

ASNS 1602 – Asia: Past, Present and Future

Table of Contents

TABLE OF CONTENTS	1
LECTURE 2.1 – THE UNIVERSE, THE EARTH AND ASIA.	6
RECAP FROM WEEK 1.....	6
ORIGIN STORIES	6
A MODERN, SCIENTIFIC ORIGIN STORY	6
LECTURE 2.2 – LIFE, EARLY HUMANS AND THE PEOPLING OF ASIA	7
LECTURE 2.1 RECAP	7
LIFE ON EARTH	7
HISTORY OF MAN	8
READING 3.1	9
CHAPTER 4: HOMININES HUMANS AND THE PALAEOLITHIC ERA.....	9
HOMININE EVOLUTION: 8 MILLION TO 200,000 YEARS AGO	9
THRESHOLD 6: THE APPEARANCE OF HOMO SAPIENS.....	9
<i>What Makes us Different?</i>	9
<i>When and Where is Homo sapiens Appear?</i>	11
THE PALAEOLITHIC ERA: 200,000 TO 10,00 YEARS AGO	11
<i>Definition and Significance of the Palaeolithic Era of Human History</i>	11
<i>Two Main Events of the Palaeolithic Era</i>	11
<i>Palaeolithic Lifeways: How did People Live?</i>	12
<i>Palaeolithic Impacts on the Planet</i>	12
VIDEO 3.1	14
THRESHOLD 6: HUMANS AND COLLECTIVE LEARNING	14
WHAT MAKES HUMANS DIFFERENT?	14
THE COMMON MAN	14
HOW DID THE FIRST HUMANS LIVE?	14
LECTURE 3.1 – COLLECTIVE LEARNING AND PALAEOLITHIC LIFEWAYS	15
RECAP WEEK 2:	15
COLLECTIVE LEARNING.....	15
PALAEOLITHIC ERA	15
<i>How did the first humans live?</i>	16
READING 3.2	17
CHAPTER 5: ORIGINS OF AGRICULTURE AND THE EARLY AGRARIAN ERA.....	17
THRESHOLD 7: AGRICULTURE.....	17
EXPLAINING THE AGRICULTURAL REVOLUTION	17
<i>What is Agriculture?</i>	17
<i>A Slow Revolution</i>	17
<i>The Transition to Agriculture</i>	17
LECTURE 3.2 – AGRICULTURE AND THE EARLY AGRARIAN ERA.....	18
EARLY AGRARIAN ERA (NEOLITHIC).....	19

READING 4.1	20
CHAPTER 6: THE APPEARANCE OF CITIES, STATES AND AGRARIAN CIVILISATIONS	20
DEFINING CITIES, STATES AND AGRARIAN CIVILIZATIONS	20
THE BUILD-UP OF RESOURCES AND COLLECTIVE LEARNING	20
<i>Increased Agricultural Productivity</i>	20
<i>Irrigation and Other Techniques</i>	20
<i>Population Increase, Hierarchy and Climate Change</i>	21
CHAPTER 7: AFRO-EURASIA DURING THE ERA OF AGRARIAN CIVILIZATIONS	21
A NEW TYPE OF HUMAN COMMUNITY	21
<i>What Were Agrarian Civilizations? A Taxonomy of Human Communities</i>	21
THE ERA OF AGRARIAN CIVILISATIONS	21
<i>Defining Features of Agrarian Civilizations</i>	21
VIDEOS 4.1	23
THE FIRST CITIES AND STATES	23
<i>Where and why did the first states and cities appear?</i>	23
LECTURE 4.1 - CITIES, STATES AND AGRARIAN CIVILISATION	24
RECAP WEEK 3:	24
AGRARIAN CIVILISATIONS	24
<i>We have Cities, States and Writing</i>	24
<i>Civilisations</i>	24
WHAT IS A CITY?	25
HOW DO STATES (AND EMPIRES) WORK?	25
<i>Tribute-Taking State</i>	25
WRITING	25
READING 4.2	26
CHAPTER 6: THE APPEARANCE OF CITIES, STATES AND AGRARIAN CIVILISATION	26
CITIES STATES IN OTHER REGIONS.....	26
<i>The Indus River Valley</i>	26
<i>China: Two River Valleys</i>	27
VIDEO 4.2	29
THE INDUS RIVER VALLEY	29
CHINA'S TWO RIVER VALLEYS	29
LECTURE 4.2 – AGRARIAN CIVILISATIONS: THE INDUS RIVER VALLEY & CHINA’S TWO RIVER VALLEYS	30
LECTURE 4.1 RECAP:.....	30
TODAY:	30
<i>Civilisations are Constantly Changing</i>	30
INDIA – INDUS RIVER VALLEY (HARAPPA)	30
CHINA’S TWO RIVER VALLEYS.	31
READING 5.1	32
CHAPTER 7: AFRO-EURASIA DURING THE ERA OF AGRARIAN CIVILIZATIONS	32
THE ERA OF AGRARIAN CIVILISATIONS	32
<i>Long Trends in the Era of Agrarian Civilisations</i>	32
FIRST TREND: THE EXPANSION, POWER AND EFFECTIVENESS OF AGRARIAN CIVILIZATIONS AND THEIR ADMINISTRATIONS.....	32
<i>First Cycle of Expansion and Contraction: 2000 BCE - 500 BCE</i>	33
<i>Second Cycle of Expansion and Contraction 500 BCE to 500 CE</i>	33
<i>Third Cycle of Expansion and Contraction: 500 CE to 1000 CE</i>	33

VIDEO 5.1	34
WHY DID AGRARIAN CIVILISATIONS EXPAND?	34
LECTURE 5.1 – THE EXPANSION OF AGRARIAN CIVILISATIONS: THE CHINESE EMPIRE	35
EXPANSION OF AGRARIAN CIVILISATIONS.....	35
CHINESE EMPIRE (1000 BCE – 1000 CE)	35
READING 5.2	37
CHAPTER 7: AFRO-EURASIA DURING THE ERA OF AGRARIAN CIVILIZATIONS	37
FIRST TREND: THE EXPANSION, POWER AND EFFECTIVENESS OF AGRARIAN CIVILIZATIONS AND THEIR ADMINISTRATIONS.....	37
<i>First Cycle of Expansion and Contraction: 2000 BCE - 500 BCE</i>	37
<i>Second Cycle of Expansion and Contraction 500 BCE to 500 CE</i>	37
READING 6.1	38
CHAPTER 8: AFRO-EURASIA DURING THE ERA OF AGRARIAN CIVILISATION	38
SECOND TREND: THE ESTABLISHMENT OF SIGNIFICANT NETWORKS OF EXCHANGE AMONG AGRARIAN CIVILIZATIONS OF AFRO-EURASIA	38
<i>Networks of Exchange and Collective Learning</i>	38
<i>Trans-Civilizational Linkages Through Warfare</i>	38
<i>Early Afro-Eurasian Trade Networks</i>	38
<i>Significance of the Silk Roads</i>	38
<i>Origins of the Silk Roads</i>	39
<i>First Silk Roads Era</i>	39
LECTURE 6.1 – NETWORKS OF EXCHANGE: THE SILK ROADS	40
EXCHANGE NETWORKS	40
<i>Two Periods of the Silk Roads</i>	41
READING 6.2	44
CHAPTER 6: THE APPEARANCE OF CITIES, STATES AND AGRARIAN CIVILISATION	44
CITIES AND STATES IN OTHER REGIONS	44
<i>Agrarian Civilisations in the Americas</i>	44
CHAPTER 7: AFRO-EURASIA DURING THE ERA OF AGRARIAN CIVILIZATIONS	44
FIRST TREND: THE EXPANSION, POWER AND EFFECTIVENESS OF AGRARIAN CIVILISATIONS AND THEIR ADMINISTRATIONS.....	44
<i>Third Cycle of Expansion and Contraction</i>	44
READING 7.1 – BREAKTHROUGH TO MODERNITY	45
AFRO-EURASIA DURING THE ERA OF AGRARIAN CIVILISATIONS	45
<i>Fourth Trend: The Generally Slow Pace of Change and Growth</i>	45
CHAPTER 11: BREAKTHROUGH TO MODERNITY	46
<i>Threshold 8: The Modern World/Anthropocene</i>	46
<i>Rationale for Threshold Eight</i>	46
LECTURE 7.1 – THE MODERN REVOLUTION	47
<i>New World = New Worldview</i>	47
THRESHOLD 8: THE MODERN REVOLUTION	47
<i>Power shift from Asia to Europe</i>	47
<i>How to talk about our modern world</i>	47
THE MODERN REVOLUTION.....	47
THE INDUSTRIAL REVOLUTION	48
<i>Malthusian Cycles</i>	48
SLOW GROWTH	48
CHARACTERISTICS OF MODERNITY	48

READING 7.2	49
CHAPTER 11: BREAKTHROUGH TO MODERNITY	49
THRESHOLD 8: THE MODERN WORLD/ANTHROPOCENE	49
<i>Why Great Britain and Western Europe? The Global Context</i>	49
LECTURE 7.2 – WHY NOT CHINA?	50
OUTLINE	50
WHY NOT CHINA?	50
FIVE FACTORS THAT ARE THE CAUSE OF INDUSTRIALISATION	50
TUTORIAL 7.2 - THE INDUSTRIAL REVOLUTION: WHY NOT CHINA?	51
READING 8.1	52
CHAPTER 11: BREAKTHROUGH TO MODERNITY	52
<i>Political Revolution: The Rise of the Modern State</i>	52
<i>The Emergence of Two Worlds – Developed and Developing</i>	52
CHAPTER 31: SOCIETIES AT A CROSSROADS	52
<i>The Chinese Empire Under Siege</i>	52
CHAPTER 28: THE BUILDING OF GLOBAL EMPIRES	54
<i>European Imperialism</i>	54
<i>Imperialism in Southeast Asia</i>	55
LECTURE 8.1 – MODERN STATES, NATIONALISM AND IMPERIALISM	56
<i>Modern states = Nation-states</i>	56
<i>Nationalism</i>	56
<i>Imperialism</i>	56
READING 8.2 – MODERN JAPAN NATIONALISM AND IMPERIALISM	58
CHAPTER 31: SOCIETY AT A CROSSROADS	58
<i>The Transformation of Japan</i>	58
CHAPTER 28: THE BUILDING OF GLOBAL EMPIRES	60
<i>The Emergence of New Imperial Powers</i>	60
LECTURE 8.2 – MODERN JAPAN: NATIONALISM AND IMPERIALISM	61
<i>Japan</i>	61
<i>Three waves of industrialisation</i>	61
<i>Modern Japan Success and Failures</i>	61
JAPAN: GLOBALISATION AND ISOLATION	61
<i>Edo (Tokugawa) period 1600-1868</i>	62
<i>A Modern Industrial Nation-State</i>	62
<i>Double Edge of Westernisation</i>	63
<i>Imperialism</i>	63
<i>Two Wars</i>	63
1912	63
READING 9.2 – CHAPTER 12: GLOBALISATION, GROWTH AND SUSTAINABILITY	64
INTRODUCTION	64
PART 1: POLITICAL AND MILITARY CHANGES	64
<i>Imperialism and Military Competition: 1900 – 1950</i>	64
LECTURE 9.2 – GLOBAL CRISIS AND CONFLICTS	66
ENERGY AND TECHNOLOGY	66
1900	66
THE RUSSO-JAPANESE WAR (1904-05)	66
JAPAN IN WWI	66
TUTORIAL 9	67

READING 10.2	68
SOCIETIES AT A CROSSROADS	68
<i>The Chinese Empire Under Siege</i>	68
NATIONALISM AND POLITICAL IDENTITIES IN ASIA, AFRICA AND LATIN AMERICA.....	69
<i>Asian Paths to Autonomy</i>	69
LECTURE 10.2 – CAPITAL, COMMUNISM AND REVOLUTIONS	70
COMMUNISM	ERROR! BOOKMARK NOT DEFINED.
READING 11.1	71
CHAPTER 12: GLOBALIZATION, GROWTH AND SUSTAINABILITY	71
<i>Part 1: Political and Military Changes</i>	71
CHAPTER 37: THE END OF EMPIRE.....	72
<i>Independence in Asia</i>	72
CHAPTER 37: THE END OF EMPIRE.....	73
<i>After Independence: Long-Term Struggles in the Postcolonial Era</i>	73
LECTURE 11.1 – THE COLD WAR 1945-1991	75
COLD WAR.....	75
<i>In Asia</i>	75
READING 11.2	77
CHAPTER 12: GLOBALISATION, GROWTH AND SUSTAINABILITY	77
<i>Reintegration, Renewed Growth, and New Forms of Conflict: 1950 – 2010</i>	77
LECTURE 11.2 – THE LAST 70 YEARS	78
BACK TO THE BIG PICTURE.....	78
<i>1945 - 1990's</i>	78
<i>1990's – today</i>	78
READING 12.1	80
CHAPTER 12: GLOBALISATION, GROWTH AND SUSTAINABILITY	80
<i>Part 2: Growth – More Humans Consuming More</i>	80
LECTURE 12.2	81
GROWTH	81
CLIMATE CHANGE	81
ECOSYSTEMS	81
LECTURE 13.2 – THE REMOTE FUTURE	82
THE NEXT FEW THOUSAND YEARS	82
THE REMOTE FUTURE.....	82

Reading 3.1

Chapter 4: Hominines Humans and the Palaeolithic Era

Hominine Evolution: 8 Million to 200,000 Years Ago

- Genus Homo formed about 2.5 million years ago when dramatic cooling began
- Among these early forms of the genus Homo were;
 - H. rudolfensis
 - H. habilis
 - H. ergaster
- By 2 million years ago *Homo* species lived in large groups vocalizations and gestures similar to apes.
- 1.8-1.7 million years ago emerged **H. erectus** its appearance was more human-like. Almost as tall as modern humans and 70% brain-size than ours.
- Due to babies being born prematurely, because of female pelvis becoming smaller and babies head being larger, they need more care from mum and then dad would stay around to make sure his offspring survived. Thus, pair bonding occurred.
- H. erectus also discovered fire. It was a significant step that differed them from other animals.
- H. erectus was the first Hominine species to venture out of Africa.
- 1.8 million years ago H. erectus evolved into **H. neanderthalensis** (Neanderthals). They lived till about 20,000 - 30,000 years ago.
- An offshoot of H. erectus is **H. floresiensis**. They were no taller than 1 metre.
- Decedent's of H. erectus evolved in a few ways over Afro-Eurasia.
 - Asia: change very little; remained same species.
 - Europe: Reaching to glacial conditions they became Neanderthals.
 - Africa: They evolved into H. sapiens.

Threshold 6: The Appearance of Homo sapiens

What Makes us Different?

- We judge that a threshold has been crossed when minor changes generate a cascade of further changes that yield new emergent properties.
- You can see the differences clearly by comparing modern human societies with the societies of chimps today.
 - Important differences is humans relationship with the environment in that human behaviours have changed over time. This has created our *history*.
- What is distinctive about our ancestors is that, unlike all other species, whose technologies were limited, our ancestors kept finding new ways of adapting to their environments.

Teamwork

- Teamwork is the source of ecological and social creativity. Humans collaborate better than any other large organism.
- Teamwork is apparent in all forms of complexity.
 - Chemistry arises when atoms join together in new combinations.

Symbolic Language

- At present, there are many reasons for thinking that the transformative event for our species was the appearance of new and more powerful forms of language that allow humans to share information and ideas more efficiently than any other species on Earth.
 - There is limits to how much chimps can communicate.
- We can even discuss things that may not exist, such as pink elephants. This is because we possess what Terrence Deacon has called symbolic language.
 - Rather than using sounds and gestures to refer to something, we use sound as conceptual parcels that refer to ideas.
- From this we can pass of knowledge to later generations that will changes their behaviours over time. These slow behavioural changes are called *history*.
- Symbolic language accounts for our remarkable ability to collaborate through **Collective Learning**, or the ability to share in great detail and precision what each individual learns through symbolic language.

TABLE 4.2 Some Differences in Modern Chimps and Modern Humans: What Changed over 7 Million Years

Chimpanzees	Humans
Knuckle walking	Bipedalism
Smaller brain size (about 3 times smaller)	Larger brain size
Large teeth, jaws, and mouth	Smaller teeth, jaws, and mouth
Dark fur, light skin	Little hair, dark skin (now variable)
Sociable	More sociable
High larynx	Lower larynx
Unassisted solitary childbirth	Assisted social childbirth
Males 25–30% larger than females	Males 15–20% larger than females
Male and female hierarchies	Pair bonding
Solitary eating	Social eating
No use of fire (raw food)	Use of fire (cooked food)
Simple tools	Complex tools
Vocalizations and gestures	Full speech with syntax
48 chromosomes	46 chromosomes



Threshold 6 Summary

THRESHOLD	INGREDIENTS ▶	STRUCTURE ▶	GOLDBLOCKS CONDITIONS =	EMERGENT PROPERTIES
HOMO SAPIENS	Same as all life and highly developed manipulative, perceptive, and neurological capacity.	Highly specific biological structures governed by human DNA.	Long preceding period of evolution generating highly developed manipulative, perceptive, and neurological capacity.	Collective Learning, i.e., capacity to share information precisely and rapidly so that information accumulates at the level of the community and species giving rise to long-term historical change.

When and Where is *Homo sapiens* Appear?

- Sometime between 250,000 years ago (the start of the Middle Palaeolithic) and 50,000 years ago (the start of the Upper Palaeolithic).

Can we be more precise about when human history began?

- We could determine when symbolic language and Collective Learning began but that is difficult because these things don't leave a direct trace.
- With how quickly we began to evolve over the 200,000 we can assume that the pack-age came together quite quickly (a few 10,000 years).

Where did our species evolve?

- When did *H. sapiens* split off from the hominies (all descendent of *H. erectus*)? There are two hypothesis:
 1. The "**Out of Africa hypothesis**".
 - Modern humans evolved in Africa within the last 250,000 to 200,000 years.
 2. The "multiregional hypothesis".
 - Various forms of *H. erectus* or *H. ergaster* evolved slowly into our own species over much of Afro-Eurasia and over many hundreds of thousands of years. However, studies show that Neandertals are not a variant of our own species, but that we diverged about 500,000 years ago from later forms of *H. erectus*.
- Most scholars now accept that our species evolved in Africa sometime within the last 250,000 years.
 - Still remains debate about where and when.

Summary

- First, what makes us unique as a species is our capacity to keep developing new forms of behaviour and new ways of relating to our environment. This ecological, technological, and artistic creativity explains why we alone have a history of long-term change.
- Second, the source of this creativity seems to be the peculiar efficiency of human language, the fact that we can share ideas so well that they get locked within the collective memory, and begin to accumulate. This is what we call Collective Learning.
- Third, most palaeontologists argue that our species evolved within the last 250,000 years, probably somewhere in Africa. From about 100,000 years ago, the evidence that our ancestors not only looked like modern humans, but also behaved like them (in other words, that they were adapting through Collective Learning), becomes increasingly powerful; and from about 50,000 years ago, it is indisputable.

The Palaeolithic Era: 200,000 to 10,000 Years Ago

Definition and Significance of the Palaeolithic Era of Human History

- Palaeolithic = "the Old Stone Age". Defined as the first age of distinctly human history, from the appearance of *H. sapiens* (200,000 years ago) to the beginning of agriculture (12,000 years ago).
- During this period is when we become who we are and began to realize our species' potential physically, socially, technologically, and linguistically. It is also the foundation of all subsequent world history.

Two Main Events of the Palaeolithic Era

1. Climate Change

- Specifically the impact of the last ice age on human history.
- 2. *Extensification*.
 - The spread of humans around the world, as a result of new technologies to cope with different environments.

Climate Changes: Survival in the Ice Ages

- Palaeolithic humans lived through two distinct ages.
 1. Beginning 195,000 years ago conditions began to deteriorate and the planet entered long glacial stage that lasted until approx. 123,000 years ago.
 2. Beginning 110,000 years ago and lasted until 11,500 years ago.
- Human life during the Palaeolithic largely evolved under ice age conditions.
- Around 14,000 years ago earth experiences a rapid global warming and moistening.
- After a few thousand years of recovery the planet went through a short lived glacial event called *the Younger Dryas* (100 years). It disappeared 11,500 years ago and this marks the start of **the Holocene epoch**.
- From 11,500 the earth became warmer and wetter and the ice sheets gradually melted.
- The period between 9,000 and 5,000 BCE is known as the **Holocene Optimum**.

Extensification: The Spread of Humans

- Small groups of modern human began to migrate out of Africa from about 90,000 years ago.
- **Extensification** is the term used to describe the process of global colonization. It is a form of innovation that allows “an increase in the range of humans without any parallel increase in the average size or density of human communities”.
 - This suggests that there was little increase in complexity during these Palaeolithic migrations.
- The chronology for these global migrations suggests that humans had left Africa and migrated into West Asia and the Mediterranean regions by about 100,000 to 90,000 BP; had made it to East Asia and Australia by 60,000 BP; were occupying cold regions of the Ukraine and Russia by about 35,000 BP; Siberia by about 20,000 BP; and the Americas by at least 13,000 BP.

Palaeolithic Lifeways: How did People Live?

Foraging as a Way of Living

- **Foraging** involves the gathering of food-stuffs and other needed materials from the environment to survive.
 - This is important as it shows a level of teamwork. Humans also use knowledge accumulated over many generations to hunt.
- Because foraging couldn't sustain a large population infants and elderly were often left to die or killed deliberately. Thus populations of nomadic foragers grew slowly.

Palaeolithic Standards of Living

- Some experts argue that Palaeolithic communities lived as an affluent society. However, many people argue that they lived on the verge of starvation and did not choose to continue the foraging lifestyle, but had no option.

Living in Small Groups: A Do-It-Yourself Approach to Life

- Foragers generally live in small groups of 10 to 20 people and the family is the basic social unit. Everything was done within the family.

Palaeolithic Impacts on the Planet

- Modern evidence shows that they did have a significant impact on the environment.

Fire-Stick Farming

- Setting fire to huge tracts of bushland to drive game out and to promote the growth of new vegetation.
 - Turned scrubland into grassland. Suppressed the succession of certain species.

Megafaunal Extinction

- Humans demonstrated their adaptive abilities and technological prowess by initiating a wave of extinctions, among the megafaunal (that is, large-sized animal) inhabitants of these continents, who had had no previous experience with this introduced predator. In the Americas nearly 75 percent of all animals weighing more than 100 pounds (45 kilograms) disappeared after humans arrived. In Australia the figure is 86.4 percent.

Video 3.1

Threshold 6: Humans and Collective Learning

- About 200,000 years ago, man evolved to become the most important force for change on the Earth's surface.
- What makes us so different from other living things? How did we, together, make something entirely new?
- Many creatures can learn. Some can share what they learn. Only humans can share ideas so efficiently that we learn collectively as a species. We are uniquely powerful because we use symbolic language to store and circulate information that would otherwise disappear when individuals die. This enables us to manipulate and react to our environments like no other species on the planet.

What Makes Humans Different?

- No other species can do what we can do, however, there is no universally agreed upon answer to what makes us different.
- 200,000 - 100,000 years ago H. sapiens started spreading (left Africa), they started building houses and using a whole different variety of tools. Eventually humans spread all across the globe, which happened very quickly in evolutionary standards.
- No other species shows the same capacity for creativity that we do.
- Humans have a specific way to communicate which is very powerful -> symbolic language
 - Stored in the Collective memory, thus, ideas don't die. We learn collectively.
- Being able to pass down information from generation to generation is unique to humans.
- **Collective Learning** defines our species and is why it is the 6th threshold and why we have such a profound impression on the biosphere.

The Common Man

- Common Traits:
 - Collective Memory
 - Language
 - Accumulation of Information
 - Sharing of information efficiently
 - Cooperation -> better than most organisms
 - Some plants and animals can't cooperate without us.
 - Curiosity. Why we are here? What is over the next hill? What is in space?
 - Just to know for the sake of knowing.

How Did the First Humans Live?

- Traits:
 - Large area
 - Small population
 - Nomadic
 - Travelled light
- Palaeolithic era begins with the arrival of H. sapiens and ends with the arrival agriculture.
- Life seemed ok as long as there is an abundance of food. They travelled around a lot and were fit from this.
- Significant migration happened 60,000 years ago.
- About 10,000 years ago humans had settled across the entire globe.

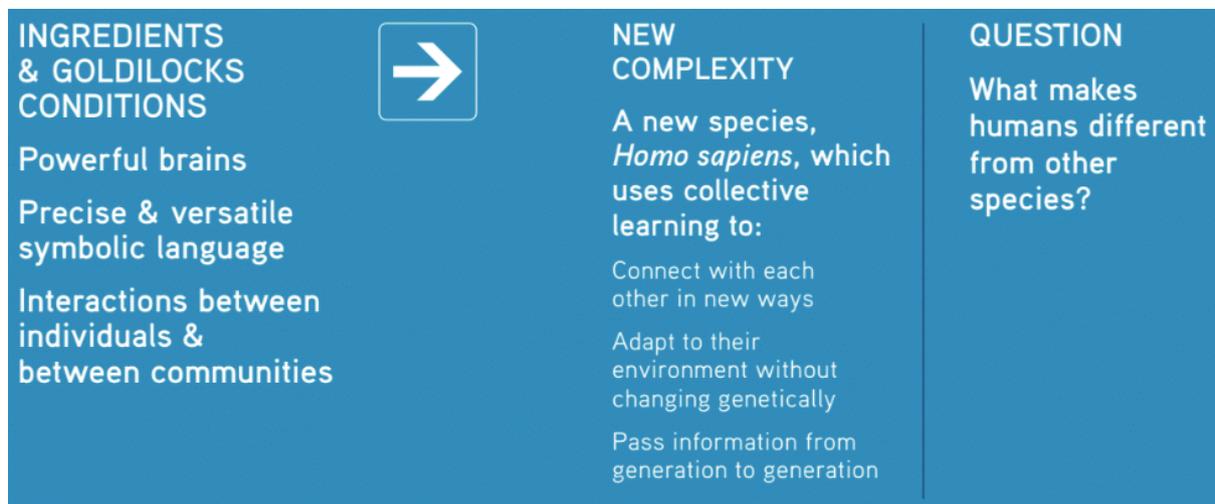
Lecture 3.1 – Collective Learning and Palaeolithic Lifeways

Recap Week 2:

- Went through thresholds 1-5.
- Looked at Homo sapiens and our development. Looked at our hominine brothers.
- The spread of Hominines across the globe. H. sapiens spread even further.
- Zoom into Asia and saw how we have a lot of remains in China, Indonesia and Asia.
- H. Sapiens originated in East Africa. But this has been challenged.

Collective Learning

- What makes us different from other species?
 - H. sapiens spread much more rapidly. Only H. s reached Aus. Around 100,000 - 200,000.
- The dominant species on earth in a way that no other species has been before.
- Growing agreement that what makes us unique is our ability for **Collective Learning**. Most species can learn, however, most of this knowledge is lost when the individual dies. But with humans we have symbolic language which allows us to pass on our knowledge.
 - Language is the key the Collective Learning as it allowed us to *build* on knowledge.
 - Collective Learning gives us a unique and powerful adaptive mechanism.



Palaeolithic Era

- Eras and the percentage of humans throughout time (80 billion):
 - Palaeolithic: 200,000 – 10,000 BCE = 12%
 - Agrarian: 10,000 BCE – 1700 CE = 68%
 - Modern- 1700 – now = 20%
- **Palaeolithic** = **old stone** age
- Foragers = hunter-gathers

How did the first humans live?

- Great variety of lifeways
- Small groups
- Competition and cooperation
- Nomadism
- Highly skilled individuals

Reading 3.2

Chapter 5: Origins of Agriculture and the Early Agrarian Era

Threshold 7: Agriculture

- From 12,000 to 10,000 years ago new technologies began to appear and which gave humans access to more energy and resources. Thus, human began to multiply more rapidly and to live in larger and denser communities like agrarian villages and towns.
 - The adoption of agriculture was fundamental in economic and cultural revolution
- Where agriculture was adopted the pace of change was normally faster. Not everywhere adopted agriculture so different regions began changes at different paces.
- When denser farming communities appeared Collective Learning began to accelerate.

Explaining the Agricultural Revolution

- Instead of **Extensification** farmers find ways to extract more from a given area, a process called **Intensification**. Farmers harvest smaller numbers of animals and plants, whose output they have learned to increase artificially.

What is Agriculture?

- It is a series of methods to increase the energy and resources available to humans by manipulating the plants, animals, and landscapes around them.
 - Thus, there becomes a **symbiosis** (species co-dependence).
- Over time, both humans and domesticates have come to depend on the relationship, so much so that the survival of each might be seriously endangered if the other were to disappear.

A Slow Revolution

- First took place in a few widely separated areas across the globe and then gradually spread.
- 23,000 BCE evidence was found of more than 90,000 plants had been eaten. Although no signs of domestication researchers saw that wheat and barely was being ground up to create flour for dough and bread.

TABLE 5.2 Sites and Dates for the Emergence of Agriculture (BCE)

Southwest Asia (Fertile Crescent) 9000
Egypt and the Sudan (Nile valley) 8000
China (Yangtze and Huang He valleys) 7000
Australasia (New Guinea Highlands) 7000–4000
Sub-Saharan Africa 3000–2000
Indus valley 2200
Mesoamerica (Central Mexico) 3000–2000
South America (Andes and Amazonia) 3000–2000
North America (Eastern United States) 2000–1000

The Transition to Agriculture

- Initial argument was that someone invented it, however, archaeology shows that agriculture emerged separately in different parts of the world.
- Foragers did not always see farming as a more attractive lifeway.

Lecture 3.2 – Agriculture and the Early Agrarian Era



- What is agriculture?
 - A symbiotic relationship between humans and domesticated species.
 - Symbiotic = cooperation between different species. When living together is a win-win.
 - E.g. the bee and the flower.
 - Domesticated = the process by which humans breed a population of plants or animals to make them more productive, easier to control, or more beneficial to humans in other ways.
 - E.g. cattle. Domestic sheep are helpless without humans.
 - The population of domesticated species are very large.
- Domesticates change genetically
 - E.g. domestic cattle are much smaller and gentler than their ancestors.
- Humans change culturally
 - Humans from 50,000 – 60,000 are genetically very similar. However our lifeways change. We used to be foragers and now we are farmers living in huge cities. The biggest genetic change we have had is being able to digest other animals milk (it took us a few 1000 years).
- Humans applied their Collective Learning skill to begin to produce food. This is a radically new way of living and it didn't happen suddenly. It was small changes that accumulated. Many small groups that made smaller decisions. Many of these may have been unintentional.
- Agriculture was certainly connected to climate change. Global warming + population growth = agriculture.
 - Which a growth in population it pushed people to find more and new sources of food. Global warming also made the climate able to produce crops.
- Agriculture emerged first in SW Asia (Middle East) called the fertile crescent. **Can check map on slides for more specific information.**

TABLE 5.2 Sites and Dates for the Emergence of Agriculture (BCE)

Southwest Asia (Fertile Crescent) 9000
Egypt and the Sudan (Nile valley) 8000
China (Yangtze and Huang He valleys) 7000
Australasia (New Guinea Highlands) 7000–4000
Sub-Saharan Africa 3000–2000
Indus valley 2200
Mesoamerica (Central Mexico) 3000–2000
South America (Andes and Amazonia) 3000–2000
North America (Eastern United States) 2000–1000

- Agrarian Societies: societies in which agriculture is the foundation of wealth.
- Was agriculture a process?
 - The trap of sedentism (in textbook).
 - Once we started farming there was now going back → From the growth of population. People depend on the food. If there is a bad crop or epidemic that kills animals, there is a famine.
 - The life of foragers was better than the life of peasants.
 - After a few generations later no one has the knowledge of how to live in the bush.
 - Thus, we were trapped.
 - Animals are the biggest victims of the agricultural revolution. ☹ agriculture (back them) seemed to make everyone miserable?

Early Agrarian Era (Neolithic)

- The period beginning with the appearance of agriculture and ending with the appearance of cities and states. 10,000BCE – 4,000BCE

More information in the textbook