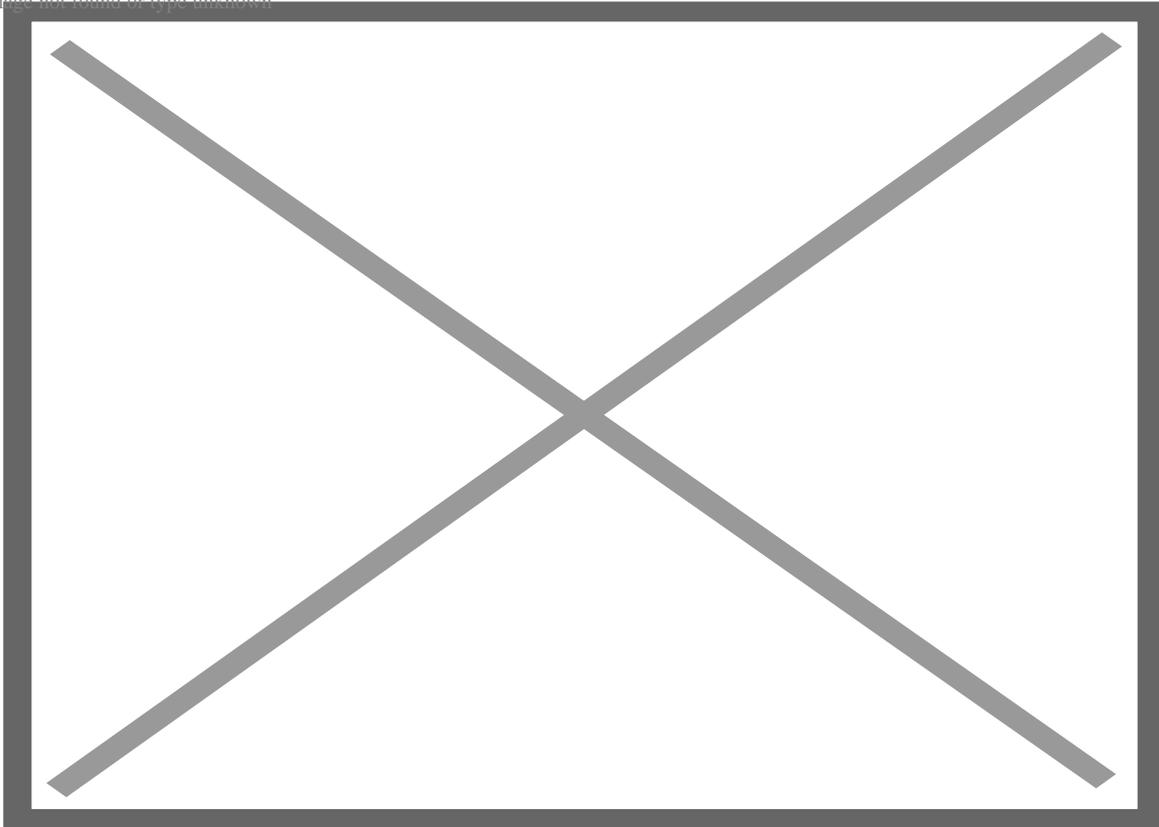


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The Six Waves of European History

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Complex life has existed on earth for about 550 million years.

Complex human life, defined as substantial city dwelling peoples has a history of only 10,000 years or about .0002 per cent of the larger number.

The period of history for which there are reliable records of human achievement is closer to 2,500 years.

Human achievement in this 2,500 period, insofar as the Middle East and Europe are concerned, has been like a game of snakes and ladders. So far, the ladders have been more impressive than the snakes and include great advances in the fields of communication, utilization of new energy resources and political development particularly in the difficult field of *quis custodiet ipsos custodes*.

The snakes have been pestilence, corruption, tyranny, and fanaticism.

This paper explores the great advances and the setbacks as they occur within a number of great waves. The great waves swell up reach a peak, crash and swirl up the beach before either receding or being replaced by another great wave. The waves may start with an important intellectual development or discovery, which may be followed by a combative period and then swell into a higher level of human achievement.

It is suggested that these great waves have been:

- the coming of the **Greek alphabet** enabling translation of speech into phonetic writing;
- second wave; **the Age of Faith** as Christianity absorbed the decaying Roman Empire;
- third wave; **Arab (or Indian) numerals** enabling complex calculation;
- fourth wave; the **printing press** enabling the dissemination of ideas to an ever widening audience (the Renaissance);
- fifth wave; the coming of **serious political thought** at about the same time as **steam power** was achieved and **economic theory** hypothesized (the Enlightenment);
- sixth wave; **globalisation, the computer, the Internet, and social media**. This wave has perhaps reached its crest but the nature of the crash and the combative period is yet to be experienced.



Babylonian tile art, sixth century B.C.

In 539BC the Babylonian Empire fell to the Medes and Persians, and a long period of competing city states and eventually empires growing up in Mesopotamia and its neighbours ended. 539 itself as a date had nothing to do with the Greek alphabet or the civilisation which followed. However 539 was the time that the Persian Empire established hegemony over the highlands of Persia, Anatolia (Turkey), and the valleys of Mesopotamia. It represented a major threat to the embryonic Greek city states where the alphabet and arts of writing and rhetoric were developing.

The origin of the Greek language may have been Phoenician or maybe related to Linear B from Mycenae, but at some stage it involved the development of the alphabet and the start of phonetic writing. This had such an important effect on the capacity of humans to communicate and maintain records, and led to the development of syntax and grammar enabling literature drama and law to be written and learned in a civilisation surely superior to its predecessors. It was the first wave.

The crest of the wave may have been Periclean or Socratic Athens, the combative period of the Persian Greek wars and the Spartan Athenian wars, and then great achievements as the wave spread Greek culture, with the help of Alexander, through the failing Persian Empire to Egypt and

on to Rome, and the stability of Roman law.

The first wave lasted from some time before 539BC and finally spent its force in the period from Marcus Aurelius to Diocletian (180 to 308 AD). It would then be bedeviled by its “snakes”; that of corruption, tyranny and pestilence.

Gibbon said that “if a man were called to fix the period in the history of the world during which the condition of the human race was most happy and prosperous, he would, without hesitation, name that which elapsed from the death of Domitian to the accession of Commodus.” It is quite likely that the death of Marcus Aurelius coincided with a serious plague and perhaps a cooling of the planet. In any case the accession of Commodus started the downtrend and the three snakes were enough to reduce the fighting capacity of Rome’s armies leading to the final death throes of the Empire in the 5th century.

The second wave, that of Christianity, was not a major force until after the conversion of Constantine, when it took over the Roman Empire as a dominant political phenomenon. Whether it played a significant role in the decline of Rome is questionable but probably the answer is affirmative. Christianity introduced the concept that faith is to be preferred over reason, and it is unsurprising that this coincided with a decline in productivity and living standards. Britain is thought not to have achieved Roman living standards until the early nineteenth century, 1500 years later.

The Age of Faith (so far as Europe is concerned) reached its peak about 1100 AD, just as the new third wave was swelling. The snakes which beset Christianity, and which were well evident at the peak of the age of faith, were pestilence, corruption, fanaticism, and tyranny (the regulars). They were all much in evidence during this period.

The third wave, the understanding of Arab numerals and the concept of zero, came to Europe from Spain (then Arabic) in the 11th century. It coincided with an Age of Faith as it enabled the mathematics for the architects and masons to build the great cathedrals that populated most of Europe from Kiev to Canterbury and whose wonders are still available for us to enjoy in the 21st century, 1000 years later. In 1095 the Age of Faith displayed its maximum influence on society by prompting the Crusades, a series of expeditions which cost lives and money over two centuries with no benefit to Europe but a lasting scar on its relationships with Arabic countries. A cooling change of climate around 1350 and the great plague put an end to most of the achievements by the simple process of halving the population.



Detail from an early printed book, 1471

The fourth wave, the invention of the printing press, first by Gutenberg in 1450, coincided with the fall of Constantinople to the Turks in 1453 and the Renaissance in Florence, Venice and other Italian cities. It enabled books to be made available to the middle and upper classes and the spread of knowledge which in turn stimulated original thought, both political and religious. Copernicus and his theory of planetary orbits followed by Galileo reduced the credibility of biblical 'truths'. This was followed by Martin Luther and other reformists who concentrated on the corruption of the clergy and (in turn) incited a counter-reformation with 100 years of destructive fanaticism. War stimulated by new ideas included the Thirty Years War, the Spanish Armada, and persistent civil war in France lasting to the accession of Henry IV in 1592. Meanwhile in 1492, the Spanish had evicted the remaining Arab state in Spain and a Spanish-financed expedition discovered the American continent with enormous consequences for its local population and for the future of Europe. The wave continued with literacy and numeracy bringing exciting discoveries in mathematics, astronomy and optics. Increased wealth enabled leisure to become an 'activity'; allowing time for philosophy, literature drama and the admiration of the achievements of Greece and Rome.

The fifth wave was built on the shoulders of recent (17th century) achievements – first in the political and then in the economic and energy fields. In 1776 Gibbon published *The History of the Decline and Fall of the Roman Empire*, a work of criticism in contrast to the admiration for the ancient world shown by prior generations. In the same year Adam Smith published *The Wealth of Nations*, a work which was the economic chartroom for the next hundred years. Also in 1776, Jefferson was the main architect of the American Declaration of Independence, which stated that the pursuit of happiness was a recognised human goal, and that self-determination was a justifiable political right. 1776 becomes even more the crest of the fifth wave recording the partnership between Matthew Boulton and James Watt for the production of the steam engine.

Wind power and water power had been harnessed earlier but the fifth wave witnessed the employment of hydrocarbons to produce power; and hydrocarbons had two advantages, that the power was concentrated and that it was transportable. The use of hydrocarbons was one of the defining characteristics of the fifth wave, and it was only as the wave spent its force that humanity began to recognise the weakness of relying on hydrocarbons; that they were exhaustible.

Political development following work by Hobbes, Locke, Adam Smith, Voltaire, Montesquieu was embryonic at the start of the fifth wave but became a defining statement of the period as during the 19th and 20th centuries privileged parts of the world enjoyed the advantages of law legislated by democratically elected parliaments, and the rule of law with fairly independent judiciaries, respect for property, and well developed commercial and contract law.

Work in hygiene, medicine, improved diets, and clean water enabled populations to increase hugely from about 1 billion people in the world in 1800 to 7 billion by 2000. European and European-derived populations were at the fore of this population surge until 1945, when Asian, African, Middle Eastern, and South American communities exceeded the European growth rate in a major way.

Developments in the field of communications (telephones, radio, resulting from the discovery of electricity), in the field of transport (rail, motor cars, planes, enabled by the use of hydrocarbons), and in the field of home lighting and appliances, revolutionised life in a manner which no previous generation could have conceived.

In this way, the fifth wave enabled humanity to climb the ladders of improved political institutions, better energy capture, better health, and of course greater wealth. But the snakes were not to be forgotten with Napoleonic wars and two world wars, inspired by fanaticism, exhausting Europe to a point at which its leadership in world affairs was abdicated, almost completely; a feature which contributed to the start of the sixth wave.



Margaret Thatcher celebrates her victory at the 1983 British general election

The sixth wave in which we are now living (globalisation, the Internet, computers and social media) may be first detected after post-war socialist policies were failing. In 1979, when Deng Xiao Ping took over leadership of the Communist Party in China, he inaugurated a policy that was effectively capitalist, first by promoting special economic zones, and then seeing their success, opening up China as a whole (subject to some political restraint) to individual capitalism. China has not only stood up, but may shortly stand taller than the USA.

In the same year, 1979, Margaret Thatcher achieved leadership in Britain and encouraged there individual capitalism which had been frustrated since 1945 by high (80 per cent) personal tax rates, extraordinary trade union influence and substantial socialist ownership of many enterprises. Other European states copied Mrs Thatcher and the capital markets of the “free world” were kept busy with the public flotations of a great number of government owned businesses, resulting in significant efficiency gains and wealth creation.

The great economic advances of the free world put pressure on the USSR to the point that it self-immolated in 1989, and America enjoyed for 12 years at least unimpaired political and economic leadership. American business made good use of this holiday by developing computer software systems and computer hardware that have revolutionised communications well beyond fifth wave achievements. In the USA in 2013, the rate of non-residential capital expenditure is running at \$1.5 trillion per annum, of which ‘information processing and software’ is \$630 billion or 42 per cent. The ubiquity of computers, the Internet and social media characterise the sixth wave in the way that the printing press inspired the fourth wave and Arabic numerals the third.

Productivity improvements in the US (where figures are available) have not been shared equally



between corporations and their staff. Corporate profits after tax have grown from a post-war average of 5.5 per cent of GNP to 11 per cent of GNP while 'real compensation per hour' for the American workforce is up over ten years by only three per cent. This and the 'entitlement problem' presage a political precipice for the US which is likely to surface within a few years. The snakes, tyranny, corruption, pestilence and fanaticism may not be the main threat to the US but inequality and un-financeable promises probably are.

Outside the US, Europe has stagnated economically and is politically in limbo. Despite this its political freedom and high standard of living are very attractive to people outside Europe where populations are still surging. A (perhaps *the*) challenge for Europe is to retain its personality when immigration pressure is so high. The Roman armies were seldom defeated in the field, but the gradual infiltration of "barbarians" changed the nature of the Empire quite quickly during the Christian period (325AD et seq).

The snakes in Europe are not very different to America, but corruption fanaticism and inequality may undermine the self confidence of the continent when threatened by 1.5 billion Muslim people who are living with all the snakes but seek to avoid them by immigration. Such people are more dangerous as single spies than they are in battalions.

The sixth wave may have peaked but the period of combat has yet to break. The tinder waiting for the spark is both the "Entitlement problem" (domestic) and the phenomenon of birth-rate disparity between Muslim and European worlds. These problems are solvable but not easy. No doubt there are others (terrorism?) which lie in more obvious mode.

At the beginning of the fifth wave we rode on horseback but now in BMWs; we wrote with quill pens, and now with voice recognition computers; then we fought with muskets and now with atomic warheads. The game and the consequences have changed.

If the sixth wave can spend itself without disaster the seventh wave may give us Fusion based power and batteries with energy per gram the equivalent of the same weight of petrol. Solutions to the political problems need more skill and more patience.

– June 6 2013

Addendum: The Sixth Wave June 30 2013

You have read my recent paper called 'The Six Waves of European History'.

It purported that we (the world, or at least the European world, comprising North America, Australia and Europe ex Russia) entered the sixth wave in about 1979.

The previous waves had followed conceptual or philosophical initiatives. The first was the Greek Alphabet; the second Christianity; the third Arabic numerals; the fourth the printing press; the fifth



the Enlightenment encompassing new political and economic theories as well as the invention of power being available from sources other than muscle.

The fifth wave encompassed the move to democracy and the rule of law (in many countries), as well as the industrial revolutions of the 18th 19th and 20th centuries.

The sixth wave is thirty odd years old. 1979 is chosen as the date of 'takeoff' because it was the year that Deng Xiao Peng opened China to capitalist business methods, and Mrs Thatcher became PM in the UK, and her policies had flow-on effects in particular in the privatisation of previously public enterprises in many OECD countries and even Russia.

Globalisation was talked about in 1979, but 1982 is a more obvious date for recording its birth as it is from then that capital was (generally) given freedom to move between OECD countries, and many important currencies were permitted to float. Also the General Agreement on Tariffs and Trade gained better political support and trade barriers came down (not absolutely of course).

World GNP growth has, since 1950, exceeded 4.0 per cent per annum for the 50 years to 2000 and from 1980 to 2012 the growth rate appears to be about 4.3 per cent. GNP in 2013 is reputed to be \$US 72 trillion equivalent. In 1985 it was \$22.5 trillion; 1950 \$4.1 trillion.

World population in 1950 was about 2.5 billion and reached 7.0 billion in 2010. The average annual growth rate was 1.73 per cent. There were 23 consecutive years (1980-2013) in which population grew by an annual number greater than 77 million, but projections are for that number now to reduce slowly.

The Wikipedia article about world GNP does illustrate how 'our times' are very different. The article hypothesises that world GNP in the year 0 was \$US18 billion equivalent, and that by 1000AD it was \$35 billion (the gain presumably being China and not Europe which was in decline). 1500AD is given as \$58 billion and 1900 as \$1.1 trillion. Annual growth rates have been: 1000 to 2000, 0.7 per cent; 1700 to 2000, 2.0 per cent; 1950 to 2000, 4.7 percent.

If GNP growth from 2013 to 2050 remains at 4.0% pa; world GNP will be over \$300 trillion and if the population is about 9 billion, the the GNP per person will be over \$33,000.

Possible? Or will something go wrong?

This post was originally posted in the IPA's Foundations of Western Civilisation Program.