



G. Gallagher A3
Cyril Gallagher. A3. Revised.

Supplied for the Public Service
HMSO Code 28-614

30-10-84 - (1984).

HISTORY CLASS.

S.O. Book 614

96 pages

COMPILATION: **A.**

30.10.1984.

IRISH HISTORY:

3000 BC Newgrange: Massive Stone Age burial chambers, also Religious centre for Stone-age man.
1000-800 BC Milesians?

500-400 BC Celts invade Ireland: They gradually intermix with original inhabitants. Became one race with one language, culture, law, social system. They're all broke up into tribal and clan lands - independent of each other. It is from these years that the Gaelic legends spring - Cuchulainn, Finn Mac Cumhal, The Fionna etc. As you can see by the dates - Gaelic culture was undisturbed for nearly 1,000 yrs. until Christianity came, which in turn became distinctly Gaelic itself.

1 BC

1 AD

450-790 AD ST PATRICK and Christianity: Ireland became the "college" of western Europe. Its civilization flourished during this period. Thousands came from Europe to learn at centres all over Ireland e.g. Glendalough, Clonmacnoise etc. All Religious centres also taught philosophy, medicine, ART, ETC. This was when the "Book of Kells" was wrote. Thousands of Irish men also travelled to Europe to teach Christianity and establish centres of learning all over. ST Brendan sailed to America during this period. Nearly 1,000 yrs before Columbus.

800 AD The Vikings start raiding: These raids devastated Ireland over 200 years. Eventually many Vikings settled down to trade and inter-marry with Irish. They founded Dublin, Cork, Waterford. Dublin became the biggest city in western Europe during this period. The Vikings used it as their capital to attack England, France, Spain, etc.

1014 AD Battle of Clontarf: Brian Boru was the first really effective "High King" of Ireland. He broke the power of Vikings in Ireland at Clontarf. Vikings and Irish fought on each side against each other. But Boru was killed shortly after the battle, in turn his power broke up all over Ireland into independent chieftains again - warring against each other. No cohesive state emerged.

1169 Norman Invasion: (KING HENRY 2nd: 71) The Normans were the most powerful soldiers of this age. But their invasion wasn't very thorough going due to many reasons - Not least the ability of the Irish to resist them. Over this period the Normans introduced a new "social system" into Ireland - The Feudal system. This was totally different from the native Irish social system. (1170: "CAPTURED DUBLIN") (1318: EDWARD BRUCE DEFEATED.) Over the next few hundred years many Normans "went native". They inter-married with Irish, adopted their dress, spoke Gaelic, took Irish titles, and obeyed Irish law, etc. This was so widespread that the English King brought in the "Statute of Kilkenny" to forbid this behavior. It outlawed all this, making it an offence against "English" law to speak Gaelic, etc. These laws were ineffective though. Actual English rule in Ireland had shrunk to a very small area around Dublin known as "The Pale". Outside this, Irish law remained in force. The main forces in Ireland at this time were the Fitzgeralds of Kildare and Munster (Both Norman, old English who'd intermarried with the Irish) and the O'Neills of Tyrone, O'Connors in Connaught, etc. (The chieftains of the Gaelic clans) They all actually ruled Ireland. The Statutes of Kilkenny were brought in to use in the 1380's (1366).

1530's Henry 8th: Henry 8th turned Protestant in 1530. He confiscated the lands of the church in England and Ireland. He sent an army to Ireland to do this and try to force the people into Protestants. Resistance followed. But his army defeated the Fitzgeralds of Kildare in the 1550's. This was the beginning of the real conquest of Ireland. Most chieftains and old English submitted to him in return for keeping their lands.

1550's-1590's Elizabeth 1st, "Surrender and regrant". Elizabeth 1st continued his policy and fought many wars in Ireland, ruining our country. Her army defeated the last powerful old English power, The Fitzgeralds of Munster. This only left the Gaelic chieftains, their last stronghold was Ulster. Many other Gaelic chieftains had sold out to the English, sold out their people. Hugh O'Neill and Hugh O'Donnell finally organised the Irish in Ulster to fight the English. They drove them clean out of Ulster and Connaught. The English came back with an army but the Irish totally defeated them. Irish arose: 1579.

1598, Battle of Yellow Ford: At the battle of Yellow Ford (Not far from Lurgan) the Irish were in touch with the Spanish to help them fight the English. The Spanish landed a force at Kinsale (Co. Cork) but were trapped by

1756-63: "7 YEAR'S WAR."

*:- 1915, Fenian vet, O'Donovan
 Rossa died in NYork. Body brought home.

FICs: REPS Surrendered on 30th June.
Rafly, O'Connor, Dick BARRETT, LIAM Mellowes,
Joe Mc KELVEY, ERIC O'NEALEY. Taken Prisoners
First four men were shot at Dawn on
Dec. 8, 1922. in THE YARD of Mountjoy Prison.

Three hand-drawn maps of Ireland illustrating historical changes over time:

- Left Map (800 AD):** Shows the arrival of Vikings. Key locations include Deire, Banqor, Newgrange, Tara, Glendabough, Clonmacnoise, Cashel, and IRELAND: Just before the Vikings came.
- Middle Map (1014 AD):** Shows the Battle of Clontarf. Key locations include Uister, Connacht, Leinster, Dublin, Munster, Waterford, and Cork. The map is divided into three regions: Uister, Connacht, and Leinster.
- Right Map (1530):** Shows the English conquest. Key locations include Carrickfergus, De Courcy, Drogheda, Pale, Dublin, Waterford, Powers, Fitzgerrards of Kildare, and Cork. The map is divided into three regions: Uister, Connacht, and Leinster.

(fully Conquered for 1st time.) English rule extends All over.

1609. Belfast
Dublin.
Yellow Ford 1598
Kinsale, 1601.

1653. Connacht.
Galway
Limerick
Cork. Cromwell fully Conquers Ireland again after 12 yrs

1691. Carrickfergus
Belfast.
King Billy
land's at Carrickfergus - Williamite wars.
Treaty of Limerick.
Flight of Wild Geese.
Penal Laws - Total Subjection and Impoverishment of Irish.

1690. R. Boyne
1691. Limerick

shaded = Confiscation of most

of Ulster after "Flight of the Earls".
The Ulster Plantations begins.

Lough Swilly, Wolfe Tone 1798

Shaded Areas: Main Centres of Uprising.

French Land Mayo, Sept. 1798

Bellfast, Newry, Bantry, Carrickfergus, Rathfriland, Wicklow, Wexford, Enniscorthy, Wexford.

1798. United Irishmen Uprising.

Antrim "Henry Joy" Down, June 98.

Wicklow, May 1798.

Wexford, May 98.

Enniscorthy.

Wexford.

Bantry Bay, Wolfe Tone. 1796.

of war, again land confiscated.
"To Connaught or Hell". During uprising most of Ireland in hands of Gaelic clans and old Normans.

1798. United Irishmen Uprising.

Antrim "Henry Joy" Down, June 98.

Wicklow, May 1798.

Wexford, May 98.

Enniscorthy.

Wexford.

1921. PARTITION.

Derry, Antrim, Tyrone, Down, Fermanagh, Armagh.

Pyramid's in Egypt built
Moses.

TROY
Rome founded
Buddha, Confucius.
Celts sack Rome.
Probably M.A. 323: in Babylon Aged 32.
Alexander the great dies. 13 June
Great wall of China built.
Spartacus and Slaves Revolt.
Julius Caesar assassinated.

Roman Empire established at its
greatest extent.
German tribes invade Empire.
Christianity becomes state religion.
Attila the Hun dies.
Roman Empire breaks up,
Europe falls into chaos.
Muhammad dies.

Viking's begin attack's on all of Europe.
Some of them settle in Normandy.
Canute is King, in England, Norway, and Denmark.
Norman's invade England,
William the Conqueror.
First crusade begin's.
Saladin Capture's Jerusalem.
Genghis Khan die's.
The "Black death" in Europe.
Civil war's in England.
Columbus Re-discovers America.
Protestant Reformation begin's.
Martin Luther die's
War the terrible in Russia.
Slave trade of African's to America begin's by European countries.
Spanish Armada.

Elizabeth 1st die's.
James 1st King of England, Scott
Guy Fawke's and Gunpowder
plot.
The Mayflower lands in Am
-rica. And first African slave's a

2500.	slipped into the English Colonies	1620.
1200.	in north America.	1625.
1000.	Charles's 1 st King of England.	ONWARDS.
753.	Parliament opposes King, Start of	1641.
550.	civil war. Cromwell becomes head	
390.	of Army. Defeats King's army in	
323.	several battles over these years.	
214.	This is the English Revolution.	
73.BC.	King Charles's 1 st executed.	1649.
44.BC.	Cromwell dies.	1658.
	Charles 2nd took back as King.	1660.
	James 2nd King of England.	1685.
117AD.	James 2nd overthrown in England,	1688.
ONWARDS.	William, Prince of Orange, Made King.	
250.	War's fought in Ireland, James 2nd	1690-91.
323.	flee's to France.	
453.	Bonnie prince Charlie and scots	1745.
455.	Uprise and march on London, defeated.	
632.	Industrial Revolution begins in England.	ONWARDS.
	British Seize India and Canada,	1750.
ONWARDS.	off The French.	1763.
800.	American Revolution or war of	1775-83.
912.	independence.	
1016.	French Revolution starts.	1789.
	French King executed.	1793.
1066.	French Revolutionaries are	
1096.	overthrown by more reformist	
1187.	elements.	1794.
1227.	Napoleon becomes 'First Consul'	1799.
1348.	Napoleon crowns himself Emperor.	1804.
ONWARDS.	Napoleon invades Russia, Retreats.	1812.
1400's.	Battle of Waterloo.	1815.
1492.	Napoleon die's in exile.	1822.
1520's.	England main power in World.	ONWARDS.
1546.	Revolution in France.	1820's.
1547.	Chartist Movement in England.	1830.
ONWARDS.	First mass working class move-	1830's-40's.
1550's.	-out in History. Force's a lot of	
1588.	reforms but defeated. Two of its main	
1601.	leaders were Irish men.	
1603.	Revolutions in France, Germany.	1848.
	Austria, Hungary, Italy.	
1607.	Crimean War starts.	1854.
	American Civil War.	1861-65.

America bought Alaska from Russia: 1867.

Paris commune, first time in history that workers seize power. European Powers divide Africa up between them, into colonies to exploit them.

1st World War
Russian Revolution.

Revolutions in Germany, Hungary, Italy. Social unrest all over Europe. Fascist Mussolini seizes power, Italy. Lenin dies.

Hitler seizes power in Germany. Spanish civil war starts.

2nd. World War.

Mao Tse Tung seizes power, China. Stalin dies.

Castro, Guevara, seize power, Cuba.

Vietnamese war ends in victory for liberation forces.

Mao Tse Tung dies.

1871.

ONWARDS
1870's.

1914-18.

1917.

1918-21.

1922.

1924.

1933.

1936.

1939-45.

1949.

1953.

1959.

1975.

1976.

A Rough outline of how Europe has developed since 1000 BC.

What must be remembered is that 'different' parts developed faster than other parts. E.g. Tribal Society broke up in Greece about 1000 B.C. While Tribal Society broke up in Ireland only in the 17th century, about 2,600 yrs later.

First of all the diagram will give a general outline of how the different societies came about and what "classes" they were made up of. It must be remembered that the major point of Marxism is the "class struggle". Classes struggle against each other constantly until there is a break, a Revolution where one class is overthrown and replaced by a new class. And things begin all over again. Each Society develops into the following Society through Revolution etc. Exceptions exist. Ireland was forced from Tribal Society into later Feudal Society, Capitalist Society.

Approximately 1000 BC, in Greece onwards Tribal Society. In Italy also.

Primitive Community. Tribal Society:

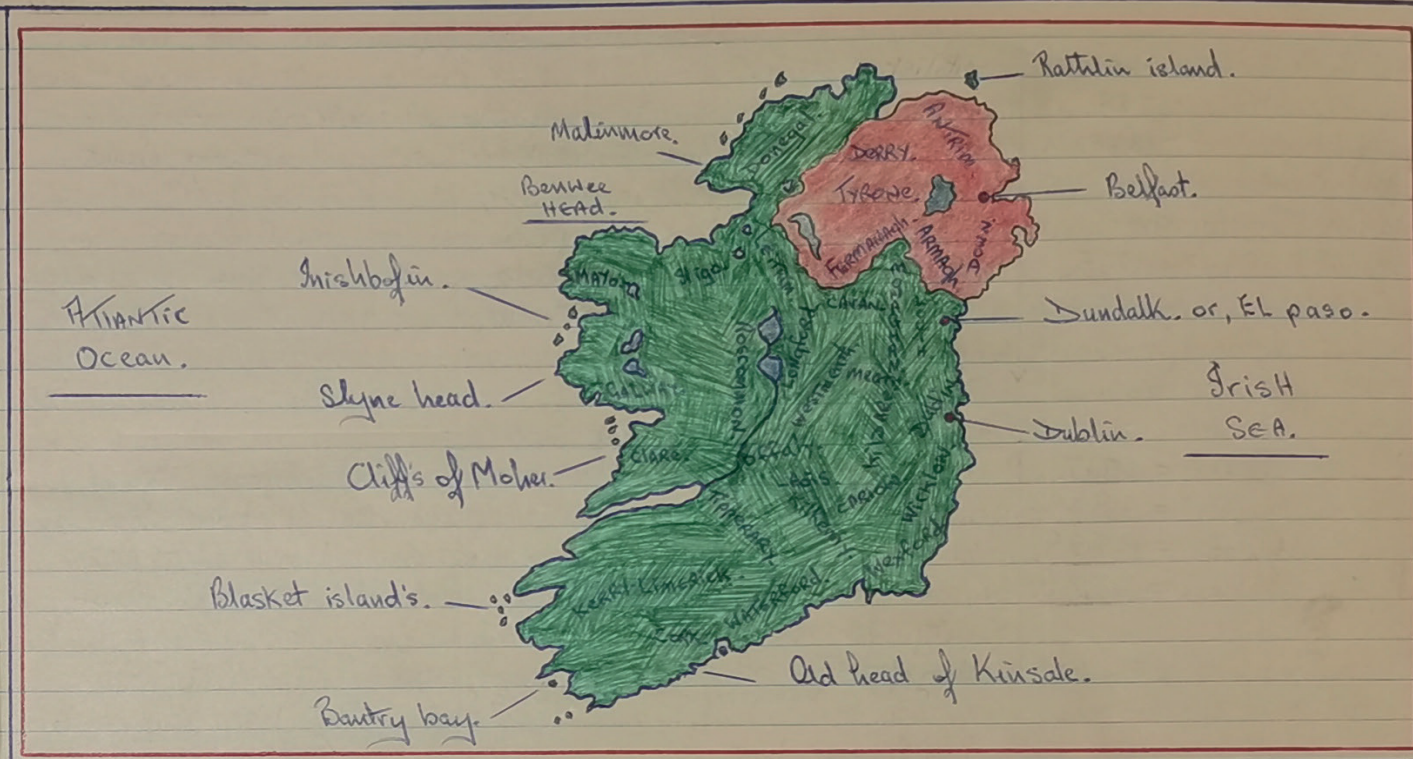
No classes exist in Tribal Society. There is no private property of the means of life the land. The tribes are divided up into clans. All its members are free. None are slaves. Tribal Society breaks up "slowly" when it meets the right conditions. That's why Greece broke up faster than Ireland.

Slave Society. Slave Society:

This is the "first" major emergence of classes. Into slave's and slave owner's. Rome and Greece are the classic example of this. The slave's do all the work. The slave owner's live off them. There have always been slave uprisings. The most famous being, "SPARTACUS".

Spartacus 73 BC.

Christ allegedly born 1 A.D.



Approx: 400 AD onwards in most of Western Europe.

Vikings - 9th - 10th Centuries.

Approximately 1200 AD. All over Europe, Crusades. 1500 AD onwards, America.

Slave trade begins in Africa, America and Asia - 16th - 17th - 18th - 19th Centuries.

Tribal Society exists in Ireland up to the 17th Century.

Feudal State. Early Feudal Society:

This arose from the break up of Slave Society. Thus we have the emergence of new classes: landowner's and Serf's. At this early stage, those who were strong enough established themselves as King's, with other "Noble's" loyal to them. These all lived off the Serf's, who were tied to the land and worked and produced everything.

Feudal State. Later Feudal Society:

This was a far richer and more developed Society due to, first, the Crusades, which opened up the markets from the East to Europe. Then later due to the rediscovery of America and a new sea route to India and China. Vast riches of gold, silver, silk, spices, flooded into Europe and generated massive economic activity. This in turn gave rise to a great many trading centres, towns and cities. And also gave rise to the beginnings of the middle classes. The bourgeoisie. And the very first beginnings of the working class. Thus in Society we have the land owning class. The Aristocracy, King's, Duke's, Earl's, Baron's etc. We have the Peasant class who make up the majority of the population, we have the rising, rich bourgeoisie and the workers. All these classes engage in class struggle. The classic example is the French Revolution in 1789 where the bourgeoisie seized power.

Capitalist Society:

English Revolution - 1640's.
French Revolution - 1789.
Rest of Europe - 1848.
Capitalist countries and Colonies. Slavery still exists in USA up to 1865. also in Africa and S. America.

Capitalist System.

This is our modern society where the capitalists own mostly every thing (industry, land). And the working class own nothing except their ability to work. It arose after the revolutions of 17th, 18th and 19th centuries. The class struggle is between the Capitalist class and the working class. Capitalist society for the first time ever encompasses the whole world. In 20th century we have the rise of imperialism.

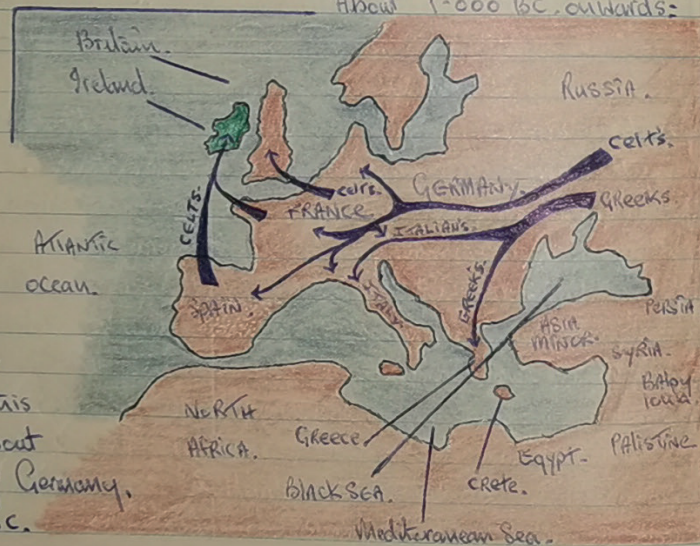
Socialist Society - Communist Society:

Russia = 1917.
China = 1949.
Cuba = 1959.
Ireland = 1985.

Where the basic industries and land become the common property of all the people. The capitalist class is over-thrown by the working class in alliance with the peasant class. Where the wealth produced goes back into society for the good of all. The downfall with class society. The swarming of the bourgeoisie's state, the withering away of the proletarian state, i.e. the dictatorship of the proletariat.

About 1-000 B.C. onwards:

The main tribes to come into Europe from the east about 1-000 B.C. were the Celts and Greeks, plus many sub tribes like the Italians. Before they came, Europe was inhabited by other ancient people's who had lived there for thousands of years. They had built stone henge and other ancient monuments all over Europe including Ireland. The Greeks and Celts etc conquered these people after hundreds of years and finally absorbed them into their own people so that they became one people. The Greeks had achieved this in stages shortly after 1-000 B.C. The Italians by about 700 B.C. The Celts in central Europe, France, parts of Germany, Spain, Britain and Ireland between 800-300 B.C.



Some tribes developed faster than others when they met the right conditions. As you can see by the map the Greeks headed south towards the Mediterranean. This brought them into contact with the ancient civilisations of Crete and Egypt etc. which had cities, Merchant fleets, rich trade etc. The Greeks conquered Crete and took over all this. From here onwards the Greek tribal society begins to break up. Their tribes settle down. They began to form an Aristocracy of Kings etc. these gradually usurped more power and authority which formerly used to belong to only the tribe. They began to acquire private property. This is when their society began to split up into the "first classes" over several hundred years this split developed until there was "property owner's". And those who "owned nothing". Many Greek city-states grew up through trade etc. And slaves began to assume a more important role in production. As you know the Greeks were very war-like. They set up colonies all over the Mediterranean sea and traded more in slaves etc. Around 700-600 B.C. the slaves are the most important economic factor in their society.

All the wealth turns on them, they produce everything, both on land and in the towns and cities. Slaves and slave owner's. At the height of Greece's power the slave's outnumbered the free greek's by about 20 to 1. Alexander the great was about around 340 B.C. His empire stretched east from Greece to Syria, Egypt, Palestine, Babylonia, Persia, right up to India. When he died shortly after, his empire broke up and from then onwards Greece's power declines in the world.

You can see by the map where the Celts headed, thus "away" from the old centres of civilisation and trade, cities etc. Their society in all those countries remained a tribal society. That is where everyone in their tribe remained a "free person", where they shared out the land between them so as everyone could manage, where the chiefs were all elected. This wasn't perfect, inequalities did exist. But there were no classes, that is no class exploited another. Everyone had their tribal rights and no one could amass land as one's private property. The Celts were also very warlike. They fought among themselves and sold the defeated as slaves to the Greeks, etc. (If they ever kept slaves themselves it was only as a tiny number.) They ~~all~~ attacked the Greeks constantly, and once actually sacked Rome, in 390 B.C. There's no doubt that given time they would have likewise developed as the Greeks did, but they had it thrust upon them as I explain now.

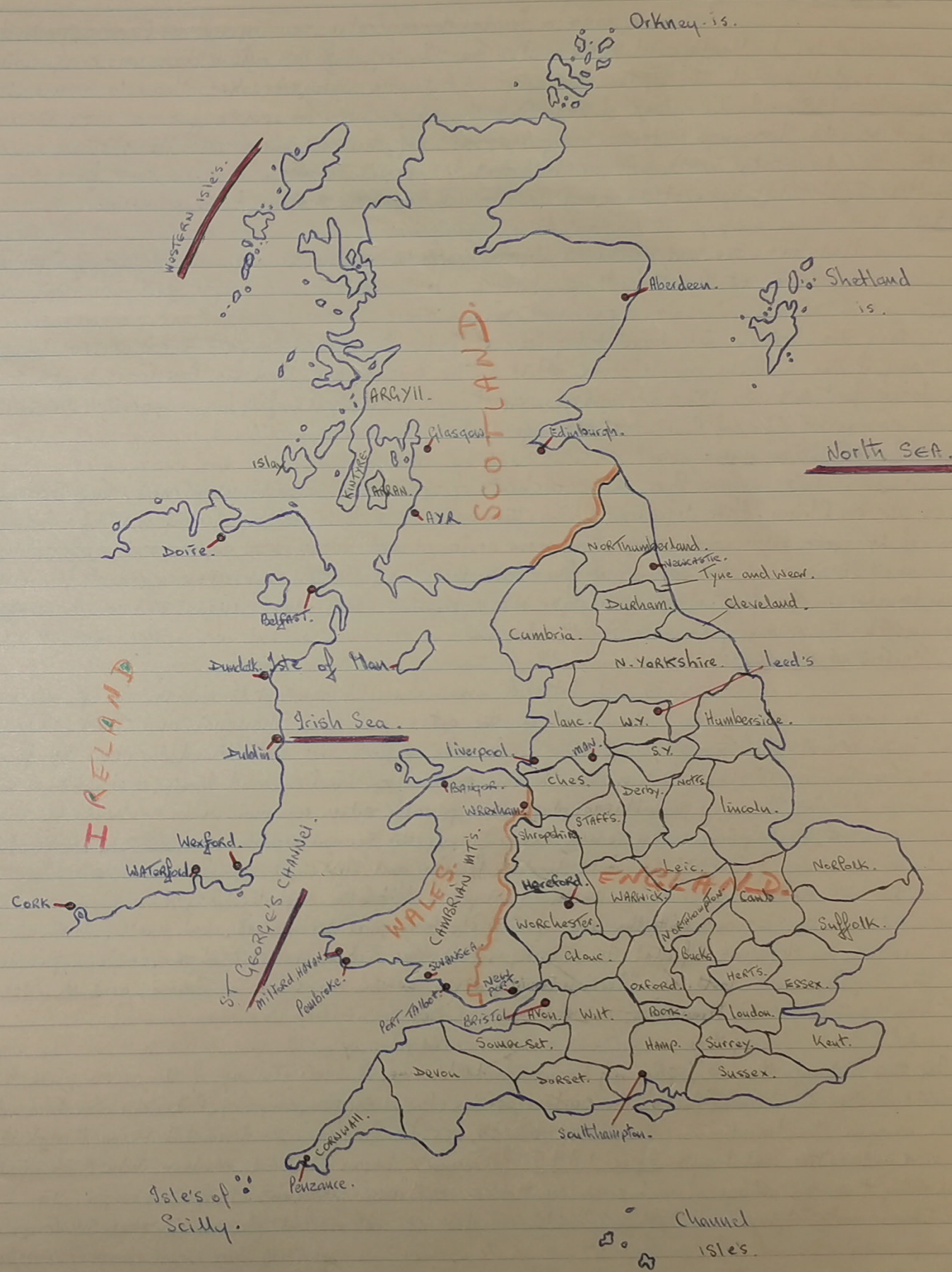
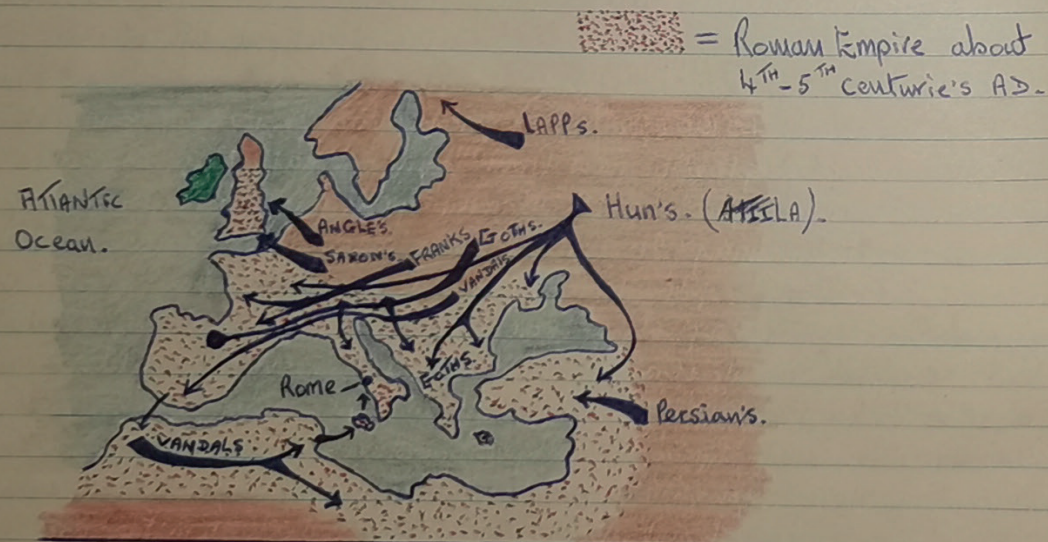
The Italians, As the name implies, they took over all of Italy. But this wasn't uniform, they were split up into many tribes and clans and were constantly at war with each other. They likewise absorbed most of the original, Native Population. Also the Greeks had set up colonies, cities in the south of Italy. Rome is the classic example of the ancient world. From the settling down of a tribe, founding of a town, the rise of kings, the establishment of a republic, the division of these Romans into classes and their struggle against each other, Patricians + Plebeians. The destruction of the class of free Roman farmer's and their replacement by slaves. The rise of a rich slave owning class. Rome was founded about the eighth century B.C. and gradually grew through the stages I've mentioned above, into a vast world empire. The empire was founded on the mass slavery of the world's people. Slavery began to dominate Rome about the 2nd-3rd centuries B.C. There was always slave uprisings. Spartacus's revolt was about 73 B.C. Rome expanded through wars of conquest and the enslavement of the conquered people. It grew from being a small city, to controlling all of Italy, then Greece, south Russia, Spain, North Africa, Egypt, Palestine, Syria, Babylonia, Asia, France (Gaul), Britain and part Germany. It was Caesar who about 50-60 B.C. invaded France (Gaul) and massacred the Celtic people. He then seized power in Rome but was soon assassinated. The Emperor of Rome was set up about 30 B.C. They never invaded Ireland. The Roman empire reached its peak about 100 A.D. It dominated the whole world. There was always uprisings against it by the Britons, Germans, Jews etc. but they were always put down. The Empire was thus made up of a vastly rich slave-owning class. Rich trading merchants in the cities and a slave class. These slaves worked on vast agricultural estates all over the empire. They were totally oppressed and it was among them that Christianity first took root on a massive basis. As it promised a new world of salvation away from the present world of oppression. Over the next couple of hundred years the Roman empire began to stagnate. From about 200-450 A.D. economically, Slavery began to become a hindrance on development. Most of the wealth was consumed by a small rich elite in Rome which (besides a few exceptions) left the rest of the Empire always impoverished. These were the famous Roman taxes. Also slavery became too expensive, i.e., the slave owner had to buy slaves and maintain them, however badly he treated them and fed them to work.

for him. There was no incentive for them to work, thus the slave's would only do the minimum of work with which they could get away with. Another important factor was that new tribes appeared out of the east again. The Franks, Vandals, Goths, Huns etc. All these factors ^{put} together brought about the collapse of the Roman Empire and slavery. These tribes swept into the empire over hundreds of years, breaking it up, seizing power here and there. Slavery was economically unviable for them. Thus they broke it up. The conquering tribes divided the land up. They set themselves up as a form of primitive aristocracy. They lorded it over the slaves who now became serfs. A lord would let these serfs live on his land but in return they owed him certain dues and privileges. This is what feudal means. It was a new form of exploitation, but it was a progressive development from the Total Slavery of the Roman Empire.

From this period 400 AD onwards. The towns and cities of western Europe declined and many were abandoned altogether. This new society just growing was based exclusively on living in the country side. E.g. even the city of Rome declined, in its heyday it had about 1,000,000 people, by about the 6th-7th centuries it only had 50,000 people, a decline of 950,000 people.

It would take hundreds of years more for this "New Society" and "New economic order" to establish itself in an ordered and systematic form. From 400 AD onwards, Kingdoms began to be set up in parts of France, Spain, Italy, Britain, Germany and central Europe. This period from 400-500 AD onwards is known as "the dark ages", in Europe it lasted until about 1,000 AD. It was also when Ireland was the "College" of Europe. Thousands came from Europe to learn. And the Irish journeyed all over Europe educating and evangelizing.

The Vikings, (Danes, Northmen), appeared about 8th-10th centuries. They destroyed a lot, but they also contributed a lot to the development of Europe economically. But that's another story...



Some Chinese History:

China was a Feudal-bureaucratic country, with an Emperor, peasants were oppressed by landlords and bureaucrats. The Ideology of this ruling class was Confucianism. Peasants struggled against the system for centuries, but were always crushed. Mao was born on the 26th, December, 1893, in the village of Shao Shan, Hunan province. The people of Hunan were known as rebels and bandits. Uprisings were savagely repressed by the local bureaucrats. Mao Tsetung as a child saw the decapitated heads of many rebels and felt something must be done. He came from a peasant family. Mao Tsetung left home at the age of 16 to go and learn the history of his country.

1729:

The Manchus, the last of China's dynasties, prohibited the selling and smoking of Opium. Opium grew in China at this time. It was having a bad effect on the people of China, Opium.

1781:

Then the British introduced it, by way of India, to China. The first cargo arrived in 1781. Soon many of the Chinese people were addicted. The British and then the Americans began to amass large fortunes. By 1838 China was importing 40,000 chests of Opium a year. One chest = 133 lbs of opium. This was 57% of China's total imports!

1838-59. THE Opium War:

Over 20,000 chests of opium are seized and burned. Then Britain declares war on China. After defeating China, they enforce a humiliating Treaty in 1842: Indemnification of 20,000,000 silver dollars for the opium destroyed and British war expenses, Also, Surrender of Hong Kong to Britain. And, the opening of five "Treaty Ports" and British subjects are exempt from obeying Chinese law, etc. The first of many treaties. With oppressive rulers plus foreign invaders, for another hundred years the crises of Chinese Society deepened.

1850. THE Taiping Uprising:

Peasants and Artisans in Southern China, Next to Vietnam, rose up in arms. Crossed the immense countryside and arrived at the gates of Peking, Shanghai, and Tibet. They founded a plebeian state. This plebeian state lasted some 13 years and established a primitive form of Socialism. The Taiping rebels abolished the Manchu system of taxation, land tenure, and political control. Although Peking, Shanghai and Macao, plus other principle cities remained in the hands of the Manchu rulers, but the Taipings really scared them. During the Second Opium War, 1858-60, Anglo-French troops took advantage of the situation and looted Peking and destroyed the Summer Palace. In the end the Manchus made concessions with the foreigners. With the new treaties, trade and religion were allowed into the interior. With the help of British, American, Mercenaries, and newly trained Chinese armies, the Manchus defeated the Taiping rebels. The Government killed 20,000,000 people before the Taiping rebels lost. The "Foreign Devils" were allowed to reside in Peking, and the "Foreign Devils" then became "Foreign Friends".

By the end of the 19th century China had become a semi-colony of the great powers. Foreigners controlled the 'Treaty Ports', the Custom Service, Postal system, Shipping, Railroads and Telegraph. Foreigners escaped the jurisdiction of Chinese courts, etc. Foreign powers dominated China through their banks, war indemnities and loans. After 1895 foreigners began to build modern industries in China. They took advantage of cheap Chinese labour and raw materials. They also began to divide China into "Spheres of Influence". Chinese labourers also went abroad to work in very large numbers.

THE CHINESE PEOPLE believe in a "chi" energy, which must be kept balanced to ensure good health. The force has a "yin" i.e. negative, and "yang" i.e. positive phase. They stress the relationship between this energy and the total environment, maintaining that the human organism is responsive to a cosmic vital energy...

1900, The Boxer Rebellion:

The Secret Society of peasants called the Yihquan, or, Society of the righteous and harmonious fists. The Boxers. They expressed a popular Anti-Foreign reaction, especially against Christian missionaries, because missionaries, protected by their foreign governments, treaties, and privileges, were getting hold of China bit by bit. The population hating the arrogant foreigners were thus delighted with the boxers who got into the missionaries, and also attacked the foreign legations in Peking. The corrupt Manchu dynasty played its usual double-game. They hoped to gain profit from the boxer movement. So they declared war on the foreign powers, as if backing the popular revolt. But when the allied expeditionary forces arrived, the imperial Manchu army changed sides.... "Faith and Civilization are in danger". With this rallying cry the foreign powers organized a real old fashioned crusade. The English, French, Austro-Hungarians, Americans, Russians, Japanese, Italians and Germans all got involved, The Rebellion failed.

An intensely Nationalist group of young patriots, the majority of them students, educated abroad, organized the Tong Menghui, or, Revolutionary alliance. Their leader was Dr Sun Yat-sen. A moderate reformist. Sun Yat-sen had lived and studied outside China. His family were wealthy. Sun represented the ideas of Chinese living abroad, of overcoming British dominance and making China a European style bourgeois republic.

10th Oct, 1911, An uprising which drove the Manchus from power, within one year. And led to a short-lived Republic in place of the age old imperial system. The Military garrison at Hankou revolted and was joined by the imperial Navy. With the sympathies of the foreign powers, who preferred to mediate this time rather than involve themselves in a civil war, Sun's followers triumphed. Sun returning from exile after many years became provisional president of the new republic. But, Sun had to resign 15 days later. He hadn't enough power to rule China.

In the next decade, China was divided into many 'Kingdoms'. At the end of the Manchu dynasty regional armies had been created and their generals became warlords when the Manchu dynasty collapsed. They ruled their own provinces and oppressed the people in the same way, or worse, than the Manchus.

1912: THE Kuomintang: National people's Party, was founded.

The Kuomintang, the majority party in the new parliament was a union of radical republicans and groups influenced by the 1905 Russian Rev. Conflict developed between the Kuomintang and the military cliques. Sun Yat-sen as leader, set up a regime in Canton, it was weak unable to control the warlords. So was the official western recognised Government in Peking.

1914, 18, WW1:

China remained neutral, but was forced to declare war on Germany on the 14th Aug, 1917. Japan was on the allied side, this was a good excuse for the Japanese to invade North China, defeat the small German army stationed there and then take over the German possessions. Japan tried to turn China into a Japanese colony. The Europeans being busy with the slaughter at home, and China so divided, nobody could do very much to stop the Japs. Japanese.

4th, May, 1919:

Having entered the war on the Allied side, the Chinese fully expected it to mean the return of Germany's Chinese possessions. When the news reached China that the Versailles conference had simply transferred Germany's rights and privileges in Shandong to Japan. Many ^{Chinese people} felt betrayed. Students organized protest demonstrations which soon swept the Nation. Even a rail strike the first recorded in

Chinese history occurred for the first time both intellectuals and workers linked foreign imperialism with domestic reaction in a single slogan: "Externally preserve our sovereignty and internally eliminate the traitors!" May the fourth also represented the beginning of a great revolt of intellectuals against the oppressive weight of the Confucian cultural tradition.

Mao:

for six months in 1911 young Mao served in the new republican army. This was a turbulent time. But between 1911 and 1918 Mao studied at Changsha, provincial Capital of Hunan, until he graduated as a teacher from the normal school there. In Changsha 1918 Mao founded the new citizen's society. Mao believed a great deal in the power of the masses. Mao fell in love with young Kaihui, daughter of a professor of philosophy, they married in 1921, later having two sons. When Mao was a student at Changsha, his first published articles were about the unhappy position of women in traditional China. In accordance with the Confucian ~~cultural tradition~~ ethical system.

The Summer of 1921:

Mao went to Shanghai to attend the founding of the "Chinese Communist Party". Two Peking university lecturer's, Chen Duxiu and Li Dazhao were the main organisers. The delegates held their congress on a damn Sampan! In early 1920's the C.C.P. is weak, recruiting peasants, encouraging strikes in major cities etc. But salvation seemed to lie with bigger and more influential Kuomintang. Soviet agent's A.A. Soffe and Henrietta Sneeveliet (alias Maring) (1883-1942) played an important role negotiating with Sun Yat-sen. The U.S.S.R. promised to support the Kuomintang and train Sun's armies. Sneeveliet also played an important role in persuading the Chinese communists to enter into an alliance with the Kuomintang and to accept a bourgeois-led struggle for national liberation. Later Sun died suddenly of cancer after arriving in Peking. The Kuomintang was then left in the hands of, Chiang Kai-shek. The Kuomintang prepared for war against the powerful Warlord's of the North. They demolished the resistance of the war lord's with the fighting spirit of the peasants and workers, not General Chiang Kai-shek. The Communist Party was gaining many members now.

Chiang Kai-shek turns on the communists. In April 12th 1927 General Chiang Kai-shek's troops turned against the Shanghai workers in a bloody massacre, almost all the members of the communist party were ~~stuffed~~ ^{Murdered}. Chou Enlai escaped. Similar massacre's occurred in the cities under Kuomintang rule. Stalin himself still backed the K.M.T. (Kuomintang). Mao didn't die but his ideas of peasant revolt and his opposition to the absurd KMT alliance left him in disagreement with the C.P. leader's. The ~~Chinese~~ ^{Chinese} communists now wanted to strike back at the K.M.T. But the uprising's were doomed. In July 1927 after defeat in Shanghai, uprising in Nanking failed. Then the C.C.P. was outlawed and Mao was declared a "red bandit". Mao organized the peasant unions and Hunan miners into the first workers and peasants revolutionary army. Hundreds of suspected red's were being ~~stuffed~~ ^{Murdered} by the K.M.T. Mao was captured by some Min Tuan (Militia) working with the K.M.T. But, just within 200 yds of their H.Q. Mao made a dash for freedom and escaped into the fields. Chiang Kai-shek consolidated his rule with the support of foreign powers. Mao and other surviving desperate communists then started the "Guerrilla War". There was about only 1,000 of them with only 200 chocolate tiffins, others soon arrived, 8,000, peasants joined the new born Red Army! Being so many of them they decided to go to another mountain stronghold, Juichin, in Kiangsi. On the way they continually clashed with KMT troops. Getting to the new base the Red Army lost as many as 2,000 men. But Mao is the greatest tactician of Guerrilla warfare.

Mao's Tactics:

When the enemy advances, we retreat.
When the enemy camps, we harass.
When the enemy tires, we attack.

Mao's requirements for Victory:

Support from the masses.
Party organization:
Strong Guerrilla army.
Favourable region for Military Move's.
Economic self-sufficiency.

1930:

The KMT launched 5 extermination campaigns. The Red Army was outnumbered 10 to 1. The first 4 campaigns failed to beat the "Red bandits". The KMT were wrecked by the red army and relieved of many many weapons. In July 1930, Mao's wife Yang Kaihui was captured and killed. Mao's sister was also killed by the KMT. Chiang's campaign lasted 4 disastrous years, and he then also became pressured by the ~~Japanese~~ ^{JAPANESE} who were threatening to invade China from the North. Chiang launched his massive 5th Campaign against Mao's 140,000 men. Under his personal command he led a 900,000-man army formation of 300 bombers. With a German advisor, General Von Seeckt against Mao. Chiang's tactics were now changed and the KMT adopted a "Scorched Earth" policy. Causing terrible death and damage where ever it passed, Mass destruction etc. By August 1934 the communist force's found themselves encircled, and reduced to 100,000 men. Mao then called a Conference to decide what the fate to do, After talk's they made a decision: THE Long March.

THE Long March:

16th 10th 1934. All the force's gathered together at night. They gripped all their weaponry and a few belongings on their backs. The Red army retreat began, about 100,000 men, 35 women and a few children crossed enemy lines. Chiang Kai-shek constantly pursued them, the KMT ambushed, bombed, and stayed on the heels of the R.A. As well as this campaign the Red Army suffered from Hunger and disease. They were also attacked by Warlord's whose regions they crossed. The Red Army climbed 18 Mountain chains, forded 24 Rivers, desert and swamps etc. They Marched 6,000 Miles! by the time they got to their destination almost all the women and children died, 80,000 men died! After marching 368 days they reached, Yenan. There they established the beginning's of a Socialist Republic. They had escaped Chiang Kai-shek, K.M.T. Mao's second wife, who was pregnant, Ho Tzu-chun, got through the March with him.

The threat of Japanese invasion then arose. Chiang still wanted to destroy Mao's army, and the Red Army wanted to destroy the K.M.T. But, with Japan interested in taking all China, Mao thought that the main enemy was Japan. Mao was willing to unite with Chiang against the ~~Japanese~~ ^{JAPANESE}. Chiang was indifferent and thought the main thing was to crush Communism.

THE Sian incident:

12th December 1936, Chiang Kai-shek was kidnapped by two former Warlord's and allies of Chiang's. Zhang Xueliang and Yang Hucheng. They even offered him up for execution to Mao. Talk's took place, and Chiang facing death called off his "Suppression Campaign". Then he agreed to join with Mao to fight Japan! Alliance with the Kuomintang was accepted. In July 1937 Japan invaded China. The KMT did the least of the fighting and after the first year most of the fighting was left to the communists. While Chiang played politics with the allies, and because

Chiang was "head" of the ^{Chinese} Government the U.S. and Soviet help went to him instead of Mao!

THE YENAN Experience, 1937-49:

During this resistance the party gained strength and much support. Mao wanted to throw "abstract Marxism" out of the window. In Yen-an Mao began to put "Chinese Marxism" into practice. The Communists organized themselves, Military and economic ways. With the main task being the defeat of the ^{JAPANESE} ~~Japs~~. In Yen-an they reduced land rent and fixed low interest rates and also encouraged cooperative work in agriculture and industry. They organized schools, universities, Technological training institutes etc. Their system of Mass organization and participation in Government was called, "Democratic Centralism". The principle being: "From the people to the people". This was a new egalitarian vision in China. They organized, the speak bitterness sessions, People were encouraged to stand up and speak their mind. In the meantime in KMT areas the oppression was the same. During the famine of Honan the Gov squeezed the people of Tax money, and grain etc. Peasants were eating dried leaves! And still Stalin and Cohen's didn't believe in a Mao-style Revolution in China.

YALTA, Feb. 1945:

Stalin meets Churchill in Yalta to divide up the new world. Conditions were made. The war ends, civil war begins. The U.S. negotiators talked of bringing Chiang and Mao together while the U.S. were arming Chiang's troops. And helped them with a massive American airlift to all over China to help them gain KMT plenipotence. 60,000 U.S. Marines were landed in N China as a "force of stability". The U.S. in no way wanted China to end up communist! But, by 1949 almost all of China was in the hands of Mao. Chiang and his remaining troops ended up on the island of Taiwan, (Formosa). Here with the help of the U.S. he formed a phantom country the "Republic of China", also known as "Nationalist China". In the following years the U.S. tried to quarantine China entirely, a reason why Mao leaned to the side of Russia in the onrushing cold war.

Oct. 1st, 1949:

Mao proclaimed, The People's Republic of China - finally peace. no more being a foreign colony. Mao was now 56 years old. He had written many things, philosophy, warfare, and politics. He had a ruined country, as industry, agriculture, Trade were all in chaos. The solution was Socialism. With Russia being used as an example. After backing Kaishhek to the end, Stalin now recognised Mao's new Gov and invited him to Moscow. Mao came back with Socialist Technicians, Technology, Education programme, and 300 Million dollars. The country soon progressed, Industry was nationalized and planned, New schools etc. All in the Russian direction. But, The lessons of Yen-an were being ignored, the peasants were being forgotten. Mao was still uneasy. Mao feared that the growing reliance on Russian-style heavy industrial and technological development, concentrated in a few big cities would aggravate the traditional gap between city and country. Socialism will never be achieved! From the first days, Mao had sought a far-reaching programme of land reform: Give each peasant land. But, this made an infinite number of tiny peasant farms - and little cooperative effort to tackle the poverty that condemned all the peasants. New ways must be found. Thus, The "Communes".

1958:

With Mao's support a mass movement swept China. In the cities attacks were launched against rigid Soviet hierarchical methods of organization in industry and education. The greatest innovation came from the people of the countryside. An attempt to reverse the Soviet Model - What the peasants produced through intensified collective efforts was to go not to the city, but into the hands of the peasants themselves! In Communes, of up to 20,000 people, peasants would pool their resources to develop locally needed industries. The communes organized schools and institutes, etc.

THE CHINESE ESTABLISHED A 365 DAY CALENDAR around 3,000 BC.

At some future time the city and the countryside would blend into one! This was a great leap towards communism. But, being misled the Maoists began to disregard sound economic and Marxist considerations. They moved forward, too fast. The country was then hit by crop failures, drought, etc. Among this political differences between China and Russia became so acute that the U.S.S.R. withdrew all its assistance factories ground to a halt.

1959-62:

"Three hard years". Divisions appeared in the communist Party leadership, lead to the two line struggle. Many colleagues were turning against Mao. Mao then took a long look at Russia and also China. And he had many criticisms.

1966, The Cultural Revolution:

Encouraged by Mao, millions of ^{CHINESE PEOPLE} ~~China's~~ took to the streets to voice their discontent. Criticising officials, etc. Universities were closed for four years. They asked questions. In the factories workers joined the Red Guards. The President, Liu Shaoqi, was vilified and put under house arrest. The Cultural Revolution aimed to overthrow the old order. Followers of the Soviet line, or of Capitalism, were in for it. The young imposed the "correct" line, Mao Tsetung's. Mao wanted to create a new Society, with absolutely no Capitalism. Socialism. The U.S.S.R. was worried of a split in their country if the people followed this road to Socialism. Mao's Red Guards toppled Liu Shaoqi. A Hero of the Revolution was Lin Biao - who was the most outspoken supporter of the Mao cult. At this stage, 1970, Mao was now 71 years of age.

1971:

Lin Biao died in a plane crash, Mystery surrounds this. At the end of the Cultural Revolution a new group of leaders arrived on the scene: The Gang of Four,

Zhang Chunqiao.

Wang Hongwen.

Yao Wenyuan.

and Mao's last wife, Jiang Qing.

The people were not happy when the Gang of Four refused to let them commemorate, Chou Enlai, in April 1976. There was then riots in Peking and many other cities.

On September the 9th, 1976, Mao Tsetung died in Peking, aged 83.

The people mourned his death like the death of a father. Mao had named his successor as, Hua Guofeng, who got rid of the Gang of Four. The people rejoiced very much at this. With Deng Xiaoping, Hua Guofeng started a program of modernization and reversal took place bringing back things over-thrown during the cultural revolution. There is still, Today, opposition between Russia and China.

中国共产党

C.C.P.

W.W.I.

"1914"

- France: and French empire, includes, Modern day Algeria, Vietnam, Laos, Dahomey, Kampuchea, Niger, Chad.
- Japan and its colony Korea.
- Germany and its empire, includes, Tanzania, Cameroon, Togo, Namibia, Pacific Islands, part of Poland, etc.
- Italy and its empire, includes, Libya, Eritrea.
- Britain and its empire, includes, Ireland, India, Pakistan, Burma, Malaya, Egypt, Sudan, Zimbabwe, Kenya, etc.
- Spain and its empire includes, Morocco, Spanish Sahara, etc.
- Turkey and its empire, includes, Saudi Arabia, Israel, Jordan, Iraq, Lebanon, Syria.
- Portugal and its empire includes, Angola, Mozambique, Guinea Bissau, Timor.
- Holland and its empire includes, Indonesia, Surinam.
- USA and its colonies include Philippines, Puerto Rico.
- Russia, and its empire includes: part of Poland, Finland, etc.
- Belgium, and its colony, includes, Zaire.

Germany, France, Britain, all had Pacific island colonies as well. Also, all three, plus Russia, Japan, Portugal, USA, all had "territorial concessions" in China, in fact China was in the process of being broken up by all these countries.

France and Britain had the most colonies. Germany had very few. Russia was a vast empire in itself. The Austrian-Hungarian Empire was also very restricted and had no colonies. Poland didn't exist, it was divided between Russia and Germany.

The first World war was an "imperialist war". It was a war fought to re-divide the world by the capitalist powers of Britain, France, Russia, vs. Germany, Austro-Hungary, Turkey. It was a war for "New" capitalist markets, colonies, zones of influence, etc. The U.S.A., Italy, Japan, entered the war later on against Germany, etc.

The war aims of Britain, France and Russia:

- To destroy (principally) Germany as a capitalist rival. To seize her colonies in Africa, Pacific ocean and China.
- To break up the Turkish empire and take control of its colonies. Russia was "promised" possession of Istanbul by Britain and France.
- To break up the Austro-Hungarian empire into British, French, and Russian areas of dominance and influence.

The aims of Germany, Austro-Hungary, Turkey:

- To destroy Britain and France as capitalist rivals. To seize their colonies in Africa and Asia, etc.
- To seize the Ukraine and the Baltic states of Russia.
- To control all of South-East Europe.

Japan entered the war, To seize Germany's colonies in the Pacific and in China.

Italy " " " " For part of Austria.

U.S.A. " " " " To ensure the billions she'd lent to Britain and France were repaid to her.

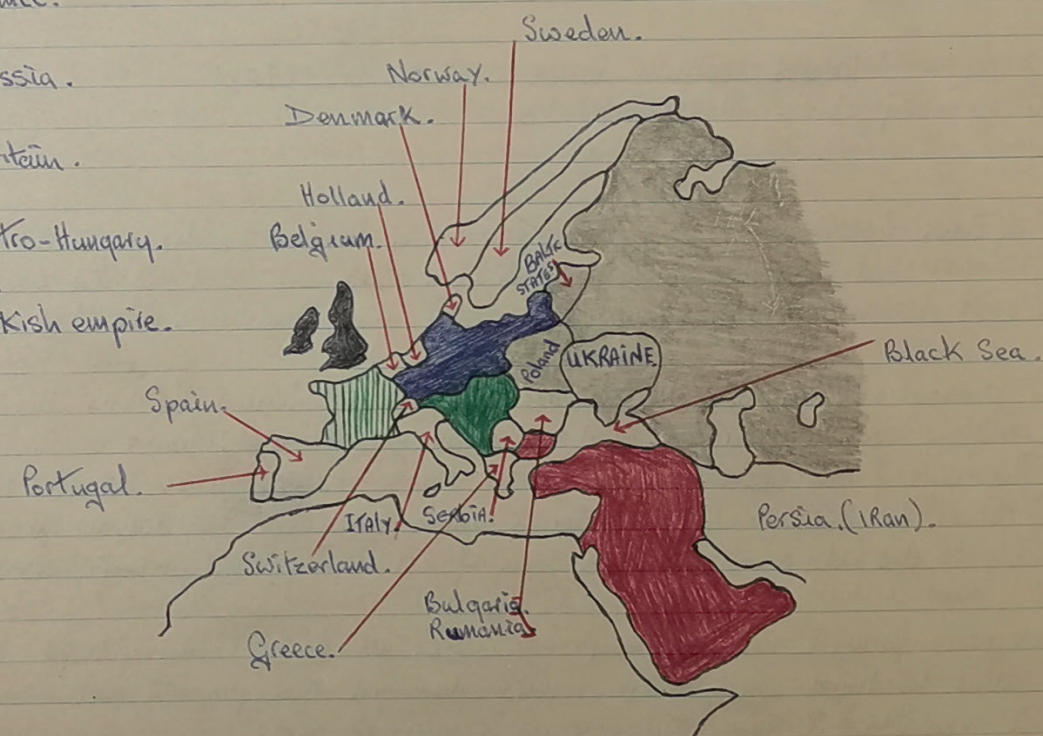
W.W.I.

"1914"



Europe, Russia and Middle east,
August, 1914.

- Germany.
- France.
- Russia.
- Britain.
- Austro-Hungary.
- Turkish empire.



War between the rival capitalist classes was inevitable. "Any" incident could have started it. War broke out in Europe in August 1914 when Austro-Hungary invaded Serbia. Serbia was an ally of Russia. Russia declared war on Austro-Hungary. Germany declared war on Russia. France declared war on Germany, Britain likewise. Turkey joined Germany and Austro-Hungary.

W.W.1.

Japan entered the war and seized Germany's colonies in Pacific and China. U.S.A. entered war in April 1917. South Africa seized Namibia. Australia seized Islands in South Pacific. Britain seized Tanzania.

Russian Rev. Bolshevik, in November 1917. Russia made a separate peace with Germany, April 1918. Germany took the Ukraine and Baltic states. Also took all of Poland. Russia gave Finland its independence.

War ended November 1918. Talks set up by France, Britain, etc. Russia regain's possession of the Ukraine. Treaty of Versailles signed by France, Britain, Italy, etc. And defeated Germany. Other treaties signed with Austro-Hungary and Turkey.

Result:

Germany made to pay Reparations. The Rhineland is occupied, Factories, mine's, etc. German Empire broken up. Poland is formed as an independent nation. Russia is separated from rest of Germany. German colonies in Africa, seized and given to Britain and South Africa. German colonies in Pacific and China given to Japan, Australia.

Austro-Hungary broke up: New countries formed. Yugoslavia, Czechoslovakia, Austria, Hungary Italy got part of Southern Austria.

Turkish Empire broke up: Britain take's control of Palestine, Jordan, Iraq, Aden, Oman.

France take's control of Syria, Lebanon.

Saudi Arabia become's an independent country.

Greece get's more territory of Turkey.

Ireland roughly between 1740 to 1770.

At this time the "working class" consisted of two sections.

A.

The working class Protestants and Presbyterians of the north, who had the advantage of education of a sort. And by virtue of their status as a component part of the conquering race were possessed, although in a limited degree, of the franchise, etc.

B.

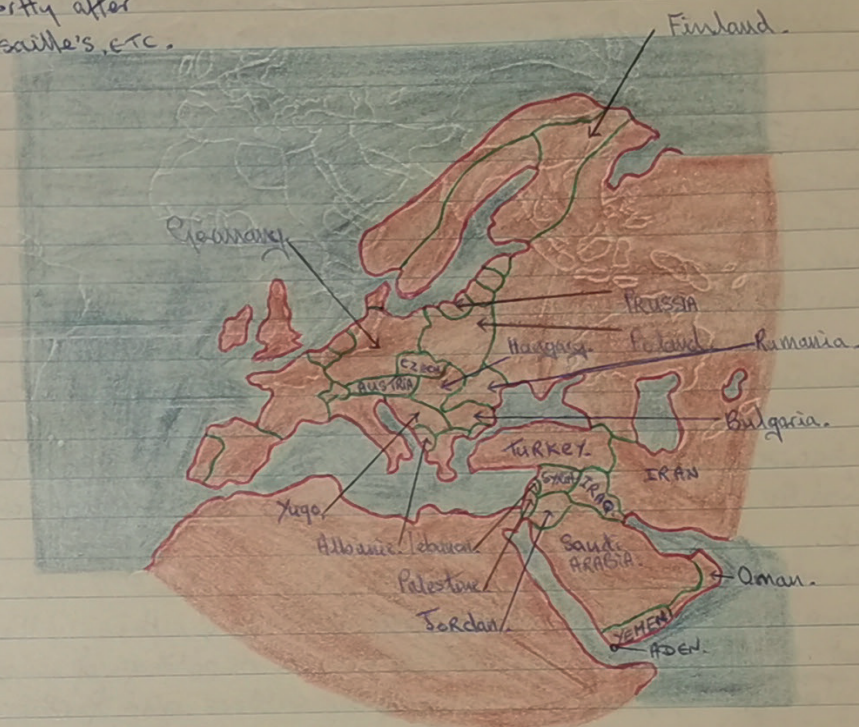
The Catholic peasants, artisans, and labourers. These were denied by law the right to education, their religion was proscribed, and their race condemned. Almost crushed out of existence by the exactions of their landlords. The Penal laws still in action also, (1695) and by the extortion of Tithes for the upkeep of a clergy whose teachings they did not accept. So they resorted frequently to the only means left to them of arranging their wrongs, namely, Force.

Secret Societies were formed, The Whiteboys ^{in the South,} etc. They all resisted these 'legal' forms of oppression. They killed landlords and their agents, damaged their property and animals, etc. They were in turn hung, whipped, transported, etc on a massive scale.

The North had it's oakboys and hearts of steel. But then not alone were the expropriated Catholics of the South in revolt. The bulk of the northern Protestants and Presbyterians were also approaching the same condition.

W.W.1.

1918, and shortly after Treaty of Versailles, etc.



1740-70.

John Mitchell says: "The instinct or meaning of all these organisations is the instinct of resistance to legal oppression. All the laws were made not for, but against, the mass of the people. The proscribed race saw only enemies on the bench and in the jury box."

"The immediate cause of the first breaking out of these disorders was that many landlords in Munster began to enclose commons, on which up to that time, their rackrented tenants had enjoyed the rights of commonage. In Waterford, Cork, and Tipperary, angry crowds assembled and tore down the enclosures."

Large bodies of troops were sent to the disturbances and many brutal executions took place. These were followed by fierce reprisals on the part of the peasantry. On the whole, the Whiteboy Movement was on a par with the revolts of the poor in other European countries in earlier times. Such as the risings in England headed by John Ball and Wat Tyler, the insurrection of the "Jacquerie" in France, and the peasants wars in Germany.

The Presbyterians in the North at this period were now as well as the Catholics, suffering, not only from the Test act and the Tithes, but also from the difficulty of earning an honest livelihood. ^{THE PEASANTS WANTED TO FORCE THE LANDLORDS TO REVERT BACK TO VILLAGE INSTEAD OF GRAZING. WITH DESERTS HAVING KILLED LARGE PROPORTIONS OF CATTLE IN ENGLAND, AND THE EMBARGO AGAINST IRELAND SCRUBBED, TO KEEP DOWN ENGLISH WORKERS' WAGES; IRISH LANDLORDS FAVOURED GRAZING, WHICH WAS MORE PROFITABLE. AND TO HELL WITH THE IRISH PEASANTS...} The Catholic and Protestant, property class, united [Penal laws in operation] in order to crush the poor slaves, so as to maintain their position and privileges. A very flood, that "Patriot" in the House of Commons in 1763 denounced the gov for not killing enough of the Whiteboys. He called it "clemency."

Ireland:

The centre low land is mainly 200-400 ft high. Hills in Ireland are present especially round the coasts, although there are few peaks above 3,000 feet high. The highest being Carratuohill (the inverted reaping hook) 3,414 ft, in Macgillcuddy's reeks, Co Kerry. The low land bogs which cover parts of central Ireland, are intermingled with fertile limestone country where dairy farming is the chief occupation. The bogs are an important source of fuel in the form of peat, Ireland being poorly supplied with coal. The Annual rainfall on the lowlands varies from 30 in. in the east, to 80 in. in some western districts. But, much higher falls are recorded in the Mountains, and as a result it gained the name 'THE EMERALD ISLE'.

Christianity, was introduced by Saint Patrick in 432 A.D. During the 5th 6th centuries Ireland became the home of a high civilization, sending out missionaries to Britain and Europe. From 800 A.D. the Danes began to raid and later to colonize, founding Dublin and other coast towns. Then in 1014 they got whopped by Brian Boru at Clontarf.

1167: 1169. 1171: Henry 2nd.

Anglo-Normen adventurers invaded, but by the end of the Middle Ages English rule was still confined to the Pale. The Tudors adopted a policy of conquest, confiscation of Irish land, and plantation by English settlers, and further imposed the reformation and English law on Ireland. The most important of the plantations was that of Ulster, carried out by James the 1st, in 1610. Flight of the Earls: 1607.

Revolt took place in 1641. Cromwell's army then came over from 1649 to 1653. Cromwell himself only staying here for a few mts. The estates of all 'rebels' being confiscated. Another revolt in 1689-91 was also defeated and the Catholic majority held down by Penal laws, 1695.

1782:

Irish Vols: 1778.

(PROTESTANT)

British government grants the Irish parliament its independence, 'Grattan's Parliament'. In 1798, influenced by French revolutionary ideas, Poverty, Injustices, etc the people rose in Rebellion, Tone, but again defeated.

In 1801, 1st January. The Irish Parliament voted itself out of existence by the act of Union. From 1800 Pitt induced the Irish parliament to do this. When the act of Union came into effect in January Ireland was given parliamentary representation at Westminster.

O'Connellism:

Catholic Emancipation came about in 1829, demands for repeal of the Union, 1841. Famine 1845. Revolts ^{Lalor, Mitchell} 1848 and ^{Fenians} 1867. Land League founded in 1879. Dublin 'lock-out' 1913. Easter Rising 1916. War of Independence 1919-21. (IRA) Treaty signed in 1921 which divided Ireland into the Irish free state and Northern Ireland....

Charlie A Teutonic Genius.

Karl Marx:

Was a Jewish-German philosopher who lived from 1818 to 1883. The main thing he was into was the "Class Struggle" ^{Especially concerning the Dictatorship of the Proletariat}, among many other subjects. He was born in Trier, on 5th May, in W Germany. His father was a lawyer. Charles went to Bonn university to study law and is reputed to have been fond of the wine, women, and song. He was even involved in a duel which earned him a wound on his eyebrow. He was only nineteen at this stage. He finished his studies in Berlin. Then returned to Bonn to try teaching. Marx decides to study philosophy and study Hegel's ideas. Hegel didn't believe in the immortality of the soul, and also believed humanity advances and progresses only because of conflicts, Wars, Rev, through the struggle of the oppressed against oppressors. Peace and harmony he would say don't make for progress. Although Hegel was talking of religious struggle, purely spiritual conflict. When Hegel died contradictions like these divided his followers into Hegelians of the right, and left. The left defending their teachers most progressive ideas, the right stuck to his spiritual and conservative ideas. This is when the terms "left" and "right" came into use, 1830.

Ludwig Feuerbach, A Hegelian supporter of the left, wants to put Hegel's theory into practice. He denies the "Sacred" origin of Royal authority. Marx agrees with this but Marx is more radical than the Hegelian leftists and more active, and not one for all talk. Marx accepted a job, 1842, on the 'Rhenish Gazette', he soon made editor in chief. The paper gained real prestige, as Marx used the press to spread ideas, and political journalism came to life. The Government closed it down. Marx marries Jenny, in 1843, 12th of June.

Marx was so unpopular with the Prussia Government that it pressured France to expel him, 1845. He moved to Brussels. But was expelled again. During the 1848 Revolution he returns to Germany, and set up the "New Rhenish Gazette" with Engels, who fights in three battles. Marx is accused of incitement to armed Rebellion but acquitted by a Cologne jury. 1849, May, is the year Marx is expelled as a "stateless" person. He begins exile in London. But, before seeking refuge in London Marx and Engels had taken part in a secret society called the "Communist League" which commissioned them to prepare the now famous, Communist Manifesto. ⁽¹⁸⁴⁸⁾ Marx stayed in London for the rest of his life. In the direst poverty, Three of his children died through the lack of medicines. He continued to write revolutionary books, and articles to papers which would accept them. Engels helped to support him often. Many people though still could not grasp Marx's daring and complex ideas. It was only in 1917 that Lenin's victory in Russia helped his works to be noticed throughout the world, studied, discussed, and put into practice by millions of people. Marx died at his desk at 65 years of age. In March, the 14th. Marx, in Paris, came into contact with guys like: Blanqui, Proudhon, Blanc.

The Philosophy of Marx. The economic doctrine of Marx. The Historical Materialism of Marx. 3 branches of Marxism.

Every Social Movement over the last hundred yrs has been influenced by Comrade

Marx:

Cuba, Chile, Mexico, Vietnam, Korea, Cyprus, Hungary, Czechoslovakia, Indonesia, Poland, Tibet, Bolivia, Guatemala, Congo, Albania, Greece, Angola, East Germany, etc, etc.

And some great names have been inspired by Marx, who in their turn influenced millions of people: [Lenin: Born 1870 in Simbirsk. A small town on the Volga].

Lenin, Stalin, Mao, Castro, Tito, Dimitrov, Zapata, etc, etc.

Philosopher's:

Thales:

of Miletus is considered the father of philosophy. He lived four centuries before Christ and devoted himself to astronomy and Scientific enquiry into nature. Questions he asked were like: What is the force that keeps the universe in Motion, etc.

Pythagoras:

Father of Mathematics. He concluded that "Number" stands at the origin of all things, and therefore life is the result of a perfect Mathematical relation between the parts of a body. Pythagoras and his followers were the first to declare that the Earth is not at the centre of the universe, as a result they were persecuted and the pythagorean Community was scattered by religious fanatics. Pythagoras founded a peculiar sect which prohibited the eating of beans!

Heraclitus:

The father of Dialectics. An atheist philosopher. He used to teach that everything exists and at the same time doesn't exist, that all things are in Motion and fluid change, continuously appearing and disappearing. "No one steps twice into the same river, for what occurs in the next instant is never the same as the first."

Other famous names are:

Greek.	Empedocles.	Locke
	Anaxagoras.	David Hume, 1711-76.
	Socrates.	Berkeley.
	Plato. 427-347 BC.	Immanuel Kant, German, 1724 1724-1804.
	Democritus. 400 BC.	
	Aristotle.	
	Descartes. 17 th Century.	
	Spinoza. 1632-77.	

When Marx came about he said:

ways; The point is to change it." "Philosophers have only interpreted the world in various

Lenin says of Marx:

"The teaching of Marx is all powerful because it is true."
(See the basis of Communism C. Jan 1989)

Engels, 1820-95:

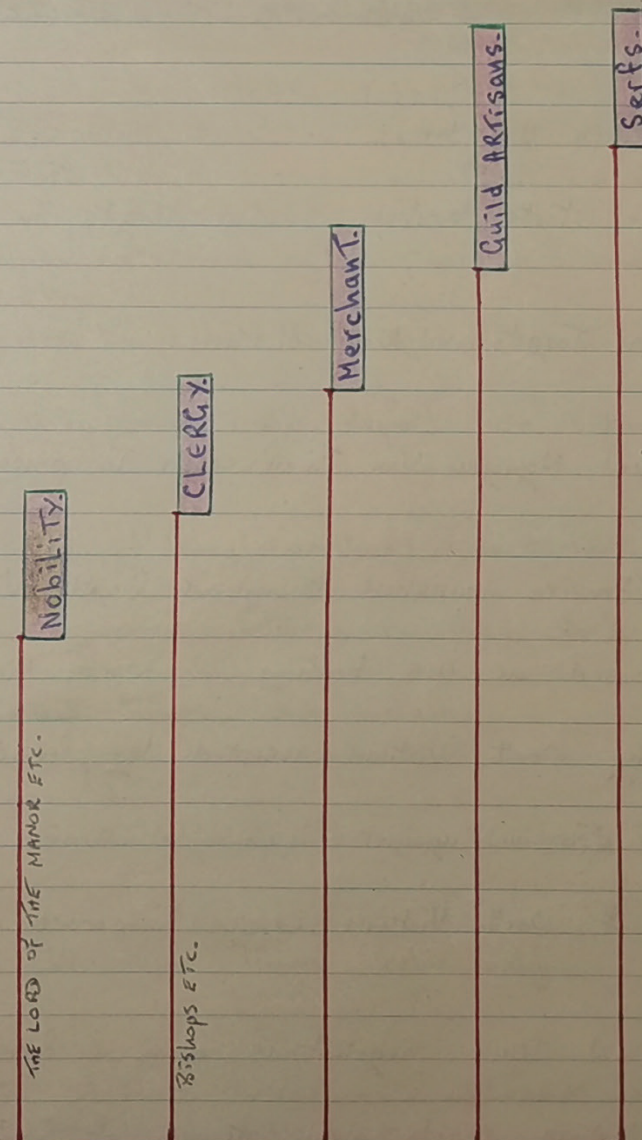
His father was a rich Textile Manufacturer, Engels left Prussia in 1842, to work in Manchester for his father's business. Engels was a Hegelian leftist. First hand contact with working class. Misery affected him deeply. Children were exploited in Mines and other kinds of industry by inhuman bosses. Engels wrote of the working class,

1845. Marx and Engels became close friends and decided to work together.
First edition in London, February 1848, of the Communist Manifesto.

feudalism comes from the Latin word, "feudum", the name given to the lands, which the king divided up among his Nobles, in exchange for their support.

A 'feudum' = A 'Fee' - "Serf": from the Latin word "Servus", which means "a slave"...

Within Feudalism the Social Classes Seen from Top to bottom were:



Those who actually lived on the land had some claim to their bit of EARTH. But their labour belonged to the feudal over-lord to whom they paid taxes, and who used them whenever he went to war, whenever his crops needed collected, bridge + road mending etc. The lords land and interest's, came first...

The church of Christ was also a feudal system like any other. In feudal times, the church was the largest landowner.

Re Vietnam: Ho Chi Minh: Born 1890, in Nghe Tinh.

7th May 1954 — Surrender of French garrison at Dien Bien Phu.

26th April - 21st July — Geneva Conference: Vietnam divided into north and South at the 17th Parallel.

1956-64 — Guerrilla activity by the Viet Cong supported by North Vietnam.

August 1964 — North Vietnamese patrol craft attack U.S. ships in the Gulf of Tonkin. America retaliates.

August 7 — Tonkin resolution passed by U.S. Congress giving president L.B. Johnson extensive military powers in Vietnam.

31 December — U.S. armed forces in Vietnam (south) total 23,000 Men.

February 1965 — Viet Cong attack U.S. bases in South Vietnam.

7 February — U.S. Air Force starts bombing selected targets in North Vietnam.

1966, 12 April — B-52s bomb targets in North Vietnam.

1967, 3 September — General Nguyen Van Thieu comes to power in S. Vietnam.

1968, 30 January — Tet offensive launched throughout South Vietnam.

31 March — Restrictions imposed on U.S. bombing in North Vietnam.

3 May — Peace overtures by North Vietnam accepted by President Johnson.

4-5 May — New Communist offensive against South Vietnamese towns and bases.

1 November — U.S. bombing of North Vietnam ceases temporarily.

1969-72, 25 January — Formal Truce negotiations open in Paris.

31 January — U.S. forces in Vietnam reach peak strength of 542,000 Men. Massive anti-war demonstrations in the United States.



North Pole.

1972, 30 March — North Vietnam launches conventional invasion of South Vietnam.

May — North Vietnamese ports mined by U.S. planes. U.S. bombing offensive stepped up.

June — South Vietnamese troops hold North Vietnam invasion - position stabilised.

12 August — last U.S. ground troops depart from Vietnam.

1973, 15 January — U.S. military operations against North Vietnam cease.

27 January — Peace agreement between U.S. and North Vietnam signed.

29 March — last U.S. troops leave Vietnam.

1975, 5 March — North Vietnamese army launches final offensive against South Vietnam.

30 April — North Vietnamese troops enter Saigon.

South Vietnam surrenders unconditionally.

(See compilation C for a better chronology.) 26 Dec. 1987.

History: Died On Hunger Strike:

1917.

(page 32).

Thomas Ashe, September 1917, Mountjoy prison, Dublin. (forced feeding)

Mick Fitzgerald, October 18 1920, Cork prison.

Joseph Murphy, October 1920, Cork prison. 76 days: longest fast on record.

Terence Mac Swiney, October 25 1920, Brixton prison, England. (74 days) 74.

All four above, prisoners of British.

1981.

Danny Barry, November 1923, Newbridge camp, Kildare.

Andy O'Sullivan, November 1923, Mountjoy Jail, Dublin.

Joseph Lacey, December 1923, Curragh prison camp, Kildare.

Tony D'Arcy, April 1940, Arbour Hill prison, Dublin.

Sean Mc Neela, April 1940, Arbour Hill prison, Dublin.

Sean Mc Caughy, May 1946, Portlaoise prison.

All six above, prisoners of 26 County State.

Aged 24. force fed.

Michael Gaughan, June 1974, Parkhurst prison, England. on the Isle of Wight.

Frank Stagg, February 1976, Wakefield prison, England.

Both above, prisoners of British.

H-Blocks, Long Kesh, Belfast: Bobby Sands, Harry West, Unionist, on 9 April 81, becoming an M.P.

Bobby Sands, 5 May 1981. M.P. 1.15 AM. 66 days.

Francis Hughes, 12 May 1981. 5.43 P.M. 59 days.

Raymond Mc Creesh, 21 May 1981. 2.11 A.M.

Patsy O'Hara, 21 May 1981. 11.29 P.M.

Joe Mc Donnell, 8 July 1981. 5.00 AM. 61 days.

Martin Hurson, 13 July 1981. 4.00 A.M.

Kevin Lynch, 1 August 1981. 1.10 A.M. 71 days.

Riordan Doherty, 2 August 1981. T.D. Sunday 7.15. Among the H.S.s. (73) longest survive

Thomas Mc Elwee, 8 August 1981. 62 days.

Nicky Devine, 20 August 1981. 7.48 A.M.

(Royal Wedding. 29.7.81.)

1/ The right to wear their own clothing.

2/ exemption from all forms of prison work.

3/ free association with one another.

4/ The right to organise their own recreational

and educational programmes.

5/ full restoration, of lost remission.

The young lad ran into the house with a big bump on his head and crying, his mother asked what was wrong, and was told, a brit, hit him over the head with a rifle butt. Would you identify him again if you saw him, asked the mother, certainly said the youngster, I've his head in my schoolbag...

NOTE: "Dungannon clubs", founded by two IRB men, Denis Mc Cullagh from the falls road. And Bulmer Hobson, middle class quacker background.

History:

Modern Socialism is Scientific Socialism is Marxism.
It springs directly from the class struggle existing in Capitalist Society between the Capitalist class and the working class;
The Bourgeoisie and the proletariat,
Proprietors and non-proprietors, And also the Anarchy ruling in production.

But Modern Socialism didn't spring up fully developed, complete and Scientific. It had its own history, its origins going back hundreds of years and slowly developing as the Economic Conditions in Society likewise developed. So what we have to ask is WHY and How it arose and developed?

In its theoretical form it first appears as a more developed and consistent extension of the principles laid down by the French philosophers of the 'Enlightenment' in the 18th Century.
What were the principles laid down by these philosophers?
France during the 18th Century was a Feudal state: Absolute Monarchy, Privileged Nobility, Privileged Church, Old customs, Tithes, Taxes, Arbitrary Rule of law. French philosophers criticised all of this. (Rousseau, Voltaire, Diderot.) They criticised Religion, Political institutions, Privileges, Taxes, lack of Representative Government, Tyranny. All of this was attacked as being irrational, inhuman, against the basic rights of Man, etc. They proclaimed that REASON should rule Society. That Reason would be the rule of Good and Virtuous Men, that would benefit ALL the people in Society and not a privileged few.

The 18th Century was called the Age of the Enlightenment; the age of new ideas etc that enlightened peoples minds, that broke free from all the old traditional, stultified ways of thinking. Their writings thus concentrated on criticising, Superstition, injustice, Equality, and Rights of Man.

We now know, that their writings, were the expressions of the aspirations, of the Ruling Capitalist Class, the Bourgeoisie. Their writings were Revolutionary, as were the Bourgeoisie, as they aimed to change totally the whole Feudal System. But we also know that their aspirations were idealized conceptions of what Society should be like, and as such, because they were based on PURE REASON of how they would LIKE Society to be, they differed entirely from what Society turned out to be like, when the Bourgeoisie seized power, during the French Revolution. [1789].

Thus, their Eternal Justice, - Became Bourgeois Justice -

Their Equality,

- Became Bourgeois equality before the law.

Their Rights of Man,

- Became the sacred institution of Bourgeois property.

Their Government of Reason, - Became the Bourgeois Democratic Republic.

History:

This was the French Revolution, of what the philosophers thought would be the Rule of Reason.

How did it turn out?

The Government of Reason went through the 'Reign of Terror' (1793-94). The 'Directorate' (1795-99), Napoleon (1799, 1st Consul.) War's. Instead of Eternal Justice and Equality and general prosperity, we had rising antagonism, between rich and poor.

Small traders and peasants began to be crushed by big capitalists, etc. Poverty abounded amid great wealth as capitalism developed etc.

In short, Capitalism was established in Society.

Thus as we said at the very start of this section about the Theoretical form of Socialism appearing as a more developed and consistent extension of the French philosophers principles. It was because it SEEMED that these principles had been sold out, been cast aside etc. And thus it was simply a matter of re-establishing them, the Rule of Reason for Society to become a better, Socialist Society.

We'll come back to this point, and go back in history a bit further for a moment:

Under Feudalism, the main class struggle was between the nobility and the bourgeoisie. But, the Bourgeoisie also claimed to represent all the rest of Society; Workers, Peasants, etc., against the Nobility. In each Bourgeois Revolution the Bourgeois put themselves at the head of all exploited and poor in the country against the Nobility, Rich idlers.

But, the Bourgeoisie cannot exist without its opposite, without wage workers. The first Bourgeois to arise were the "Burghers" of the towns in the middle ages, these were Merchants, bankers, Master craftsmen etc. The master craftsmen were organized in Guilds; carpenters, iron-smiths, tailors etc. (employing journeymen etc.)

The first Proletarians to arise ^{were} the 'Journemen' and 'Day labourers' also in the towns in the middle ages. The Journeymen were likewise organized in Guilds, they were apprentices who had qualified as master craftsmen but had little capital to set up their own business, or had been excluded by the Master Craftsmen's Guild. Hence the name. The day labourer was outside the Guilds.

So you can see that both the bourgeoisie and Proletariat came into existence together. Though at this early stage both classes were IMMATURE. Immature because of the economic development in the middle ages etc. On the whole the Bourgeois in their struggle with the Nobility could claim to represent the other working classes in this period. As a victory for the Bourgeois would progress Society in the historical sense, and thus create the conditions in the future for liberating ALL of Society. But, in each great Bourgeois Movement of these times, there were independent outbursts of that class, which was the forerunner of the Modern Proletariat.

History:

Each wanted to go beyond the aims of the bourgeoisie and establish different forms of Societies, More Just, Equal etc. As we've said, the economic conditions of these 3 great movements meant that the fore-runners of the modern working class hadn't yet developed into a Mature Class. And as such, their immaturity was reflected in their theories.

The Theories of the 16th and 17th centuries were of Utopias - where all would be ideal, no poverty, harmony and equality etc. In the 18th Century we have direct Communist theories, class distinctions to be abolished. These first theories, Utopias, tried to establish an ascetic Communism. Living close to nature, few pleasures, very spartan. Communities were established in many parts of Europe, in Germany, Holland, France, England, and then some spread to the U.S.A. But most were suppressed by the powers that be, and broken up. Though some still survive to this day both in America and Europe. These were the ORIGINAL Utopians up until the French Revolution. From 1800 onwards arise the Utopians - St Simon, Fourier, and Robert Owen. More Modern.

As we left off previously, these modern Utopians firstly based their ideas on the extension of the principles of the French philosophers of the 18th Century, on the Rule of Reason. They want to free all of humanity at once. They want to bring in the Rule of Reason that was sold out etc. But, at this time, Capitalism was still undeveloped, (hadn't reached its classic form yet). But, it was developing furiously. As was the Proletariat, (just growing, being formed, getting organized). Thus, this actual state of Society, was reflected in the ideas of the Utopians. (The economic conditions didn't YET exist to bring about a new type of Society.) Their ideas were themselves IMMATURE. But, they did discover some genuinely sincere facts about the conditions of the Proletariat under capitalism.

Capitalism really developed due to the industrial Revolution. The introduction of machinery, powered by steam, and used in large-scale industry. It was this that gave birth to the Modern Working Class as we know it. In 1800 this was only beginning in England.

An observation MUST be made here: Large Scale Industry creates the Modern Proletariat. At the same time it promotes the class struggle between the Bourgeoisie and the Proletariat, as the proletariat begins to organize consciously to fight for better conditions etc. (Trade Unions.) Also at each stage L.S.I. promotes the conflict to bring about a revolution and abolish capitalism. And at the same time, L.S.I. and the proletariat are the means that will resolve the conflict. The Class Struggle - And organize, a Socialist Society...

Again, as the above situation didn't yet exist in 1800, the Utopians couldn't know any better. They seen Society as being full of abuses, which could be cured by reason. And to which ALL Reasonable people would agree.

History:

ST Simon:

His experiences of French Revolution influenced him, Workers and idlers, everyone must work. Reign of Terror. Rule of Science and Industry. Discovery of Class struggle involving those without property. Foretold absorption of politics by economics. Economic conditions were the basis of political institutions.

Fourier: Showed up real state of Bourgeois world from all its high sounding phrases. Equality of women. His handling of Dialectics.

R Owen: At this time England furiously industrialising. Horrible conditions, massed in towns, women and children at work. Demoralization, instability. Break down of all traditional bonds. Poverty is born of abundance itself. Set up Model Colony, New Lanark. "Unpaid labour - where did it go," it belonged to working class. L.S.I - common property of all.

All early socialist writers were based on these three. All these early schools made up of a mish mash of their ideas. Based on absolute truth. Reason. Justice. Which have existed for all time, in all places, etc.

It was Marx who demolished all these early schools of Utopians. By actually placing Socialism on a solid Historical and Scientific basis, by his analysis of Capitalism, using Materialist Dialectics.

Philosophy:

DM.

The new German philosophy fermenting in Hegel (1770-1831) has as its greatest merit the resumption of Dialectics as the highest form of thinking. Firstly: What is Dialectics?

It is a way of viewing the world, of understanding the world, of how it works, what its laws are. It is a way of thinking and of analysing the world we live in.

Dialectics takes as its basis the Scientific fact of **MATTER in Motion**, i.e. that everything that exists (MATTER), is **constantly** in Motion (changing), - i.e. that everything is constantly coming into being and passing away.

That everything is **INTER-Connected** and as such **INTER-acts**;

That nothing exists in Isolation;

That nothing ever remains the same from one moment to the next;

That change takes place through **Contradictions** - i.e. through the actions of **opposing forces**, working on each other, through the: **Unity of opposites**.

Philosophy:

Dialectics is therefore a science concerned with the General laws of **MATTER in Motion**. They are concerned both with the laws of the **EXTERNAL WORLD**, (NATURE, Society, World, Universe, Existence.) And the laws of **HUMAN Thought**, (Mind, Consciousness, Logic, Dialectics.)

* Dialectics aren't something invented in the mind of some Genius and then applied to the **EXTERNAL WORLD** to make it conform to a system of ideas etc, But the exact opposite, i.e. The workings of the external world are reflected in the minds of people, which give rise to ideas and thoughts. These reflect the Dialectical Movement of the real world, Reality.

When we apply Dialectics to the **HISTORICAL Development** of the Universe, NATURE, Society etc. We discover further facts, i.e. in this historical development things move from, The Simple to the Complex. From the Lower to the Higher. In a 'progressive' development.

But, this progressive development isn't always in a straight line. At times it takes a Zig Zag course, there are 'temporary' Retrogressions, (Germany 1520's, Paris Commune 1871, etc.) But, in spite of these, the progressive development finally asserts itself. Each process as it comes into being contains the GERM of its own undoing - It will finally die due to its internal contradictions. As such, Dialectics is revolutionary. It recognizes no **ABSOLUTES**. The only absolute is **MATTER in Motion**.

It recognizes no absolutes of Society, law, Morality, Politics, Truth, Equality etc.

OR NATURE, All plant and animal species come into being, develop, decline and become extinct, (Dinosaurs, Mammoths etc.) Likewise the planet, Solar system etc.

Dialectics recognizes that certain laws, morals, politics, classes etc. are tied up with certain historical periods - It recognizes that it has a 'conservative' side, in that it justifies the existence for certain periods of time, ruling classes, exploitation etc. But, as its whole basis is **CHANGE**, its revolutionary character, must, always assert itself. (Castro - National Bourgeoisie, Dogma, Must analyse anew.)

We have to go back to the Greek philosophers to trace the development of Dialectics. Ancient Greek philosophy was dialectical, the above definitions was how they viewed the world. They made startling discoveries. Lived between 650-350 B.C. Thales, Heraclitus, Democritus, Hippocrates, etc.

Everything was made of Atoms. The ultimate particles Humans, Animals etc. sprung from simpler forms.

Earth was a planet orbiting the sun.

Disease caused by Germs, not Demons etc.

Land was formed from the oceans.

Fish moved from water to dryland and evolved into animals.

An infinite number of worlds exist.

That stars are suns, but very far away.

Everything is subject to dissolution and regeneration.

19th 20th Century.

19th

16th

18th 19th

19th

19th

—

19th

—

Philosophy:

Worlds evolved out of diffuse matter in space. 18th, 19th
 Some worlds would be inhabited. Some not.
 Simplest forms of life arose from primeval ocean. 19th
 Milky Way Galaxy. Composed of unformed stars. 19th
 One hands and labour. Root of our intelligence.
 Earth is a sphere. 15th, 16th
 Universe is accessible through observation and experiment. Scientific method today.
 All Atheists.
 Everything was in constant flux. Dialectics.
 That Regulation laws existed in nature, and could be understood.

These philosophers seen existence as a whole - in its totality - But the individual parts were still more or less kept in the background. The details of what made up the whole and how they were inter-connected etc wasn't explained. But not the philosophers fault.

What had to be done first to achieve this was to examine each detail **SEPARATELY**. Detached from their natural and historical connections. So as to examine each according to its nature. Causes and effects.

The task of doing this belongs to, 1. NATURAL Science. i.e. Botany, Zoology, Anatomy, Geology, Astronomy, etc.
 2. Historical Research. i.e. Politics, Economics, laws, classes, etc.

Each had to be fully investigated by itself, then fitted into the whole to see its inter-connections etc. Thus giving a more profound view of Reality - of the whole.

The old Greek philosophers didn't achieve this simply due to the fact that all this material had to be amassed, investigated and classified on a scientific basis first. They had fantastic insights but couldn't develop them further. It took the next 2,000 years for all the techniques, sciences, etc to achieve this. But began by Greeks in Alexandria 300 B.C. onwards. (decline.)

Then by Arabs in middle ages.

But genuine development began in mid-15th century.

But this bequeathed us the habit of observing natural objects and processes in **ISOLATION**. Detached from the general context, of observing them **NOT IN THEIR MOTION** but in their **state of Rest**. Not as variable elements but as constant ones. Not in their life but in their death. This was transferred to philosophy and became the **Metaphysical Mode of Thought**.

Metaphysics: Everything is immutable. And separated from each other always. That everything travels in circles - repeating stages eternally - with the same results. Everything is Fixed - Rigid.
 Newton 1642-1727. physics. Linnaeus 1707-78 Botany.

(Conservatism) ----- (Church, Nobility, stay the same.)

*
 Dialectics: Comes into being, develops, reaches its peak. Then declines, and passes away.

Philosophy:

Cause and Effect. Within limits can be determined. (Good and Evil. True and False.)

But in Relation to whole, change places.

Nature works dialectically. Goes through a genuine historical development.

1809-82, DARWIN: Dealt metaphysical conceptions of Nature its heaviest blow. (Creationists.)

KANT, 1724. LAPlace, 1749-1827. Newton. Einstein 1879-1955.

We go back now to the German philosophy which terminated in the Hegelian System. Its greatest merit was the resumption of Dialectics, i.e. The World. (NATURAL, HISTORICAL, INTELLECTUAL.) is represented as a 'Process' in constant motion, change, development. Its internal inter-connections was attempted to be shown.

The Hegelian system, though it was immensely progressive, "Failed". Due to several reasons:

1. Limited extent of Hegels knowledge.

2. Limited extent of the knowledge and conceptions of the period he lived in.

3. Hegel was an Idealist.

What's an Idealist?

An Idealist, and Idealism, "Finally" resolves itself in the belief in a god - Something or Someone existing "outside" Nature, outside time and space, An "Absolute". They have their own names for this absolute but it finally resolves itself in the belief in a god.

(Compare, *)

Hegel: Thoughts, ideas etc. were the **Realized images** of the **idea** existing from eternity. i.e. That this idea (god) existed for all time, that it expressed itself as the Universe, that the development of the Universe was the working out of this 'idea'. That the 'idea', 'Thinking', 'Mind', 'Idealism' was 'primary', i.e. existed first. And that 'NATURE', 'Being', 'Materialism', was 'Secondary', i.e. sprung from the 'idea' etc. (class: Separation of labour and mind.)

As Frederick Engels said, "Everything was stood on its head", it suffered from an "internal" and incurable "Contradiction".

On the one hand: It said that Human History is a "Process of development", which necessarily cannot, by its very nature, reach a finality in the discovery of any "Absolute Truth".

On the other hand: It laid claim to being the very essence of this "Absolute Truth".

Thus, what was in contradiction with the basic laws of Dialectics, was a system of natural and historical knowledge which claims to be all-embracing and final, "for all time". This was the Hegelian system.

German idealist philosophy led to "**Materialism**", i.e. "Modern" Materialism, which sees history as the process of development of the human race. And its 'task' being to discover the laws of Motion, of this process.

Philosophy:-

Modern Materialism embraces all the recent scientific discoveries i.e. Darwin's evolution, Laplace's origin of the Solar System, The laws of the Transformation and Conservation of energy etc. As such it is 'essentially' Dialectical - i.e. Dialectical Materialism. philosophy - A special science dealing with the 'Totality' - becomes superfluous.

Thus: The Revolution in the **Conception of NATURE** depended on the Scientific investigation of Nature's properties, phenomena, etc. over hundreds of years which really took off during the 19th Century. But also a Revolution in the **Conception of History** during the 19th Century as well.

The old Idealist Conception of History:

knew nothing of class struggle based on material interests, seen only the working out of the "idea", the actions of great men, accidents, violence etc. Production and economic relations appeared as "incidental", "subordinate".

The new Materialist conception of History:

Re-examined History. Seen that all' past history (with the exception of its primitive stages) was the history of "class struggles". That "Classes" are always the products of the relations of production of any epoch (i.e. **Economic Relations**). That the "Economic structure" always forms the real "Basis", from which, in the "last analysis", the whole "Super-structure" of legal and political institutions as well as religious, philosophical and other ideas are to be explained.

Hegel: Freed history from Metaphysics. Made it dialectical. But also made it idealist. Explained man's "being" by his "Consciousness" etc.

MARX: Freed history from idealism. Made it materialist and Dialectical, i.e. The materialist conception of history, explained mans "Consciousness" by his "being", etc.

Thus Socialism, no longer appeared as an accident, The work of some "Genius" etc. But, appeared as a necessary outcome of class struggle produced by "History" between the proletariat and the bourgeoisie.

Utopians: Criticized Capitalism and its abuses. rejected it as Evil. Invented so-called "perfect" systems. Harmony etc. But couldn't "explain" Capitalism. How it exploited workers, how it arose etc.

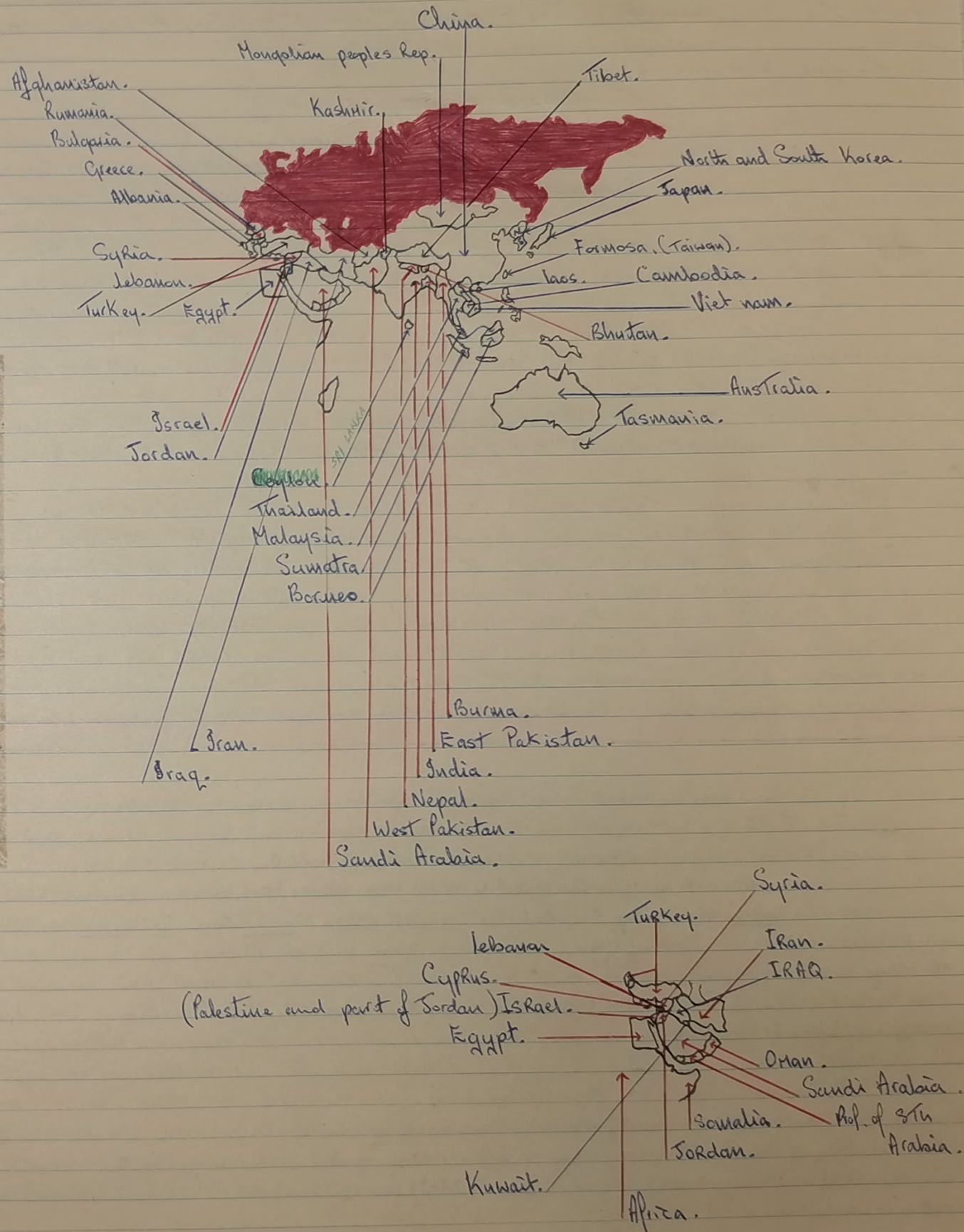
Materialist conception of history:

Examined Historical-Economic process from which the bourgeoisie, and the proletariat, and their "Antagonism", spring. And to discover, in the "Economic Situation" then existing, the "Means of Ending the Conflict".

A. Thus, it presented capitalism in an historical context, how it arose, developed and MUST OF NECESSITY, "die".

B. It lay bare the "ESSENTIAL CHARACTER" of Capitalism i.e. by the discovery of Surplus-Value.

Asia:



philosophy:

Surplus-Value forms the constantly increasing "Mass of Capital" in the hands of the Capitalists. Thus, the process of "Capitalist production", and of "Production of Capital", was explained.

These two great discoveries: A.

The Materialist Conception of history.

B.

The Revelation of the Secret of Capitalist production. Through Surplus-Value.

We owe to KARL MARX.

With them, Socialism became a science. It just remained to elaborate it in all its details and inter-connections.

Today - October 1985 - About all of Nature's phenomena have been given a Materialist explanation (Creationists). But the basic idea of Materialism is still rejected as groundless. Why?

Because the consistent Materialist outlook is "primarily a Revolutionary view of the World". Capitalists, Reactionaries, Fascists etc, and their ideologists, oppose this, to help maintain their rule.

Overall - The same applies to the ancient Greek philosophers - The Social and Political consequences of their philosophies in which nothing was privileged, everything evolved etc was a major reason for the attempts to suppress it. With the rise of slavery in Greek society their philosophies began to decline. Idealist philosophy arose which preached that the "Mind" was the power behind existence. This was inevitable in a slave society where slaves did "All" the work while the slave-owner's scorned such manual labour. Had to justify this even to themselves.

Up to now we've dealt with the French philosophers of the 18th Century, the French Revolution, the 3 great Utopians (and their forerunners in Germany, England & France) and their Socialist ideas, Hegelian dialectics, Metaphysics and Idealism, and the rise of Marxism.

Marxism criticised all that came before it. All the philosophies, Economic theories, History etc. It stated that the basis of "Every Social Order" is Production. Then the Exchange of the things produced.

1. The things that are produced.
2. How they're produced.
3. How the products are exchanged.
4. Distribution of wealth.

→ Called the Modes of Production and exchange.

E.g. We'll take a primitive society, Ancient Clan Society (Aborigines).

1. What did they produce? As being very primitive they produced nothing in the manner of commodities. They would have produced the "Necessaries of life" i.e. food, (hunters and gatherers) and tools.

2. How were these produced? Two things came into play here:

- A. Division of labour in society.
- B. Relations of production.

A:

Within their clan group men, women and children would fulfil different functions.

Men: Hunters, Tool-makers.

Women: Gatherers (berries, roots, fruit), cooking, build shelters.

Children: " as well.

B:

As such (A.) each entered into a definite relationship with each other according to what they done.

3. How were the products exchanged? As can be seen here, because the "social order" is that primitive no products would be exchanged within the group (outside the group as well.) Everything produced would be consumed by the group. The group would be a communal unit living under a system that is called "Primitive Communism".

4. The distribution of wealth determines how society will be divided into classes, estates, etc. But this distribution is dependent on: 1, 2, 3.

How is the wealth distributed in this Aborigine society?

As we know they have no wealth, (or little). Therefore classes and estates do not exist. Likewise no "state" exists. This is why we call it "Primitive Communism". The interests of the community come first etc. Any inequalities that would exist would be ones of rank rather than based on exploitation. i.e. qualities as a hunter, child-bearing, etc.

The Modes of Production - Exchange or distribution. = "Economic base".

We know that on top of this, or any, economic base, arise all the Political, Social, Religious, legal, Moral, institutions, ideas, thoughts etc. These are termed the "Superstructure".

So, what kind of superstructure would have arose on this Aborigine economic base? The sheer primitiveness, poverty, of this social order, the constant moving to follow animals and seek new feeding grounds, the necessity to keep each group as a viable unit (not too big, as most likely they'd use up their resources too quickly) and so on.

Would have meant a society living precariously close to nature. No villages, towns etc, could arise. (Constant moving, if any arose, only for short time. Exception rather than the rule). No classes, estates, castes, could arise. (Little or no wealth).

Small kinship units were the norm. Any social institution to reflect this? Council of Elders.

(Whole community would meet): To ensure harmonious working of group to hunt, need co-operation, to work together etc. Also, (where to live, hunt, tool-makers, etc).

Council of Elders: Not necessarily men. (Matriarchal societies, Mother Goddess, Earth Mother.)

Any Religious ideas to reflect this? Nature's forces appear as totally frightening and malicious, lightning, thunder, rain & floods, volcanoes, sun, fire, etc. Worship these. Rituals surround the foods they depend on. Animals, plants, Earth, Totems, spirits. Medicine Men - witch doctors.

Morals? Cannibalism. shortage of food. Justified. also, 'Ritual' Infanticide. " " " "

The Group more important than the individual (Excl. death.)

Marriage. Polygamy etc. (outside kinship group.) Exogamy: Sexual alliances outside one's immediate group.

As can be seen, all of these reflect how this primitive society produce their means of life. As their production is primitive, like their superstructure is primitive.

Never think that these people were, and are, stupid etc. FAR from it.

They knew their environment intimately and were highly intelligent. Without which they could never have survived. They knew that co-operation was essential to their survival. They knew how to hunt, which plants and fruits to eat, how to administer medicine, treat wounds, the reason why to marry outside their kinship group. If they worshipped the sun, why not? All life comes from the sun. If they worshipped the Earth, animals etc, why not?

Never have the arrogance to assume that we're a superior race. All societies throughout history once lived as the aborigines once lived. Likewise any traits of 'Racism' which remain in us e.g. Superiority, niggers, coons, savages, chinks, etc should likewise be eliminated. The human race originated in the tropics (probably Africa) and at an early period 'All' our ancestors were Black. The arrogance and superiority of Racism is one of the major factors that blind us from identifying with all the peoples in the world, it is deliberately fostered to keep people apart, to breed irrational hates, to send us to war against each other for the interests of national ruling classes etc. No one can claim to be a Revolutionary if he/she is a racist, refers to Blacks as niggers etc, discriminates against them, degrades them, etc.

Civilization as we know it, over the past 5,000 years or so, only begins when people begin to settle down PERMANENTLY, i.e. they give up their shifting, nomadic way of life. Why does this arise? That they settle permanently? and civilization begins? It goes directly to the Mode of production and exchange, i.e. 1/2/3. (slow process. Thousands of years.)

We find that what makes civilization possible is - AGRICULTURE. (Domestication. Nomads. Alongside domestications, e.g. dogs, monkeys.) The earliest civilizations we know of: Egyptian, Chinese, Mesopotamian, Indian. All arose on agriculture. All based on the River systems: Nile, Yangtze, Yellow, Euphrates & Tigris, Indus & Ganges. Annual floodings, Canals, transport system, fertile soil etc. What did agriculture do?

It ensured a permanent and reliable (famine-free) source of food. Therefore settlements, towns, cities, etc. (Babylon, Ur, Heliopolis, Thebes.)

A surplus of food: Released from production people who could, at first, concentrate on being craftsmen i.e. potters, carpenters, iron workers etc.

At a later stage, this surplus of food supports a civil administration which can now arise i.e. Priests, Administrators, Collectors, (Taxes, storage), Army and Police, laws, (civil property etc) Alphabet, Writing, etc. (superstructure). The origins of classes now arise. The first class in history was the Priests.

If we compare primitive society, with its primitive production, economic base, and superstructure, with these early civilizations - (with the relatively developed production, etc.) we find that the differences arise due to changes in the Modes of Production and Exchange, i.e. 1/ What people produce. 2/ How they produce it. 3/ How they exchange their products. 4/ Distribution of wealth.

Agriculture, changed what people produced, how they produced etc etc. And due to this the whole of these early peoples life-styles changed. With a change in the 'Economic BASE' the 'Superstructure' changed also. This applies right down to today. This is one of the central factors of Marxism...

Georges Lemaitre: The Belgian astronomer-priest who suggested the big bang theory of the universe.

Universe:

Evolution:

10-20 Billion years ago: Big Bang which began the universe. This Cosmic (Cosmos-universe) explosion began an expansion which has never stopped. An expansion in all directions. In this early universe the sky was brilliantly illuminated.

Through time the radiation cooled and space began to turn black. (in visible light.) The early matter formed from Big Bang - Hydrogen and Helium - these began to grow into pockets of gas. Vast clouds were slowly formed, began to spin and brighten. These were the first galaxies. The largest recognizable structures in the universe. [Our Galaxy: 15-20 Billion years old].

4 Billion years after the Big Bang the gravity of these vast clouds drew other clouds to them. Becoming clusters of galaxies. 'Gravitational Collapse', ①, compacted the matter densely together. 'Conservation of Angular Momentum', ②, spun the galaxies faster. Some became 'Spiral' galaxies flattened great wheels of matter. Others became Elliptical galaxies. Same all over the universe because of these two simple laws of Nature, ①, ②. (Milky Way Galaxy - ours - 'Spiral') (① and ②, Gravity pull, spin, cause 'Hydrogen to Helium', "thermonuclear reactions".) (Galaxy - thousands of solar systems, stars etc, (solar = sun) all as one unit.)

[One, or more, new stars appear in our galaxy each year].

Within these galaxies, smaller clouds of gas also underwent 'Gravitational Collapse'. Their temperatures got higher until thermonuclear reactions started and the 'first' stars were turned on. These stars differ greatly, which we'll come to later. But first hot, massive stars turned into "Supernovae" explosions which returned its contents to space and contributed to another round of star formations. Also contributed to galaxies colliding. This was the start of the evolution of the universe.

The universe is 99% Hydrogen and Helium, which are the two simplest elements. All other elements - Carbon, oxygen, Nitrogen, Iron etc. are made from them. But where and how are they made?

Firstly: Except for Hydrogen that was made in the Big Bang. "All" other atoms are made inside stars. Stars are a kind of cosmic kitchen in

which Hydrogen Atoms are 'cooked' into Heavier Atoms. An Atom is made up of three units:

A. ELECTRONS.

These orbit Around ^N nucleus.

B. PROTONS.

These two units are in the Nucleus.

C. NEUTRONS.

ELECTRONS, PROTONS, ALWAYS equal Number.

ELECTRON - Negative.

Proton - Positive.

Neutron - Neutral.

The way in which these 3 units are put together in various patterns, make essentially everything. Nucleus contains Protons and Electrons, which in turn are each made up of 3 quarks.

E.g. if an Atom has 1. Proton - it's Hydrogen.

2. " - " Helium.

6. " - " Carbon.

8. " - " oxygen.

Helium is a 'very' stable Atom. Its Nucleus: 2 protons and 2 Neutrons.

if we can put 'three' Helium Nuclei together - we make Carbon.

" " " " 'Four' " " " " " oxygen.

Each time we add a Proton (and corresponding Neutron(s)) we make a 'New' chemical element. If we take 1 Proton and 3 Neutrons from Mercury - we make Gold. (Alchemy).

It is only in the inside of stars, that have temperatures of millions of degrees and massive pressures that this fusion can take place. (Short Range Nuclear forces. ^{overcomes} Repulsion.)

STARS: Great balls of Hydrogen and Helium gas. Glowing because of nuclear fusion. Where 4 Hydrogen Nuclei combine to form a Helium Nucleus. With resulting release of a 'Photon'. (Radiation). This Photon may take a million years to work its way out of centre of star. Until it reaches the surface as 'visible light' and is radiated into space. **THE STAR HAS TURNED ON. AT LEAST 1,00,000 M STARS IN OUR GALAXY.**

Alien Civilization?

The Gravitational collapse of Gas cloud has halted as the weight of the outer layers are now supported by high temperatures and pressures generated in centre. Some 400 Million Tons of Hydrogen being converted into Helium every second. When we look at stars at night (me and Madgie) everything we see is shining due to nuclear fusion.

This fusion cannot continue forever. The fate of a star depends on its initial mass. For a star the size of our Sun (same mass. Surface Temp: 6,000°. Inner Temp, where sunlight is generated 40 Million°.) When central Hydrogen has all formed Helium, then Hydrogen fusion will spread outwards. At a region which is less than 10 Million°, Hydrogen fusion will stop.

Meanwhile the central gravity in Sun will force a new contraction of its Helium core. Thus generating new temperatures and pressures. Helium Nuclei will start to fuse together and this will fuel the Sun into a second round of fusion reactions.

This process generates the elements Carbon & Oxygen and provide additional energy for Sun to shine on. Thus have Helium fusion in core and Hydrogen fusion on outside. Makes Sun undergo a major change. Its exterior will expand and cool. Become a Red Giant Star whose surface is that far from the core that its gravity will be too weak to hold it. And it will spill out into space, engulfing planets.

Billions of years after this, Sun's core will be all Carbon and oxygen. A last 3rd round of nuclear reactions will begin due to collapse etc. This will again expand the outside a little. Sun will slowly expand and contract. Eventually spilling its atmosphere out into space. The hot exposed core will flood the outside shell with light extending a few billion miles into space and losing 1/2 its remaining mass. Sun's core: small hot star. Cooling in space. Collapsing to super density. (Ton-teaspoon.) slowly become a white dwarf cooling to its ultimate state. A dark and dead Black Dwarf.

Other stars:

BINARY SYSTEM: So close they finally touch. Produces a **NOVA**, (powered by Hydrogen fusion.) Actually two red giants, but one develops quicker and declines quicker into a white dwarf. It is white dwarf which flares into a nova. Only occurs in a binary system. **half the amount of stars in the universe are binary, or multiple.**

SUPERNOVA: These only occur in a single star system. But, are much more massive than our Sun. They exhaust their fuel for quicker. Converting H. into He. For a few million years only, before beginning new fusion. Finally finish with Silicon fusion. Silicon atoms have 28 protons & neutrons. If two fuse together at Billions° we get an Iron Atom with 56 protons and neutrons. A supernova produces more energy in a few days than the Sun has radiated in a billion years.

In Supernova this generates a massive iron core. The pressure exerted on this is such that the electrons and protons are welded together in iron nuclei. Core of star is turned into a single giant atomic nucleus of super density. This core implodes on itself with result that exterior rebounds and a supernova explosion occurs.

This explosion of supernova, vastly bright, destroys everything around it. Planets etc. The billion. It throws out into space most of its matter i.e. some H & He with lots of Carbon, oxygen, Silicon, Iron etc.

SUPERNOVA in 1054 A.D. 6,000 light years away. Seen on earth for 3 months with naked eye. Flared up. Could read by it at night. (Chinese, Red Indians, Moslems. Europe - No.)

What remains is a core of hot neutrons bound together by nuclear forces. A single massive atomic nucleus. A Sun 30 miles across, with an atomic weight of 10^{56} . i.e. An ordinary teaspoonful would weigh the same as a mountain. Called: **NEUTRON STAR**. It spins rapidly. 30 times a second. Its magnetic field is so powerful that it traps atomic particles which emit radiation in visible light etc. Each rotation, emits a flash. Called **PULSAR** because of this. A cosmic lighthouse - it keeps better time than any clock. **PULSAR = A pulsating star.**

BLACK HOLE:

This Applies to A MORE MASSIVE STAR yet again. AFTER A Supernova, IF A STAR is left with 'FIVE' times the Sun's Mass, it's Gravity will turn in into A Black Hole.

We on EARTH experience GRAVITY. Perfectly used to it. We call it 1 G.

IF experienced 0 G - slightest motion would send us floating into space.

IF " 4 G's - Everything would be immobilized.

IF " 1,000 G's - Trees, people, etc, would be squashed FLAT.

IF " 100,000 G's - Rocks would be crushed by their own weight.

AT 1 Billion G's - 1,000,000,000 G's - Light, which TRAVELS in a STRAIGHT line, Begins to bend.

AT Billions of G's - light is pulled back into Black Hole. When GRAVITY is this high -

NOTHING - NOT even light, can get out. Sucks things in.

When Gravity and Density is high enough - Black Hole winks out and disappears From UNIVERSE. (GRAVITATIONAL Tug.)

A Supernova Left with appropriate MASS will shrink incredibly, Spins, Reddens and at 10^{10} G's it disappears. (Apple, worm Holes?).

QUASARS:

Billions of light years away. May be colossal explosions of young Galaxies. They are racing away from us at 90% speed of light. Biggest explosions after Big Bang itself. Every Quasar explosion. Millions of Worlds destroyed. See them as they were Billions of years ago.

- Blue STARS - Hot and young.
- yellow STARS - Conventional, Middle aged.
- Red STARS - Elderly and dying.
- White & Black STARS - In final stages of death.

So FAR, we have the General picture: The Big Bang - The Formation of Hydrogen. The Formation of MASSIVE Gas clouds which form GALAXIES. The Formation of STARS (VARIOUS kinds). The Formation of ELEMENTS. THE STRUCTURE of ATOMS. AS we've seen, Oxygen, Carbon, Iron, etc are "Cooked" inside stars. Then, due to SUPERNOVAE etc these contents are spewed out into space. To Eventually undergo the same process again, i.e. STAR Formation.

But between the stars, other clouds made up of many elements were forming. These which attained enough mass, like our Sun, turned into a star. Those of lesser mass, unable to ignite, their Nuclear fire, turned into planets. Trapped within the Gravity of a STAR. Called SOLAR SYSTEMS.

SOLAR - Sun.

STAR at Centre, with planets around it.

>>>> - Sperrin Mts.

Co Derry: Derry City - Dy. L - Limavady.

C - Coleraine. S - Swatragh.

D - Dungiven. BY - Bellaghy.

BN - Ballynaw. M - Maghera.

DN - Desertmartin.

Co Tyrone: S - Strabane. F - Fintona.

A - Aughnacloy. T - Trillick. D - Dromore.

O - Omagh. CL - Clogher. P - Pomeroy.

DN - Dungannon. CA - Carrickmore.

CN - Caledon. CO - Coalisland.

CT - Cookstown.

Co Antrim: C - Cushendall. A - Antrim.

L - Larne. CA - Carrickfergus.

LI - Lisburn. BE - Belfast.

BA - Ballymena. BY - Ballymoney.

Bal - Ballycastle. >>> - The Glens.

Co Donegal:

B - Ballyshannon.

P - Pettigo.

Co Leitrim:

Co Fermanagh:

B - Belleek. G - Garrison. Be - Belcoo.

T - Tempo. R - Roslea. E - Enniskillen.

LW - Lisbellaw. LA - Lisnakea.

N - Newtown butler.

Co Cavan: C - Coot hill.

Co Monaghan:

M - Monaghan. B - Ballybay.

CY - Castletaney. C - Clones.

Co Down: NS - Newtownards.

C - Comber. BH - Ballynahinch.

DE - Dromore. BE - Bmlbridge.

DK - Downpatrick. NY - Newry.

R - Rathfriland. K - Kilkeel.

Co Louth: E - El Paso.

Co Armagh: L - Lurgan. P - Portadown.

A - Armagh. K - Keady. CH - Camlough.

CN - Crossmaglen.



In EARLY SOLAR systems many planets would have been in process of formation. A form of NATURAL selection worked: Those with ELLIPTICAL orbits, would be destroyed sooner or later by collisions, orbits would INTER-SECT. (MATERIAL-WASTE.) Those with CIRCULAR (NEARLY) orbits, be neatly separated from each other. Hence survive. ON VAST outer Regions of SOLAR system - Comets. GIANT SNOWBALLS. About A mile across. EVERY so often one gets Tugged into inner SOLAR system. Some inevitably will collide with planets. HAVE ELLIPTICAL orbits (Maybe vital to life.) EARLY HISTORY of SOLAR system. An age of impact (MOON. NO ATMOSPHERE. NO EROSION. THUS PRESERVED.)

186,282.

UNIVERSE is 16 Billion light YEARS across. Speed of light: 186,000 Miles per sec. 1 Light year: ^{5,880,920,000,000} 6 x 10 miles. (Imagine), Intergalactic viewpoint - 8 Billion L.Y. From earth. Galaxies all around us. Approx. 100 Billion (or 10¹¹) in Universe. Each Galaxy - Composed of Approx 100 Billion stars. Some contain much more. Probably Billions of more planets.

Heading towards EARTH. Come towards local group of Galaxies. 20 Galaxies. Several Million L.Y. Across. Closest Galaxy To EARTH - M31 - which is 2 Million L.Y. From Earth.

'M' = MESSIER.

Passing M31, we come towards our Galaxy. The Milky Way Galaxy. Has a diameter of 100,000 Light years. This is a 'Spiral' Galaxy, with its arms turning slowly. Once every 1/4 Billion years. The Sun and Earth are on one of these spiral arms.

Passing into the centre of the Milky Way Galaxy, Everything is brilliantly illuminated. Has Approx 400 Billion stars. But the Earth is still 30,000 Light years from this centre. Out on a distant Spiral arm. Heading towards Earth vast numbers of stars flash by. All kinds, shapes, sizes etc. (Some 1 Million times bigger than Sun.)

Nearest star to Earth - PROXIMA CENTAURI - 4 Light years From Earth.

Now 1 Light year from Earth i.e. 6 Trillion mile's, (or 6×10^{12} Miles.) Coming into vast swarm of comets (Trillion) which orbit Sun very slowly. (Average - one orbit every 30 Million years.)

These Comets Composed of Ice, Rock and Organic Molecules, (especially Carbon - vital to life.) They only develop their so-called TAILS when they're pulled into inner Solar system. Then as they approach Sun they become heated, their ice is vaporized and as come closer, their TAIL develops...

NASA: NATIONAL Aeronautics, and, Space administration.

SETI: Search, for, Extra-Terrestrial Intelligence. [Frank DRAKE.]

It was Copernicus who showed that our planet was not the centre of the Universe.

Come to first of the planets - Pluto - So distant that Sun is only a point of light to it in a pitch black sky.

Pluto,	3,700	Million Miles From Sun.	Has a Diameter of 3,650 Miles.	Takes 248 years To orbit Sun.
Neptune,	2,793	" " " "	" " " " 33,000 "	" 164 " " " "
Uranus,	1,782	" " " "	" " " " 30,900 "	" 84 " " " "
Saturn,	886	" " " "	" " " " 75,100 "	" 29 " " " "
Jupiter,	483	" " " "	" " " " 88,700 "	" 11.8 " " " "
(ASTEROIDS)	-	-	-	-
Mars,	141	" " " "	" " " " 4,200 "	" 1.88 " " " "
EARTH,	93	" " " "	" " " " 7,917 "	" 1. " " " "
Venus,	67	" " " "	" " " " 7,600 "	" 0.61 " " " "
Mercury,	36	" " " "	" " " " 3,000 "	" 0.24 " " " "
-	-	-	-	-
Sun,		" " " "	" 864,000 Miles.	

This is our SOLAR system. Condensed out of inter-stellar gas and dust.

During this Jupiter Acquired most of the Matter that didn't fall inward to form Sun. If Jupiter had been several dozen times more massive, the Matter in its core would have undergone Thermonuclear Reactions and Jupiter would have begun to shine by its own light. It is a star that failed. If it had have become a star then we would have inhabited a Binary STAR System. With two Suns in the sky.

Neptune, Uranus, Saturn, Jupiter. All Giant Gas Worlds with icy moons. Pluto - 1 moon. Jupiter and Saturn have over 12 moons each. TITAN (A Moon around Saturn.) is about the size of Mars. Asteroids - So called minor planets - Biggest is Ceres, 400 miles in diameter.

EARTH - 1 MOON. OVER 70% of Surface is covered with water. Its inner Core is believed to be made of Solid Iron - 800 miles in diameter. Its outer Core is believed to be Made of Molten Iron. 1400 miles thick. On top of this is a MANTLE of Solid Rock - Maybe - 1800 miles thick. On top of this is outer Crust. 30 Miles thick beneath continents, and 3-5 miles thick beneath the ocean floors.

Our Planet's circumference is 24,902.4 Miles, and its radius [allowing for slight variations, since the Earth is not an exact sphere] is 7917.78 Miles. There is a flattening at the poles, and a slight bulge at the Equator. This was caused by the Earth's rotation on its axis...

THE UNIVERSE. All THE GALAXIES in it are rushing away from each other. The more distant they are, the greater their speed. A time will come when they will all disappear over our Galactic Horizon. The lights in the sky will go out. Stars cool and die. Matter decays to particles.

①, If there is less than a critical amount of Matter in the Universe. Then the Gravitation of the Galaxies will be insufficient to stop the Big Bang explosion and Universe will run away for ever.

②, If there is More Matter in Universe than we can see, then the universe will hold together, GRAVITATIONALLY. With (inevitably) expansion being followed by contraction. Endless succession of cycles. Thus Big Bang would only be end of previous cycle and so on.

Hinduism:

Has idea that Universe undergoes an immense, infinite number of deaths and re-births. It is only Religion which corresponds to time scales of Modern Science. It's cycles run from an ordinary day and night, to a day and night of BRAHMA which is 8.64 Billion years long. (longer than age of Earth and Sun.) There are much longer time scales still. That Universe is the dream of Brahma, who after 100 Brahma years dissolves himself into dreamless sleep and Universe dissolves with him. Until after another Brahma Century. Then he begins to dream the cosmic dream again.

Hindus thought in Billions of years. Mayans in Millions. Europeans in Thousands. (Bible). Of course - it's said that men may not be the dreams of God, But rather that Gods are the dreams of Men.

Just to Re-cap:

The Origin of the Universe began with the Big Bang. This created huge clouds of Hydrogen gas which began to form into the first Galaxies due to two basic laws (① and ②) of Nature. Within these Galaxies smaller clouds were also affected by these laws and began to form the first stars. Which ignited. Shone. due to the conversion of Hydrogen into Helium by Thermonuclear Reactions. Vast amount of STARS of all kinds were formed, exploded etc. each in their turn generating new elements (Carbon etc.) which were spewed into space to undergo more TRANSFORMATIONS eventually. This Matter eventually began to form our our Sun. And other matter not swept up into the Sun began to form the first planets.

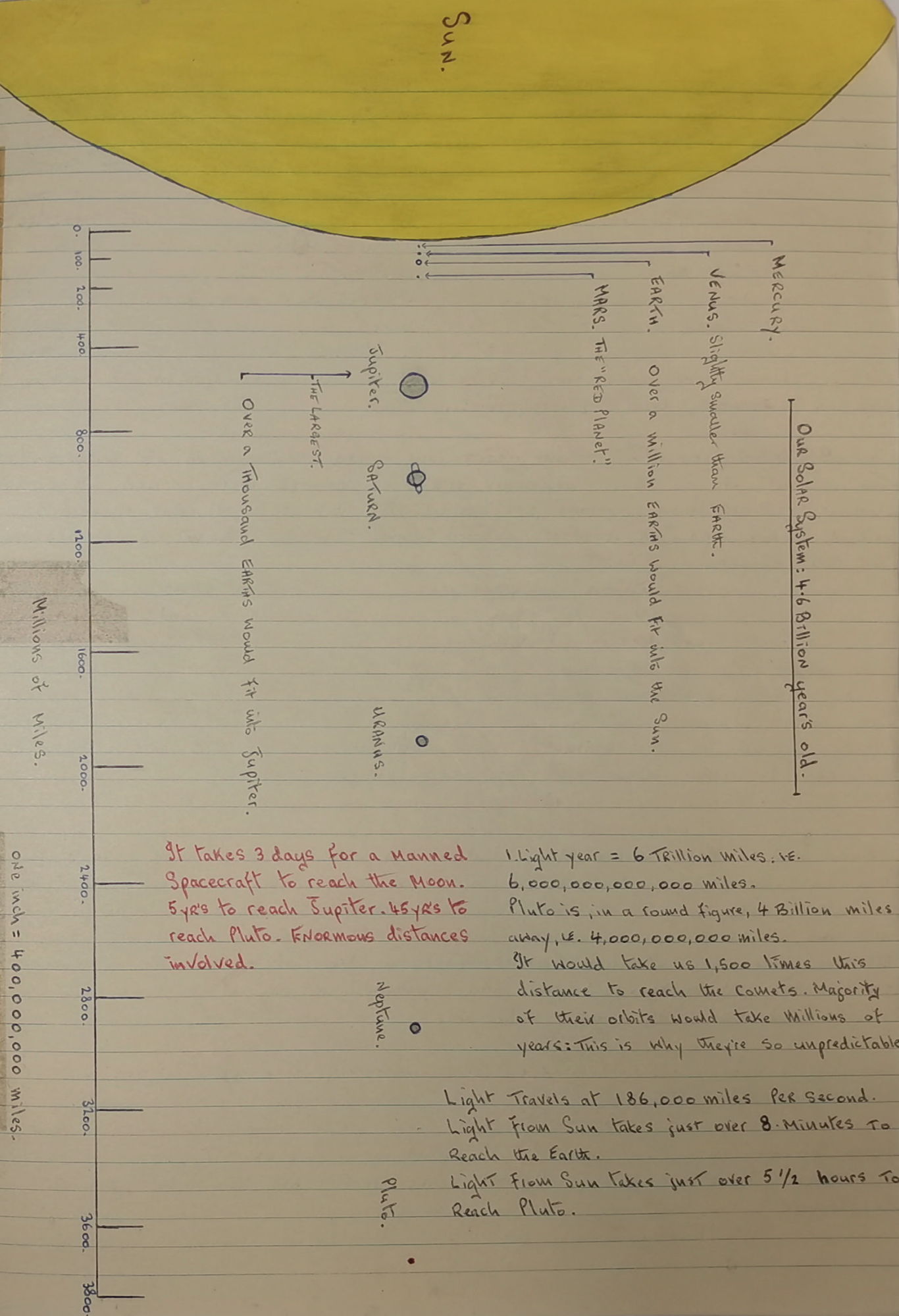
All the Elements of Earth - Except Hydrogen - were Made in the Stars.

"GALAXY": From the Greek word for milk. The Galaxies are all receding away from each other at speeds approaching that of light, in the observable universe. (distances from the universe as a whole). The universe is expanding. The expanding universe theory was confirmed in the 1930's.

It is now estimated that there are 3,000 Million Galaxies.

Two scales here mixed in.
 Not totally accurate:

100 Tons of Meteoritic Material enters the Earth's atmosphere; every day...



It takes 3 days for a Manned Spacecraft to reach the Moon. 5 yrs to reach Jupiter. 45 yrs to reach Pluto. ENORMOUS distances involved.

1 Light year = 6 Trillion miles, i.e. 6,000,000,000,000 miles.

Pluto is, in a round figure, 4 Billion miles away, i.e. 4,000,000,000 miles.

It would take us 1,500 times this distance to reach the comets. Majority of their orbits would take Millions of years: This is why they're so unpredictable.

Light Travels at 186,000 miles Per second.

Light from Sun takes just over 8. Minutes To Reach the Earth.

Light from Sun takes just over 5 1/2 hours To Reach Pluto.

EARTH & LIFE:

The Earth Condensed. Took shape. Out of the Gas, Dust, ELEMENTS ETC. Swirling about, the early Sun, Approx 4,560,000,000 years ago. As Sunlight flooded on to the Earth a process of complex events took place. The Earth itself as it warmed released the gases Methane, Ammonia, Hydrogen and so on, that had been trapped in it's material. Thus forming a PRIMITIVE Atmosphere. Water was formed, and along with the crashing of Comets into the Earth, which likewise carried water and Carbon Compounds. The first Oceans were formed. Sunlight generated lightning and thunder. Which in turn broke apart the Hydrogen rich Molecules in atmosphere. These re-combined to form even more complex Molecules, which eventually dissolved in Oceans. Storms raged all over the Earth. Volcanoes overflowed with lava ETC. All of which contributed to vastly complex chemical reactions occurring...

By 4,450,000,000 yrs ago the Oceans were like a kind of warm soup. The product of all these chemical reactions. Molecules were formed into complex chains. Breaking down. Reforming etc. Life hadn't arose yet. But Molecules existed which conducted chemical reactions similar to life. (Amino acids formed in this soup - Experiment.)

Certain types of clay exist on Earth. They absorb and release gases and bring about chemical reactions as a result. They can combine, Amino Acids, in to long chains which resemble Proteins. It's reckoned that before life existed on Earth, these chemical reactions which resemble Respiration and Photosynthesis were already cycling in the soil and may well have contributed these two vital processes to life when once it arose.

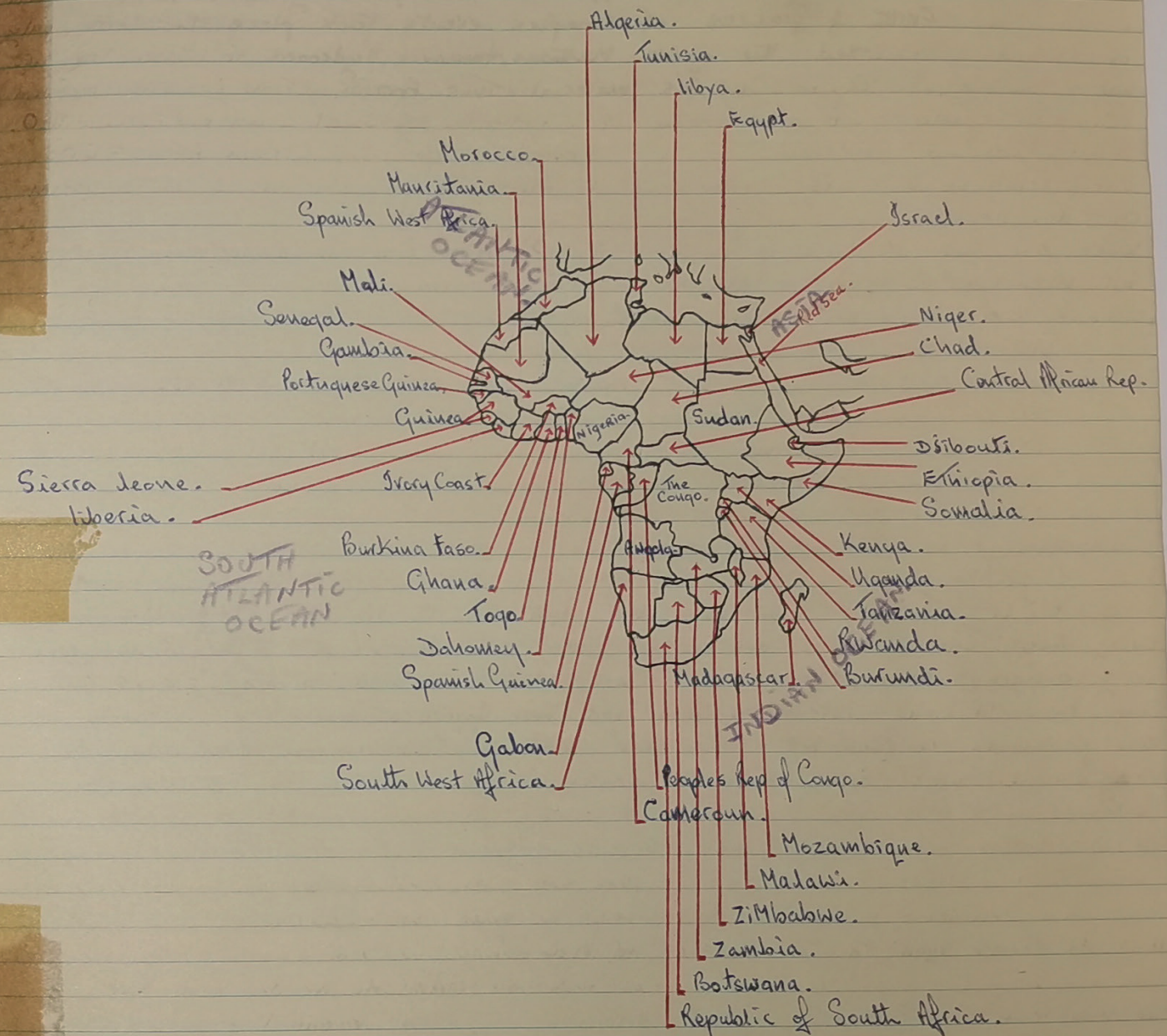
Experiment: MARS. (1976.) Mixed Martian soil with lifeless organic soup Molecules from Earth. Something in Martian soil broke the soup down chemically, as if microbes in soil were using it to Respire and Metabolize. The same as when Gas from Earth was introduced into soil, it combined with soil chemically as if (photosynthesis) Microbes were again at work. Fact is: There's no trace of organic life on Mars. It's reckoned that Martian soil (like Early Earth's soil) in absence of Microbes can convert Gases ETC. into organic Molecules.

ESSENCE OF LIFE:

Is the ability of living things to extract energy from the environment. To use it to build up complex structures and carry out these Functions. And finally to make copies of themselves i.e. To Re-produce.

All living things on Earth do this...

Africa:



Republic of South Africa

Transvaal.
Orange Free State.
Lesotho.
Natal.
Swaziland.
Cape of Good Hope.

Niels Bohr described the Atom.

As we already know all matter is composed of Atoms. They are fundamental building blocks of everything. An Element: is a substance composed of one type of Atom. E.G. Iron - Made only of Iron Atoms. Diamonds - Made only of Carbon Atoms, Etc. A Compound: is a substance composed of Molecules, i.e. larger building blocks. These are produced when different Atoms combine. (are mixed).
 E.G. A Water Molecule is a compound of 2 Hydrogen Atoms & 1 oxygen Atom. = H_2O .
 E.G. A Carbon dioxide Molecule " " 2 oxygen Atoms & 1 Carbon Atom. = CO_2 .
 E.G. A Speck of Salt is " " 1 Sodium Atom & 1 chloride Atom = Sodium Chloride. (NaCl).

When one type of Atom is by itself, it has certain chemical properties. But when it joins with other different Atoms, it acquires new " " "

E.G. Sodium: is a metal which burns on contact with water.

Chlorine: is a deadly poisonous gas.

Together they form, SALT. - Harmless.

Thus:

Atoms can bond together to form Molecules. Carbon is the special case - vital to life. Carbon compounds form most of the chemical compounds in living things. They have the ability to form complex bonds with other atoms, (especially oxygen, Hydrogen, Nitrogen and Phosphorus.) To build up long chains and rings, to build complex structures and hold them together. The key family of these compounds are PROTEINS. (which are involved in structure and functioning of living things.) These Biological compounds contain maybe Hundreds to Hundreds of Thousands of Atoms.

In our Bodies there are approximately 50,000 different kinds of Protein.

How do Atoms bond together to form Molecules?

Firstly, we already know that it's the number of Protons that determine an Atom's chemical properties. But it's how the ELECTRONS behave that explain how they bond together.

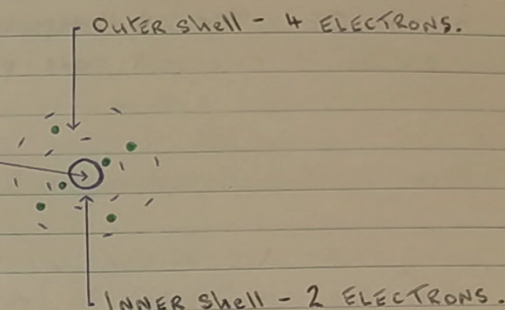
The simple rule is that each kind of Atom has the capacity to develop only a certain number of bonds with other Atoms. It is electrical forces that allow the bond to be formed. Try picture the Nucleus of an Atom with a kind of shell-like structure around it. Electrons are placed in each shell in definite amounts which produce a kind of stability.

THE inner shell - AT THE MOST - Contains only 2 ELECTRONS.
 THE next shell " " " " " 8 "
 " " " " " " 8 "

E-15-

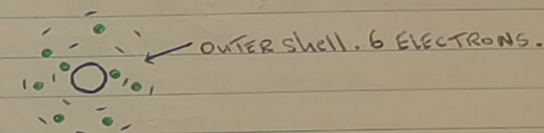
CARBON ATOM: 6 PROTONS. Therefore 6 ELECTRONS.

As can be seen the outer shell has 4 electrons. It thus has room for another 4 AT the most. Therefore A CARBON ATOM has capacity to form 4 bonds with other Atoms.



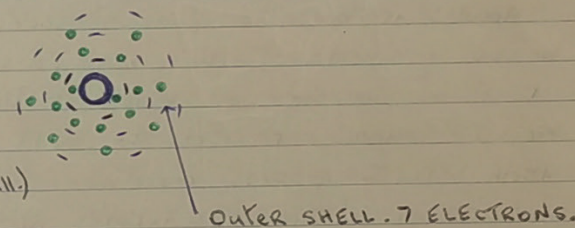
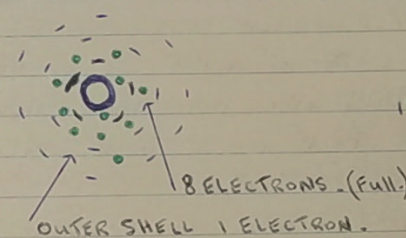
Oxygen Atom: 8 PROTONS. Therefore 8 ELECTRONS.

Outer shell has 6 ELECTRONS. Thus has room for another 2 - AT the most. Can form 2 bonds.



Sodium ATOM: 11 PROTONS. 11 ELECTRONS.

Chlorine ATOM: 17 PROTONS. 17 ELECTRONS.



It is through the actions of heat, light, pressure, radiation, vibration, etc. which sets these Atoms AT work to bond or break apart. As can be seen with Sodium and chlorine, once the electrical forces keeping them apart are overcome they form a bond which unites them. And outer electrons unite to form a stable shape of 8 ELECTRONS. This in turn produces a molecule of good stability. I.E. SALT.

Hydrogen Atom, 1 Proton, 1 Electron.

A Hydrogen Atom can only form one bond.

An oxygen Atom can form two Bonds. Therefore an oxygen Atom can form a bond with 2 Hydrogen Atoms = H_2O = WATER. Very stable as share 8 ELECTRONS. Hydrogen and oxygen are both Gases.

WATER is a liquid at certain temperatures.

" " " Solid " " " (ICE.)
 " " " GAS " " " (VAPOUR.)

Back to Proteins:

These in turn are made up of sub-units called "Amino Acids." Proteins are living molecules. Amino acids are lifeless molecules. Life is composed of lifeless molecules.

Back to the original, warm soup (broth) like oceans:

Before life arose we know that many molecules existed which underwent chemical reactions. We now know that molecules are 'made' in this soup called amino acids (experiments). On their own, amino acids are lifeless but joined together to form proteins they become the very stuff of life.

Life is based on Amino Acids. Molecules which are also made up of combination of oxy, CAR, NIT, Hyd, Phosphorus atoms. Somewhere, Sometime, amidst all this chemical activity in the oceans A molecule arose that was able to make crude copies of itself, using other molecules as parts. As building blocks (the oceans were full of these molecules.) Everything would be very simple at this stage. A matter of a molecule of amino acids being able to extract from the soup in which it lived other molecules which it could break down and use the energy released to build itself up until it can eventually make a copy of itself. With the process repeating itself constantly.

As time passed more elaborate, complex molecules arose capable of copying itself. The soup-like ocean began to grow thin as these molecules began to feed on others. And thus: Transforming the ocean into complex forms of self-copying organic molecules.

The original molecule capable of doing this is the earliest ancestor of, DNA. This is the master molecule of life on Earth. It is contained in 'every' living thing. And it is this which carries the message of how an organism can develop, acquire energy, make copies of itself.

*: See facing page, and then back to here.

Approx 3,900,000,000 years ago. Through mutations, getting more efficient etc. a Bacteria arose capable of Photosynthesis. Photosynthesis is the ability of plants to use water, Carbon dioxide, and Sunlight - to turn them into carbohydrates, sugars, oxygen. It releases oxygen as a waste product back into atmosphere, and used sugars and carbohydrates as energy etc. Rocks founded in Australia and dated 3 1/2 Billion years ago contain masses of these bacterial plants called, STROMATOLITES, in fossil form. All these forms of life. Made of only one cell. They copied themselves i.e. re-produced by splitting into 2 equal halves to form 2 new cells. And so on again. Other forms of Bacteria existed

at this stage also, got their energy from surrounding molecules, plant-like forms etc.

*: Approx 4 Billion years ago. Earth was still in primitive stage i.e. poisonous atmosphere (poisonous, that is, to us today.) First proper life we know of is Bacteria like minute organisms. Plant like organisms. Existing in a rudimentary cell. The ultimate source of energy is Sunlight. Plants use sunlight - Convert it into energy - store it and grow etc. Animals in turn feed upon plants (or animals which have ate plants.) In evolution, first life is this, Plant-like organisms.

By 3 billion years ago, a number of one celled organisms had joined together (maybe a mutation that prevented a single cell from splitting into two.) This was the beginning of Multi-Cellular organisms. All banded together for the common good. Today, us, made of 10^{14} cells.

2 1/2 Billion years ago, change began that eventually led to beginnings of animals. Some Bacteria lost their hard cellular jackets and were left with only a soft membrane covering them. This enabled Bacteria to move more freely.

A process had been occurring now for over a Billion years which was to change life drastically. The atmosphere at this time kept the heat radiated by the Sun trapped on Earth - Making it warm and humid. The most commonest gas in atmosphere was Carbon Dioxide. And it was this that stopped heat escaping into space. From the time of the Stromatolites the planet was gradually being poisoned by Oxygen - As we know they developed photosynthesis - This takes Carbon Dioxide from the air, uses it, and breathes out oxygen. Thus as Carbon Dioxide was being used up over this billion years the Earth grew slightly colder and we have the first ice ages Approx 2,300,000,000 years ago.

More importantly, these Bacteria were releasing oxygen over this same period into atmosphere. It never got the upper hand until Approx 1,800,000,000 years ago, when it overcame all other chemical defences to use it up. Oxygen is deadly poisonous to organic matter i.e. life. Many forms of Bacteria died. A crisis occurred in life due to this...

Evolution was speeded up to solve this crisis. The fossil record in Geology records this crisis. As at this time a whole new kingdom of organisms is found. These learnt how to use oxygen. exploit it. Others which couldn't change - died out. (Some ancient Bacteria retreated to dark airless places - Some survive today - and can only live in oxygen free environments.) One of the newcomers, a purple bacteria, learnt how to cope with oxygen - thrived in oceans.

Approx 1,700,000,000 years ago. A Bacterial neighbour of this purple bacteria, but derived from the Jacket-less bacteria came up with a new invention.

In response to the oxygen crisis, it absorbed a small descendant of the purple Bacteria, which now would manage the oxygen and in return would receive nourishment.

1. This is the Ancestor of all Modern cells in Animals.

The Bacteria absorbed is called "Mitochondria". It is in the cells of our bodies today.

These primitive Ancestors of animals were still minute single celled creatures. Another Billion years were to elapse before they had acquired the internal Machinery that enabled them to form Sizeable Animals composed of large numbers of living cells working in Harmony.

Meanwhile, Approx 1,500,000,000 years ago, Another union took place regarding the Modern cells of plants. A Bacteria (which was related (maybe the same,) to the Bacteria which absorbed the Mitochondria.) Took in another small blue-green bacteria which was capable of growing by Sunlight. This makes use of the Carbon dioxide gas (Just as the Mitochondria makes use of oxygen, in animals.)

2. This is ancestor of all Modern cells in plants. The Bacteria absorbed is called: "chloroplasts".

Thus: 1 and 2, was division of life into two distinct Kingdoms - Animals and plants. (had common Ancestor.)

Approx 1,300,000,000 years ago: Fossil evidence shows ~~that~~ the first Multi-celled plants. (Types of Seaweed, Micro.)

Horoscope. Unscientific:

Venus: The planetary Ruler of Libra, Venus is the planet of Peace and Love.

Jupiter: The planet of Providential protection, is Ruler of the Sagittarius sign. Sagittarians seem to be happy-go-lucky, pleasure-loving and Self-indulgent, yet there is nothing superficial about their mentality.

For nearly 3 Billion years, life consisted of minute single celled organisms. A sort of blue-green Micro Seaweed was the dominant life form which covered and filled the oceans. Evolution up to now had been agonizingly slow. Re-production had been by one organism splitting into two etc. Any changes - Mutations - could only arise due to accumulations over Ages until a new life form had arose. These changes would be 'activated' by changes in the environment, (oxygen crisis E.T.C.) - When Re-production took place a cell simply divided, Making two identical individuals from one. Each carried identical DNA. This was the Reason Evolution was so slow. What speeded Evolution up was the invention of Sex. This was the Formation of a 'New individual' by taking it's DNA from two individuals, Mixing the DNA up, thus producing New Varieties of Life.

Approx 1 Billion years ago - Could be later - Sex arose among Bacteria. DNA - is made up of Genes. They carry the message of how an individual can make a copy of itself, extract energy etc. What sex done was to arrange certain Genes into Male and Female Germ cells. Which when united supplied a full set of Genes for a new individual. The reason how this accelerated Evolution was:

Each individual has a set of Genes which determine his characteristics E.T.C. 'Non-Sexual Re-production' - was simply the splitting of the Genes into full identical parts - followed by the cell splitting - Hence two identical cells being Made.

'Sexual Re-production' - is the splitting of the Genes in one individual to form a sex cell. which contains only half the full set of Genes. when the $\frac{1}{2}$ set join with another sexual $\frac{1}{2}$ set (from another individual - namely Madge.) They form a new, Unique, individual with a full set of Genes.

What this means for Evolution is that constantly new individuals are being born. With which Nature, through a process called NATURAL SELECTION, selects those most suited to survive - which will in turn thrive - and rejects those which can't adapt - which will die out -.

Approx 670 Million years ago:

Most severe cold spell in Earth's history happened. Fossil record shows food sources becoming scarce. This prompted the appearance of the first true Multi-celled Animals. An Animal composed of Multi-cells would pay off as it could sample larger volumes of water than single celled primitive Animals could do when searching for food. Most of food sources lay on sea bed, the remains of microscopic plants. The means of getting at this was under development...

Humans trace back to Flat-Worms - Ribbons of cells with simple nervous systems which wriggled along the sea-bed in search of food. These Ribbons of cells, help make hollow bodies with internal organs. Pumped full of water - such bodies became more rigid and helped worms to burrow into seabed. Among these worms were the Ancestors of all hollow bodied Animals - including us.

From 670, To Approx 600 Million years Ago:

Became what is known as the "Cambrian Explosion". This is not an explosion in a bomb sense. But the discovery in the Fossil record of diverse Forms of Life. This period was the beginning of Evolution in the way that broke out of the old mould. Spectacular Forms of Life develop from here on in. Over this period the First Vertebrates appear. As do the First primitive Brains. (in worms. Types of Crab.)

The organization of hollow bodied worms enabled them to Evolve into larger - diverse Animals. E.G. A worm built in segments (like Modern earthworm) gave rise in time to scorpions and house flies. These fossils are found in Australia and the Soviet Union - dated 620 million years ago.

Our Ancestors of this time - A worm with tentacles - . Our Ancestry followed a fishy route, when tadpole like larvae of these became capable of re-producing while still swimming about. These were the forerunners of fish. Some Animals began to form shells for protection. others formed bony scales on their backs (Fossils - 510 Million years ago.)

It still took a long time for PROPER internal skeletons to develop - Bony Jaws appeared in fish 425 Million years ago - fins by 415 Million years ago.

But other fish with fleshy, muscular fins, had converted parts of their guts into the First Vertebrate lungs, (Air Bladder - lung fish.), Capable of breathing air. Among them were the Ancestors of the, Bony land Animals.

So far, for Billions of years life had been confined to water. Continents totally barren, like MARS E.T.C.

Approx:

425 Million years ago,

(Millipedes.) First plants appeared on land. Soon followed by first animals.

395 M.Y.A.,

Millipedes, mites, and the first insects were eating the plants. Spiders and Scorpions appear and eat the insects E.T.C.

370 M.Y.A.,

Plants formed trees and forests. Fossil record shows that first Vertebrate now appear on land.

Fish began to take to the land. Developed into Amphibians i.e. Scaly looking creatures looking like fishes on legs. Their fleshy fins developed into four limbs. Fed on insects. But few took to land, (lungfish), stayed in or near water to breed. Their descendants today are frogs E.T.C. Early Amphibians filled gap between fish and Reptiles.

310 M.Y.A.,

First Reptiles emerge. Their unique invention was the modern egg with its protective shell. Reptiles were able to move about more freely, and able to grow much bigger. These were first large animals to walk on land. (they included the forerunners of the Mammals.) These EARLY reptiles dominated the land for approx 100 Million years. But, two, disasters overtook them.

The first approx 256 M.Y.A. when many were wiped out.

The second approx 245 M.Y.A. when the entire planet nearly died.

It's reckoned these were caused by collisions with comets E.T.C. But, every mass extinction was an opportunity for survivors among these early reptiles to establish themselves.

Approx 235 M.Y.A.,

A different branch of these reptiles - Dinosaurs - appeared. Trotting about like birds on their hind legs. They gave rise to the most successful group of bony animals ever to inhabit Earth. They were a direct challenge to the early reptiles...

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225 M.Y.A.:

Dinosaurs had attained the great sizes that we now find in Fossil record. The Dinosaurs nearly wiped out all the other reptiles including our Mammal-Like Reptile Ancestors.

216 M.Y.A.:

Some Mammal-like Reptiles had went to ground as animals as small as mice, the first True Mammals. They spent the next 150 M.Y.A. in this state. Hiding from predatory dinosaurs and flying reptiles.

Dinosaurs - Swimming, Flying, Walking ones.

The Dinosaurs had their own Evolution - Different Dynasties arising and dying out. But they totally dominated the Earth over the next 150 M.Y.

Meanwhile the Mammals remained small Rat-like creatures. Important changes were taking place in them. They invented the Placenta. In most of species of Mammals today.

114 M.Y.A.:

Floral Revolution occurred. At 100 M.Y. earlier. Ancient Flowers had been using insects for pollination. About 123 M.Y.A. The Ancestors of the Modern Flowers had evolved. Within 7 M.Y. they had spread over most of Earth. Driving out older plants (Just as Dinosaurs drove out early Reptiles). What was good for flowers was good for insects nourished by the flowers. And what was good for insects was good for small Mammals that fed on insects.

Right at this time the Modern Placental Mammals Evolved. (Modern birds?).

95 M.Y.A.:

Our Ancestors became distinct from other Mammals. Beginning of PRIMATES. NOTE: 'Homo Sapiens Neanderthalensis', The Successors in Europe and near east, from the later type of Homo ERECTUS. 100,000 - 35,000 then vanished. Had ritual burial. It was a more primitive form of our species. But, distinguished from Humans today. [A version of Homo Sapiens].

70 M.Y.A.:

Beginning of Monkeys. PRIMATES: 70 mya. PRIMATES: Homo Sapiens, Apes, monkeys, lemurs, Pottos, Bushbabies, lorises, and Tree shrews. All these have important characteristics in common: grasping fingers backed with nails rather than claws. Stereoscopic vision.

67 M.Y.A.:

An asteroid, Meteorite or Comet, Super-nova, hit the Earth. It's reckoned that huge World-wide fires resulted. Destroying vegetation etc. That dust, soot etc, cast into Atmosphere would block out most of Sun's light. (cooling the Earth. Plants dying. ice ages.) ALL of this resulting in changes in the climate. This wiped out all large land animals (Again it's reckoned that possibly 1/2 of all the various Life Forms on Earth were wiped out.) Fossil Record records this. One estimate says that 96% of all life in oceans died. Again, what was disastrous for the Dinosaurs, gave other species

the chance to develop. Our Ancestors were one such Group. Monkeys evolved some 40 mya, followed by Apes 10m after that, and between 14 and 4 mya came the 'hominids'.

36 M.Y.A.: So called old World Monkeys.

21 M.Y.A.: So called early Apes.

* Dryopithecines = Ape-Like Animals.

* 8-14 Mya: Ramapithecines. Consists of: Gigantopithecus, Sivapithecus, and Ramapithecus.

12 M.Y.A.: So called Great Apes. 8-14 Mya: Ramapithecus. Our Ancestor. Had stereoscopic vision and, brachiation. After climatic changes, adaptation to open country.

6-5 M.Y.A.: Diverging of our Ancestors, from other Primates. [possible] 4-3 BIAK Fossil Record. 'Ramapithecus', split from Apes. first Hominid (?) beginning of Human line. AND lived with (A) and (B), our

By 4 M.Y.A.: [Bipedalism: upright walking] Almost. It's believed, our 'Ancestors' can walk upright. Fossilized footprint found in Tanzania, dated 3 3/4 M.Y.A. [Almost] are called: 'AUSTRALOPITHECINES', still Ape-Like. Walking upright. Freed the hands. Two distinct lines: (A) AUSTRALOPITHECUS AFRICANUS. Died out.

and: (B): A. ROBUSTUS - Died out. [AUSTRALOPITHECUS BOISEI]. Also at this period

We have: HOMO HABILIS - Our direct Human Ancestor. not descended from (A) and (B).

2 1/2 To 2 M.Y.A. Climate change on Earth. Warm wet forests. Turned into cool dry Savannas. HOMO HABILIS, (A), (B), AND 3 lived [close together?] about 2-3 mya. Were separate creatures.

By 2 M.Y.A. HOMO HABILIS. Earliest stone tools found. His Brain still not much bigger than an Ape. Earliest stone tools: Stone flakes, for cutting meat. Great invention. 1 1/2 mya onwards: 'Acheulean Technology': hand axes and cleavers. [Stone Knapping]. After the extinction of the AUSTRALOPITHECINES, there remained on Earth only one hominid: HOMO.

By 1,600,000 Y.A.:

HOMO HABILIS had developed into "HOMO ERECTUS".

NOTE:

His Brain was bigger than an Ape.

[Apes and Hominid: collectively called 'Hominoids'. 'AUSTRALOPITHECUS' means: Southern Ape.]

'Hominidae': All HOMO and AUSTRALOPITHECUS species. But, excludes the apes.

750,000 Y.A.:

[From 1 1/2 mya to about 300,000 ya.]

Our Ancestors Among HOMO ERECTUS broke out of the Tropics into Northern latitudes. The 'Hunter-gatherer' life probably came about 1m and 1/2 m years ago. Their skin: dark in colour. Also, had some form of spoken language. 'Acheulean tool technology' used.

By 600,000 Y.A.:

Had evolved into our ANCESTOR species. HOMO SAPIENS. Then evolved into HOMO SAPIENS SAPIENS, about 40,000 ya, which is us, today.

Neanderthal Man. Buried their dead. Virtually indistinguishable from Modern Man, in Body Movement, use of hands, Thought and language. Many lived to old age. Individuals cared for.

60,000 Y.A.:

Neanderthals putting offerings into graves.

45,000 Y.A.:

Emergence of Modern Human beings - Sub Species - Called HOMO SAPIENS SAPIENS. (us) So-called Mental Revolution begins - language. Chimpanzee: Man's closest Relative.

If entered cell, would have to pass through its Membrane, A micro thin lining. We then enter the Endoplasmic Reticulum which is connected to the membrane by long extensions, it is an inner layer of Protoplasm. And is important for the structure of the cell, it is connected to the Nucleus by thread like Micro-tubules.

1 Protoplasm:

This concerns the overall substance of the cell. It is a greyish, jelly-like fluid, which is the basis of all life, All living matter in the cell. It contains Carbon, oxygen, Hydrogen, Nitrogen, water. Also Sulphur, iron, Phosphorus, Calcium, Carbohydrates, Proteins, Fats. Chemical Inter-actions constantly take place in this living matter. (soup - Building blocks.)

2 Cytoplasm:

Is protoplasm. But it just refers to Protoplasm that surrounds the Nucleus. If pass on through the E.R. we enter the cytoplasm. Many of the Molecular specks we'd see would be Protein Molecules. Some of them working feverishly while others just lie about waiting. We'd also see Ribosomes which Synthesize proteins. Also see Mitochondria - very large - these power the cell by combining food with oxygen and producing chemical energy. We'd also see ENZYMES - the most important proteins - they control the cells chemical reactions. As we continue on through the Cytoplasm we finally reach the Nucleus.

If pass through a pore in the Membrane of the Nucleus, see coils and strands of DNA everywhere.

There are 2 kinds of Nucleic Acids.

- 1, DeoxyRibonucleic Acid: DNA: The Master Molecule of life. It knows what to do.
- 2, Ribonucleic Acid: RNA: This conveys the instructions issued by DNA to rest of cell. Usually called; Messenger RNA.

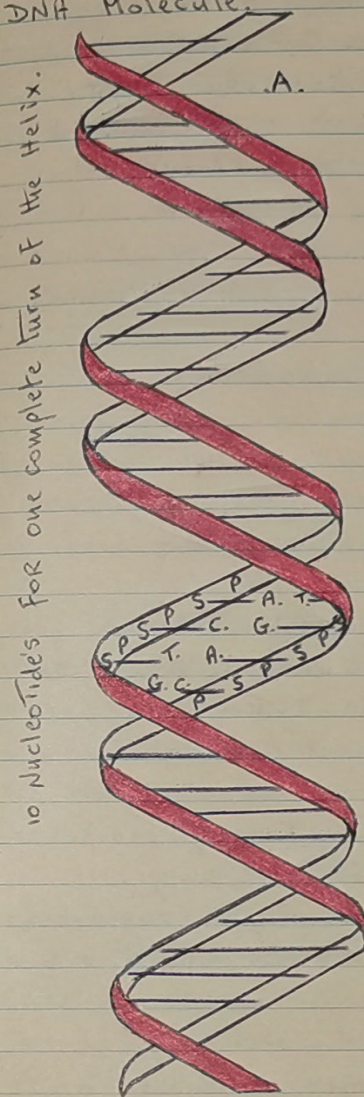
They contain the full complement of information on how to make a cell, tree, us, work. DNA (with very rare exceptions); knows how to make identical copies of itself.

The shape of the DNA is like two intertwined strands. Called the 'Double Helix'. Each of the two strands marks the backbone of the DNA molecule. its made of alternating Sugars and Phosphates.

The Rungs between them are made of 4 different Molecular Parts, it is these which form the 4 letters of the Genetic Code.

SEE DIAGRAM A. →

Double Helix: DNA Molecule.



It is the 'Nucleotides' which spell out the hereditary instructions for making any life form. Every life form has a "different" set of instructions, though written in essentially the same language. The reason why life-forms are different, is the differences in their Nucleic Acid instructions. At the same time: All creatures have many similar Genetic instructions. We have much in common E.G. in breaking down food. This again points to a Common Evolutionary Heritage.

The Nucleotides are made of the Molecules: Adenine - A.

Thymine - T. Guanine - G. Cytosine - C.

A. bonds only with T. G bonds only with C.

They are made of the Atoms: Carbon, Hydrogen, oxygen, Nitrogen, phosphorus.

One full Molecule of Human DNA, has approx 100 Million twists in its double Helix - And, has approx 100 Billion Atoms - And, has approx 6 To 10 Billion Nucleotides.

Chromosomes: Made of strings of thousands of Genes.

Genes: Made of the chemical DNA.

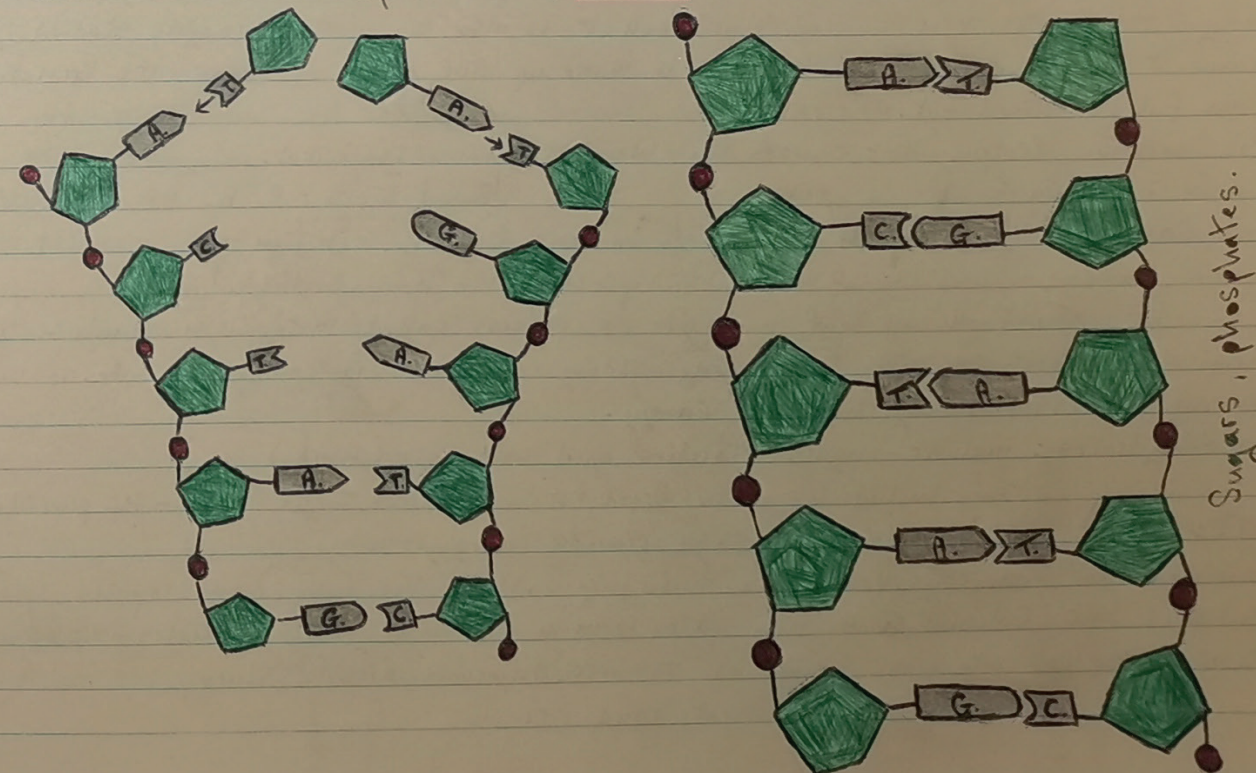
DNA: Made of strings of 4 different sub-units, thousands of them per Gene.

Each Human Being has 23 'pairs' of chromosomes.

DNA: Controls both the heredity i.e. Making accurate copies of itself.

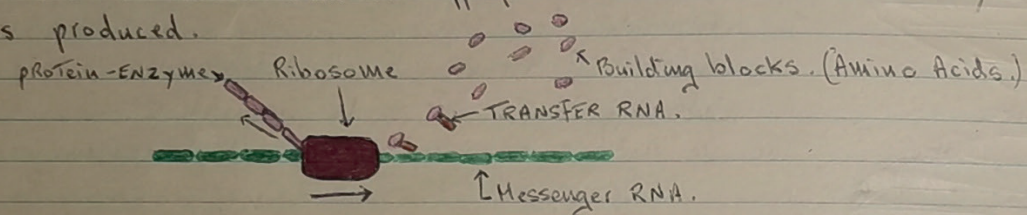
And Metabolism i.e. Directing the activities of the cell.

Replication of DNA:



it controls these by synthesizing the Nucleic Acid - Messenger RNA.

This passes out of the Nucleus into cytoplasm. What happens then is that a Ribosome(s) attaches itself to it and actually begins to read the message it contains. And as it moves along it, it begins to build up a protein - ENZYME - When it gets to the end of the Messenger RNA it breaks off and releases its Protein - ENZYME to go about its business. While the Ribosome is reading the Message and synthesizing, another Ribosome may join on and start also and so on. Likewise when the Ribosome finishes it may go back and start again. This continues until the appropriate amount of Proteins - ENZYMES required by the cell is produced.



ENZYMES:

The most important kinds of proteins. They specialize in particular Molecular jobs. What they do is bring about chemical changes by dismantling Molecules. Without themselves being changed in the process. Two ENZYMES in our bodies are 1. Pepsin. 2. Trypsin.

Pepsin is a gastric ENZYME which helps break down Meat, fish etc. in our stomach.

Trypsin is a pancreas enzyme which helps likewise.

Another ENZYME - Hexokinase - (in us and whales etc.) is one of 2 dozen ENZYMES, each with a particular job, needed to convert a Sugar Molecule obtained from food into energy.

Oxidase is an ENZYME that helps in process of extracting energy from oxygen compounds.

There are numerous enzymes in cells. Diastase is a vegetable enzyme that converts starch into Sugar. Synthesize - to build up, combine.

Other Proteins:

HAEMOGLOBIN, This is the blood protein that carries oxygen around the body. Vital for us. It is the red blood cell. It is also the most thoroughly studied group of Genes. It has 70,000 Sub-units which make up this group of Genes - its Genetic Code has been fully worked out.

Fibrin: The Protein that causes the blood to clot. Also vital.

Casein: Protein found in Milk.

[Blood types: A. B. AB. O.]

over 50,000 different kinds of Protein in our bodies. [William Harvey. 1578-1657. An English physician, discovered the circulation of the blood and published his theory in, 1628.]

The Food we eat undergoes a process called Metabolism. Which is the constant chemical activity of breaking down and building up etc. it is central to life. To making and repairing tissues, providing heat and Energy.

Carbohydrates: include sugars, Starches and cellulose (Fibre.)

They include the Foods - Bread, Potatoes, cereals, sugar itself - ALL provide ENERGY.

FATS: BUTTER, LARD, FAT on Meat. Also provide energy.

Proteins: Meat, Fish, eggs, Vegetables. These help build up the body, and repairs tissues.

Minerals: Salt. Calcium from Milk. Iron from meats and green Vegetables - vital for blood.

Vitamins: Help the body from falling into sickness. Anaemia, Rickets, Scurvy.

They're found in Fruit, Wheat, eggs etc.

All the information contained in Human DNA - in the Nucleus of each of our cells - if written out in English would fill a thousand volumes, (500 pages each.) (Need to have 6. To 10. Billion pieces of information.)

We know we have approx 10^{14} cells. "EVERY ONE" of our 100 Trillion cells contains a "complete library" of instructions on how to make every part of you.

From the original division of the cell onwards, the Genetic instructions were copied with great Fidelity. But cells carry out different functions. Thus, your liver cells have some unemployed knowledge about how to make Bone cells etc. etc.

This Genetic library contains everything your body knows how to do 'on its own' e.g. Digesting an Apple - All we do is munch it up and swallow it, while our body does everything else. If we had to synthesize our own ENZYMES i.e. if we consciously had to Remember and direct all the chemical steps needed to get energy out of Food - we'd probably be starving.

The constant division of cells is called "Mitosis".

What happens when it comes time to divide is that the DNA synthesizes an ENZYME called 'Helicase'. This helps unwind the Double Helix by supervising the breaking of the chemical bonds between the Nucleotides.

We also know there are 23 pairs of chromosomes in our cells.

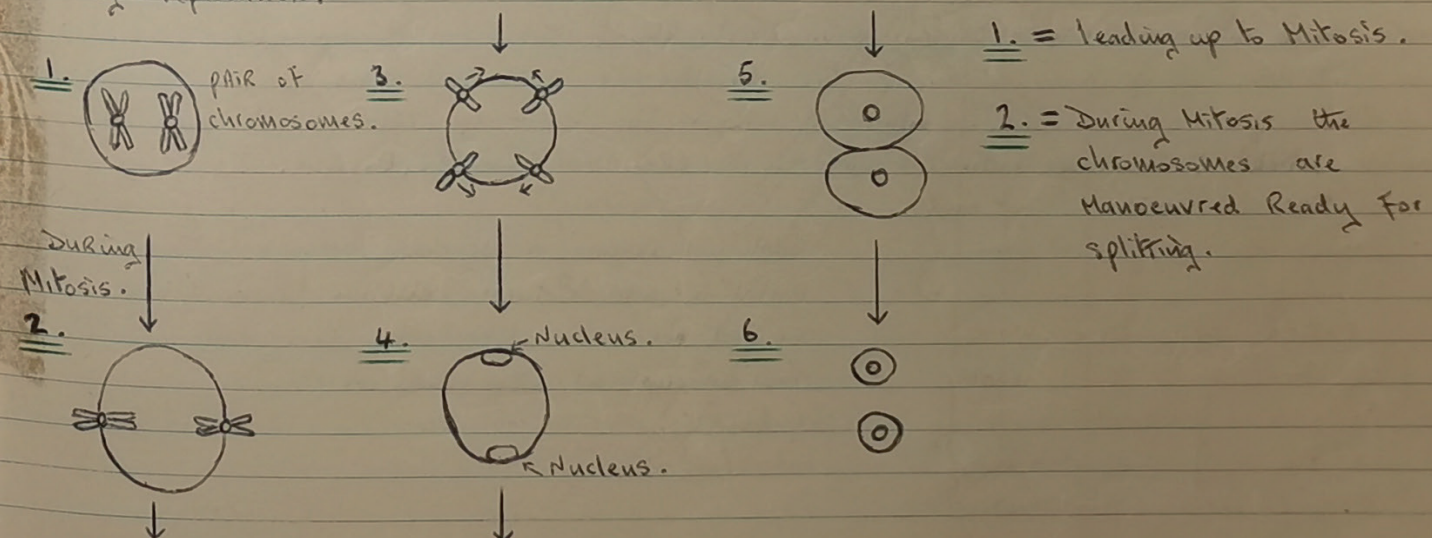
As each chromosome is unwound, Another ENZYME called 'DNA POLYMERASE' goes about building each single strand up into Double Helices - it takes the building blocks floating around in nucleus and adds each into its proper place, making two identical Double Helices.

DNA Polymerase - Helps ensure that copying works almost perfectly.

If a mistake is made, other enzymes snap it out and replace it by Right one: Proof Reading.

A Typical DNA polymerase will add a few dozen nucleotides every second.

10,000 of them may be working on a DNA Molecule at any given moment during replication.



3. = They then split and go to each end of the Nucleus. This happens for all 23 pairs. (Two Nuclei begin then to form.)

4. = Then the Nucleus expands into rest of cell and eventually as it 5. Forms the Nuclei the whole cell begins to split - around each Nuclei. Until finally they break apart.

6. = We thus have two identical cells - Each containing a full set of the Genetic Code.

This is Repeated Constantly.

Evolution: It works through 'Mutation' and 'Natural Selection'.

Mutation: is a change in a Nucleotide which is passed on to offspring. It is a change in a single Nucleotide, which causes a change in a single Amino Acid in the protein for which that DNA codes.

E.g. The Red blood cells of people of European descent look roughly globular.
" " " " " Some people of African descent look like sickles or

crescent Moon's.

Sickle cells carry less oxygen and consequently transmit a kind of Anaemia. But they also provide major resistance against Malaria, which is endemic in parts of Africa.

Evolution - It is better to be Anaemic than dead, still a crippling disease. Out of approximately 10 Billion Nucleotides, it has now been able to identify the single Nucleotide which causes it.

Mutations are random Nucleotide changes, most of which are harmful as they code into existence non-functional enzymes. It takes a long while before a Mutation makes a life-form work better. yet, it is this, a small beneficial Mutation in a Nucleotide, one ten Millionth of a centimetre across, that makes Evolution go. OK.

A Mutation might occur during replication, if DNA polymerase makes a mistake, which it rarely does. It may also occur because of radioactivity, or ultra violet light from the Sun, or cosmic rays, or chemicals etc. in our environment. All of these can change nucleotides. or, maybe tie them up in knots. E.g. if the Mutation rate is too high - we lose the inheritance of 4 Billion years of evolution. if Mutation rate is too low - new varieties will not be available to adapt to some future change in the environment. Comets, Oxygen.

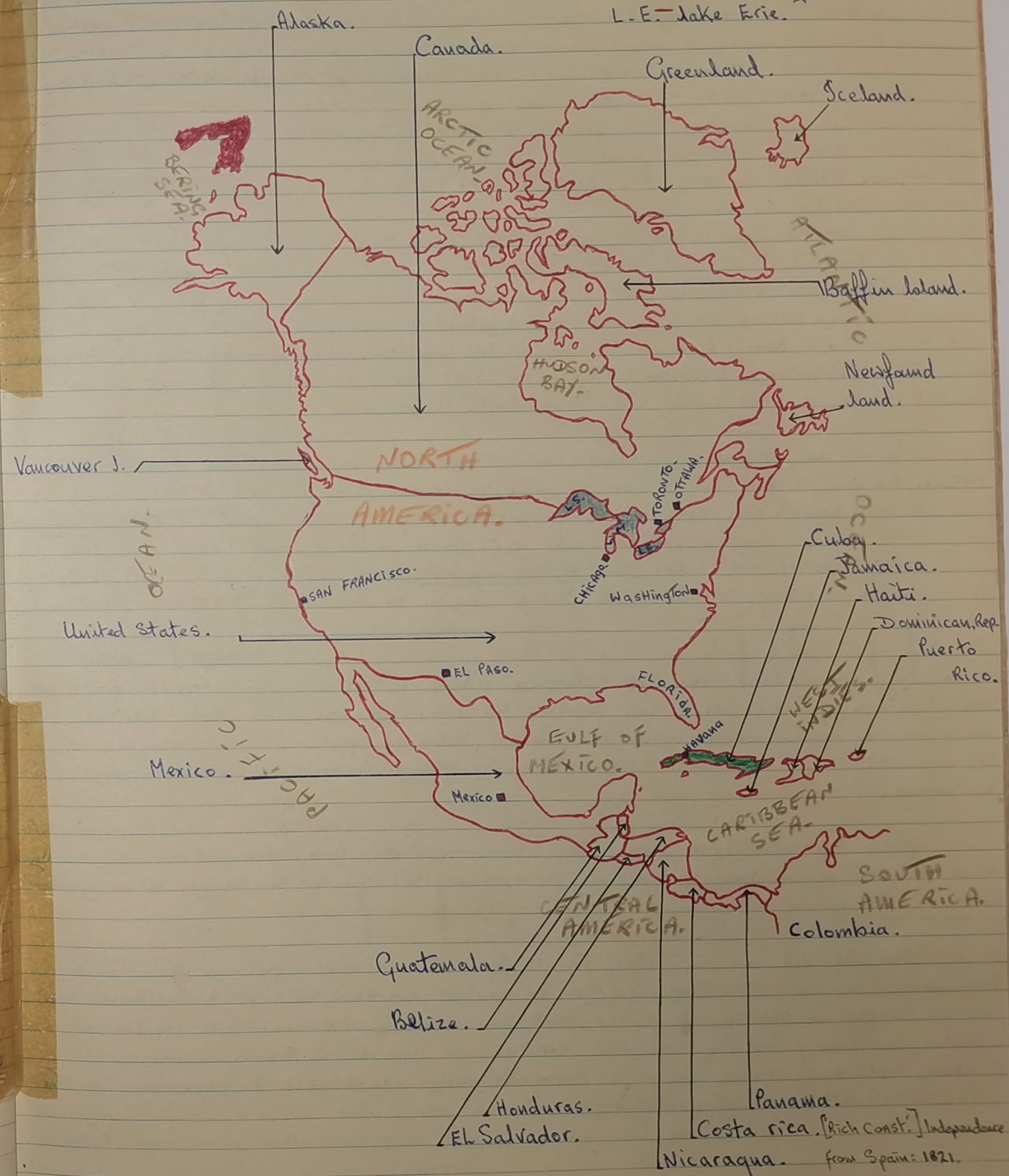
Evolution requires a precise balance between Mutation and Natural Selection. When this is such we get remarkable life forms, completely adapted to their environment. (Sharks, Tigers etc.).

North America:

L.S. - lake Superior.

L.M. - lake Michigan.

L.E. - lake Erie.



EDUCATION of the People. JAN 1ST 1961: LITERACY Campaign launched. When the campaign opened, literacy was 23.6 percent, when finished: 3.9 percent. NEVER in the history of EDUCATION anywhere in the world has there been so successful an achievement. Cuba is spending on EDUCATION, over 4 times the amount, previous to the people's Revolution.

the people use democracy in a Socialist order, The people now know their true interests. Now that the Social economic order is one of Socialism, the nature of the whole state is a Socialist one. **Oct. 1962: Missile crisis. [Russia]** ^{CASTRO and Comrades: July 26 Movement!}
 December, 1956: Castro arrives aboard the 'Granma', to Cuba. ^{Committees for the defence of the Revolution.} Cuban form of Gov: Since 1976, 'Peoples Power' (C.D.R. organisations; Revolutionary Security, [watch people etc]).
 Candidates elected [secret vote], democracy. Main Cuban product is Sugar. Takes 3 mths harvest. Today $\frac{3}{4}$ of Cuban Sugar production, goes to Communist bloc. Cuba gets oil from Russia at very cheap prices.
 Since Castro took power, Cuba develops greatly. Cigar industry, Public health, Education, Machinery, Parts, industry, textile industry, etc, all making great advances. Cuban food, Rent, electricity, very cheap.
 [Mario Boatlift]: 100,000 dissidents let migrate to America, in 1980. Fidel, meets people at work etc and asks them how they feel? What problems they have? etc A True Revolutionary. When the Spanish Conquistadors came to Cuba they brought the Gospel, Cross, and the Sword. Under the name of 'Christianity'. Also brought the slaves to work on Sugar plantations. Today: church denied access to Media, No 'Privileges', No Powers. Communists and true Christians work together, under a Socialist system. The understanding between church and State: co-existence. Christianity is better suited under a Socialist order, based on the advance^{ment} of humanity, and incompatible, under a Capitalist Society; based on, exploitation, impoverishment, and the repression of an oppressed class.
 Provinces: Pinar del Rio. HAVANA. Matanzas. Las Villas. Camaguey. Oriente.
 ANTAGONISM:

From the Greek, agon = Contest. An irreconcilable contradiction which is resolved by violence. As the contradiction between the bourgeoisie and the Working Class is thus resolved by Socialist Revolution. Contradictions between the working class and Peasantry have no antagonistic character.

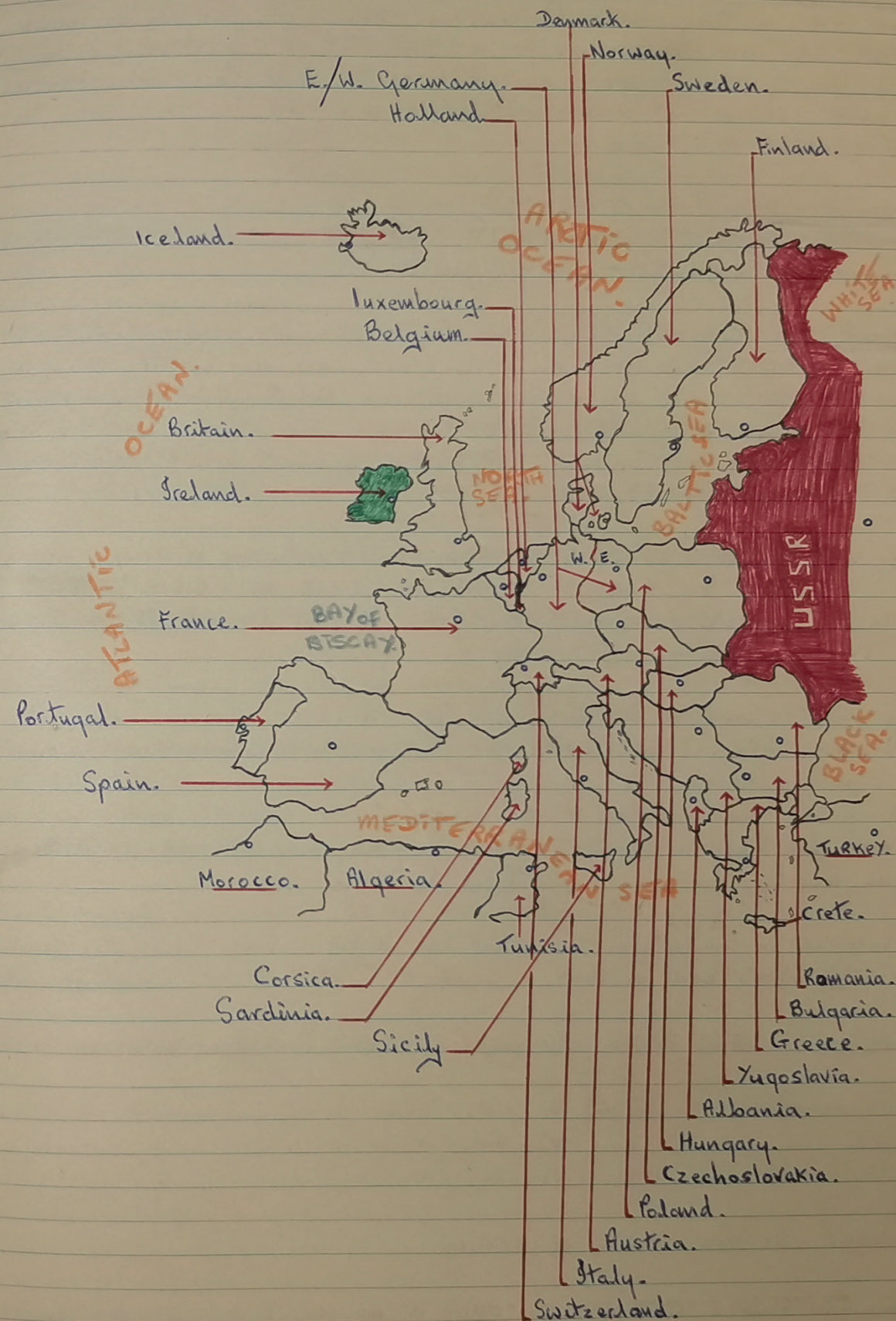
Economic Structure: ordering of Society into classes. The Relations of production which correspond to the specific level determined by the development of the material forces of production.

Base (infra) and Superstructure: The Mode of Production, Economic base, the foundation of Society. Once the base, or infrastructure, is modified then the superstructure must also modify itself, at a more or less rapid rhythm.

Thesis, Antithesis, Synthesis: From the Greek, Affirmation, Negation, Union. Every process of development, according to Hegel, passes through these three stages. Each stage refutes the other one before, and the last re-unites in itself the dominant features of the first two.

Dialectic: from the Greek, debate and converse. According to early Greek philosophers, the art of knowing truth by uncovering the contradictions in the reasonings of one's adversary. Later dialectics came to be transformed into a theory of development and universal relations. Dialectics considers all phenomena as being in movement, in a process of perpetual change. It views the development of Nature itself as a result of the struggle between contradictions within Nature. Dialectics became a Science when Marx and Engels liberated it from Hegelian Idealism. It is a doctrine of development. A Science of the Universal laws governing the development of Nature, Human Society, and thought.

Map of Europe:



1934, May 23: Clyde Barrow and his girl Bonnie Parker were ambushed in their hi-jacked Ford V-8, by Texas rangers in Louisiana. Bonnie was hit by 50 rounds, and Clyde 27 times. "We just shot the hell out of them", one of the ambush party later explained. Clyde was 21 years of age and Bonnie was 19 when the couple embarked on a series of armed robberies and murders, which would make them fugitives for the remaining two years of their lives.

Battle of Dien Bien Phu: Giap attacked the French on the 12 MARCH 1954. The French surrendered on the 7 May 54. It was 55 days of bloody savage war. 3,000 French dead, and an equal number disabled. 8,000 Viet Minh dead.

Battle of Little Bighorn: June 25th 1876. General Custer and 215 men, of the 7th Cavalry, were slaughtered by Crazy Horse and his Braves. Experts have now proved that the Indians were in fact not armed with primitive weapons, but had a surprising number of the most recent 16 shot Winchester and Henry repeaters, bought from white gun runners on the Black-Market. The Cavalry had Springfield Rifles (carbines), which needed reloading after every shot, and Colt revolvers. The Massacre was over within about an hour.

James Connolly 1868-1916. Born in Edinburgh. Irish parents. First came to Ireland, ironically, as a youth in the British Army. Came to Ireland and formed the I.S.R.P. 1896. Emigrated to the U.S. in 1903. Member of Socialist Labour Party in U.S. Returned to Ireland in 1910. S.P.I. Executed following 1916 uprising.

Margaret Hilda Roberts. Born in Grantham, 13.10.25. Tories win G.E. in May 1979. Becomes British Prime Minister. 1983 Tories win G.E. Thatcher enters second term of office.

"Our independence must be had at all hazards. If the men of property will not help us they must fail. We can support ourselves by that numerous and respectable class, the men of no property." Theobald Wolfe Tone.

Clan System: land held in common, etc. The Clans had elected leadership, chiefs. The forcible break-up of the "clan system" came in 1649.

Vikings, (Northmen, Danes): Their Seaport strongholds of Dublin, Cork and Waterford, developed into cities.

i.	iv.	vii.	x.
ii.	v.	viii.	xi.
iii.	vi.	ix.	xii.

1797: Britain's biggest ever Naval Mutiny at Spithead.

May 1926: Fianna Fail Founded, by Eamon De Valera. Many Anti-Treaty activists joined this. Fine Gael, originally known as Cumann na nGaedheal, made up of mostly Pro-Treaty members. De Valera, comes to power in 1932.

Frank Ryan: 1902-1944. died in Dresden, Saturday, 10th June. Fought in Spanish Civil war.

In 1956, Britain invaded Egypt in a bid to re-capture the Suez Canal which Colonel NASSER had Nationalised.

Blacks Rose in San Domingo (later, Haiti) in 1791. Slaughtering the white plantation owners. Their leader was a Black Slave called Toussaint L'Ouverture. He was imprisoned in a French Prison, by Napoleon Bonaparte. Kept in bad conditions, his cell door was opened on the morning of April, 7th, 1803. Toussaint was in his chair dead. The Blacks achieved victory some months later. "Friendship without end."

First Murder Conviction of a Brit, came about in December, 1984. His name: Ian Thain.

"Kill ten of our men, and we will kill one of yours. In the end it is you who will tire." 1946. Ho Chi Minh: He who enlightens. Real name, Nguyen Tiet Thanh. He died on the 3rd, September 1969, aged 79. heart attack. 1916 Rising had strong effect on him. S.S.: Schutz-Staffel. K.G.B.: Komitet Gosudarstvennoe Bezopasnosti.

George Jackson, Murdered on August 21st 1971. San Quentin. [See compilation B']

Alexander the Great died June 12th 323 B.C. at the age of 32.

Pearl Harbour: Sunday, 7th December, 1941.

"No Political change whatsoever is worth the shedding of a single drop of blood." Daniel O'Connell. The man who killed a guy in a duel. Heart buried in Rome.

Nikolai Lenin = Vladimir Ilyich Ulyanov. Stalin: Man of steel.

John F. Kennedy, assassinated 22 Nov 1963. in Texas.

Seige of Paris. 1870-71. lasted 135 days. Mexican war: 1916-17.

156 people were acquitted in 1961 after a six year trial. S. Africa.

Cambodia - Kampuchea. Khmer rouge forces of Pol Pot. Anti-Vietnamese, hence, Anti-Soviet.

6. MARCH 86: Bourgeois ideology.

The following are, mostly in "Theory", Really.

The constitution of a state:

The "Constitution" of a state consists of those rules, deemed to be universally accepted by the members of the state, which determine the relations between the governed and the Government. In brief; a constitution lays down the rules which govern the Government of a state, e.g.:

A The constitution would not allow a government to abolish the courts of law and govern as it pleased.

B In a democracy, a government is regulated by the constitution and is not totalitarian.

C The Government must obey the constitution or go. The government is not the state, it is merely one of the organs of the state.

Written and unwritten constitutions:

In some states the rules which govern the government are written down, and anybody can refer to the constitution in case of doubt that the government is not exercising its functions properly. But in other states there is no one document setting out the constitutional limits of government, which may be partly written, in a wide variety of documents, and partly conventional.

A Examples of countries with written constitutions:

1. The U.S.A. has a written constitution setting out such matters as the powers of the President and of Congress.
2. France has had several Constitutions. The latest, The constitution of the Fifth Republic, was approved by a referendum in 1958, and has undergone several amendments since then. It is by no means as explicit a document of the constitution of the U.S.A.

B The British Constitution is partly written and partly unwritten:

1. The written part of the constitution is contained in acts of parliament, or statutes, relating to constitutional matters, e.g. the act of Settlement, 1701, which regulated the succession to the throne, in historic documents, e.g. Magna Carta, 1215, and in the recorded decisions of judges on constitutional matters, to be found in year books.
2. The unwritten part of the constitution consists of the unwritten law of the land. The common law, in so far as it relates to the relations between the government and the citizens, and the conventions, customary rules which are followed in governing the country and which are recognised as constitutional modes of procedure.

Flexible and Rigid Constitutions:

Written constitutions tend to be rigid: Once written they are difficult to alter. But unwritten constitutions tend to have a greater degree of flexibility. Thus the constitution of the U.S.A. has undergone various amendments since it was first written; but these amendments have had to be passed by a special procedure, different than that used for passing ordinary bills.

A flexibility of the British Constitution:

1. changes are made by the ordinary processes of legislation, e.g. the parliament act of 1911, which drastically reduced the powers of the House of Lords, was passed in the ordinary way like other acts.
2. Flexibility can be a danger, in that a government imbued with doctrinaire ideas might carry by its party majority measures which might have serious consequences on the constitution. But such a government would have to face opposition both inside and outside Parliament.

B A disadvantage of a rigid constitution is that the special legislative procedure necessary to alter it might entail such complications that support to get through necessary or desirable changes might be lost in the course of enacting the legislation.

Federal and Unitary Constitutions:

Federations. A federation is a community of states each with certain political powers. By arrangement between these communities, there is a central or federal government which acts on behalf of all the people of the states in matters of common concern. The Constitution of a Nation with a federal government is inevitably a written constitution. In the U.S.A. the powers of the states' Governments and the powers of the federal government are referred to in the tenth amendment to the Constitution. Confederations. As distinct from a federation, a Confederation is one in which only limited powers are given to the central government, often loosely called a federal government. Thus Switzerland is a confederation of twenty two Republics, the Cantons. The Cantons are much more independent of the federal government than are the States of the U.S.A.

Unitary Constitutions. In unitary states, all powers are exercised by, or derived from, a central Parliament, which may delegate powers to subordinate authorities. Thus the U.K. is a unitary state: it has a central government from which all powers exercised by local authorities, or other subordinate bodies, are derived. The supreme legislative authority is the U.K. Parliament.

A The U.K. consists of Great Britain and (by terminology) Northern Ireland. 'Britain' is the general name used for England, Scotland and Wales; together with the adjacent islands such as the Isle of Man, it is the "British Isles". N.I. has its own parliament, but the powers of this parliament are limited. A governor acts on behalf of the Queen.

B The British Parliament has two chambers, The House of Commons, (lower chamber), and the House of Lords, (upper chamber), i.e. it has a 'bicameral legislature'. The U.S. Congress has two chambers, the House of Representatives, and the Senate; and all the states except

one have bicameral legislatures. New Zealand and Denmark, both Unitary States, have one chamber legislatures, unicameral. Sweden, a Unitary state, has a two chamber legislature.

Government and Power:

The powers exercised in Government. There are 3 distinct powers exercised in Government:

A/ The legislative Power, the law-making power, exercised by the, "legislature".

B/ The executive Power, the power of administering the laws made by the legislature; it is exercised by the, "Executive".

C/ The Judicial Power, the power of interpreting the laws, of pronouncing upon their exact meaning, of enforcing conformity to the law and punishing offenders against it, it is exercised by the, "Judiciary".

THE THREE POWERS:

The legislative Power:

In the United Kingdom, the supreme law-making authority is the queen-in-parliament, i.e. the Sovereign, the house of lords, and the house of commons.

A/ The House of Commons is the Major partner in law-making. The Sovereign's part is limited to the giving of the Royal assent to bills, and the powers of the house of lords, are limited by the parliament acts 1911, and 1949.

B/ The leaders of the Government are mainly in the House of Commons. It is regarded nowadays as necessary that the prime minister should be a member of the house of commons. It is the Government which proposes most of the legislation which the house of Commons is asked to pass.

C/ Acts of Parliament begin as bills which pass through similar stages in the house of lords and house of Commons and which become Acts on being given the Royal assent.

The Executive power:

The laws passed by parliament are administered by the executive.

A/ The 'Crown' is the supreme executive. In effect, the Crown, is the Government acting through ministers of the crown in the name of the Queen, the Sovereign.

B/ The Ministers are in charge of departments of state, or otherwise act on the instructions of the Prime Minister.

C/ For every act of state, a minister is responsible. The Crown, as distinct from the Gov of the day, can hold property, employ servants, and in law act like an ordinary person. The Crown can be sued by citizens for breach of contract and for tort, i.e. civil wrongs which are not breaches of contract. It prosecutes wrongdoers on behalf of the nation. But there is always some minister who for practical purposes can be identified as the "Crown".

The Judicial Power:

The judicial power is exercised by the judiciary, the body of judges acting in the courts of law.

A/ The judges pronounce on both the written parts of the law, and the unwritten parts.
B/ In particular, they interpret the statutes, or acts of parliament, passed by the legislative body.

The doctrine of the "Separation of Powers":

It is evident that if the people who make the law, are the same people who administer it, tyranny will result. Equally, tyranny will result if the same people who make the law judge it.

The idea was put forward by a seventeenth-century philosopher named, John Locke. And was developed by the Baron de Montesquieu, who visited England in the reign of George II and who compared the conditions in England with those prevailing under Louis XV of France.

Montesquieu concluded that in England parliament made the laws, the king and his ministers carried on the administration, and the judges judged the laws independently. Though he was mistaken in some of his observations, the principle enunciated by Montesquieu has been acknowledged to be of profound constitutional significance; and the constitution of the U.S.A. has been deliberately based upon it.

THE SEPARATION OF POWERS IN THE UK:

Since the U.K. has no written constitution, the doctrine has never been applied as a deliberate plan in this country. But historically there has been the inter-play of tendencies towards separation and counter-tendencies.

A/ The Judiciary has in fact achieved independence since the Act of Settlement, 1701. Judges can be removed from office only by an address from both houses of Parliament, an exceedingly unlikely event. The only political-legal appointments today are those of the Lord Chancellor and the Law Officers of the Crown; and the latter are concerned with legal rather than political functions.

B/ Parliament is the supreme law-making authority. There is no Supreme court, as there is in the U.S., which can declare an act of Congress unconstitutional.

C/ The Executive in the modern working of the British constitution is to all intents and purposes the Government. The power of a personal Monarch has been replaced by the power of a Government made up of the House of Commons because the leaders of the Gov, consisting mostly of members of the House of Commons, are able to count upon the support of the members of their majority party in the House.

1. The executive tends to encroach upon the law-making powers of parliament by persuading parliament to pass acts delegating what are in effect law-making powers to ministers.
2. The executive has tended to encroach upon the judicial power by appointing administrative tribunals to decide on the cases of dispute between citizens and officials.

The Separation of Powers in the U.S.A.:

In contrast, the constitution of the United States has expressly set out the nature and limits of the powers to be exercised by the judiciary, Congress, and the executive.

A. The Supreme Judicial authority, the Supreme court, now exercises the function of deciding whether any law passed by Congress or by any other of the federal courts, or by any of the states' courts, is constitutional; though it does not pronounce upon such a matter unless asked to do so in a given case.

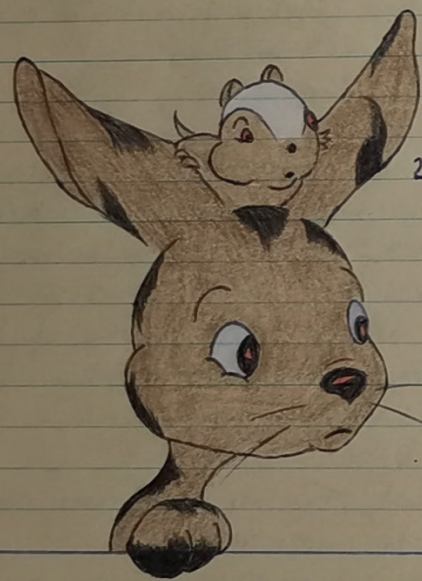
B. The Congress is the law-making body. Members are elected as legislators for fixed terms. Neither the president nor any of his "cabinet" (the executive) can be a member of Congress. The powers of Congress are set out in the constitution.

C. The President is the executive:

1. As the executive, the President has very great powers. But he cannot introduce bills himself into Congress, and may indeed find effective opposition in Congress to the introduction of legislation through his friends.

2. He has a power of veto over the legislation of Congress, this veto can be overridden by Congress, though in practice this is rarely done.

3. He holds office for a term of years, and cannot be re-elected more than once. He cannot dissolve the legislature.

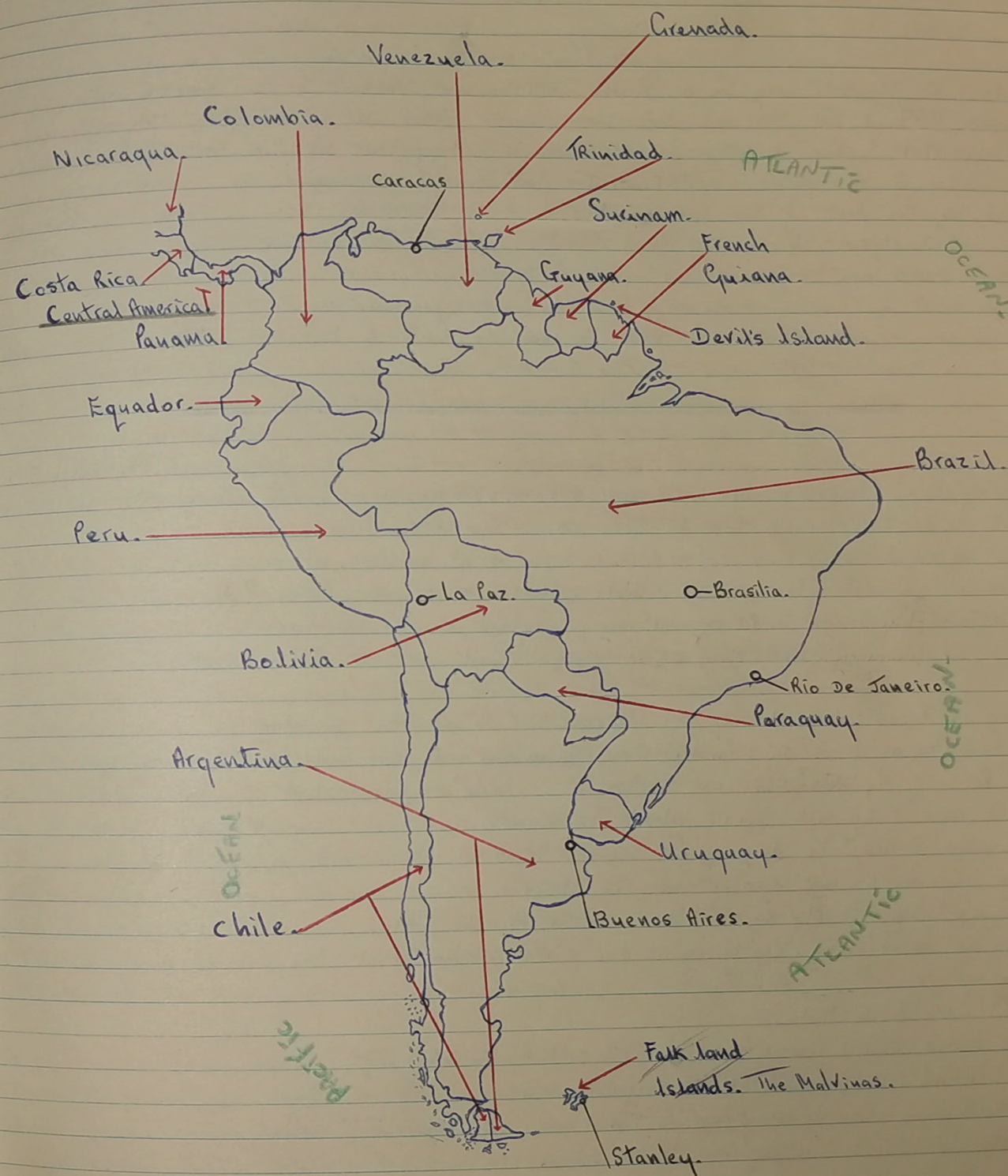


"To have arrived on this EARTH, as the product of a biological accident, only to depart through human arrogance, would be the ultimate irony..."

Richard Leakey.

About Nuclear War.

South America:



Q: list the major statutes that influence the Monarchy and its ability to act in Britain today?

A: 1. No Monarch may be a Roman Catholic or Married to a Roman Catholic, Bill of Rights 1689. 2. The title and succession to the throne is derived from the act of Settlement, 1701. 3. The duration of parliament is independent of the death of the Sovereign, representation of the people act, 1867. 4. The holding of office under the crown is not affected by the death of the Sovereign, demise of the Crown act, 1901. 5. Where the Sovereign is under eighteen years of age, the Royal functions are to be exercised by a regent, who is the next person over twenty-one yrs, in line of succession, or 18 yrs if the heir-apparent. In the event of illness (not amounting to total incapacity) or absence from the U.K. the Sovereign may appoint Councillors of state to exercise such of the Royal functions as maybe conferred on them by letters patent. 6. The Civil list.

16. MARCH. 86:

Bhí mé ag caint le mo xhara: vee may agcainch le mo kara: I was talking with my friend.
Toil-will le do thail-please. Toil dé-Gods will. lebhur dtail-[Plural] please.

Tá Seán ag an doras: ta shan egg an doris: Sean is at the door.

Tá Máire ag an tabla: ta Myra ag an tabla: Maire is at the table.

Tá Pól ag an fhuinneog: ta Pol egg an inyog: Paul is at the window.

Níl sé ag an fhuinneog: neel shay ag an inyog: He is not at the window.

Níl sí ag an doras: neel she eg an dorrish: she is not at the door.

An bhfuil Seán ag an doras? Tá: An will shan egg an doris? ta: is Sean at the door? yes.

" " Pól " " tabla? Níl: " " Pól " " tabla? neel: is Paul at the table? no.

Cá bhfuil Seán? Ca will shan: Where is Sean.

Tá sé ag an doras: ta shay egg an doris: He is at the door.

Cá bhfuil Máire? Ca will Myra: Where is Maire?

Tá sí ag an tabla: ta she egg an tabla: she is at the table.

Cé tá ag an doras? Sean. Kay ta egg an doris? shan: Who is at the door? Sean.

Dia duit: Guea ditch: Hello.

Dia agus Muire duit: Guee is micrih ditch: Hello [in Reply].

Tá fáilte roimh: ta fal chih roim: you're welcome.

Go raibh Maith agat: Gurrish moy uggit: Thank you. agairh-[Plural].

Cad é Mar tá tú? Kih jay Mar ta tao: how are you?

Tá mé go Maith: ta may guh moy: I am well.

Tá mé go Measarthu: ta may guh Massirah: I am middling.

Tá mé go hálco: ta may guh hulk: I am poorly/rotten.

Beannacht dé ort: bann acht jay ort: God bless you. [Goodbye].

Gurab amhlaidh duit: gurib owlh ditch: The same to you.

Buíochas do dhia: bwiee ihiss duh yeea: Thanks god.

Shan agat: Shan uggit: Good bye [to one remaining].

Shan leat: Shan lyat: Good bye. [To one leaving].

Go n-éirí an tadh leat: guh nyerree an tah lyat: Goodluck.

Go bhfeice mé arís thu: guh vekkee may areesh hoo: I'll see you again.

Adh Mór ort: ah More ort: Goodluck/Goodbye.

Tá Seán ag togáil an bhosca: ta shan ih toag ih un huska: Sean is lifting the box.

Cá bhfuil an leabhar? Kah will unnyore?: Where is the book.

Tá sé ar an tabla: ta shay air un tablih: it is on the table.

Ta toitin agam: ta tutcheen uggim: I have a cigarette.

An bhfuil páipéar agat? An will pahpere uggit? Have you a paper?

Níl léine orm: nyee ih laynyih urrim: I'm not wearing a shirt.

Caidé tá ort? Kih jay ta ort? What are you wearing/what's wrong with you?

Tá Pól ag oscailt an dorais: ta Pol ag uskailch un dorrish: Paul is opening the door.

Tabhair dom an peann: fore doo an pan: Give me the pen.

Déirigh mé ar Maidin: Jeery may air Modgin: I got up this morning.

Maidin inniu: This morning. Ar Maidin: in the morning/this morning.

Dia duit an Maidin: Good morning. Sé: he. Sí: she. Siad: them. i: her. é: him. iad: them.

Nigh mé mo lámha: nee may mah mo lawa: I washed my hands.

Chuir mé léine orm: hur may lanega orim: I put a shirt on.

Chuaigh mé go dtí an Seomra bia: hooey may go tee an shumra beea: I went to the Canteen.

Fuair mé Cupán tae: foor may cuppan tay: I got a cup of tea.

Leigh mé an nuachtán: layee may an noo ach tan: I read the newspaper.

Chaitt mé tobáin: haigh may tawcheen: I smoke.

Chuala mé an radio: Hoola may an Raddio: I heard the radio.

Shiub mé sa dhóir: hee oo il may sa hlose: I worked in the yard.

Cé tá ag an tabla? Máire: Who is at the table? Maire.

Cé tá ag an fhuinneog? Pól: Who is at the window? Paul.

Tá mé: I am. Níl mé: I am not.

An bhfuil mé?: am I?

Tá tú: you are. Níl tú: you are not.

An bhfuil tú?: are you?

Tá sé: he is. Níl sé: he is not.

An bhfuil sé?: is he?

Tá sí: she is. Níl sí: she is not.

An bhfuil sí?: is she?

Tá an bosca ar an tabla: The box is on the table.

Tá an Cupán ar an chathaoir: The cup is on the chair. [hee aher].

Tá an peann faoin tabla: The pen is under the table. [fween].

Níl an bosca faoin tabla: the box is not under the table.

Níl an Cupán ag an doras: the cup is not at the door.

Cá bhfuil an Cupán: Where is the cup.

Tá sé ar an chathaoir: it is on the chair.

Cá bhfuil an peann: where is the pen.

Tá sé faoin tabla: it is under the table.

Cad é tá ar an tabla? What is on the table.

Ta an bosca ar an tabla: the box is on the table.
Cad é ta faoin tabla?: What is under the table?

An bosca mór: The big box. [Mór-more] An bosca dearg: The red box.
An bosca beag: The small box. [beag-little] An bosca gorm: the blue box.
An brat glas: The green flag - An Cupán bán: The white cup.

1. Molann Mo Mhathair mé nuair a léigim an bord i gceart.
Molann Mo Mhathair may noor a léigim an bord i gceart.
My Mother praises me when I lay the table properly.

2. Glanaim Mo Sheomra nuair amheim sa tseachtain.
Glanaim mo sheomra oor awine sa chach tain.
I clean my room once a week.

3. Ciorann sí a cuid gruaige sula dtéann sí ar scoil.
Key ran she a kidge groo aga soda Jayan she air scail.
She cleans/combs her hair before she goes to school.

4. Siúlann an buachaill abhaile i ndiaidh na scoile.
She colan an bua hal awalya in yae na scola.
The boy walks home after school.

5. Togann sí abhaile ar a tri a chlog.
togan she awalya ar a tree a clug.
She comes home at 3 o'clock.

6. Gearrann an barbóir mo chuid gruaige go minic.
Gearran an barbare mo kidge groo aga go minic.
The barber cuts my hair often.

7. Togann an fear an leabhar uaim.
toe gan an fear an lower woo im.
The Man takes the book from me.

8. Fágaim an Seomra Seo ar a sé a chlog.
Fagim an sheomra shaw air a shay a clug.
I leave this room at 6 o'clock.

9. Pleascann na buamáir i mbeal feirste.
play as can na boo ami i mel fairs cha.
The bombs explode in Belfast.

10. Iorann Nóra orm teacht léi go dtí an rince.
yaran nora orim chachit lay go Jee an rinka.
Nora asks me to come with her to the dance.

11. Scuabann Mo Mhathair an turlár gach lá.
Scua ban Mo Mhathair an turlar gach la.
My Mother sweeps the floor everyday.

12. Ionann sé an cíteal le huisce.
lee onan shay an kitchal le hiska.
He fills the Kettle with water.

13. Feáchann Mo chairde ar an chlar Sin.
fay a han Mo hard ya air an hiar shin.
My friends watch that programme.

14. Iocann sé as na hearraí a cheannaíonn sé i gcónaí.
yochan shay ass na harree a heyan ee un shay ih gonee.
He pays for the goods which he buys always.

15. Dúnann sé an leabhar nuair atá sé leite aige.
Doo nan shay an lower moor ata shay lay cha egga.
He closes the book when he has read it.

Use 'ní' to make the sentences negative; 'ní' aspirates, b.c.d.f.g.m.p.s.t.

Use 'an' to ask questions; 'an' eclipses, b.c.d.f.g.p.t.

Use 'Cáide...?' to ask 'What...?' eg: Cáide a thiogann an fear?

Use 'Ce...?' to ask 'Who...?' eg: Ce a thiogann an leabhar?

Tá sé an fhúar: Tá shay an oor: it is very cold.

Tá sé an te: Tá shay an chay: it is very hot.

Tá sé an fhlúch: Tá shay an leench: it is very wet.

Tá sé an tirim: Tá shay an chirim: it is very dry.

Tá sé an dorcha: Tá shay an dorcha: it is very dark.

Tá sé an ghéal: Tá shay an yall: it is very bright.

Tá sé fuar: Tá shay fear: it is cold.

Tá sé an fhúar, ach tá sé tirim: Tá shay an oor, ach tá shay chirim: it's very cold, but it's dry.

Tá sé tirim, buíochas le dia: Tá shay chirim, buíochas le Jee: it is dry, thank god.

Níl an lá go Maith: The day is not good.

Tá an aimsir go dona: Tá an aimsir go donna: the weather is bad.

Tá an oíche go breá: Tá an echa go brá: The night is fine.

Níl an oíche go deas: Neel an echa go Jas: The night is not nice.

Níl an Maidín go Maith: Neel an Maidín go Moy: the morning is not good.

Níl sé go dona inniu: Neel shay go donna in you: it's not bad today.

Tá sé go hálainn anois: Tá shay go haleen anish: it is beautiful now.

Tá sé mór: he is big. Níl sé beag: he is not small.

Tá sé Seán, níl sé óg: He is old, he is not young.

Tá sé tinn [chín], níl sé go Maith: he is sick, he is not well.

Níl Seán leat [lat] inniu?: Seán is'nt with you? Níl, tá sé tinn: No, he is sick.

Níl sé go dona anois ar chor ar bith: Neel shay go donna anish ar hor ar bee: He's not bad now at all.

is Maith sin, buíochas le dia: is migh shin, buíochas le gia: that's good, thank god.

Níl mé go dona anois: Im not bad now. Tá mé go maith inniu: Im well today.

An bhfuil mé go deas? [deas-Jass] am i nice?

Tá tú go hálainn, Maise: Tá too go haleen, Masha: you are beautiful, indeed. [Madgie.]

Níl tú go hálainn fhlúch? Neel too fleuch: your not wet.

Tá mé glan, níl mé Salach: I am clean, Im not dirty.

An bhfuil tú fuar? an will too fear? are you cold?

Níl, níl mé fuar ar shor ar bith: No, I'm not cold at all.
 An bhfuil tú linn arís? [arís-areesh]: are you sick again.
 Tá mé anseo [anseo] anois [anois]: I am here now.
 Níl sé is istigh ansin: Níl shay is chee anshin: He is not in there.
 Tá sé thuas [hoo-as] ansin: he is up there.

Ar a trí a chlog gach lá: Air a tree a chlog gach lá: At 3 o'clock each day.
 Bíonn Seán agus Máire ar Scoil: bee un shan agus Myra air scol: Sean and M are at school.
 Ritheann Seán abhaile: Reehan shan awalya: Sean runs home.
 Siúlann Máire: Shoolan Myra: Maire walks.
 Osclaíonn Seán an doras: oslee on shan an doris: She Seán opens the door.
 Téann sé isteach sa teach: chay an shay ischa sa chach: He goes into the house.
 Cuirteann Mamáí im agus aran ar an tabla: Curann mammi im agus aran ar an tabla:
 Mummy puts butter and bread on the table.
 Tógann Seán Scian: tow gan shan skee an: Sean lifts a knife.
 Cuirteann sé im ar aran: Cur-an shay im ar arran: He puts butter on bread.
 Itheann sé é: ee han shay eh: he eats it.

Faighceann sé Cupán tae: fai an shay Cuppan tay: He gets a cup of tea.
 Tugann Mamáí tae do Mháire fosta: tugan M tay do Míra fosta: Mummy gives tea to M also.
 Cade rinne [Rin] Seán inné? [in yae]: What did Sean do yesterday.
 Thóg [hoge] Seán an bosca: Sean lifted the box.
 Shiúil [shoo il] sé go dtí an Cofra: he walked to the cupboard.
 D'oscail sé an Cofra: he opened the cupboard.
 Chuir sé an bosca isteach sa chofra: He put the box in the Cupboard.
 dhruid [gruidge] sé an Cofra arís: he closed the cupboard again.
 Rith sé go dtí an clós: he ran to the yard.
 Bhí Máire ansin: Maire was there.
 Thug sí Mílseán do Sheán: She gave a sweet to Sean.
 D'ith sé é: He ate it.

Chuaigh [hooey] sí go dtí an doras: She went to the door.
 Fuair [foor] sí peann ar an urlár: She got [found] a pen on the floor.

Cad é an lá atá ann inniu? : What day is it today?
 An Iuan, [an loo-an]: Monday.
 An Mháirt: An Wairch: Tuesday.
 An Céadaoin: An hay deen: Wed
 An déardaoin: An dare deen: Thur.
 An Aoine: An eena: Friday.
 An Satharn: An Sa harn: Saturday.
 An domhnach: An Doe nach: Sunday.
 Inniu an Iuan [in you]: today is Monday.
 Inné an domhnach [in yae]: yesterday was Sunday.
 Amárach an Mháirt: tomorrow is Tuesday.

Dé luain [Je loo an]: on Monday.
 Dé Máirt: March: on Tuesday.
 Dé Céadaoin: Kay deen: on Wednesday.
 Dé ardaoin: dare deen: on Thursday
 Dé haine: heena: on Friday.
 Dé Satharn: Sa harn: on Saturday.
 Dé Domhnaigh: Doe wee: on Sunday.

Mór: More: big, large
 beag: Bug: little, small.
 ard: tall: Nua: New.
 deas: JAS: nice, pretty
 bocht: Bawst: Poor.
 láidir: laidir: Strong.
 kamlar: Kower: Fat.
 óg: owg: young.
 Seandúine: Shandúine: an old Man.
 Teigh: chay: go. Tog: take.
 Bris: Breesh: break.
 Crechnaigh: Creechnee: finish.
 tabhair: dom: tower: give me.
 Siúil: Shoo il: Walk.
 Seas: shas: Stand.
 Suigh: See: Sit down.
 éirigh: ee ree: get up.
 ith: eat. ól: drink. stad: stop.
 dún: doon: shut. Rith: Run.
 Scuab: Scoo ab: Sweep.
 stróic: Strock: Tear.

dearg: Jarag: Red. drochphlingin: a bad penny.
 gorm: gorim: blue
 dubh: doo: Black, Black haired.
 donn: Brown, brown haired.
 Rua: Red haired. Ban: White.
 Fionn: Finn: fair haired.
 liath: lee a: grey haired.
 glas: Green: (grass etc).
 Uaine: oo ain ya: Green (dress etc.)
 Féach: Fayach: look.
 Scríobh: Screev: write.
 Ceannaigh: Cannay: buy.
 deisigh: Jessi: Mend.
 Oscail: oscail: open.
 léigh: lay: Read. tar: Come.
 abair: Say. fan: Wait, stay.
 glan: clean. Cuir: cur: put
 Nigh: Nee: Wash. Faigh: Fai: get.
 éist: Aist: listen.
 go gasta: quick.
 Seandúine: an old Woman.

NÁ: prefixes h to Vowels. a.e.i.o.u.
 Sounds: b = V, W. F = F. P = F.
 C = H. G = Gh, Y. S = H.
 D = Gh, Y. M = V, W. T = H.

Combined, for Scientific research:
 ARCHEOLOGISTS:

Search for stone tools.

Physiographers.

PALaeoAnthropologists:

look for early human fossils.

Stratigraphers.

Geologists:

Study the environments of ancient living sites.

Geochemists.

Kapnomists:

Investigate the way bones may become buried, and subsequently fossilized.

Geochronologists.

Anthropologists:

learn the ways of contemporary 'simple' societies.

Geomorphology: The Science of landform study. 19. feb. 87.

22-June. 1986:

Animal behaviorists:

Study the habits of Monkeys and Apes.

Psychologists:

Interested in the development of the human brain.

Big Bang Theory:

13 DEC. 86. H-5. D-wing.

The birth of the Universe. The first moments of the Big Bang spawned quarks and gluons, the stuff of MATTER. For a fraction of a second they were freely moving, but then clustered into tight groups that we call Protons and Neutrons; later to seed the elements that today build up the Galaxies, the Earth, you and me. We are the remote descendants of that conception...

Isaac Newton.

The LAWS of Motion are:

19. May. 1987.

- (1) Every body maintains it's state of rest, or uniform straight-line motion, unless acted upon by an external force. [inertia: resistance to motion].
- (2) The rate of change of momentum in a body is proportional to the magnitude of the force causing the change and it takes place in the same direction as the force. [stating the facts of acceleration].
- (3) To every action of a force there is an equal reaction in exactly the opposite direction. [When a body is pushed then it pushes back or reacts against the disturbing force].

Concise notes.

3 Nov. 1987: H-4.

Democritus invented the word 'Atom'. Greek for "unable to be cut". "Nothing exists, but atoms and the void". He said. For Democritus, life was to be enjoyed and understood; understanding and enjoyment are the same thing...

"Knowing a great deal is not the same as being smart; intelligence is not information alone but also judgement, the manner in which information is coordinated and used." Carl Sagan. 'Cosmos'.
"Everyone of us is, in the cosmic perspective, precious. If a human disagrees with you, let him live. In a hundred billion galaxies, you will not find another." Carl Sagan. 'Cosmos'...

A sound book.

3 Nov. 1987.

'Symbols, examples and ideas cannot be destroyed. When their enemies think they have destroyed them, what they have actually done is make them multiply.' Cuban pamphlet.

'In Capitalist Society we have a democracy that is curtailed, wretched, false, a democracy only for the rich, for the minority...' THE STATE AND REVOLUTION. Lenin. Continues: The dictatorship of the proletariat, the period of transition to communism, will for the first time create democracy for the people, for the majority, along with the necessary suppression of the minority - the exploiters. page 109.

Socialism:

termed by comrade Marx as the first phase of Communism.

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