

1. Farmers

Here's an introduction to myself:

I was born in Liverpool in England in 1968. In my youth I was interested in Physics, Astronomy and science in general. I wanted to be an astrophysicist but then I developed an interest in Social science. I went to Wolverhampton University to study Sociology, Politics and History. I started to work in Politics, but then I got interested in Psychology. Just as I was about to start a career as a Psychologist, I got interested in language and culture and ended up teaching in China.

After graduating I went with my partner to South Wales, and studied at the nearby University at Cardiff. There I met a friend whose husband was a Cambridge History graduate. We talked a lot about history, and he has a huge library of history books that I frequently used. That's how I ended up with a working knowledge of British history.

After University I worked at a school for children with autism. This helped me get used to working with young people in a school. I then moved on to a managerial job working in Children's services. There I got used to organising projects and making presentations. Finally, I brought these two things together and trained to be a teacher.

I spent my early life moving around Britain, but I wanted to see more of the world. I moved to London, which is a cosmopolitan city, but once I knew it very well I realised that I had to go abroad. I came to China and lived in Wuhan, but once I was familiar with the South, I felt that I had to come North, so I ended up in Beijing.

I am interested in interpretive history, and in this respect, I have observed four alternative ways that history can be read:

One way is **cyclical**. This was the way the ancient historian, Sima Qian saw history. For example, before modern times, people worked the land and the population went up, until the land lost its fertility and couldn't sustain any more people. War reduced the population, and the process would begin again. Another example is when a bad King is deposed by someone who has observed him and learnt how not to rule. He becomes a good King, but then the lessons are gradually lost each generation until there is a bad King again. The dynastic cycle begins again.

Another way to read history is as a **narrative**. If you want to see a good TV documentary of British history I would recommend the one by Simon Schama. His style is mostly traditional, narrative history. Every event is explained as being caused by the event that came before it.

The third way to read history is as a process of gradual **development**. This could be what I've heard some American historians call "sociocultural evolution theory" or more critically, "Teleology", describing the past as the process of creating the present. Another phrase is "Whig" history, which came from 18th and 19th century British historians, like Thomas Babington Macaulay, who saw history as developing toward the ideal, liberal and prosperous society, they believed they lived in. Today, echoes of the idea can be heard whenever we talk about "developed countries", "developing countries" and "underdeveloped countries".

Finally, you can read history as progressing through **stages**. The most famous examples of this are in the work of the German philosophers, Hegel and Marx. For example, a system like feudalism at first allows people to improve the way they work, gradually increasing productivity, until you can't improve it any more without removing the landlords, who consume the economy's surplus. Then there is a revolution and a new stage of history is reached.

Look again at what I said about myself. The first paragraph is a **cyclical** description. The process is: Get interested in a subject-Study it-Start to work in that field-Develop an interest in a different subject. This process doesn't seem to be going anywhere. The second is **narrative**, each event is explained by another. The third is **development**, everything I did is understood in terms of how it has affected what I do now. The final paragraph gives a **stages** description. As each stage is exhausted you have to move on to the next. This way of telling the story gives it the general impression of going up steps.

It is important to realise that each of these accounts is true! However, they show different interpretations that form different ideas in the reader's mind. When studying history we must be alert to more than what is true and what is not true. We must also think about interpretation.

History has cycles, stages and can be understood as creating the present, and of course, every event is caused by the events that came before it. Reducing it to just one of these forms of description however, is a mistake. It robs the story of its depth, its life, and even its point. History is best understood as consisting of numerous interacting processes. I have chosen three to tell a particular story. This essay will mention two of them.

The Population-Productivity cycle

Consider “the Old world”, the 3 connected continents of Africa, Europe and Asia. Today there are approximately 6.4 billion people living on this land mass. The time that our story starts, 12,000 years ago, it's unlikely that there were more than 10 million. In 12,000 years, our numbers have grown at least 640 times.

This process happened because human beings are brilliant at dividing tasks. Take any two people and ask them to do anything, and they will immediately and intuitively divide the tasks. “I'll get the meat, while you light the fire”; “You wash the dishes, and I'll dry them”. We all intuitively know that jobs get done faster, if we break them up and give parts to different people. This I think is the most important difference between human beings and apes.

When you have a small community, say 50 people, not only are tasks divided minute-by-minute: “you do that, and I'll do this”, but people are given general responsibilities: “you're in charge of the children, you're in charge of the drains, you're in charge of the animals”.

When you have larger communities, say 1,000 people, then you can have real jobs: builders, carriers, farmers, fishermen, soldiers, priests, and so on. The more people you have the greater the opportunity to divide tasks. You produce more, not just because you have more people, but because you can produce more per person. Productivity goes up. This in turn, raises the population of a community. Simply put, the more food you make the more people you can feed. So population increases productivity, which increases population.

This is a cycle which has been interrupted many times in history (there are weaker acting processes that counteract it). The prevailing trend however, is incontestable, 6.4 billion and rising! Population and production keeps going up.

12,000 years ago, a huge ice sheet covered a sizeable proportion of the “old world”, and the people, all hunter-gatherers, lived in the South (all but a very hardy few). As the temperature warmed up, and the ice retreated, the population increased and the people spread north. Over the course of about 6,000 years they cultivated plants and domesticated animals. They also invented pottery, which involves building ovens, and they decorated them, which involves the technically skilled use of fire.

Inventions will have happened in different places and been passed on through imitation, cooperation or population spreading. Different cultures developed as different plants and animals did better in different environments. For example, wild rice grew around the Himalayas, and because it thrives in warm and wet environments it was cultivated throughout the South East Asian lands. Wild wheat probably began in the Alborz and because it thrives in milder and drier environments it spread North and both East and West.

Farming in Europe

Studies of grain found at archaeological sites in Europe show that while there were a variety of wild cereals 12,000 years ago, the ones that were actually planted and grown came from the Middle East. The sequence of dates of finds of early farming show a progression westward across the continent. Although agriculture is around 12,000 years old, it didn't arrive in the North Western edge of Europe, in Britain, until about 7,000 years ago. That's 3,000 b.c.e using the common dating system.

Because people were still using stone tools, we call this the stone-age. The arrival of farming however, is a very big change. So the period before it is called the old stone age, or Palaeolithic, and the period after, the new Stone Age, or Neolithic. This is the change from hunting and gathering to farming, although the people still did hunt and gather food. In Britain there were still set aside areas for hunting animals like rabbits, deer, wild boar and ground birds, right up until modern times.

The anthropologist, Patricia Phillips estimates that if you take a generation to be about 25 years, the progress of the Neolithic revolution was about 18km/generation. That seems quite fast to me, but not inconceivably so. Fresh farm land was available by cutting down forest, while crops were still low yielding (selective breeding had only just begun). So grabbing and using as much land as possible may have been common.

There would also have been other factors influencing the rate of spreading, for example, conflict with hunter-gatherers and natural events, like flooding. If hunter-gatherers threatened, a group of farmers might travel further looking for safe ground, or if hunter-gatherers were defeated in battle, a large area would suddenly become available for cultivation. Natural events might spur on spreading, like for example, if a settlement was destroyed by a flood, the farmers would need to clear and cultivate more land quite quickly.

It is difficult to deduce much about the lifestyle of early European farmers. It seems that they liked to live by the riverside, which was the most fertile land. The earliest villages in the Balkans have a simple pattern: square, mud-brick houses around some kind of common house (maybe a shrine), each with a hearth, cooking and sleeping area. They mostly kept sheep and grew wheat and legumes.

When farming spread into central Europe the houses became long and made of wood, probably accommodating bigger families. Cattle were more common as you move away from the hills and into the northern lowlands. By the time they reached Britain they would have increased their range of resources. The first farmers on the islands had sheep or goats and pigs, but mostly relied on cattle, which were smaller than the native Oxen.

Pigs are found everywhere. Archaeological evidence shows that they seem to have got bigger during the early phase of agriculture in Europe. Maybe the virgin soil of the wild forest was good for the things they ate, or human scraps provided more food than they would normally get in the wild.

After 4,000 b.c.e in the Balkans, we find copper and gold. These are natural metals, that people could discover how to use from experimenting with heating pots and dyes. Objects were made using one piece pot moulds. Wheels and carts, by the way, were invented about 3,500 b.c.e. Horses, which at first may have been eaten, were then used to pull ploughs, and became valued alive.

Shortly after 3,000 b.c.e., copper and gold objects, like those found from centuries earlier in the Balkans, are found in the south of Spain, with evidence that they are being made there. Copper however, does not reach Britain. When metal working reaches the island new technologies have caught up, and people are already making and using bronze.

The power exchange

Think again of the division of tasks. It happens, not only with physical tasks, like caring for children or doing the plumbing, but also with mental tasks, such as deciding who does the childcare and who does the plumbing. The division of tasks means that some people do more decision-making than others, and this can easily end up with some people having all the power, while others have none.

Power depends on talking to people and getting them to accept what you say. The simpler the society, the fewer people it is possible to talk to at any one time. In the simplest society, only the human voice would be used to transmit authority. If a family is considered the best in the tribes, especially if it is the biggest and has the best territory, it's eldest member may be considered the "chief".

Asserting power, that is to say, getting your instructions across, is relatively easy in a tribe of a few hundred people. Getting it across to a large tribe, or a confederation of tribes, or to a mass of subordinate tribes, is a bigger problem. One way is for the chief to divide up the population and post one reliable member of his tribe to act on his behalf in each, or perhaps he could bring together the chiefs of the lesser tribes and convince them to act on his behalf.

One way or another we have the formation of a hierarchy. Seen from above, a growing hierarchy can be imagined as an expanding circle, with power over a wider area flowing to the chief of chiefs, or King, at the centre. As people submit, and surrender power to him, it flows toward the middle. This power is "centripetal".

Now imagine the growing hierarchy in cross-section. The King at the peak is rising up, and getting further away from the people at the bottom. To exercise power he has to allow measured amounts to trickle down. He gives power to his lesser chiefs, so that his power is carried to the edges. This power is "centrifugal".

Now try to imagine the 2-way flow of power. If the centripetal exceeds the centrifugal, the King's area, his "domain" or "realm", gets bigger. If the centrifugal exceeds the centripetal, the realm has stress points and is vulnerable to division. These conflicting forces are the dynamic of what I call "the power exchange".

The Fertile Crescent

By the time metal working, in copper and gold, had reached the far West of Europe, another process had begun in the area known as the "fertile crescent", in South West Asia and North East Africa. These settlements are the physical signs of a process sometimes referred to as "civilisation", which is sometimes a controversial word. But the process needs a word. We are talking about the beginning of the "state", marked by "cities" and written records of rulers.

In Mesopotamia, which is the East of the fertile crescent, agriculture began very early, around 10,000 b.c.e.. Domestic animals are added around 8,700 b.c.e., and the first stone settlements have been dated to about 7,000 b.c.e.. Centuries of selective breeding, the cultural transmission of ideas and the invention of new tools and techniques, will have gradually increased productivity and the population.

A system of writing based on pressing a grass reed edge into clay evolved. This made stroke based pictures and characters difficult and lead to a more symbolic script called “cuneiform”. From around 3,100 b.c.e., in the far South of Mesopotamia, cuneiform tablets seem to show lists of objects and animals, probably rations. The farmers of this time, who planted cereals, and raised sheep and goats, had entered into some kind of production and exchange system with the growing stone-built settlements of the time.

From around 2,900 b.c.e., the settlements in the South had significantly large buildings and irrigation systems. It is reasonable to refer to them as “cities”, although this can be misleading. They are not like what we now call cities, but more like extended Royal residences and ceremonial complexes.

A list of Kings, written shortly after this time, begins with mythological characters until it reaches King Emmebaragasi. He is a plausible character and there is corroborating archaeological evidence for his reign. He united Sumer and conquered Elam, but on his death, the cities rebelled and became independent.

Later, another King would come and do the same, but spread the realm further and sustain it longer. Perhaps these Kings were gradually learning more effective ways to fight and govern. Sargon of Akkad was the first to unite all of Mesopotamia in a campaign that is thought to have begun in 2334 b.c.e.. His dynasty lasted around 1½ centuries. It's last King, Naram-sin is the first we know of to call himself a God. The head of a hierarchy is always vulnerable, and when foreign invaders called the Gutu attacked the centre, the whole state broke up.

The western part of the Fertile Crescent is the delta and long valley of the Nile. Farming cultures developed here around the same time as in Mesopotamia. Ancient records say the first ruler to unite delta and valley was called Meni or Menes, making him the first King, or Pharaoh, of Egypt. Archaeologists have identified a Pharaoh called Narmer, depicted as the unifier, who ruled from 3150 b.c.e.. The first big burial buildings called Mastaba, date from around this time.

We can't be sure, but it seems that some degree of stability was achieved for centuries after that. Perhaps because Egypt is like an island in a sea of sand, it is relatively protected from invaders. Perhaps also the Nile allows relatively good transport for Kings and armies to reach the whole domain.

Throughout this time the population would have grown, requiring a growing number of officials to rule them. A class of scribes emerged, who recorded things in the Egyptians hieroglyphic script. They recorded that the Pharaoh gave estates to scribes, priests and other people who served his government. For purposes of administration, the land was divided into 42 “nomes”.

Around 2200 b.c.e., probably triggered by a drought, the centrifugal tendency in the power exchange prevailed and the central authority disappeared. There followed 66 years of rule by the local nome governors called Nomarchs. After that Egypt was reunited for 4½ centuries, then divided again. This time there was foreign invasion and the period of division lasted longer. Again reunited and redivided, it eventually became dominated by the Empires of Mesopotamia from

around 672 b.c.e.

In this process you can see how the power exchange works. Some tribes come to dominate their neighbours and the reach of their power extends. The centre grows, accumulating physical artefacts in the form of temples, palaces and walls. As it grows it devolves power to its agents, creating “centripetal” and “centrifugal” forces, leading to expanding circles of unification and division.

Britain's first farmers

Britain has no natural forests left, natural that is, in the sense of having survived through 7,000 years of cultivation. All the forests on the islands have been planted at some time during that 7,000 years, mostly in the last 1,000 of them. They are all controlled and managed.

However, 7,000 years ago, when the first farmers arrived in Britain, they would have been wandering into a thick, wild forest. Over 90% of Britain would be covered with forest if nature had its way. There would only be a few patches of bog and wetlands around lakes and rivers.

Did the farmers from Europe drive the hunter-gatherers out when they arrived? Or did the locals take up farming? This is still an open question, but DNA analysis comparing early and current populations suggests a long continuity, and hence, in all likelihood, the adoption of the new lifestyle by descendants of hunter-gatherers.

For me, I imagine the process in Britain might have been something like what you can see today in New Guinea. Small farmers cut clearings in the forest, and live alongside the hunter-gatherers. They supplement their diet with some hunting and gathering, while many of the hunter-gatherers have taken to keeping some chickens. Having some animals that are easy to transport and care for, and even planting the occasional crop at their tribal centre, gives the hunter-gatherers just a little extra food security.

I have no data on this, but I can't imagine that New Guinea farmers reproduce faster than the hunter-gatherers. But they do cut down trees, exhaust land occasionally, and have to move along a bit. Because trees take a long time to grow back, the ideal environment for hunter-gatherers declines, while the ideal environment for farmers increases.

Under such circumstances you can see why hunter-gatherers would gradually rely more and more on the animals and crops that at first provided only emergency rations. They will turn into farmers by small imperceptible steps. This is said to be happening now in New Guinea.

The earliest evidence of farming in Britain is from 3807 b.c.e., and can be precisely dated because it's made of wood. Sweet Track in Somerset, in the South West of England, is a causeway for people to walk across an area of bogland. It was made by driving wooden stakes into the ground and then laying planks across them. It's believed to have been made by people who knew farming, based on the implements found nearby, and possible evidence of forest clearing at the same time. (There may be an even older one in London, but it is yet to be reliably dated).

The best preserved evidence of very early farming in Britain is on the far northern islands of Orkney. Skara Brae is a very special, more-or-less intact, neolithic village dating from about 3,000 b.c.e.. It may have been the absence of trees in the area that made the locals use stone, or it may simply be its remoteness that led to its preservation. Stone buildings like this may have been common, but in areas of relatively high population they would have been repeatedly built over and the land and stones reused.

The houses of Skara Brae are all the same layout and size. Even the tombs use the same basic plan. They are all windowless. A little light could come in, and smoke escape, through a hole in the roof. The things found in and around the village show what kind of life its people lead. Bone was used to make tools and flint stones for sharp edges. There is no evidence that they could make textiles, so all clothing must have been animal skins.

They had cows, sheep, barley and wheat. They gathered shellfish from the shore, including limpets which they stored in tanks. These were probably used as bait for catching fish. The only fish bones found are cod and saithe, which swim in the shallows so can be caught without boats. There is also evidence that they ate red deer, boar and seals, and used their skins. There is even evidence of the consumption of whales, which are occasionally washed ashore on the beaches.

This simple and remote village life was linked to a larger world. A path from Skara Brae leads to the centre of Orkney's main island passed standing stones. At the centre is the burial mound at Maes Howe.

Signs of civilisation?

We can never be sure exactly how civilisation begins. It is possible that thriving communities lend to struggling communities, who become stuck in an accumulated, indefinite debt. Repayments become "tribute", which accumulates at the centre. It is also possible that struggling communities steal from thriving communities, who end up making regular payments to be left alone. This extortion of resources is the other way to get "tribute".

It seems to me that both are equally possible and likely, in different circumstances. We know of cities built on the best land, surrounded by settlements vulnerable to the encroaching desert, like those on the Indus and the Nile. We also know of cities built on the worst land, gathering resources from all of the fertile land around it, like the Aztec capital in Mexico. All it really takes is the initiative of a well organised group, and the acquiescence of others. The need for food security, exchange and protection create the conditions.

The focal point where tribute will be brought must be recognisable. Often there are memorable natural objects, such as distinctive rock formations. Otherwise (and also) places can be marked with standing stones, perhaps a line to show the way and a circle around the centre. The next level of sophistication is to shape and assemble the stones in some functional or symbolic way.

The stones that mark paths and places on Orkney have not been shaped in any way and the tomb at Maes Howe is simple. At the other end of Britain, where the population was higher and more fluid, there are cut and arranged standing stones, and larger tombs. Stonehenge, in Southern England, has been extensively studied and shows a gradually evolving construction from around 3,100-1,600 b.c.e.

The first stones laid there are believed to have marked burials. Centuries later a wooden structure was added, and by 2,400 b.c., the large recognisable stones. There remains faint traces of images of daggers and axeheads carved on some of them. Animal bones found at the site show that they were slaughtered at 9 or 15 months old after being born in spring. This suggests that people gathered at the site for festivals in mid-summer and mid-winter.

There is evidence from seeds in the soil that parts of Britain that are now barren, were fertile at this time. During the later phase of construction, from 2,500 and 2,000 b.c.e., the land was getting drier and wheat production was falling. After 2,000 b.c.e., it got wetter again, reaching a rainfall peak around 900 b.c.e.. Techniques developed in one climate phase can become destructive in another. So

climate and farming can conspire to change the fertility of soil. All the land around Stonehenge now is moorland, that is to say, it has been taken over by low, hard, plants like bracken and heather, and is not good enough for crops.

Places like Stonehenge and the nearby impressively large stone circle at Avebury are visible signs of a process that elsewhere lead to civilisation. Monumental ceremonial centres can easily accumulate tribute, and if a dominant group can turn occasional ceremonies into continuous supplies of resources, a state can form.

Stonehenge never became a temple, a city, or the centre of a state. Climate change may have been a factor, or perhaps its people were defeated in war. Another possibility that can't be ignored is that the dominant group was defeated by rebellion, and the site, no doubt associated with oppression, fell into disuse. It seems to me quite possible that any or all of these factors may have been involved. It is possible that sites like Stonehenge have risen and fallen many times in many places. Only a relative few have taken the next evolutionary step.

The Celts

From 1,300 b.c.e., there are bronze objects in Britain: wheels, shields and helmets. They are of a distinctive style found in Northern and Western Europe. At the rainfall peak of 900 b.c.e., the first ramparts and palisades, that is to say, fortified defences, are being built in Britain. This coincides with the disappearance, with possible signs of burning, of some old settlements in Central Europe. At the same time, people in Central Europe are increasingly living at higher altitudes, and in caves. All this suggests warfare and migration.

From 700 b.c.e., the objects found in graves changes, and a new kind of grave appears containing men on horses with long swords. These swords are very significant because they are the first in Britain and Central Europe made of iron, not bronze, and they have elaborately decorated hilts, with gold leaf, ivory and amber. They are also buried with drinking-sets, exotic imported goods, more gold and sometimes with whole wagons.

From around the 6th century b.c.e., the expanding circle of civilisation had reached out from the Fertile Crescent across the Mediterranean sea. The city-states of Greece had teachers, writers and explorers. They called the people of the North "Barbarians", and a geographer called Hecataeus of Miletus, in 517 b.c.e., called the Barbarians near Messila, on the south coast of what is now France, Celts.

A Greek explorer, Pytheas, sailed north around 330 b.c.e., and recorded the Northern Celtic islands as the "Brittanic" Isles. Around 300 years later, a Roman General, called Julius Caesar, conquered the Celts of Europe and sailed across the narrow sea, to what the Romans called Britannia. The Romans used this word "Celt" for the people of Far Western Europe, based on the cultural similarities they saw. They subdivided them into the Gauls and Belgica, of the mainland, and the Britons of the islands.

Like the Celts of Europe, the Britons lived in round houses. They used iron and decorated things with patterns like bound branches that inspired the modern style known as Celtic art. They were connected with the continent, probably exporting dogs, wool and slaves, and got expensive jewellery, wine and metal goods in return. It may well have been competition for shares in this trade that led to the spread of large, wooden walled enclosures called hill forts, of which the earthworks still remain scattered across the British countryside.

In conclusion, the population-productivity cycle is expressed in the spread of farming, metalwork,

art, etc., from East to West across Europe. It arrived and began deforesting Britain around 3,000 b.c.e.. Early signs of the process that elsewhere lead to civilisation can be found in Britain. Stonehenge, for example, was probably the ceremonial centre of a power exchange that ended during the wet centuries of the 2nd millennium b.c.e..

Sometime around the end of that millennium, a wave of settlers from the mainland brought new technologies, iron working in particular. They and their culture are the earliest to be named. They were called “Celts” by the literate societies developing on the Mediterranean coast around the middle of the 1st millennium b.c.e.. The expanding power of these societies would mark the next millennium with the beginning of written history in Britain.

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