

# ANCIENT HISTORY

## Pompeii and Herculaneum

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**Explain what private buildings (villas, houses, and shops) reveal about life in Pompeii and Herculaneum:**

It reveals the social, political, religious and economic aspects of life in both cities.

- Social status→ differing kinds of houses; no obvious distinction between residential and commercial units in both towns, where Andrew Wallace-Hadrill described an “interlocking jigsaw of large, medium and small houses” → wealthy and poor were segregated. Front door could be large and elaborate (indicated wealth and status of owner) large peristyle: luxurious gardens, fountains, statues to show off their wealth to visitors. According to Wallace-Hadrill “decoration allowed the visitor a social orientation”. Houses in Pompeii included the House of Faun which had lavish architecture and luxurious statues and ornaments highlighting the owner’s wealth and high status in society. The House of Vetti also had a large peristyle and kitchen which reveal their wealth. Middle Class houses of Plebians were less extravagant than those of Patricians especially in Herculaneum “Houses appeared to be more evolved, more advanced in their planning, than those in Pompeii” (Deiss)
- Economy: The Domus is for wealthy families which could cater for the Dominus’ business which took place in the tablinium – taking care of finances – impacting on economy. Houses had a tabernae connected to it which would have impacted on the economy-it also reveals how the residential and commercial activities were intertwined. Economy was also aided by weaving as evidenced by loom weights found in the atrium of many wealthy houses (according to Livy). House of Vetti had a wall painting depicting slaves pressing flowers to extract the oil in wooden mills-the perfume industry aiding the economy. Villas → built for pleasure but main purpose was agricultural production of crops as seen by the Villa Rusticae where they had presses for production of wine and oil.
- Religion: The House of Vetti had a lararium in the vestibulum which had a painting of the Roman God of Fertility, Priapus; for domestic worship-reveals religious practice emphasised by Cicero “There are his sacred hearth and his domestic gods, there the very centre of his worship, religion and domestic ritual.”

### **Economy:**

- Butterworth “the sparkling bay of Naples was a powerhouse of the Roman economy”.
- Pompeii was a bustling commercial centre: Tabernae and Thermopolia, shops along the Via Del Abbondanza and in the Forum and the central market-the Macellum. Over 600 active businesses.
- Trade and exports: Garum, pottery, wine, perfume (seen in House of Vetti where flowers are pressed to extract oil in wooden mills-panting), clothing (wool-as evidenced by Eumachia’s wool storehouse).
- Industries: Textiles- loom weights in atrium of houses (Livy)-Fulleries for laundry (18 found in Pompeii-Fullery of Stephanus), Bakeries (pistrina) 28 in Pompeii and 2 in Herculaneum identified by mills and ovens and in Herculaneum a baker Sextus Patulcus Felix specialised in cakes where 25 bronze pans of various sizes were found. Agriculture industry in the Bacchus

painting-wine production. Perfume industry-House of Vetti had a wall painting depicting slaves pressing flowers to extract the oil in wooden mills. Villas → agricultural production of crops as seen by the Villa Rusticae where they had presses for production of wine and oil.

- Bronze scales used to weigh goods; set of standardised weights and measures built into the wall of the Temple of Apollo (religion and economy intertwined).
- Houses connected to tabernae (commercial and residential intertwined) 200 eating and drinking places found in Pompeii.
- Business activities of the banker Jucundus have been revealed on two bundles of wooden tablets coated with wax.
- SLAVES: Slave labour was “both essential to the ancient economy and encompassed all facets of life” (George); Performed mostly agricultural and manufacturing work. May have worked in shops or ran them-evidence of slaves’ seals and signing tablets on behalf of their masters-high level of responsibility (receipt from fullery).

### **Social Structure:**

- Fiorelli estimates 12, 000 for Pompeii, while Herculaneum has been estimated as 5, 000 based on seating capacity at theatre.
- Upper class: Patricians; senators and equites-Marcus Nonius Balbus.
- Equites or equestrians were second class.
- Middle class Plebians provided essential services-manumitted slaves or Freedmen “they imitated the cultural language of the nobility in order to establish their membership in that society”-Wallace Hadrill-> they were prosperous and influential gaining wealth through trade, banking and manufacturing.
- Lower class Infames.
- Men: senatorial elite and ordinary citizens, all citizens could vote and had full legal rights, most were prominent citizens as evidenced by memorial plaques, dedicated inscriptions, honorary statues (e.g. MARCUS Holonicus Rufus, a prominent business man, made fortune from brick making and wine exporting, prominent in local politics).
- Women weren’t citizens and had no political rights-> traditional husband serving role, role to produce a legitimate heir (as evidenced by portraits of mothers cradling babies seen in the cubulum in the House of Postumii), lower class women were to direct the spinning and weaving of cloth (loom weights found in every Pompeian house).

According to Bernstein, they were “actively involved in the economic, political and social life of their town”-where they could influence the votes in politics by graffiti on walls e.g. the bar owner Asselina had slogans on the outside of her bar may reveal her interest in politics. Their impact on the economy →managing the household budget, went into partnership with husbands, inscribed tablets in Herculaneum reveal how they were engaged in buying, selling and leasing but not allowed to become banker.

Some were prostitutes-considered disreputable...Beard says: “Sex for money was almost as diffused through the town as eating, drinking or sleeping.” 26 Lupanaria in Pompeii.

Role in religion-actively in domestic worship, The Great Frieze in the Villa of Mysteries reveals their role in religious ceremony-> painting from Herculaneum shows women in ritual sacrifice to Isis (Julia Felix).

Slave women-foreign-> sexual relations as evidenced by slave woman skeleton found near Sarno River wearing gold bracelet engraved "From the master to his slave".

Upper-class women→ Julia Felix, rich-role in economy and commerce through her huge estate which combined commercial and residential living-tabernae at the front-also religious role with cult of Isis.

Eumachia-role in public life and politics, inscription on building of Eumachia built "in her own name and that of her son...at her own expense" in the Forum...Was the matron of fullers as she donated building in the Forum to the Collegium of the Fullones – also she had a wool storehouse-economical role.

### **Contribution of Slaves:**

#### **Economic:**

- Represented a significant proportion of the population-possibly 40%.
- Slave labour was "both essential to the ancient economy and encompassed all facets of life" (George).
- Performed mostly agricultural and manufacturing work.
- May have worked in shops or ran them-evidence of slaves' seals and signing tablets on behalf of their masters-high level of responsibility-(receipt from fullery).

#### **Politics:**

- Spreading the word of their master to be voted for.
- Contribution seen on the helmstelae (round tombstone) inscriptions that reveal a confirmed relationship between master and ex-slave.

#### **Religion:**

- Membership in the cult of Isis.

#### **Local Political life:**

- Pompeii and Herculaneum was self-governing on local matters-both self-administering municipalities.
- 2500 election slogans-interest in political affairs -> people were politically aware.
- According to Cicero, competition for office was fierce in Pompeii.

### **Three level structured local government:**

#### **Magistracy**

- Two co-mayors (duumviri) serve for one year-power to govern community, in charge of justice, decisions on public buildings, roads, collecting fines, organised census every 5 years, expected to fund money to community according to Beard.
- Two Aediles: Low ranking magistrates, served for one year, responsible for daily administration: roads, buildings, temples, markets, maintaining public order, funds for spectacles/theatre.
- Council (ordo decurionum): comprised of 80-100 decuriones-wealthy aged over 25, further members could be appointed by duumvir-> they settled community debts, city finance, religious matters, public business-decisions recorded in public archives-membership for life-> allowed to wear purple edged toga (high status).
- Peoples Assembly (comitium)-all eligible males over 25-elected by duumviri and Aediles annually, voted as individuals or guilds-by ballot in the Forum.

#### **Influential individuals in Politics:**

##### **Markus Holonicus Rufus:**

- 5 time duumvir.
- Quinquennial twice.
- For 5 years was the most popular man in Pompeii.
- Base of his statue record him as military tribune, a knight, a patron of the town, and priest of Augustus.
- Great impact on Pompeii-building projects (remodel large theatre), speeding up process of Romanisation by transmitting Augustan policy.

##### **Markus Nonius Balbus:**

- Herculaneum leading figure.
- Proconsul of Crete; at least 10 statues in his honour, in Basilica.
- Used personal wealth to fund buildings.
- Altar inscription "duumvir for the second time".
- Named patron of the city.

##### **Eumachia:**

- Used inherited wealth to donate buildings to Collegium of Fullones.
- Wool market.

## Everyday Life:

- Leisure activities like gambling evidenced by frescoes depicting men rolling dice in the tabernae or Thermopolia, sitting under sausages-also attending theatre, palaestra.
- Patricians and lower class enjoyed dining: the triclinium (dining room) facilitated this where they could recline and eat finger foods.
- Artistic representation of clothing worn-depicts rank and status: e.g. statues of Marcus Nonius Balbus in Herculaneum wearing a toga reveal only wealthy or important people wore it. Women wore ankle length stola or Greek inspired peplos (as seen in painting at Villa of Papyri) and palla to veil head-signified chastity and modesty. Boys wore tunics.
- Health: Study of human remains→ Pompeian's were well nourished; many dental conditions, bodies had high lead content as they cooked in lead pots and water was flushed through lead pipes.
- Bathing considered a social activity-> cleanliness importance, relaxation and socialisation also prostitution.
- Public-Stabian Baths (oldest): had sections for women and men evidenced by signage with entrance marked "women". Central Baths (maybe for men only), Forum Baths.
- Private-Sarno Baths had numerous rooms for dining, drinking, resting and enjoying sexual favours.
- Herculaneum baths were less luxurious and smaller-hypocaust system.

## Roman Bath Layout:

- Vestibule (exercise yard with portico).
- Apodyterium – changing/waiting room with benches and niches for clothing.
- Frigidarium – room with circular cold bath, domed ceiling, cold plunge bath.
- Tepadarium – warm room for transition from cold to hot, sometimes joint is a laconicum (sauna).
- Caldarium – hot room at 40 degrees, vaulted ceiling, semicircle at end of room, circle with a basin with cold water in it suspended floors with hypocaust underneath.
- Water Supply: over 40 fountains in Pompeii-water sent from Acquaro River by aqueduct.
- Sanitation: originally relied on public and private wells and cisterns for water, later connected to aqueduct (42 fountains in Pompeii 3 in Herculaneum) Also, had toilets which were cleaned by a constant flow of water into sewerage system.

## Public Buildings:

- Basilicas-most elaborate structure of Forum- centre of Economic activity-conducting legal cases, business & justice.
- Temples-religion, decisions controlled by the Gods, prayer, offerings, sacrifices. Pompeii had 10 temples dedicated to Apollo, Isis, and Jupiter, Venus etc. (large #highlights importance) Religious life intertwined with commercial and civic life. In temple of Apollo there is a marble altar where sacrifices could be performed.
- Forum: (2 in Pompeii: Triangular and Main) Centre of political, economic and religious life. Painted Frieze in Julia Felix Estate shows scene of public life in Forum. On the Southside had political and economic buildings (basilica), right side had religious (Temple of Public Lares, Temple of Apollo) and economic buildings (Building of Eumachia). Macellum in north east corner for economy (food market), western side had suggestum (where orators would announce things) Also, voting—ballot.
- Theatres: 2 in Pompeii-The Large theatre could seat up to 5000 spectators, directly linked to Triangular Forum and Temple of Minerva (religious aspect of drama). Horse shoe-shaped (cavea): section near stage for authorities and important visitors (ima cavea), highest section for women (summa cavea) and other members of public in (media cavea).(seating reflects social structure) The stage (proscenium), Velarium used to shade audience.
- Palaestra-gym, Large Palaestra in Pompeii surrounded by portico on 3 sides, in centre was large swimming pool (largest in Herculaneum), open area for gymnastics and wrestling. Deiss suggests that sacrifices were made in a room prior to any competition (intertwined religion and sport).
- Amphitheatre-held 24, 000 in an oval shape: for fames, gladiatorial fights, hunts with animals etc. Gladiatorial games were officially held to honour gods (as seen by niches and altar room where they made sacrifices) or celebrate victory. Also political purpose where whoever sponsored game became popular. Odeon is the semi-circle one.

## Private Buildings:

- 800 Houses in Pompeii, only 4 insulae in Herc.
- Features of house: Fauces→vestibulum→atrium. Centre of atrium: impluvium (wealth). Family shrine – lararium (religion) Dining-triclinium (Greek influence on social life); Business activities (Seneca) in tablinium; weaving-loom weights (economy-Livy); Children playing (Virgil); Peristyle-colonnaded garden (Greek influence); Kitchen (wealth).
- House of Faun: wealth, shop, kitchen, Battle of Issus mosaic.
- House of Vetti: middle class, Priapus, kitchen, wall painting of perfume industry (slaves pressing flowers).
- Herculaneum-100 villas found.

## **Influence of Greek and Egyptian Cultures:**

- Both cities founded by Greek God Heracles (toponym of Herculaneum is Greek).
- Cultural change could have been a result of wars: victors absorb cultures; political change: different rulers with their own style; natural disasters could disrupt economy; change in religion -> cultural change.
- Art: Influence, of Greek style statues, wall paintings based on Hellenistic themes: mythology, (e.g. Alexander Mosaic in House of Faun-Battle of Issus-> maybe to celebrated his victory) landscapes, exotic animals from East or Egypt e.g. Ibis.
- Egyptian Elements in royal house design, statues like Isis in Temple of Isis, the style of painting was frontal image like Egyptians; transparent clothing etc. also decorative use of sphinxes and obelisks in peristyle.
- Hellenistic slaves/ foreigners employed in tabernae e.g. Asselina (Maria, Zmyrina, Aegele). Trade with Alexandria evidenced by stamps on Pompeian pottery.
- Lifestyle: Greek plays (traditional tragedy), palaestra, dining in triclinium a Greek custom, bathhouses and homosexuals-dominant relationship.
- Architecture: Greek design like Theatres-the Odeon, the geometric grid influenced by Greek architect Hippodamus, size of grand houses based on Hellenistic palace model, Greek large scale atrium, Greek peristyle design, Greek columns in temples, palaestra.
- Religion: adaption of Greek pantheon of Gods: Zeus (Jupiter), Athena (Minerva), Aphrodite (Venus). Mysterious cults: Dionysus (Bacchus) –Greek, Isis-Egyptian.

## **Religion:**

- Romans were polytheistic (worship many Gods), Greek and Egyptian influence.
- Temples: none in Herculaneum (yet), 10 in Pompeii in Forum revealing its importance in religious life. No services for mass worship (only 2 main functions): private worship in home and rituals by priests to honour Gods.
- Romans worshipped their emperors as Gods in Temple of Jupiter and Fortuna Augustae (where in a niche a statue of emperor Augustus was found).
- Household Gods: Worshipped in shrines (lararium) where spirits of the house were venerated in the form of miniature statues (Lares)-300 found in Pompeii in the atrium(e.g. Priapus in House of Vetti)-weighing phallus) → daily ceremonies were performed by paterfamilias, with offerings of garlands, honey cakes etc. (supported by painting depictions).
- Foreign Cults: Two most popular were Isis and Dionysus. Isis appealed to women, slaves, prostitutes (Egyptian influence). Archaeological evidences supports it was the only temple restored after the 62AD earthquake→importance. Women could hold high position and priestess's here-one third of all worshippers named in inscriptions being female e.g. Julia Felix had a shrine for Isis in her garden. Sacrifices were made where an altar was found in the centre of the temple. Dionysus:(Greek)-Originally only observed by women three times a year, but now men attend 5 times a month “the cult spread like a contagious disease” (Livy)

- Tombs: Cemetery (Necropolis)-Dead buried outside city walls of Pompeii, none found in Herculaneum. They were cremated and put in urns then placed in monumental structures (decorative to show status of deceased)-entire family in one house. Seats in necropolis so people can visit. Eumachia and her family tomb is most impressive

### Examples of Graffiti in understanding life:

- Providing examples of people's thoughts and opinions. E.g. a request from a woman to elect Helvius Sabinus to the office of aedile. → Even though they could not vote, women played a part in political life. Praising the victories of a gladiator named Florus, who won several contests. (Often written by women, suggest the popularity of gladiatorial games in Pompeii and Herculaneum). Wide range of topics, such as love, quotations, jokes, gossip and threat; opinions on the goods and services provided. Includes; joke, gossip, threats and vulgarities (rude). It can show love, political views, record keeping, commenting on commercial life; pastimes: gambling, drinking, games.

### Changing Methods and contribution of 19th and 20th Century archaeologists to understanding the sites:

- Before 19th Century-haphazard excavation motivated by need to find precious objects and beautiful paintings→ treasure hunt archaeology→ sites looted, paintings removed, artefacts stored in museums→ Antiquarian approach led to loss of artefacts and damage to buildings as there wasn't a systematic approach to excavation until Fiorelli (after 1860).
- Fiorelli: director between 1863-75-his method of excavation and site management were a radical improvement on previous methods→ development of systematic excavation and recording in archaeology. He undertook first systematic approach to excavation by dividing uncovered area of Pompeii into 9 regions in a grid pattern, each contained up to 22 insulae; named the houses and streets based on ancient owner or context of building and also drew up a plan of the city, cleared debris from previous excavations. Excavations carried out top to bottom through strata to recover all structural elements (better approach compared to antiquarians-who dug through paintings accidentally) He set up a school for archaeologists and museum of finds recorded in situ.
- 1863 plaster casting method (moulds of cavities left in hardened ash by bodies or objects→ realistic representation of human bodies and clothes etc.)
- Criticisms: didn't dig below 79AD level and didn't record vertical stratigraphy where finds were found in strata. He reopened excavation at Herculaneum in 1869-75 but was halted by residents of Resina threatened with collapse.
- Mau: German archaeologist who categorised Pompeian wall paintings in 4 main styles to date them (1873-1909).
- Spinazzola: Director in 1910-23 with an aim to restore the houses accurately to reveal their original structure. He reconstructed house facades along Via Dell Abbondanza in order to reveal commercial life in Pompeii.
- The first to record all phases of the excavation with photographs, but didn't publish them. His reconstruction wasn't accurate (only based on interpretation), he wanted to protect furnishings and wall paintings.
- This New Excavation "revealed a Pompeii that had been scarcely dreamed of" +ve tourism; -ve conser. & restor.



- Mauri: Director of excavation 1924-late 1960's appointed by Mussolini. He instituted a policy of re-creating the atmosphere of the interior houses by leaving domestic utensils in place and restoring walls, ceilings and wall paintings.
- His aim was to give the visitor an impression of what life was like back then → reconstruction based on interpretation.
- He dug below the 79AD level and in 1927 resumes excavation at Herculaneum to "liberate it" and increase tourism → clearly damaging it for future foot traffic → loss of evidence.
- He also rushed with excavation, no documentation let alone publication.
- After 1960's, excavation changed to more conservation and restoration; International Teams: Anglo American, British School of Rome-Hadrill; Use of technology: photography, Philodemus Project-carbonised scrolls.

### **Impact of new research and technologies on the investigation and understanding of evidence of both sites:**

- Use of new technologies and research in past 30 years has reflected the administration of the sites emphasis on restoration and conservation.
- Since 1970's, archaeological activities at both sites have been motivated by increasing knowledge and new interpretation through preserving and conserving finds, re-examining areas already exposed and employing specialists and technologies to facilitate new analysis.
- 62 AD Earthquake: Maiuri and Penelope Allison believe Pompeii was in economic decline after the earthquake-and that they were aware if the eruption so the wealthy evacuated. Her studies of 30 houses in Pompeii suggest that poorer members may have squatted in abandoned villas with evidence of long term neglect (mistreated floor mosaics).
- Alison Cooley challenges this view; suggesting there was redecorating in the town e.g. Central Baths & Temple of Isis show signs of repair after the earthquake. This is also supported by John Dobbins in the Pompeian Forum Project (began in 1988 used a multi-disciplinary approach to reassess and reinterpret the site using photographic documentation, computer modelling in terms of effects of this earthquake) which found evidence of a comprehensive and ambitious post-earthquake plan for the eastern side of the Forum. Disproving the traditional view that the Forum was a 'builders' yard after the earthquake which reflected economic decline.
- Human Remains: Since 1986, anthropologist and archaeologist Estelle Lazer challenged the long held assumption about composition of victims gender, age, health etc. adopting forensic medical techniques to reassess Pompeian bones, and since 1996, the skeletons from Herculaneum. Her research suggests that the lifespan of individuals who survived to adult hood may not have been as short as previously attributed. Bad teeth reveals oral hygiene wasn't practiced. Skulls → ethnicity of population.
- In 1994 the 'Lady of Oplontis' was the first high-tech examination of a Pompeian -the epoxy resin cast (innovation better than Fiorelli's plaster) was x-rayed and partially CT scanned. Dr Lazer and other medical forensic specialists concluded that the woman was aged between 30 and 40, in good health apart from her teeth. The cast shows the 'pugilist pose' characteristic of bodies exposed to extreme temperature at time of death. Such observations are related to the work of Haraldur Sigurosson, whose eruption of Vesuvius in 79 AD has resulted in the consequent reinterpretation of major causes of death being from the pyroclastic surges.

Giuseppe Mastrolorenzo adopted the ideas of Sigurosson to debate against the suggestions that Herculaneans (80 found in a house near Herculaneum) didn't die of asphyxiation but from incineration in extreme heat of pyroclastic flow. → cracked enamel of teeth (only cracks at 500 degrees so proves they died of high temp).

- Buildings: Penelope Allison challenged old interpretations of room use in Pompeian houses-saying they had multiple uses. Archaeologist Tina Najbjerg identified the basilica at Herculaneum as providing shelter for business transactions and a seat for tribunes. She showed that buildings contained architectural differences (no roof), interpreting it as a portico-saying it had multiple purposes; meeting place for magistrates, market, centre for Augustales. Wilhelmina Jashemski's significant scientific reassessment of environmental data to discover use of gardens in everyday life. She along with Neopolis Project utilised computer-enhanced, high powered microscopes which helped scientists analyse pollens, animal bones and fragments of wood, glass, plants and daily objects to determine the natural history of the Campanian area as well as the agricultural and cultural practices, an important research. Her work has demonstrated what crops, fruits and plants were grown at Pompeii, including olives, grapes, apples, onions etc. – identified large agricultural plots, a formally laid out vineyard near the amphitheatre, and market garden within the walls-> 10% of area of town devoted to cultivation of food.
- Philodemus Project involved in the use of multi-spectral imaging to safely piece together 60% of the scrolls found in the Villa of Papyri (previously unable to be read as they were extremely fragile) → Computer analysis of x-ray scans of carbonised scrolls from Villa of Papyri in Herculaneum stored at French National Museum.
- Anglo American Project investigation in Region 6, Insula 1 to increase our knowledge of the social and economic life in Pompeii; working off the stratigraphy to do so.

#### **Different ways archaeologists have reconstructed the past:**

- Reconstruction of the past at both sites was originally driven by a tourist centred approach as well as the early excavation by antiquarians for treasure hunting whom removed the evidence from situ (contributing to loss of evidence).
- In 19th Century human bones were normally rearranged for a dramatic effect (adults with children) → led to major difficulties in analysis. The first attempt to systematically analyse human remains were in the 1980s, more recently by Estelle Lazer-who examined the state of victims at time of death, and health.
- Mauri had a political motivation for reconstruction for tourists: he re-built walls and roofs that were knocked down by eruption; unfortunately his materials were concrete and steel where cement mix was poor and alkaline in masonry reacted with ancient stones → crumbling and erosion to walls of structures e.g. House of the Coloured Capitals.
- Only in 1997 the Italian Government allowed finance from tourists used for maintenance of the site → contemporary focus was on preservation and restoration.
- Tourism impacted on deterioration of site → rubbish, foot traffic, vandalism: this has led to use of replicas of statues for preservation of the originals.
- This has also led to multi-disciplinary approach to examination of remains and conservation and restoration of site e.g. Philodemus Project involved in the use of multi-spectral imaging to safely piece together 60% of the scrolls found in the Villa of Papyri (previously unable to be read as they were extremely fragile) → Computer analysis of x-ray scans of carbonised scrolls from Villa of Papyri in Herculaneum stored at French National Museum.

- In 1994 the 'Lady of Oplontis' was the first high-tech examination of a Pompeian -the epoxy resin cast (innovation better than Fiorelli's plaster) was x-rayed and partially CT scanned. Dr Lazer and other medical forensic specialists concluded that the woman was aged between 30 and 40, in good health apart from her teeth. The cast shows the 'pugilist pose' characteristic of bodies exposed to extreme temperature at time of death. Such observations are related to the work of Haraldur Sigurosson, whose eruption of Vesuvius in 79 AD has resulted in the consequent reinterpretation of major causes of death being from the pyroclastic surges.
- Since 1996 with Mauri's re-opening the excavation at Herculaneum, there has been a collection of human remains there.
- Neopolis Project utilised computer-enhanced, high powered microscopes which helped scientists analyse pollens, animal bones and fragments of wood, glass, plants and daily objects to determine the natural history of the Campanian area as well as the agricultural and cultural practices, an important research.
- Virtual reconstruction e.g. Via del Abbondanza use of digital reconstructions of ancient sites and buildings, allow for the site to be views by visitors in a safe way.
- International contributions, the difference between reconstruction and restoration, the issues to consider when deciding between excavation and conservation, the increasing popularity of the cities of Vesuvius in popular documentaries, the role and validity of museum exhibitions, understand the limitations and reliability of the sources on conservation and reconstruction.

#### **Ethical Issues:**

- There is much debate and increasing ethical pressure as to whether we should collect/study human remains and how they should be managed.
- Positive: new discoveries/ information by studying them → general public have access to significant historical stories that bodies offer: teeth and skulls → diet, enamels shows what heat they died, reveal what diseases were back in the past (cavities-type of food), skulls with scratches (lice), set bones (treatments), cranial surgery, long term diseases due to scarring on bone marrow.
- Negative: Some believe remains should be reburied as it is disrespectful to display them (unethical), Ethics of letting people walk through the city, impact of tourism, people getting money of seeing violent death → destruction, wearing away sights, rubbish → pests → destruction of frescoes.
- Changing Treatment: Early days, antiquarians showed little regard for human remains. Often skeletal remains were destroyed to quickly find treasures. Some were carelessly piled in bath houses and were disarticulated. Museum collections had them stored in dark dusty basement wrapped in newspaper. setting up fake finds (Mauri), people taking souvenirs in 19th century.
- Only recently their importance in scientific study has been recognised → guidelines or codes of ethics have been established for dealing with human archaeological artefacts.
- Bones provide information about both biological and cultural aspects of the prior human population. The co-operation of archaeologists, anthropologists, Vulcanologists etc. reveal understanding of the dynamics of the eruption and its effects on the population.
- Now we have virtual museums etc. to make it more ethical, the impact of technology on ethical display of human remains and being able to study them ethically.

- CT Scanned of the bodies filled with epoxy resin e.g. Lady of Oplontis by Estelle Lazer → impact of technology for a more ethical approach to protect and conserve what is there eg Wallace Hadrill quote on importance of conservation.
- Ethical questions must be kept in mind:
  - Should bones be solely as artefacts that provide valuable information
  - Should archaeologists have the freedom to pursue knowledge and scientific enquiry without political pressures and legal constraints
  - Who should have the custodianship over human remains
  - What is the most appropriate way to store and display human remains
- Appropriate storage procedures should conform to sound conservation practices which protect the remains against physical deterioration: wrapped in acidic free paper, placed in protective papers

### Display

- Controversial-avoid giving offence, sensitivities of certain religious groups e.g. Jews and Muslims.
- Aim of museum “to provide a fascinating exhibition” (Museum of London) but skeletons should only be displayed when furthering the “public’s understanding of the past and present activities of archaeologists” (Ibid).
- Changes brought about by Fiorelli-idea of plaster cast which overcomes the issue of directly displaying the remains and offending first used on 1863.
- New technologies like holographic display of bodies-bodies not directly displayed.

### Ownership

- Artefacts sold around the world as art in antiquities black market.
- Over the years there has been many conferences on cultural property, but there are often conflicts of interest between archaeologists, museums, auction houses and art dealers.
- Most International laws claim the ultimate ownership by the state of all antiquities found within its borders. There are also pressures for museums to return remains to places of origin.

### Discuss the challenges of conserving the site:

- Conservation: ‘the action of safeguarding the objects and structures that have already been excavated to ensure those remains are available to use and enjoy today and in the future.’ (Ibid).
- There has been the argument over restoration or conservation, Wallace Hadrill sums up the argument in favour of conservation “In the end, the pivotal point is this. Until we have demonstrated that we can find a way to manage this incomparable heritage and preserve it for future generations, specifically so at Herculaneum, we can only add to the existing problem by undertaking new excavation”.

- In the 1980s a number of international rescue missions were undertaken at Pompeii to prevent further deterioration of the site, dealing with not just natural influences but also conservation methods of the recent past. Conservation carried out with steel and concrete (used by Maiuri) or remounting wall paintings on concrete are now considered to be inappropriate as they proved to be harmful, although some believe some should remain in place for their historical values as conservation 'mistakes'. Conservation approaches now focus on one or more insulae (rather than a building at a time) to achieve a more integrated result. One example is the international Anglo-American Project (AAPP) working on studying and conserving Insula VI as part of a 15 year program.
- The impact of tourism of 2,5 million visitors at Pompeii and 500, 000 in Herculaneum per year has damaged the sites through human activity both deliberate (vandalism, theft, graffiti) and accidental (brushing against walls, stepping on exposed plumbing) Yet, at the same time, tourism is integral to the conservation of the site→ income to fund preservation and maintenance.
- The Herculaneum Conservation Project has audited the site, mapped decay and stabilised structural failure with short-term props and scaffolding. The mapping of decay allowed for root causes to be determined, particularly water management through roofing, guttering, down pipes and drainage. After 10 years of work the Herculaneum Conservation Project has had a major impact on conservation education and is widely considered a model of 'best practice'. It has allowed 2/3 of the site to be re-opened to the public such as the re-opening of the Decumanus Maximus (street).
- Natural factors where US \$335 million (in 2010) needed in Pompeii for protection against natural elements. Weathering and erosion effects all exposed structures-impacting worse on frescoes, sculptures and paintings where originally highly reserved, retaining a large amount of detail, colour and vibrancy; this has begun to fade with exposure to rainfall, dampness, water seepage, and problems of fauna, flora and mould.
- Plants and animals: Feral dogs I Pompeii occupied buildings around the Forum in 1980's-been removed now as they damaged footpaths, roads and walls as well as being aggressive to tourists. Pigeons in Herculaneum big problem, acidic nature of faeces wears away rooves of many structures.
- To solve problems→funding to protect them; three organisations have now been founded: Pompeii Trust-first organisation in the world to specifically support conservation at Pompeii; World Monuments Watch-draws attention and funding to imminently threatened cultural sites around the world & the Kress Foundation-resulted in more detailed survey, analysis and conservation plan. But there have been problems with funding.
- Conservation Projects e.g. Herculaneum Conservation which had a dual aim of arresting the decay of the site and safeguarding its long term survival; and Project and Anglo American Project.