

Figuring Out the Past

Published in 2020 under exclusive licence from *The Economist* by
Profile Books Ltd
29 Cloth Fair
London EC1A 7JQ
www.profilebooks.com

Copyright © The Economist Newspaper Ltd, 2020
Text copyright © Peter Turchin and Daniel Hoyer, 2020

All rights reserved. Without limiting the rights under copyright reserved above, no part of this publication may be reproduced, stored in or introduced into a retrieval system, or transmitted, in any form or by any means (electronic, mechanical, photocopying, recording or otherwise), without the prior written permission of both the copyright owner and the publisher of this book.

No responsibility can be accepted by the publisher or authors for the accuracy of the information presented.

Where opinion is expressed it is that of the authors and does not necessarily coincide with the editorial views of The Economist Newspaper.

While every effort has been made to contact copyright-holders of material produced or cited in this book, in the case of those it has not been possible to contact successfully, the authors and publisher will be glad to make any necessary amendments in further editions after receipt of written notification.

The publisher is not responsible for websites (or their content) that are not owned by the publisher.

A CIP catalogue record for this book is available from the British Library.

ISBN 9781788161923
eISBN 9781782835196

Contents

[Introduction](#)

[Acknowledgements](#)

[Explanation of terms](#)

[Society profiles](#)

[Ancient: 3000 BCE to 500 CE](#)

[Egypt: Old Kingdom](#)

[Iraq: Akkadians](#)

[China: Erlitou culture](#)

[Turkey: Hittite Empire](#)

[Egypt: New Kingdom](#)

[Mexico: Monte Albán, early classic period](#)

[Greece: Alexander the Great's Empire](#)

[India: Mauryan Empire](#)

[Mali: Jenné-jenno](#)

[Iran: Parthian Empire](#)

[Mongolia: Xiongnu confederacy](#)

[China: Western Han Empire](#)

[Italy: Roman Principate](#)

[Afghanistan: Kushan Empire](#)

[Cambodia: Funan kingdom](#)

[Japan: Kofun](#)

[Medieval: 500 to 1500 CE](#)

[France: Merovingian kingdom](#)

[Turkey: Byzantine Empire](#)

[Uzbekistan: Sogdian city-states](#)

[China: Tang dynasty](#)

[Iraq: Abbasid caliphate](#)

[France: Carolingian kingdom](#)

[Japan: Heian period](#)

Cambodia: Angkor kingdom
Italy: Medieval Papal States
Iceland: Icelandic Commonwealth
USA: Cahokia settlement, Lohmann-Stirling period
Colombia: Tairona
Mongolia: Mongolian Empire
Mali: Mali Empire
Egypt: Mamluk sultanate
Indonesia: Majapahit Empire
India: Vijayanagara Empire
Russia: Sakha peoples
Peru: Inca Empire
Turkey: Ottoman Emirate

Early Modern: 1500 to 1800 CE

Ghana: Ashanti kingdom
Iran: Safavid Empire
India: Mughal Empire
Ecuador: Shuar peoples, Spanish colonial period
France: Bourbon kingdom
Japan: Tokugawa Shogunate
USA: Iliniouek confederation
China: Qing dynasty
Borneo: Dayak peoples, pre-Brooke Raj period
Papua New Guinea: Orokaiva peoples
Micronesia: Truk peoples
India: A'chik peoples
USA: Kingdom of Hawaii
Thailand: Rattanakosin kingdom
China: Hmong peoples
Turkey: Ottoman Empire
Spain: Habsburg Empire

Modern: 1800 to 2000 CE

Great Britain: Second British Empire

USA: Antebellum America

Germany: Third Reich

Russia: USSR

Rankings

10 largest societies by territory: ancient

10 largest societies by territory: medieval

10 largest societies by territory: early modern

10 largest societies by territory in the entire preindustrial era

10 most populous societies: ancient

10 most populous societies: medieval

10 most populous societies: early modern

10 most populous societies in the entire preindustrial era

10 most populous cities: ancient

10 most populous cities: medieval

10 most populous cities: early modern

10 most populous cities in the entire preindustrial era

10 largest buildings by total area: ancient

10 largest buildings by total area: medieval

10 largest buildings by total area: early modern

10 largest buildings by total area in the entire preindustrial era

10 tallest buildings: ancient

10 tallest buildings: medieval

10 tallest buildings: early modern

10 tallest buildings in the entire preindustrial era

10 costliest monuments to build in the entire preindustrial era

10 largest fielded armies: ancient

10 largest fielded armies: medieval

10 largest fielded armies: early modern

10 largest fielded armies in the entire preindustrial era

10 longest fortification walls in the entire preindustrial era

10 bloodiest human sacrifices in the entire preindustrial era

10 most widely attended collective rituals: ancient

10 most widely attended collective rituals: medieval

10 most widely attended collective rituals: early modern

10 most widely attended collective rituals in the entire preindustrial era

Regional adoption

Adoption of bureaucracy by world region

Adoption of state postal service by world region

Adoption of a formalised law code by world region

Adoption of calendars by world region

Adoption of scientific literature by world region

Adoption of fiction writing by world region

Adoption of monogamy by world region

Adoption of rule by god-kings by world region

Adoption of firearms by world region

Adoption of paper currency by world region

Adoption of irrigation systems by world region

Adoption of state-wide provision of drinking water by world region

Adoption of public markets by world region

Adoption of state-run libraries by world region

Maps

Spread of agriculture, 10,000 BCE to 1880 CE

Spread of human sacrifice, 5000 BCE to 1800 CE

Spread of bronze, 3500 BCE to 2000 CE

Spread of writing, 3200 BCE to 1920 CE

Spread of moralising religion, 2100 BCE to 1900 CE

Spread of chariots, 2000 BCE to 1780 CE

Spread of iron, 1400 BCE to 1870 CE

Spread of cavalry, 1000 BCE to 1870 CE

Spread of coinage, 600 BCE to 1900 CE

Spread of gunpowder, 904–1945 CE

Introduction

What was history's biggest empire? What was the tallest building ever constructed before concrete? What was the life expectancy in medieval Byzantium? Where did scientific writing first emerge? What was the bloodiest ever human sacrifice?

We are used to thinking about history in terms of stories: who did what to whom. Yet we understand our own world through data: vast arrays of statistics that reveal the workings of our societies. Why not the past as well? *Figuring Out the Past* turns a quantitative eye on our collective trajectory. Behind the fleeting dramas of individual factions and rulers, it looks for large-scale regularities. It asks how key social and technological innovations spread around the world, and it pinpoints outliers from the general trends.

As historians Jo Guldi and David Armitage wrote in *The History Manifesto*: “in a crisis of short-termism, our world needs somewhere to turn to for information about the relationship between past and future”. The book in your hands draws on a vast reservoir of historical data that was collected precisely to serve that need. Seshat: Global History Databank was founded in 2011 with the long-term goal of collecting and indexing as much data about the human past as can be known or credibly estimated. Named after the ancient Egyptian goddess of scribes and record-keeping, Seshat is the work of a large international team of historians, archeologists, anthropologists and other specialists. Inevitably incomplete and constantly being updated, it nevertheless has a strong claim to be the most comprehensive body of information about human history ever assembled in one place. (You can explore it at seshatdatabank.info)

Much as contemporary economic data are used to test theories about the day-to-day evolution of economic systems, Seshat was created to test long-range hypotheses about the rise, workings and fall of societies across the globe. For example, what causes states to develop and spread in the way they have? Why have some societies experienced high levels of growth and well-being while others stagnated? What role have warfare, religion and technology played in the evolution of social institutions? What causes societies to collapse or fracture?

The only way to answer questions like these is to test them against the historical record. Seshat, more than any other resource, collects as much of that record as possible, collated and formatted to make testing practical. The information presented in this book is intended to illustrate some key trends and patterns that emerge when you look at history from Seshat's dizzying vantage point.

A caveat: the figures presented here are only a sample of the data compiled by the Seshat project, which in turn is only a subset of what is known about past societies. All the same, because of the databank's remarkable breadth of scope and through the collaboration of dozens of the world's leading historical experts, the rankings and comparisons that follow are collectively as reliable as could be obtained from any existing resource. They reflect the best, most accurate and most complete information available at the time of writing.

As of 2020, Seshat holds information on over 450 historic societies (identified within

the databank itself using the term “polities”, to avoid ambiguity). It starts among the first West Asian farming communities in the Neolithic period about 10,000 years ago and ends in the 19th century CE. The Neolithic, in certain regions described as the “Agricultural Revolution”, is the time when humans began to settle in one spot and build recognisably distinct communities.

Conversely, the databank stops compiling figures for more modern societies largely because this more recent history is so well known. This book focuses, then, on these lesser-known periods covered by the databank. Nevertheless, data on a handful of 19th- and 20th-century nations are included for comparison among the society profiles that follow. (They are excluded from rankings and comparisons, which are confined to the preindustrial world so as to make room for these less familiar, but nevertheless important, societies to stand out.)

Many of the types of data presented in this book will be familiar to readers of *The Economist’s* annually updated *Pocket World in Figures*. Measures such as society size, populations and life expectancy provide a nearly continuous line from the ancient past to the present day. Others are more exotic, illuminating some of the key traits that distinguished past societies: their agricultural and metallurgic technologies; their governing institutions and provision of public goods; their openness to principles of equality; and so on.

Figuring Out the Past offers sections ranking societies on these items, separated into eras (ancient, medieval, early modern and modern), along with rankings across the eras. It also traces the geographical spread of key technologies and social innovations, from mounted cavalry to coinage, to show where and when some of the most important breakthroughs took place, and how they diffused around the globe. It shows when these crucial innovations arrived in different regions of the world, shining a spotlight on areas often overlooked in global histories, such as sub-Saharan Africa, South America and Polynesia, some of which encountered key technologies for the first time in the ships of colonisers, while others experienced a long history of complex societies and saw indigenous innovations well before the arrival of Europeans, perhaps to the surprise of many readers.

The societies presented here represent those for which the Seshat Databank has well-curated data. As many of these may be unfamiliar to readers, the book contains detailed society profiles which offer a close look at their make-up with respect to a common set of key indicators, along with short introductions highlighting useful information about each.

Taken together, the figures and profiles collected here show how far we have come as a species over the past 10,000 years: from our origins in roving hunter-gatherer bands, to the first settled villages and small chiefdoms, to archaic states ruled by “god-kings” wielding nearly unlimited authority, to modern nation-states populated by hundreds of millions of people powered by ever-evolving technologies.

More than this, however, these figures show how much we all have in common, both with our ancestors and with each other. We all share the need to organise and maintain social cohesion among large and diverse populations. We all have to innovate to survive in changing physical and social environments, to bolster ourselves against the vicissitudes of natural disasters and to interact with neighbours (who may not have

peaceful intentions). There is, moreover, a deep continuity in our symbolic lives. We all build glorious monuments to our own ingenuity and creativity. We all seem compelled to develop rituals to create a shared sense of identity. We all have ideals that we strive to live up to.

These concerns have occupied our species at least since before we first started to settle in agrarian villages. One truth that Seshat demonstrates is that, along with many unique milestones that were reached at different places and times, there are plenty of immutable patterns in our shared history. The more things change, the more they stay the same. And nothing makes this fact clearer than a close look at the data.

Acknowledgements

This work would not have been completed without the tireless work and dedication of the Seshat research team. We would like to single out especially Enrico Cioni, Jill Levine, Jenny Reddish, Edward Turner, Sal Wiltshire and Gregory Youmans, who compiled and checked much of the data found in this volume. We gratefully acknowledge the invaluable assistance we receive from our collaborators, who ensure that Seshat holds the most comprehensive, up-to-date information possible. In particular, we thank the following for reviewing portions of this volume (though any remaining mistakes are entirely our own): Mark Altaweel, Abel Alves, John Baines, Jim Bennett, David Carballo, Metin Cosgel, Alan Covey, Gary Feinman, Patrick Kirch, Andrey Korotayev, Nikolay Kradin, John Miksic, Ruth Mostern, Alessio Palmisano, Peter Peregrine, Johannes Preiser-Kapeller and Katrinka Reinhart. Please see the Seshat website (seshatdatabank.info) for a full list of private donors, partners, experts and consultants, along with their respective areas of expertise.

Explanation of terms

Life expectancy from birth – the average age to which people in a society lived, including the often large numbers who died in infancy. Other calculations (such as “average age at death”) often leave out those who died before the age of 5, which results in a higher figure.

Irrigation & drinking water, Health care, Alimentary support, Famine relief – refer to welfare run and financed by the state, unless noted otherwise.

Long walls – permanent fortifications used to protect a large territory rather than a single settlement.

Society profiles

Ancient: 3000 BCE to 500 CE

Egypt: Old Kingdom

In the centuries before 3000 BCE, one of the world's earliest states (rivalled only by Mesopotamian societies) emerged in the Nile Valley in what is today Egypt. During the Old Kingdom, the period of Egyptian history from around 2650 to 2150 BCE, towering pyramids were built from stone to serve as tombs for divine kings and their queens. The largest, the Great Pyramid at Giza, stood 147 m high and was originally faced with dazzlingly white smooth-dressed limestone.

General

Duration 2650–2150 BCE

Language Ancient Egyptian (Afro-Asiatic)

Preceded by Early Dynastic period Egypt

Succeeded by Period of the Regions or First Intermediate period

Territory

Total area (km²) 75,000–350,000. Difficult to provide precise estimates because it is unclear how much of desert territory surrounding the Nile valley was state controlled.

People

Population 1–1.5m

Largest city No data (Memphis)

Standing army 20,000. State-maintained officer class; expeditions sourced using conscription and some non-Egyptian military personnel.

Social scale

Settlement hierarchy 1. Capital city; 2. Regional centres; 3. Minor centres; 4. Small settlements; 5. Hamlets.

Administrative hierarchy 1. King (Pharaoh); 2. Vizier; 3. Overseers; 4. Controllers; 5. Inspectors; 6. Under-supervisors; 7. Scribes.

Institutions

Legal code Probably absent. There were property laws and formal written legal instruments, though no evidence for a fully articulated legal code.

Bureaucracy Professional. Several major administrative departments, eg treasury, granaries and other public works.

Religious validation of rule King was thought to be under the patronage of the gods, at times seen as a living god himself; he preserved *maat* (order, justice, righteousness) on the gods' behalf and for the good of the Egyptian people.

Property rights Private property existed.

Price controls Absent

Banking regulations Absent

Economy

Taxation Taxes levied primarily on land and its products.

Coinage Absent

Credit Probably present. Debt structures suggest availability of credit.

Agricultural practices

Main crops Emmer wheat and barley

Irrigation Present, though agriculture mainly relied on inundation from the annual flooding of the Nile.

Fertilising Probably present, though direct evidence is sparse.

Cropping system Nutrient replacement of soil with annual flooding

Metallurgy

Base metal Evidence for copper metallurgy from c. 3000 BCE

Military equipment

Handheld weapons Battle axes, copper-tipped spears, daggers, war clubs and maces.

Armour Wooden parrying sticks and wooden shields covered in cowhide.

Projectiles Returning throw sticks, sling shots, bows and arrows Incendiaries Inferred absent

Long walls Evidence of some city walls

Well-being

Life expectancy 20–30 years from birth

Average adult stature 169 cm (male); 160 cm (female)

Irrigation & drinking water Irrigation canals and flood control measures present by 2500 bc; desert wells dating long before, possibly from prehistoric period.

Health care Ritual practitioners and physicians (*swnw*) used both material methods, such as surgery and drugs, and supernatural methods such as incantations and magical objects.

Alimentary support Moral duty of the wealthy to give aid to the poor.

Famine relief King and local high officials obliged to distribute grain from granaries in event of food shortage.

(In)equalities

Social mobility Unclear, though there are indications of a largely hereditary elite. Increase in wealth of tombs of lower officials towards the end of this period suggests an increase in mobility.

Occupational mobility Rise in the number of craftspeople towards the end of this period suggests an increase in occupational mobility, or reduction in social inequality.

Gender equality Women could be priests or hold high positions in certain professions,

often related to ritual activity; daughters could inherit as much as sons; non-royal marriage was monogamous.

Slavery Enslaved people were few in number, especially compared with other ancient societies across Afro-Eurasia.

Human sacrifice Unclear. Probably absent, but possible that war captives were sacrificed.

Religion

Majority religious practice Ancient Egyptian religion. State religion centring around the king, considered a divine ruler, dependent on and answerable to the gods; there was great diversity in ritual practice in the wider population, centred around a large canon of supernatural beings.

Iraq: Akkadians

The Akkadian Empire (c. 2300–2100 BCE) was founded through the military conquests of Sargon of Akkad, who unified the various cities of Mesopotamia under one monarchy to create the first true empire in human history. It encompassed much of modern-day Iraq and Syria, but the location of the city of Akkad itself remains unknown. Akkadian kings governed with the aid of strongly fortified settlements, a large standing army and written record-keeping using the cuneiform script.

General

Duration 2270–2083 BCE

Languages Akkadian and Sumerian Preceded by Lagash dynasty

Succeeded by Gutian dynasty

Territory

Total area (km²) 1.1m in 2200 BCE

People

Population >210,000. Estimates for total urban population of Akkadian Empire in 2200 BCE.

Largest city 20,000–40,000 (possibly Adab)

Standing army 5,400: King Sargon claimed his army had a backbone of 5,400 men.

Social scale

Settlement hierarchy 1. Capital (Agade); 2. Major administrative centres; 3. Lesser centres specialised in revenue collection; 4. Towns; 5. Villages.

Administrative hierarchy 1. King; 2. Civil administrator (*shaperum*); 3. Land registrar; 4. Governors (*ensis*); 5. Scribes and surveyors.

Institutions

Legal code Mixed. Unknown whether Akkad had a formal legal code, but a complex legal system is attested by documents that record litigation.

Bureaucracy Professional. Scribes, registrars, surveyors, inspectors, tax assessors supervised by civil administrator (*shaperum*).

Religious validation of rule King seen as preserving order on behalf of the gods.

Property rights Private ownership of land recognised throughout the third millennium in the region.

Price controls Some evidence for price controls by kings to prevent price inflation by producers that hurt the poor.

Banking regulations Probably absent

Economy

Taxation Taxes on barley yields, livestock, irrigated water use, property inheritance in urban areas, grazing rights and boat transport.

Coinage Absent. Uncoined silver used as money.

Credit Merchants provided loans. Farm workers earned one shekel of silver a month.

Agricultural practices

Main crops Wheat and barley

Irrigation Present

Fertilising Probably present in Mesopotamian regions

Cropping system Fallowing, two-field rotation and nitrogen-fixing crops.

Metallurgy

Base metal Bronze

Military equipment

Handheld weapons War clubs, maces, battle axes, daggers and spears; swords probably present but not in common use on the battlefield.

Armour Helmets of felt, leather or copper; tough fabric or leather sash may have covered the chest; reference to shields in texts.

Projectiles Javelins, slings, throw-sticks, bows and arrows

Incendiaries No evidence

Long walls No evidence

Well-being

Life expectancy No data

Average adult stature No data

Irrigation & drinking water Mixed. Extensive irrigation system in “breadbasket” region (Sumer), smaller local wells in towns but no evidence for large-scale drinking water supply system.

Health care Evidence for sanitation systems such as underground sewage in elite households. Physicians known in Mesopotamia since 2500 BCE; texts suggest existence of dentists in Akkadian period.

Alimentary support Unclear. No concrete evidence, but ideological expectation for rulers to be charitable.

Famine relief Unclear. No concrete evidence, but state ran bakeries to provide bread and beer to soldiers and workers.

(In)equalities

Social mobility Expanding opportunities, in military and mercantile fields especially.

Occupational mobility Expanding opportunities, in military and mercantile fields especially.

Gender equality Women could possess their own property and transact on their own behalf; marriage was usually monogamous (except among elites); engagement terms had legal standing enforceable in the courts.

Slavery Debt and chattel slavery

Human sacrifice Sacrifices performed at the beginning of the construction of certain important buildings, though somewhat rare and on a small scale.

Main crops Millet. Wheat, tubers and rice known as well.

Irrigation Present

Fertilising Absent

Cropping system Swidden farming and two-field rotation evidenced.

Metallurgy

Base metal Bronze

Military equipment

Handheld weapons Adzes, knives, axes, dagger-axes and clubs

Armour No evidence

Projectiles Bows and throwing spears

Incendiaries No evidence

Long walls No evidence

Well-being

Life expectancy 23–35 average age at death (total population). Estimate from sparse archaeological remains.

Average adult stature 166 cm (male); 157 cm (female)

Irrigation & drinking water No data

Health care No data

Alimentary support No data

Famine relief No data

(In)equalities

Social mobility Hereditary elite

Occupational mobility Absent

Gender equality Unclear. Some evidence of patriarchal social structure, such as different burial practices.

Slavery Unclear. Some argue that this was the earliest society in China practising slavery, though others claim there is no concrete evidence of a servile population.

Human sacrifice Evidence for sacrificial remains at the Erlitou site itself as well as nearby sites. For example, children bound and buried in pits and under housing foundations at the Erligang site of Yanshi Shangcheng.

Religion

Majority religious practice Chinese folk religion. Involved ancestor worship and animal bone divination.

Turkey: Hittite Empire

The Hittite Empire (or Hittite New Kingdom) flourished in the Late Bronze Age, c. 1400–1180 BCE. At its height in the mid-14th century, the Hittite king controlled up to 400,000 km² of land encompassing much of what is today Turkey along with parts of Syria, Israel–Palestine and Iraq. Building on earlier developments to the south in Mesopotamia, Hittite rule was strong, centralised and bureaucratic. However, shortly after 1200 BCE the empire fell apart rapidly amid the widespread conflict and settlement destruction during the Late Bronze Age crisis, the causes of which are still hotly debated.

General

Duration 1400–1180 BCE

Language Nesite (Indo-European)

Preceded by Hatti – Old kingdom

Succeeded by Neo-Hittite kingdoms

Territory

Total area (km²) 250,000–350,000 in 1300 BCE; 300,000–400,000 in 1200 BCE.

People

Population 1.3m–2m

Largest city 15,000–20,000 (Hattusa)

Standing army 30,000

Social scale

Settlement hierarchy 1. Capital (Hattusa); 2. Large settlements; 3. Villages; 4. Farmsteads.

Administrative hierarchy 1. King; 2. Chief of the Scribes; 3. Scribe of the Wooden Tablets; 4. Lesser scribes and officials; 5. Scribal assistants.

Institutions

Legal code Present

Bureaucracy Professional

Religious validation of rule King and queen were high priest and priestess of the official cult.

Property rights Many laws dealing with theft or damage to property.

Price controls No data

Banking regulations No data

Economy

Taxation Taxes on land and agriculture; farmers on royal land could pay with their labour on state projects.

Coinage Absent

Credit Probably present

Agricultural practices

Main crop Wheat

Irrigation Present

Fertilising Present

Cropping system Short-fallowing

Metallurgy

Base metals Bronze was present; iron appeared towards the end of the period.

Military equipment

Handheld weapons Spears, daggers, axes and swords

Armour Bronze (and possibly iron) scale armour, chain mail, bronze helmets, shields and limb protection.

Projectiles Composite bows and javelins

Incendiaries No evidence

Long walls No evidence

Well-being

Life expectancy No data

Average adult stature No data

Irrigation & drinking water District governors responsible for maintaining irrigation canals; cisterns dug to collect rainwater.

Health care Unclear. Ideological expectation for ruler to be charitable, but no evidence for legal mechanisms for state provision of welfare services.

Alimentary support Unclear. Ideological expectation for ruler to be charitable, but no evidence for legal mechanisms for state provision of welfare services.

Famine relief Ideological expectation for ruler to be charitable, and there is literary evidence that kings organised grain imports from Egypt during times of shortage.

(In)equalities

Social mobility Hereditary elite. Marriage allowed for some mobility, and wealthy tradespeople were known to have gained higher status.

Occupational mobility Possibly medium/high with regards to craft-making; limited elsewhere.

Gender equality Little known about commoner women, but elite women could attain considerable power, particularly within religious institutions.

Slavery Debtors and war captives were enslaved; chattel slavery existed as well.

Human sacrifice Unclear. Some evidence for the performance of human sacrifice in connection with military engagements.

Religion

Majority religious practice Hittite religion. Hittites believed a multitude of gods inhabited the Heavens, Earth and Underworld.

Economy

Taxation Taxes on land, property, production, trade

Coinage Absent

Credit Unclear. Presence of debt suggests credit structures probably present.

Agricultural practices

Main crops Emmer wheat and barley

Irrigation Present

Fertilising Present

Cropping system Nutrient replacement of soil with annual flooding

Metallurgy

Base metals Copper, bronze and perhaps iron towards the end of the period

Military equipment

Handheld weapons Battle axes, daggers, spears, long swords and sickle-shaped swords (*kopesh*).

Armour Shields, cloth padding for limb protection, bronze helmets and scale armour.

Projectiles Javelins, slings, stave and composite bows Incendiaries Absent

Long walls City walls known.

Well-being

Life expectancy 20–30 years from birth

Average adult stature 161 cm (male); 156 cm (female)

Irrigation & drinking water State irrigated new areas and developed canal network; wells widespread.

Health care Ritual practitioners and physicians (*swnw*) used both material methods, such as surgery and drugs, and supernatural methods such as incantations and magical objects.

Alimentary support Moral duty for wealthy to give aid to the poor.

Famine relief Pharaohs and local high officials obliged to distribute grain from granaries in event of food shortage.

(In)equalities

Social mobility Unclear, though there are indications of a largely hereditary elite.

Occupational mobility Unclear; evidence that many elite men were engaged in several different professions.

Gender equality Women could own property and enter contracts and had the same legal rights as men; however, they were barred from most priestly roles and all professions.

Slavery Some chattel slavery was practised, but not widespread.

Human sacrifice Perhaps foreign enemies were sacrificed on occasion, but unclear if this was sacrifice or execution.

Taxation No definitive evidence, but probably some tax system organised through Monte Albán.

Coinage Absent

Credit No data

Agricultural practices

Main crop Maize

Irrigation Small-scale irrigation, such as check-dams and small canals.

Fertilising Present

Cropping system One- or two-field rotation depending on access to water.

Metallurgy

Base metals Absent

Military equipment

Handheld weapons Obsidian knives and wooden clubs; thrusting spears used for hunting could also have been used in warfare.

Armour No definitive evidence for armour; probably made out of perishable materials (eg fabric).

Projectiles *Atlatls*, which flung spear-like darts; slings for projecting stone and ceramic slingshot.

Incendiaries No evidence

Long walls Monte Albán was fortified with long, low walls.

Well-being

Life expectancy No data

Average adult stature 160 cm (male); 147 cm (female)

Irrigation & drinking water Small-scale irrigation likely; no evidence for large state-maintained canal networks or similar, with the possible exception of a reservoir in Monte Albán itself.

Health care No data

Alimentary support No data

Famine relief No data

(In)equalities

Social mobility Hereditary elite, manifest largely in scale and opulence of architecture in elite residences.

Occupational mobility Hierarchical society

Gender equality Royal descent traced through male line, but some examples of powerful female rulers (depicted in male garb).

Slavery No data

Human sacrifice Iconography suggests human sacrifice took place in connection with military campaigns.