Gentlemen, Junkers, etc. etc. and, on the other side: common folk, the proletariat, *krestyanin*, serfs, slaves, plebeians, the black-headed mob, *ren min*, peasants, *hoi polloi*, *robotniks*, villains, etc. etc. Over the millennia a great deal of time and effort has been put into glossing over and euphemising the highly exploitative relationship between Stealers and MYOBers. The terms used for Stealers often have positive overtones - Nobility, Gentility, Chivalry - but, even where honeyed terms are used, the split of roles is never totally concealed. People understand the fundamental reason for the split well enough: the use of threats and violence by a few to take the output of others. Certainly, most Stealer societies have made clear that MYOBers who object to the situation will suffer accordingly. To emphasise its simplicity: the process is that Stealers first take MYOBers' surpluses, then they take anything else they feel like taking. This has happened in every settled society until the Birth of Now and destroys the possibility of progress.

The critical aspect of all Stealer societies is that there is no incentive to build for the long term - almost the opposite. If, in a good year, an MYOBER works hard to build up a surplus

⁷ Some claim that the Huadenosaunee federation of North American Indians were an exception that managed to keep a hunter-gatherer style equality even after many years of settled farming

against the possibility of a future bad year, it will be taken from him. If he improves his house or works to construct additional items of furniture or tools, they will be taken from him. The more attractive or useful the things he creates, the faster they will be taken from him. He may also be beaten-up, or face legal penalties and costs, in the process of their removal, especially if he attempts to hide his surplus. Or maybe he will be beaten up anyway, just to stop him getting uppity and thinking he can complain.

When you visit a full-blown Stealer society - and there are still plenty of them, easily identifiable by pre BoN levels of poverty - the overwhelming impression everywhere is of people hanging about, doing nothing. Yet the place is a hideous mess that could clearly produce more if these people did any work on it. But, if they did, a man with a document or a man with a gun would come and take it away and they might imprison or kill someone while doing so. So everyone stands idle. If you obviously have nothing, no one can steal it or torture your children to make you reveal its location. In Stealer Societies, MYOB people will go hungry in bad years because there is no provision of reserves from good years. This happens even when storing the surplus of good years is entirely possible within the simple technologies of the society - seed-corn has to be stored anyway, so storing more would not pose a technical problem. But, when the period of hardship arrives, Stealers will take any reserve, so it is pointless to build reserves at all. This is why, again and again across history, there is hunger after just one flood, one hailstorm or one drought and, after two, there is starvation. The reason why MYOBers do not build up reserves is not that they are improvident idiots, but that the reserves would be taken from them if they did; the reason why Stealers rarely build up reserves is that they rarely suffer shortages. Stealers will take enough for their needs and pleasures from their MYOBers, regardless of the harvest, good or bad. If, as a result, a bad year pushes some MYOBers into starvation, then so be it, although, historically, a few Chief Stealers have built up stores against future shortages, very much with the attitude of tending their 'herd of commoners'. So the Stealer/MYOB model of society, the model that seems to be the universal model for agricultural societies, unintentionally but effectively works to prevent planning, investment or development. Also, because they are aware of the instability of their position, outnumbered as they are by the MYOBers, Stealers also resist anything that smacks of change, afraid that any change may undermine their privileges.

This is the reason why societies did not start to develop beyond a basic level until the Birth of Now. The universal form of society, where agriculture is the main source of food, is a

Stealer society and Stealer societies cannot develop very far because improvements are discouraged and stolen. Not all Stealer societies are the same, they can be crude or sophisticated, vicious or easy-going but, from the first civilisation of 3000BCE up to the underdeveloped economies of today, they all have the same outcome: poverty for MYOBers and stasis for society.

As soon as time and familiarity allow it to be, Stealing is re-branded. Rather than demands with the explicit threat of immediate violence, the transfer becomes rent, tax or traditional dues, all legally owing to the Lord and legally enforceable. The harsh edge of Stealing is softened but never lost; the bandit chief becomes the Count, the cutthroat becomes the Knight. As soon as possible, the MYOBER/Stealer distinction is made sacred by dividing humanity into two separate types. Stealers gradually become a semi-separate species: the Nobility, the Aristocracy, the Quality, the Gentry, special, different people, chosen by the gods for their virtue, strength and skill.

The more protected the Stealers are from revenge attacks, the more ruthlessly they can take from the MYOBers. Around 900CE, in North-Western Europe, Stealers developed the concept of the stone castle; somewhere they could be really safe from vengeful peasants. This was the reason castles were built, despite the excuse that they added to the security of the district. Commentators at the time, such as the Anglo-Saxon Chronicle, had no illusions:

"They oppressed the wretched people of the country severely with castle-building. When the castles were built they filled them with devils and wicked men. Then, both by night and day, they took those people they thought had any goods - men and women - and put them in prison and tortured them with indescribable torture to extort gold and silver."^{viii}

(The effect of castles was particularly pronounced in England, where castles were introduced suddenly after the country was taken over by William of Normandy and his cronies in 1066^{ix}.)

The simple Stealer/MYOB model builds up easily for larger communities, made up of many villages. Each community can be seen as one triangular cell, with a full Stealer, a Baron or, in Mafia terms, the '*Capo*', at the top point. Going down the triangle, there is a gang of Deputy Stealers, 'Knights' or Mafia '*Consigliore*', reporting in to the main local Stealer. At the bottom there is a large base line of MYOBers. Like a house of cards, a series of triangles can be built on each other to form larger triangles and still larger triangles can be formed out of these. At the peak of a largest triangle, based above a large number of smaller triangles, sits

a Chief Stealer: a King, an Emperor or a '*Capo di Capi*', who treats the Barons rather as though they were his MYOBers.

But the King is less able to skin the local Stealers, the Barons, of their surplus than the Barons are able to skin their peasants. This is for practical reasons: the geographical distance between the Chief Stealer and his subordinate local Stealers is larger and they have a greater ability to hide resources than the peasants do. But mostly this restraint is to do with the relative fighting power of the Barons and the King. In many societies an individual Baron has much greater practical ability to resist the King than an individual peasant has to resist the Baron, especially if there is a getting together of several Barons. Hence, it pays the King to keep the Barons sweet by leaving them with some excess.

This balance between local Stealers and Head Stealers changes with developing sophistication and technology. In technically crude societies, such as 'Spring and Autumn' period China or medieval France, fighting was a minimally planned thing. War bands and armies often set off with no supplies, carrying largely locally-made weapons, hoping to wing it on locally stolen food. Such child-like simplicity gives the Chief Stealer relatively few advantages over local Stealers. This was especially true if the contest was, 'played at home' for the local Chief Stealer. He could sit, secure in his castle, while the ill-prepared mob supposed to besiege him faded away. As a result, a loose, feudal-type structure prevails in unsophisticated Stealer societies, where, in order to maintain his superiority, the Chief Stealer needs allies almost as much as his challengers do.

In more sophisticated societies, weapons and military stores are stockpiled in advance. The armies may also be trained and professional, including specialists, such as gunners, engineers and pike men. Such professional armies are normally beyond the capacity of a local Stealer and, competently led and supported, are almost invariably successful against a feudal or a nomadic army^x. So military sophistication leads to power moving away from local Stealers and up to the Chief Stealer.

The change of relative power brought about by increasing military sophistication can be seen in the consolidation of most pre-Birth of Now empires, from the Akkadian before 2000BCE and including, among many others, the Assyrian, the Roman, the Gupta and the Aztec Empires. In each case, military success was closely allied to their professional approach to military matters, especially in equipment and provisions. In China, the change from a feudal system to a professional military system is noted in the change from the 'Spring and Autumn'

period of feudal warfare (771-476BCE), to the more professional wars of the 'Warring States' Period. This period ended in 221BCE, with the complete take-over of China by the relentless total-war system of the 'First Emperor', Qin Shi Huang. In medieval Europe, the development of reliable cannons around 1400CE swung the balance in favour of the Kings or, in some areas, the larger independent cities. Only these had the resources to make or buy these weapons and maintain their expensive appetite for gunpowder. We see castle-building and independent local armies disappearing in late Medieval Europe, as the Chief Stealers gradually out-powered their subordinate Chief Stealers.

Senior Stealers in different areas had different types of power structure. There were more-or-less absolute kings, such as the Umayyad Caliphs, and there were also, at the other end of the scale, carefully balanced hierarchies, such as the one headed by the Consuls in republican Rome. Between, there were many mixed forms of senior Stealer rule. Some were formalised as Round Tables or Parliaments of Nobles, but Kings more often consulted informally with leading courtiers, officials and nobles before their bigger moves. Many different formats of Stealer rule can still be seen in the remaining pre-Now countries today. As a general rule, the larger the area in question, the more absolute the monarchy is found to be; the smaller the area, the more likely it is to resemble group rule - an oligarchy. This difference might be explained by the closer personal contact possible between Stealers in smaller countries, compared to the remoteness of the Head Chief Stealer in a country the size of Russia. But it is difficult to measure the effect or its causes with any certainty.

From the point of view of individual survival or of leaving a larger number of descendants, it is not obvious that being a Stealer is a 'better' choice than being a peasant. Stealing is a high risk/high gain strategy. Although leading Stealers can have a rich life, producing and bringing up many offspring, Stealer men also tend to die young and violently as they battle or adventure. Many societies have traditions of killing the children and relatives of a Chief Stealer when he is deposed. This was the general practice in China and Ottoman Turkey, for example. While more prone to malnutrition than Stealers, MYOBers are less prone to being knifed and, with luck, a peasant family can go on for years, bringing up quite a number of children. There is also the limit to the number of Stealers a society can support and, if Stealers breed excessive numbers, some must fall out of Stealing one way or another. Despite this, from the MYOBER point-of-view the Stealer's position looks very attractive. So many MYOBers will seek to 'promotion' by becoming a Stealer themselves.

Some MYOB young women seek to join the Stealers by attracting a Stealer partner and some young MYOB men strive to become junior Stealers. The strategies for women seeking Stealer partners - a Prince - form the central topic of many stories. A young male MYOBER, seeking 'promotion' to Stealer status, will typically join in the periodic attempts to steal from other communities under the command of the regular Stealers. These are raiding parties or war-bands. Good performance on these adventures may lead to a bold or lucky MYOBER joining the Stealers on a more permanent basis - especially if military success allows the number of Stealers in his band to increase. Every Stealer/MYOB society produces people who are more wretched than mere peasants, in that they have no land, skill or possessions: they live by what little paid work they can get and by begging and petty theft. It may be a better choice for such a young man to join an army or gang than to stay at hovel, even when the odds of survival, let alone victory and promotion, may be very bad. For a dispossessed male MYOBER, there is often no other plan that will give him a chance of either mating or having enough food or money to live through a bad winter or illness. Violence was, for millennia, the only solution that enabled many young males to leave children, a fact that explains some of the world's issues today.

In a settled Stealer society, in addition MYOBers and Stealers, there are two smaller career paths: trade/manufacturing and priesthood/scholarship. Roles in trade and manufacturing exist in every society albeit often only for a few. Even very primitive societies have some specialists who knap flints into good shapes for tools and sell them and other specialists who travel and trade goods between different groups. However, we go on to discuss trade and its effects in Chapter 3, so we will skip it here and move straight onto Priests and scholars.

There are two approaches Priests can use to get the food and money they need and they generally use both. They can act as Stealers themselves, using the threat of supernatural injury and death to extract food and other things from MYOBers, rather than the threat of ordinary injury and killing, as used by the more conventional Stealers-through-violence. Using this approach Priests extract temple tax (tithes, zakat) or get unpaid labour on temple lands. In return they help protect the MYOBers from the wrath of the godlets or God. Priesthoods sometimes employ Stealers-through-violence to enforce the temple or church tax, but often the priestly threat of a supernatural attack is enough on its own to get both MYOBers and Stealers to cough up. Skilled priesthoods have managed to become the leading Stealers in

some societies, ahead of the Stealers-through-violence. In India, the priests, known as Brahmins, have managed to give the Stealers-through-violence, Kshatriyas, a lower caste-status than themselves. The priesthoods of Thebes in ancient Egypt, the Medieval Catholic Church in Western Europe and, in several periods, the Magi of Iran achieved something close to dominance of Stealer power, a dominance the Shia priesthood still retains in Iran. In other cases there has been very little separation between Stealers-through-violence and Priests - the Mexica (Aztecs) and Pharaohs combined both.

In addition to their Stealing activities, priests can also act as tradesmen, selling additional favours from God or the godlets at extra cost. These extra favours are often paid for in the form of sacrifices but can also be in the form of cash payment for prayers. Most priesthoods have offered a personal and flexible service, enabling the wealthy supplicant to gain additional heavenly favour but the Catholic Church in the late European Middle Ages targeted sales to a mass audience with printed 'indulgences', sold at a fixed price^{xi}.

Scholars were, essentially, those who could read, write and do arithmetic. They are the scribes and administrators that become necessary in any society more complex than the most basic. Scholars have not normally had a class of their own but have been included as part of an existing class. In ancient Sumer and in Medieval Europe, scholars were the same group as priests. In pre-Shogun Japan and in Mandarin China, the scholars were, in theory, the same people as the Nobility (Stealers). When literacy is quite common, it ceases to be an outstanding characteristic and scribes are simply one group of craftsmen or skilled professionals, generally rated just below the top crafts such as goldsmithing. Scholarship and individual scholars have varied between these positions across the ages in different societies but scholarship itself has never 'broken the mould' of the Stealer society. It has sometimes provided ways in which bookish people could enjoy the Stealer benefits normally reserved for their more violent fellows, but scholarship never changed the way those Stealer benefits were obtained.

MYOBers do not just engage in agriculture, they also act as servants to the Stealers, cleaning and cooking and manufacturing clothes, furniture, drink and luxuries. They also construct buildings, both for themselves and for the Stealers - hence the pyramids, the Great Wall of China, castles and cathedrals. The pattern of these activities is the same as with agriculture: the MYOBers engage in low-skill, manual labour, with all the output being taken

by the Stealers - unless, as with churches and other communal structures like bridges and walls, what they construct has to be shared.

In these circumstances, Stealers can add benefit to the community as a whole by leading the construction of community projects. In dry areas where there are rivers that bring water from elsewhere, the consistent coordination of the whole of a society to build and maintain irrigation channels brings the huge benefit of plentiful and easily cultivated food crops. In Egypt and Iraq, the discipline Stealers were able to impose on large-scale irrigation projects produced significant benefits to the whole community and enabled the first towns to emerge.

The Stealer society is a highly robust social model, which is why it is so widespread before the Birth of Now. No long-term planning is required, no trust or reciprocation, no writing nor structured plan is needed. Whatever the previous social structure, if a society collapses, perhaps as a result of a natural disaster, perhaps because the previous regime failed to maintain its monopoly of violence and it deteriorates into anarchy, what arises from the ashes is the simplest and most robust form of social structure: the Stealer society. It starts in a crude form - some people are stronger and more violent or they are more devious in manipulating strong and violent people to their ends. These people make a living by forming gangs that steal from others with threats and physical violence, often killing those who attempt to resist. Very soon there is a desire on all sides to put a more pleasant gloss on the situation, to find forms that avoid the appearance of naked theft, personal humiliation and immanent violence with its dangers to all involved. Stealers prefer that the blatant unfairness of their position be glossed over, so as to make it less provocative of resistance. MYOBers prefer concepts that allow them to keep some self-esteem and that may limit or control the rapacity of the Stealers. The main form of food and money extraction from MYOBers soon becomes called 'rent'. This idea works well because peasants are keen on the idea of fixed property rights, as they can see all around them the desperate underclass of the unpropertied and fear that they might fall into that group. They often have small rental arrangements among themselves, renting land or animals to each other, so the concept of rent has acceptability. After all, you are getting the right to farm the Lord's land in return for the rent, so it is a fair deal, isn't it? This is when middle-ranks can be introduced: 'gentry', made up of rising peasants and declining Stealers, to swell the numbers on the side of the status quo and allied to the Chief Stealers, in the event of trouble with resentful MYOBers.

Sometimes more cooperative sharing plans have arisen from time-to-time, the monastic movement in early medieval Europe is a good example of a deliberate attempt to replace Stealer rules. But over time and under stress, they sooner or later fall back into Stealer/MYOB habits - the Monastic movement had to keep on relaunching, as older disciplines fell into Stealer ways, from Benedictines to Cistercians, Cistercians of the Strict Observance, Carthusians, etc. Whatever the mechanism, Stealing will return to any cooperative system when it comes under stress as the system of lowest complexity.

Stealing becomes softened by tradition in every way: lands terrorised by a bandit grandfather transform into the rightful estate of the Noble grandson. The penalty to be exacted by a Stealer if a peasant fails to pay what is required is modified. In newly established Stealer societies, the penalty is likely to go from severe beating and death to living dismemberment. As the society settles down, the penalties tend to become more structured, less haphazard and violent: fines or imprisonment are introduced, although unpleasant forms of death are retained as sanctions when needed. But the decrease in the shock of the violence does not modify the rule that the MYOB surplus, anything beyond the minimum for the MYOB family to survive, goes to the Stealers and from them to associate Stealers and their servants. There are fees for licences, such as for fishing in manorial waters, taxes on inheritance of parental goods, fines to be paid for the wearing of superior clothes and permits required to trade in certain items. But all these niceties, the civilised names for extortion, the 'due process of law', still leave unanswered an underlying question: what is the civilised, acceptable reason why a poor person has to give another, wealthier person the products of their work and money?

One justification for this state of affairs is the claim that Stealers are different to MYOBers because they are descended from a godlet or linked to a godlet in some other way. The Pharaoh is made into a living God, an incarnation of Osiris; the Emperor of China commands the 'Mandate of Heaven'; the King of England is the Lord's Anointed, and so on. This can lead to the claim that all MYOBers owe their existence to the magic beneficence of the king-god and they may lose it through disobedience. The Pharaoh is a key part of the magic system that created them and sustains them; they owe their very lives to him and they should be grateful for that alone.

Another reason put forward for accepting Stealers and their demands is that they defend the people from the, far worse, Stealers coming in from outside. So skill at fighting is

almost always a claim of Stealers and, in theory, kings were the best battle leaders - that is what made them king. The last King of Britain to lead an army into battle was George II in 1743, immediately before the Birth of Now. Stealers often have to prove their prowess in battle and losing a battle normally spells doom for the Stealer in charge. Despite the theory that local Stealers should be better than incoming Stealers, however, it has not always worked that way. It is a feature of Chinese history, at least, that local Stealers were so vicious that the peasantry, again and again, sided with outsider Stealers when they had the opportunity - Huang-nu, Mongols, Manchus, Tai-Ping, British and Communists, were all helped assiduously by Chinese MYOBers, plotting the downfall of their existing rapacious lords⁸. The British in India were often more attractive overlords than the previous local Stealers, which explains how such a tiny group were able to rule so large an area for so long.

The final method for explaining and justifying Stealers taking from peasants is to claim that the Stealer race is a different kind of humanity; Stealers are a superior species to MYOBers. Keeping the 'blood' pure, unpolluted by MYOBER input, was an obsession of the nobility of Europe, the patricians of Rome, the *shenshi ren* of China, the Brahmins of India and most other Stealer groups. All these felt that humanity was divided into different categories as consequence of biological differences, similar to the distinction between a war-horse and a pit pony, a lion and a tabby-cat. At times the desire to be separate and to avoid the taint of any 'mixed blood' became extreme. In fifteenth century Spain family trees were fanatically inspected and doctored to avoid any suggestion that aristocratic '*Limpieza de Sangre*', cleanliness of the blood, was polluted. Even today, the family trees of titled people in Britain and Europe is available in large books called 'Debrett's Peerage' and the 'Almanach de Gotha'. Most Stealers used a mixture of all three claims, each supporting the other to justify taking from the poor: because of their descent from a godlet they are a different subspecies of human are the only people with the skills to lead in battle,

In Stealer Societies, it is quite wrong to expect the 'leaders', Chief Stealers, to have the least concern for the MYOBers. Some may care; most do not. They are in power for their pleasure. They can and do steal as much as they want, given the need to keep their MYOBers alive, partially to ensure that their followers (junior Stealers) are kept happy. They may mouth

⁸ This may also be connected with the use of humans as draught and pack animals in China. Horses and oxen were well known but there was never a period in Chinese history when human power was not cheaper than animal power.

platitudes about the needs of the people and they do occasionally worry if they think they are stealing so much that revolution is in the air. But there is no sense in which their power rests on the consent or 'will of the people'.

On the contrary, Stealers make strenuous efforts to ensure that MYOBers are firmly kept in their place and are continuously reminded of their insignificance and inferior quality. Many Stealer societies have strict hereditary rules, where a person's status is determined by their birth. Any attempt by individuals to 'rise above their birth' is forbidden or, at best, discouraged. People attempting to improve their lot are frequently reminded of their humble origins and punished for their presumption. Serfs and slaves are kept in their place by harsh laws. This is linked to the basic conservatism that comes with Stealer societies. Stealers require stability or people may question their 'rights' to their rents, taxes and licence fees, so Stealers tend to oppose all new ideas as disruptive. This adds to difficulty of progress: not only will improvements be stolen, but also they may be destroyed simply because they are new and so represent a challenge to the structure of society.

In all Stealer societies, the ambitious try to find ways to become Stealers - there is little other outlet for ambition. Economists call this 'Rent-Seeking behaviour'. In the remaining Stealer societies today, that typically means threatening the prosperous trader with regulatory destruction - 'failing a safety inspection' - unless they pay a bribe⁹. Stealer governments multiply regulations to provide jobs for their families and followers and opportunities for bribery. This has been called a 'licence raj', from its name in India, where regulations requiring an official permit for almost any activity reached a new height. The reason why US citizens, for example, require an expensive visa to visit India, but not Thailand, is to fund comfortable jobs in Indian immigration for Stealers, with consequent costs to Indian tourism less obvious than the enrichment of a few Babu's.

Stealer societies are stable because they require no special conditions to exist, other than fixed agriculture. Other types of society may require some level of trust between members to work, some degree of planning, some postponement of gratification. But Stealer Societies need no such sophistication. It's a strategy that can't be upset by other strategies - at least no one has found a strategy to upset the simple Stealer society at will. The Stealer

⁹ Unfortunately, the failure of a safety inspection would almost certainly be justified as the wealthy individual has saved money by ignoring safety regulations

society is the point of lowest energy, the 'valley' any other type of society has to climb out of. This simplicity, stability and strength is why, before the Birth of Now, almost every settled society, everywhere in the world for as long as we have records was a Stealer society - until, after the Birth of Now, when they started, one-by-one, to vanish.

So before the Birth of Now, every Egyptian and Chinese Dynasty, every European Persian and Indian Empire, Kingdom, Principality and Dukedom, every farming African Tribe and every Pre-Colombian American Empire was a Stealer society. In the last strongholds of the Stealer Society today, places in the world where corruption remains a key driver, development remains slow. But when Stealing is reduced, as it has been, country-by-country, faster development follows. Then economic growth comes, regardless of issues such as tropical climate, minimal mineral resources, or other factors previously held to explain the presence or absence of development. Neither Japan nor Singapore has fossil fuels or the 'Protestant Work Ethic', but both have become wealthy.

The Birth of Now took so long to arrive because the Stealer-based society that prevents or destroys development is almost universal before the Birth of Now. Not only did this grim fact keep almost all humanity back for the whole of recorded history until the Birth of Now but also parts of the world have still not made the change away from Stealing and its consequent MYOBER poverty. Somehow a society had to escape from trap of being a Stealer society and move into a different social structure before long-term improvement was possible. A few societies did rise above the level of the Stealer society, at least for a while. Let's see how the story moves on.

ⁱ Meteoric iron was known to the Sumerians. Crude smelted iron is a poor material, so they may simply not have bothered with it - iron ore was also not available nearby. The date of the first smelted iron has gone back a lot in the light of recent discoveries but the start of the traditional 'Iron Age' is still set at around 1200BC. Maybe the use of iron seems important to us only because it was so symbolic to the Victorians, who saw iron production as a symbol of the progress they had made. Some have suggested that the success of the Assyrian Empire from 1200BCE was connected with their use of iron tipped spears.

ⁱⁱ Those sleeping in Versailles did have chamber pots which were removed by servants in the morning, but the daytime provision seems to have been more haphazard. Some simply went on the lawn (including some ladies), where their ability to pretend that the gawping gardeners did not exist impressed some commentators.

ⁱⁱⁱ There are Assyrian bas-reliefs that show liquid fire being used, probably around the 10th century BCE. In Thucydides' History of the Peloponnesian War, the 4th-century BC war between Athens and Sparta, we find the earliest description of chemical warfare. The Biblical book of Daniel appears to show Daniel preparing a bomb and blowing up an idol of a snake (or Dragon). Daniel 14:27.

^{iv} There are those who deride these figures for town sizes, saying that they are far, far too large. I am not in a position to comment on these but have tried to take what seems to me to be the prevailing point of view on city sizes.

^v Decline and Fall ch LIII, last pages

^{vi} The so-called Baghdad battery seems obviously to be that - a battery that could give a tingle to your tongue. Unfortunately Eric Von Daniken picked it up as a demonstration of his 'ancient astronomer' theory, so the possibility is hotly denied by all respectable people.

^{vii} There is a great deal of interesting variation in the social structures of different hunter-gatherer societies, studied by Anthropologists. It does seem, however, that the idea of the MYOB/Stealer split can help in explaining some of these variations: roughly speaking, the more the situation allows Stealing and security for the Stealer, the more the society will tend to look like the split of commoners and Chiefs found in settled agricultural societies. The less there is to steal and the less protection there is for Stealers, the more egalitarian the society seems to be.

^{viii} Entry for 1137.

^{ix} In England, resentment of this extra level of Stealing has often been anachronistically ascribed to resentment of the Normans' foreignness, a concept that arose much later. William was, if anything, less foreign than the Danish King, Knut (Canute), who had ruled England 50 years earlier. Canute had provoked little popular resentment because peasant-crushing castles had not accompanied his take-over.

^x Professional vs. feudal or nomadic armies. People may think that the success of the Mongols and other horse conquerors against Chinese, Iranian and European armies throws this assertion into doubt. But, in fact, the armies led by the Mongols were made up of many troops from many regions and were generally highly professional and competent, the horse component being only a part of the army - and a highly disciplined and supported one as well. The armies they faced were, in the case of the Chinese, disloyal to their leaders who were also incompetent. In the case of Iran, the opposition was fragmented and often disposed to join the Mongols rather than fight them and, in the case of Europe, ill-disciplined and disorganized in the extreme. When they faced a competent, professional opponent, such as the Mamluks of Egypt, they were quite capable of being beaten as they were decisively at Ain Jalut in 1260. This is also the first battle in which cannons are recorded being used.

^{xi} Indulgences. These appear to have been the first large printing contracts in Europe. Gutenberg made his original money from printing Indulgences, before going on to printing the Bible. The funding indulgences gave to the development of printing is a key factor in the Reformation, probably second only to disgust at the commercial cynicism 'indulgences' themselves symbolized.