

Module 1

Greek and Latin: History

Earliest Greek Language

- Greek \subset Indo-European
- Earliest evidence of Greek language: "Linear B" writing on clay tablets from 15th cen. BC Mycenaean civilization
- Dark Age (12th cen. BC to ~800 BC): disappearance of written records; started as Mycenaean civilization collapsed

The Greek Language and Alphabet

- 950-750 BC: Greeks adopted the Phoenician alphabet:
 - For the hard "k" sound: Greek used letter *kappa* (κ) while Latin used "c"
 - Letter "h" did not exist in Greek; considered just a puff of air and often treated like a vowel
 - Vowels:
 - *upsilon* (υ) = "u" but sometimes "y"
 - *iota* (ι) = "i" but sometimes "e"
 - Double letter consonants:
 - *rho* (ρ) = "rh"
 - *chi* (χ) = "ch"
 - *psi* (ψ) = "ps"
 - *phi* (ϕ) = "ph"

Rise of the Greek City States

- Greek civilizations were organized into self-governing city-states, or *polis*
- Beginning in 1000 BC and ramping up in 8th cen. BC, Greeks spread throughout the Mediterranean basin: Sicily, southern Italy, southern France, Spain, North Africa, and Black Sea area

- City states fought each other until the Persian Empire invaded Greece in early [5th cen. BC](#) and they joined forces under Sparta and Athens

Greek Classical Period

- The century that followed the Persian Wars is considered the Greek "Golden Age"
 - Great tragedians: Aeschylus, Sophocles, Euripides
 - Comic playwright Aristophanes
 - Architecture: Parthenon on the Acropolis
 - Homer: *Iliad* and *Odyssey*
- Peloponnesian War: conflict between the two dominant city-states of Athens and Sparta; won by Sparta

Age of Philip and Alexander

- Macedonians (Greek-speaking people from Northern part of Greek peninsula), lead by Phillip II forced city-states into an alliance in mid [4th cen. BC](#).
- Phillip planned revenge against the Persians; he was assassinated, but his son Alexander carried out the invasion
 - The Greek language was spread far eastwards; became the standard language of commerce and government in many areas

Hellenistic Period

- Alexander died suddenly after establishing his new empire
- Empire's center of influence shifted from the Greek peninsula to cities such as Alexandria in Egypt and Antioch in Syria
 - Advances in medicine (particularly in anatomy)
 - Great libraries established in Alexandria and Pergamum (in modern Turkey)

Earliest Latin Language

- Latin \subset Indo-European
- Earliest evidence of Latin language: inscriptions from [6th cen. BC](#)
- Latin alphabet = English alphabet minus letters "j" and "w"
- Rome began as a small, Latin-speaking settlement founded in the [8th cen. BC](#)

- Rome grew during the Hellenistic Period and added Hellenistic regions to its own growing empire

Roman Republic

- Rome was originally ruled by kings, but in early **6th cen. BC** the Republic (a system based on annually-elected magistrates and representative assemblies) was established
- Rome's expansion spread the Latin language:
 - Rome had conquered all of Italy by the **3rd cen. BC**
 - Rome clashed with Carthage in the 3 Punic Wars for control of the western Mediterranean
 - Rome absorbed Greece and the Hellenistic kingdoms
 - Rome also expanded into North Africa, France, and Spain

Romain Empire

- Roman Republic system collapsed and resulted in frequent bloody civil wars
- In late **1st cen. BC**, Augustus became emperor
- Geographical linguistic divide - "Latin West" and "Greek East", except:
 - Latin was used for law and administration throughout
 - Greek was used for philosophy and medicine throughout

Greek and Latin After the End of Antiquity

- Romain Empire collapsed in the late **5th cen. AD**
- During medieval period (**5 - 15th cen. AD**), Latin was used for all scholarly and ecclesiastical works
 - Ecclesiastical Latin continues to be used by the Roman Catholic Church
- In **16th cen. AD** (Renaissance) there were attempts to revive Classical Latin, which resulted in Neo-Latin
 - Neo-Latin was used for science, education, and diplomacy in Europe until gradually replaced by local languages by early **18th cen.**
- Modern day:
 - Latin evolved into modern Romance languages

- Latin is used to name and describe species
- Ancient Greek remains important theologically due to the New Testament
- Ancient Greek serves as the primary source for most medical terminology

Greek and Roman Medicine

Important Figures in Greco-Roman Medicine

All Greeks, no Romans; Romans did not consider bio-medicine worthwhile, while Greeks considered it an extension of philosophy

- Hippocrates: *father of medicine*
 - 5th cen. BC; physician and medical writer
 - Over 60 medical texts
 - Humoral theory; role of lifestyle and environment in illness
- Plato:
 - 5th cen. BC; philosopher
 - *Timaeus* outlined his conception of the body and soul and their interactions, though internal anatomy and physiology was entirely theorized
 - Very respected, his ideas about the human body were valued even though he was not a physician
- Aristotle:
 - 4th cen. BC; philosopher and Plato's student
 - Ideas about human body drew upon analogies from animal dissections; better understanding than Plato, but also sometimes wildly inaccurate
 - Promoted empirical investigation of the natural world; first to attempt a systematic classification of the natural world
- Dioscorides:
 - 1st cen. AD; physician and pharmacologist
 - Work on pharmaceutical herbalism *Die Materia Medica* was a standard work of medical reference well into the 17th cen.
- Galen:

- 2nd cen. AD; physician of the emperor in Rome
- Several hundreds of medical texts
- Held ideas of Hippocrates in very high esteem; modified humoral theory to its modern form
- Often referred to Soranus with great respect
- Soranus:
 - 2nd cen. AD; physician in Ephesus
 - Known for *Gynaecia*: a treatise on gynecology, obstetrics, and paediatrics

Bio-Medical Theories of the Classical World

- Theories:
 - Theory of humours: *most common in ancient world*
 - Handed down and relied upon well into the 19th cen.
 - First recorded by Hippocrates, modified and promoted by Galen
 - A person's physical and mental states are determined by the relative ratios of various (4) liquids in the body
 - According to Galen ($n = 4$):
 - Blood: hot + wet = Air
 - Phlegm: cold + wet = Water
 - Yellow bile: hot + dry = Fire
 - Black bile: cold + dry = Earth
 - Physician's job was to restore balance to the humours
 - Pneumatic theory:
 - Disorder of the *pneuma* (breath / spirit that was believed to flow in arteries) was the cause of illness
 - Corpuscular theory:
 - Blockage of *corpuscles* (little bodies that flowed through the body) was the cause of illness

- Sects:
 - Dogmatist: *e.g. Hippocrates and Galen*
 - Physician should combine theory of disease causation, anatomy knowledge, and understanding of the patient in their practice
 - Methodism:
 - Understanding human anatomy is unnecessary
 - Used corpuscular theory: physician needed only techniques to 'adjust the size of the corpuscular channels to alleviate blockage'
 - Empiricist:
 - Understanding human anatomy is unnecessary
 - Cause of disease was irrelevant; instead detailed notes of what has worked in the past should guide a physician

Divine Healing

- Hippocratic Oath calls upon various Greek gods of healing
- Galen was a *therapeutes* (servant) in an Asclepion (temple of Asclepius, the Greek god of healing)

The Continued Use of Greek and Latin in Medicine and Biology

- Greek and Latin elements make up 94% of all life/health science terminology
- Reasons for use:
 - Greek and Latin medical terms are well entrenched in history
 - Greek was the language of medicine; even during the Roman Empire, medical texts were written in Greek
 - Greek medical terms were transliterated (i.e. letter-for-letter) into Latin terms
 - After the fall of the Roman Empire, Latin became more prominent in medical texts
 - Greek and Classical Latin are dead languages and no longer change
 - The word structure of Ancient Greek allows for complex ideas to be made into a single word

