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FROM APOGEE TO COLLAPSE

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The “mystery of the collapse” of Classic-period Maya civilization has been one of the great enigmas in world history, and the search for a solution has been a driving force in Maya archaeology. The vision of vast cities with stone temples, palaces, and hieroglyphic monuments abandoned and overgrown by the jungle has come to dominate popular images of the Maya. The mystery of how and why this great civilization disappeared has inspired all manner of explanations, including diseases, earthquakes, droughts, overpopulation, invasions, war, “moral decline”, and even extra-terrestrial intervention.

On a scholarly level, the collapse of Maya civilization has been the subject of serious study and debate for more than a century. Along with evidence and theories on the end of other civilizations, discussion of the Maya collapse has provided insights into the general processes of the cycle of the rise and then disintegration of states, and indeed of all complex societies. One of the great intellectual problems of all social sciences has long been “Why do civilizations follow a trajectory that always leads to decline or collapse?” Studies in philosophy, history, politics, and anthropology have considered this question and what it also tells us about the very nature of societies. How a society falls apart tells us much about how it was structured in the first place. Thus, archaeological and historical study of the collapse of civilizations can spark our comprehension of the institutions and adaptations of ancient societies, just as our understanding of the human body and modern medicine began in the 18th and 19th centuries with autopsies.

Figure 307. Tulum, Quintana Roo, Mexico, depicted by draughtsman Frederick Catherwood, who accompanied explorer John Lloyd Stephens in his travels in the 19th century.



WHAT IS COLLAPSE?

Despite many recent archaeological studies, there is still disagreement among experts as to the nature and causes of the end of the Lowland Classic Maya kingdoms, just as there is great disagreement over the collapse or decline of other civilizations, states, or chiefdoms, such as the Moche, Indus Valley, Easter Island, Chaco, and Khmer, to name only a few. The lack of consensus is due in part to gaps in the archaeological record. However, it is also due to preconceptions about the very concept of the collapse of civilizations, in other words, about what constitutes a “collapse”.

The collapse of an ancient society does *not* mean an end to its “great tradition”, involving its culture, world-view, ethics, literature, and other major characteristics. It means a relatively rapid decline or disintegration of a specific complex political and economic system of a society. It is the level of complexity and the specific configuration of the economics and politics alone that change radically, decline, or disappear. Such a rapid change at the end of a civilization can also often involve warfare, destruction, and population decline. Yet, in many cases, it does not involve such traumatic events.

In the case of the Classic Maya, the term “collapse” really refers to the disappearance between AD 750 and 1050 (rapid in some regions, more gradual in others) of the system of “theatre states” of the Maya Lowlands of eastern Mesoamerica—taking with it the spectacular art, architecture, monuments, and writing that were part of Classic-period politics. The great Maya cultural tradition itself never disappeared. It has passed through many cycles of growth, decline, revival, and florescence. Today, in the post-civil war era, yet another epoch of Maya resurgence has begun.

While noting the continuity of the Maya cultural tradition, there was, indeed, a great crisis and political change in the Lowland area of Maya civilization between about 700 and 1050, the dating depending on the region. It is these metamorphoses or catastrophes that are referred to by archaeologists as “the collapse of Lowland Maya Classic-period civilization”. This specific designation is correct because this phenomenon occurred only in the Lowland area, the Petén region of Guatemala, and the Yucatán Peninsula of Mexico. During those three centuries, one by one, many Maya city-states of the Lowlands were abandoned or greatly declined in size and complexity. It was in the southern Lowland region, the forests of southern Campeche and Quintana Roo, eastern Chiapas, and the Petén region of northern Guatemala that the process of change was a genuinely rapid “collapse”. Beginning as early as 700–30, villages began to be abandoned, then major centres destroyed, and populations displaced. By 800 in the south-western Lowlands, many city-states had been reduced to small populations, some with a few clusters of huts or no occupation at all. Meanwhile, dramatic changes were under way in other Lowland regions.

WHAT COLLAPSED? THE NATURE AND SALIENT TRAITS OF CLASSIC MAYA CIVILIZATION

What was it then that collapsed, declined, or was transformed by the end of the Classic period? It was a specific type of political system and material culture: a system of competitive states with most forms of power (religious, military, and political) focused on their “divine lords”, the *k’uhul ajaws* (figure 308). The power of these states depended heavily on religion and ritual manifested in spectacular ceremonies staged in great plazas surrounded by awe-inspiring buildings and monuments, including temples, hieroglyphic stairways, ritual ballcourts, and great palaces. In the courtyards and throne rooms of the palaces even more elaborate rituals were staged for smaller, more elite audiences of royals and nobles. Southern Lowland Maya centres of the Classic period were like the “theatre states”, as scholars call them, of the South-east Asian civilizations. In those states, for example the Khmer and Fugan, religious and political power were combined and long and lavish ceremonies were essential in drawing the support of the people and holding together the bureaucracy of nobles and priests.

Great Maya cities and even small Lowland states had ceremonial centres, similar in function to the more famous “mandala”-patterned designs of South-east Asia, such as Angkor Wat in Cambodia. As in those centres, every detail was aligned with sacred geography, astronomy, and other symbolic considerations. With the Maya, site position, architectural details, and monument placement were decided in accordance with the sacred “colour directions”, with subterranean chambers and channels of caves, and, in some cases, with geometrical alignments of the temple-tombs of royal ancestors. All of this labour-expensive splendour was designed to create the settings of the great ceremonies that brought prestige and power to hold the allegiance of lords and the worship of commoners.

The pageantry and ritual created notable architecture, monuments, art, writing, and science, but it also required great labour, as well as the importation of exotic goods like sacred green jade, quetzal feathers, and pyrite from the Highlands, and conch and stingray spines from the coasts. The demands of ceremony also led to status rivalry between the holy lords of the Maya city states; this was expressed in competition for even larger rituals and architecture and led to warring for positions of power, for display of strength, for tribute, and for control of the trade in sacred materials from distant regions. These precious goods were necessary not only for the ritual garb and tombs of the *k’uhul ajaw*, but also for their patronage networks distributing these items to the nobles of their city-states and to the lords of vassal states. The Classic Maya dynastic status rivalry was similar to the competition in art, architecture, and war between the cities of Italy in the 15th and 16th centuries. In Italy this helped to create the grandeur of the Renaissance, just as the rivalry between Maya states led to the magnificence of the Lowland Maya Classic period.

This Classic Maya *k’uhul ajaw* system was well adapted to the ecology and agriculture of their fragile subtropical rainforest environment. This may have been because in most sub-regions of the Lowlands the role of the rulers and the state in the actual infrastructure of farming was minimal. While there were notable exceptions, especially in the largest centres, in general decisions about agriculture and land use were made by local farmers, who would have been most knowledgeable about the sensitive and fragile variation in the forest soils, slopes, and karst landscape drainage conditions of the Petén and the southern Yucatán Peninsula. Local knowledge acquired over generations, rather than state control, would have made successful rainforest adaptation possible. Paleoecological studies and excavations of farms and gardens have revealed that from the 4th to the early 8th century they adjusted their fields to local conditions by using a wide range of different techniques, including terraces, stone box gardens, sunken gardens, check dams, reservoirs, seasonal use of *bajos* (swamps), and a mix of fallow and forests. A few areas and great sites did have intensive subsistence, with some probable state involvement to create large reservoirs, canals, or zones of *chinampas* (artificial islands for growing crops) in swamps. However, it was the religious and political activities of the holy rulers and their courts that held together the social fabric of Classic Maya society through faith, ritual, war, and patronage.



Figure 309. Stela 9; Seibal, Guatemala. By the early 9th century, most of the cities in the Petexbatún region had collapsed. Nevertheless, Seibal flourished, as is shown by the erection of monuments such as this stela, which dates to the year 849.

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Figure 308. Stela 7; Machaquilá, Guatemala. This monument was dedicated on 2 January 831. It depicts ruler Ju'n Tzak To'k', who wears the ceremonial attire of Maya royalty, such as the high headdress and ruling headband, and holds the manikin sceptre of K'awiil in his right hand.

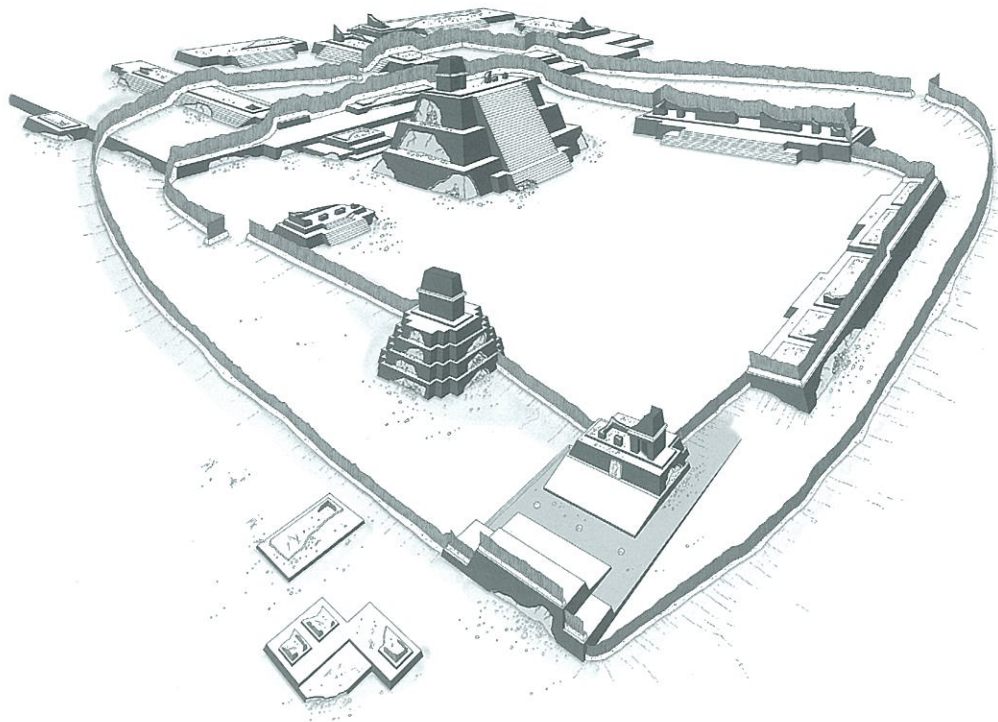


Figure 310. Dos Pilas, Guatemala. The city, which was walled in its later years, lost the original functions of its spaces.

STRENGTHS BECOME WEAKNESSES: THE UNDERLYING “ROOT CAUSES” OF THE MAYA COLLAPSE

The structural features that led to the success and the grandeur of ancient Maya civilization were also the factors that became its weaknesses (figure 312). This paradox is often apparent in the collapse or decline of civilizations: over time the very success of certain features of a society can lead to stresses and even to disintegration. Another tendency is that as societies become more complex and more highly integrated, they also become more fragile, a phenomenon sometimes called “hyper-integration”. The growing network of Maya states, with their alliances, shared religious systems, and trade networks, became increasingly complex, integrated, interdependent, competitive, and, thus, fragile, while the *internal* hierarchy of rulers and nobles within these states followed this same trend.

The reliance of the “divine lord” on religion, rituals, and massive ceremonies to sustain their power was one of the strengths of Classic Lowland Maya kingdoms, and was largely responsible for the beauty of its material culture. However, this strength became a source of stress during the Late Classic period, as the royal and noble class grew through polygamy, as well as through the expansion of bureaucracy and patronage that is generally characteristic of complex societies. This growth of the elite class was reflected in the multiplication of the number of emblem glyphs in the monu-

ments of the 7th and 8th centuries, indicating the identification of more dynastic seats. This proliferation of smaller centres, together with the growth of older major cities, led to an ever larger elite class requiring more and larger palaces, temples, ballcourts, monuments, murals, stucco sculptures, and lavishly furnished tombs, all using rare materials that had to be imported and crafted by a growing class of artisans.

All of this beauty, including the splendid art and architecture seen in this volume, had an escalating cost in labour for all aspects of construction, craft, and ritual, as well as for intensification of agriculture to support the multiplying elite classes and their retainers and specialists—whose own role in subsistence activities had been reduced or eliminated. These classes included royal and noble court members, full-time artisans, priests, war leaders, architects, and court staff from cooks and fan bearers to jesters. Recent evidence for the 8th century indicates that many of those involved in craft production, trade, and transport were joining the ranks of full-time non-agricultural specialists.

Another consequence of these same processes was more frequent and more intense warfare between rival centres, with their unstable alliances, as well as intradynastic struggles and usurpations within states. The expanded elite class and the increasing number of courts and royal marriages between states created more contenders for the many thrones. As in all warfare, there were high costs in terms of subsistence support and transport for the mobilization of forces, weapons, fortifications, and reconstruction. Yet, at the same time, there was a loss of farmers and a disruption of the agriculture that maintained all those activities. Evidence from texts, art, artefacts, architecture, and archaeology indicates that warfare became more common and more destructive in the 6th to 8th centuries. As in other situations of competing and warring rival states, the leaders at all levels, from king to extended family patriarchs, would have encouraged population growth, given the need for labour and sustenance for labourers.

In a number of regions, archaeological evidence indicates Late Classic growth in the non-elite population, intensification of agriculture, and, in some zones, clear evidence of overuse of soils, erosion, and anthropogenic (human-caused) environmental deterioration. While some have viewed such unsustainable agronomic practices as a “cause” of the collapse, the real issues of causality can be seen at the deeper level of the political factors that led leaders and followers in some regions down a path toward ecological self-destruction. The Classic-period Maya thoroughly understood their dependence on the humid tropical forest and its limestone geology, and they had adjusted to its sensitivities and subsistence challenges for centuries. Yet, short-term thinking, driven by political and economic competition, war, and status-rivalry, often led the leadership of the states to ignore growing environmental damage.

In many ways this is a familiar story of civilizations beginning with the success of their basic structural elements and major features, but leading to intensification in demands that ultimately damaged the same system that had created success. In the end those same strengths reversed their effects to lead to crisis. Some complex societies and states, leaders or populations have responded to such crises to adjust their systems, but other civilizations simply rapidly collapsed or slowly declined or were absorbed by neighbouring states or societies. Babylon, the Khmer empire, Rome, and other civilizations followed a similar course towards their doom.

To sum up this reconstruction of the root causes of the Lowland Classic Maya collapse: the basic structural characteristics of Maya civilization over time created processes of change that by the 7th and 8th centuries had led the Classic Maya Lowland states to: 1) greater size and scale of centres; 2) growing bureaucratic complexity; 3) more centres and dynastic seats; 4) an ever-growing elite; 5) increased status-rivalry within and between centres in expensive constructions and ritual ceremonies; 6) increased demand for and intensified long-distance trade in expensive imports for ceremony, for display of rank, and for patronage; 7) more direct violent competition in warfare; 8) and, thus, more pressure for an even larger elite class, as well as 9) pressure for growth of non-elite (warrior/farmer) populations. In the end, in some regions this spiral of growth, intensification, and status-rivalry eventually led to more destructive warfare, damage to subsistence systems, and a spiral of effects that shattered the political and economic structure of Classic Maya society.

This summary is a very broad characterization of historical changes that took place over three centuries and across many thousands of square kilometres. For that reason it must gloss over details of regional variation and over a number of questions and concerns regarding evidence. As sketched below, the specific evidence and manifestations of collapse or transformation are different in each region of the Maya Lowlands, and the security of chronology and quality of evidence are even more variable. Nonetheless, given such caveats and acknowledging the above to be a preliminary approximation, such may have been the underlying processes that led to the crises of the Lowland Maya states at the end of the Classic period.

WHY WAS THERE NO RECOVERY?

There is, of course, another major component to considerations of the historical crises of any society: the impact of other societies on the ability of a civilization to recover. Many states do recover when leaders and populations respond to their crises sufficiently to modify their society, whilst still retaining its basic structural features.



Figure 311. Jadeite mosaic vase; Tikal, Guatemala. Jadeite was an exotic luxury item, used for manufacturing votive and prestige objects; they were commonly deposited in the tombs of high dignitaries, as with this vase, which was placed in the tomb of Jasaw Chan K'awiil.

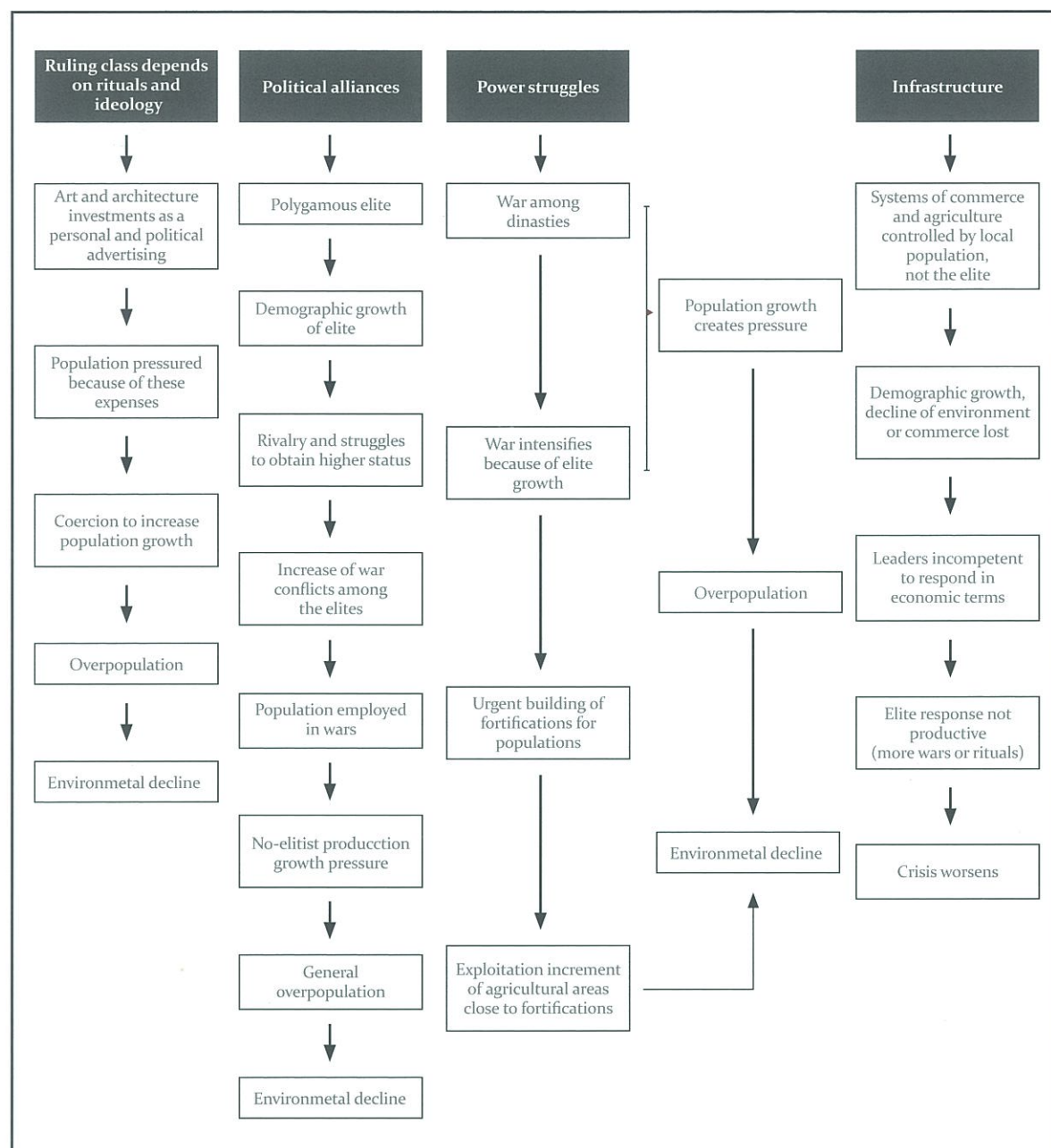


Figure 312. Basic features of Maya civilization during the Classic period.

at the end of the Classic period, there was no recovery from crises in many areas of the southern Lowlands. Instead, there were a variety of forms of collapse or decline of most of the states between 750 and 900, with a significant reduction in population across the southern Lowlands. Some zones were virtually abandoned. In those Lowland areas where there was a significant continuity or recovery (most notably the northern Lowlands, the Belize coast, and around the central Petén lakes), the new forms of Maya political and economic organization were significantly different from those of the city-states ruled by “divine lords” in the Classic period. Many cultural features continued, but the structure of politics and economy had changed. In the Post-Classic period, investment in status-enhancing ideology and its elaborate material culture was reduced, power became more widely distributed and divided between lineage heads, merchants, and warrior groups, while economies shifted to a greater emphasis on long-distance trade. Thus, via collapses, declines, or in some cases transformations, the Lowland Classic-period version of Maya civilization did not recover.

For example, archaeological and paleocological evidence from a number of regions of the Maya Lowlands appears to indicate that an environmental crisis occurred near the end of the Pre-Classic period. By AD 100 to about 250, the spread and growth of Maya populations and agricultural fields throughout the Lowlands may have led to widespread deforestation, then erosion, then general ecological deterioration and a notable decline in population. Studies of ancient environmental change, soils, and field systems in some regions suggest that in the subsequent two centuries, in the Early Classic period, the Lowlanders learned from these problems and adjusted better to their rainforest environment. In the Classic period they began to apply a wide range of ecological adaptations and agronomic systems, described above, to protect and even enrich soils, to hold moisture, and to avoid erosion. In addition to specific garden, terracing, and water control techniques, after the crisis at the end of the Pre-Classic period, the Lowlanders had a greater awareness of the need for fallow period timing, for more limited forms of limited slash-and-burn agriculture, for more use of domestic gardens with human waste and garbage as fertilizer, as well as for the use of low swampy *bajo* areas for short-season farming and for mining of swamp soils. As the population grew again in the Early Classic period, they exercised greater care about the problem of deforestation. As a consequence of these adjustments, most of the regions that had experienced decline recovered and by the mid-5th century a new florescence was under way.

In contrast, during the 8th and 9th centuries,

THE SECOND SET OF “ROOT CAUSES”: PAN-MESOAMERICAN CHANGES IN POLITICS AND ECONOMY

Yet *why* did Classic-period Lowland Maya civilization never recover in most areas, as it had six centuries earlier? Why did most of the southern Lowlands remain very lightly populated, with some regions having only small populations or virtually none? To answer these questions we must consider what was occurring in the rest of Mesoamerica in the Classic Period, especially in the 6th to 10th centuries.

Like all collapses, the Classic Maya 8th-century crisis in the southern Lowlands did not play out in isolation, but rather in a pattern of change across most of the cultures of Mesoamerica, a change towards a different kind of economic and political system. Such a “new order” of states had already developed earlier in central Mexico and Veracruz. During the Late Classic period such a shift in governance and economies had also developed among Maya states of the coastal Chontalpa region of Tabasco. Influences or parallel changes can be seen in the Maya sites of the western Yucatán Peninsula, especially the Puuc zone of Yucatán and Campeche in the 8th to 10th centuries. Similar changes or influences were present for a time far to the south at the river and Highland port and trade centre of Cancuén at the south-western frontier of the Maya Lowlands.

Centuries earlier, states in central and western Mesoamerica had developed economies that were heavily based on long-distance trade of commodities like cotton, textiles, cacao, salt, ceramics, and stone tools. Large-scale markets, merchant classes, and probable state coordination of economic activities had been far more important for some time in the states of central Mexico and Veracruz. Power in these states was more often shared among different institutions and individuals such as lineage heads, councils, merchant guilds, warrior classes, and the like. Large markets, some long-distance commodity exchange, and perhaps some merchant elites existed in Late Classic Maya states as well, especially by the 8th century, but their scale, formality, and importance in most states were limited.

Furthermore, in the Classic period, power appears to have been more concentrated in the ruler and his dynasty and, as discussed above, that power was heavily based on ideology, politics, and ritual, rather than on involvement in the economy, large-scale tribute, or other aspects of infrastructure. The political and ideological dependency of Classic Maya states and their heavy reliance on charismatic divine lords was a major source of instability, causing fluctuating periods of grandeur and expanding alliances, followed by periods of decline. These periods of decline were sometimes a consequence of military defeat, internal political



Figure 313. Santa Rosa Xtampak; Campeche, Mexico.



Figure 314. Plan de Ayutla; Chiapas, Mexico. The jungle devoured the abandoned cities, which remained hidden and forgotten for centuries.

struggles, or merely the succession to the throne of a less capable ruler. Such setbacks were often minor in terms of the economy and general population, but they had a magnified impact on Classic Maya states because of the intense identification of the state, the religion, the hierarchy, and the people with the sacred rulers.

However, from central Mexico, the Gulf coast, and the southern Highlands of Guatemala, the more resilient Highland political order was spreading across Mesoamerica. The resplendent, but archaic, Classic Maya states could not compete with these new forms of state organization. Thus, to return to the initial question about why there was no recovery, the growing internal structural problems and the internal fissures in the Lowland states were also impacted by international competition that in the end would not allow the recovery of Classic Maya civilization—at least not with the structure, nor many of the specific traits, of the *k'uhul ajaw* political and ideological system. This change also greatly reduced the high degree of social investment in spectacular art, architecture, and inscriptions.

Another element in the “root causes” of the disappearance of Classic Maya civilization relates to the pre-existing conditions of the Lowland ecology and geography. It would have been difficult

to shift to the new forms of Mesoamerican political economy in the physical environment of the southern Maya Lowlands, where the subtropical forest is rich and diverse, but very complex. Most of this subtropical forest can be highly productive, but it is also very fragile. It had to be managed with diverse farming systems and dispersed populations. The Classic-period population was greater—with much larger cities—than we once believed, but even the most densely populated Maya centres, like Tikal, Calakmul, or Caracol, were still dispersed over a wider area than central Mexican cities like Teotihuacán or Tenochtitlan or than Post-Classic Maya capitals, such as Mayapan or Iximche in the Highlands; and Classic-period cities were certainly far more dispersed than “cities” as defined by our own Western civilization with their distinction between urban and rural areas.

The Classic Maya adaptation supported great cities and large populations, but its agronomic regimes were *not* well suited to some major aspects of the state organization that was developing in other parts of Mesoamerica. In the Post-Classic period in the southern Maya Highlands the centres were more defensible as they were more densely concentrated and/or sited in more secure

positions. They could maintain such a settlement pattern because of the richer, thicker volcanic soils in the Highlands. They could also rely more heavily on regional *over*-production of certain crops or commodities across larger areas of land, creating surplus for trade. Meanwhile, in the northern Lowlands of the Yucatán Peninsula and coastal Belize, centres were closer to or had more direct access to the Gulf and Caribbean coasts, which had become part of the major routes of long-distance trade. These varying characteristics in both regions led to their greater success in export market economies and to long-distance transport of commodities as tribute or for trade. The thin soils and rich but fragile Petén environment were not well suited to large surplus production. There were few navigable rivers, and most of those had numerous rapids or shoals, thus necessitating portage (carrying crafts or cargo overland past such obstacles). The Lowlands of the inland areas of the Petén, Campeche, and Quintana Roo were well suited for Classic Maya systems of grand theatre states, but they were not ideal for the Post-Classic form of economy, nor for its demands on transport systems.

Thus, as the Classic Maya states in the southern Lowlands were collapsing or declining, the trade movements shifted to the less interrupted and less demanding Gulf and Caribbean routes, and the level areas along those coasts, for long-distance transport and trade (figure 315). In the southern Highlands populations grew around more defensible centres, with more concentrated populations, supported by their thicker soils and less delicate ecology.

OTHER PROPOSED ROOT CAUSES FOR THE DECLINE OF THE LOWLAND MAYA STATES: DROUGHT AND/OR ENVIRONMENTAL DESTRUCTION

Some of the many pan-Maya “external” causes that have been proposed in previous studies include epidemics, earthquakes, and foreign invasions. The evidence from decades of investigations has ruled out contagious disease and geological or meteorological catastrophe, and direct foreign invasion seems increasingly unlikely.

However, theories of climatological change and drought are still among the most popular interpretations. The paleoecological evidence from the period 800 to 1200 does indicate several times of drought. For that reason drought has been proposed as a “global” explanation of the collapse of Classic Maya civilization.

The problem, however, is that the droughts do not correspond well with the archaeological, chronological, or even general environmental evidence for the collapse in many areas—most notably in the regions where the Classic Maya states first began to experience radical change or disintegration. Careful review of evidence for drought, when correlated with firmly dated 8th-century events, indicates that it was a late, but important, factor in some regions, but not a general cause of the southern Lowland collapse.

Another major class of collapse theories proposes environmental destruction caused by human activities—rather than climate—as the fatal factor. Comparison of findings across the Lowlands does reveal numerous 8th- and 9th-century problems of over-population in many regions, which were sometimes correlated with erosion or leeching of soils.

However, was that the root cause? In these scenarios we must explain the reasons for unrestrained population growth and the failure to respond to the problem. One factor is that such growth may have been encouraged by increasing rivalry and war between city-states and between the growing number of kings and nobles, with their needs for labour for construction and for warfare. For these and other reasons, overpopulation, overuse of soils, silting of productive swampy areas, erosion, and other forms of environmental damage seem to have been significant factors in some regions. Yet, once again overpopulation is not a factor in many areas, including those with the earliest major changes. In any case, causality must be sought at the deeper level of the political and social factors that drove overpopulation and failed to restrain it.

DIFFERING REGIONAL “FINAL” OR PROXIMATE CAUSES OF COLLAPSE

Such considerations return us to the importance of comparing the specific evidence from each region, especially its dating, in order to identify the “final” or “proximate” causes of collapse in that zone. These were the “last straws” or “*coups de grâce*”, present in differing degrees of importance in each region. Thus, a number of proposed theories are, in a sense, all correct as final causes for at least some regions. However, scholars tend to make the mistake of thinking that the nature and causes of change in their own zone of research provide *the* general reason for collapse everywhere in the Lowlands.

For more than a century archaeological projects have explored the last days of Classic Maya states in many regions of Mexico and Central America. Yet these projects have come to conflicting conclusions on the causes of collapse, often even in the same region. These regional disagreements involve varying interpretations of the data or contradictory sets of data. However, again, most such disagreements have been due to confusing differing regional “proximate” or final causes with the global pan-Lowland processes and growing structural problems that I described above as the “root” or underlying causes. Those general processes led to the regionally variable final changes, crises, or collapses in the 8th to 10th centuries. One reason that such specific regional crises (e.g. deforestation, warfare, drought) can be mistaken for pan-Lowland causes is that most regions have inexact chronologies, so often the specific timings of events are not carefully compared.

There have been only a few collective attempts at carefully and systematically comparing evidence between regions to see exactly *what* happened in *each region* and exactly *when* it happened. One important early attempt was a volume of essays on the Maya collapse published over 40 years ago (*The Classic Maya Collapse*, edited by T. Patrick Culbert, 1973), which brought together scholars working on different regions to describe and compare their findings. However, at that time many regions were very poorly known and chronologies were too inadequately defined to come to any clear conclusions. More recently, 52 scholars collaborated in comparing evidence from different zones and trying to date and plot the history, nature, and sequence of the changes in each Lowland area in the final centuries of Classic Lowland civilization (*The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, edited by Arthur A. Demarest, Prudence M. Rice, and Don S. Rice, 2004). While there was still much disagreement about causes, the comparisons did provide the most recent geographic “plotting” of the general chronological order of changes and crises at the end of the Classic period.

The first obvious finding is that the end of Classic Maya civilization was generally not as “sudden” as many had believed. Rather in some regions there were crises and depopulation beginning as early as 700 and in others between 800 and 900. In the northern part of the Yucatán Peninsula, collapses, declines, and transformations to the Post-Classic form of Maya states were even later, and in some cases more gradual. Thus, the “collapse” was actually a process that took place over a period of three hundred years.

It is also very clear that in different regions the manifestations of the end of the Classic period varied in nature from sudden, dramatic, and violent to a very gradual decline or transition. Even within the same sub-region the collapse phenomenon was often complex: while some centres collapsed, others had brief periods of florescence as populations and power shifted. Yet, even given the irregular histories of the sites, many regions still experienced a dramatic overall decline in population and architecture—in some areas within a century from the regions’ apparent apogee.

A broad, very general trend of the radical changes (collapse, decline, emigration, depopulation, transformation, etc.) is that they were earliest in the western Petén, especially along the great western trade route of the Pasión and Usumacinta rivers. It is not surprising that crises began earliest there, since the western corridor was a zone of intense competition for control of the trade route, as well as being a region that was in close interaction with the very different non-Maya states farther west.



Figure 315. Trade and transportation routes of the Maya world during the Late Classic period.

THE EARLIEST REGIONAL COLLAPSES: THE SOUTH-WESTERN LOWLANDS RIVER ROUTE

The collapse was earliest, most sudden, and most violent in the south-western Petén along the Pasión River valley, the transport “superhighway” of the Classic Maya world. The scene may have been set for this collapse as early as the great wars between the alliances of the city-states of Tikal and Calakmul in the 6th and 7th centuries. Major targets of these wars were the trade routes for sacred goods like jade, quetzal feathers, pyrite, and some non-exotic commodities such as obsidian and salt.

Between 730 and 800, cities in the Pasión region like Dos Pilas, Aguateca, and Cancuén were destroyed by sudden military attacks. At the Pasión River capital city of Dos Pilas, the besieged population dismantled parts of their own temples and palaces in a desperate attempt to build stone defensive walls (figure 310), but the city was destroyed. Nearby, Aguateca sat upon an almost impregnable high escarpment surrounded by cliffs and a chasm, and it was also defended by kilometres of constructed walls. It held out longer, but in about 810 it was finally overrun and burnt.

A smaller but even more secure site, Punta de Chimino, was located on a peninsula reinforced by moats and walls. It was able to protect its population and small ceremonial centre for another century.

These dramatic events were preceded by decades of war and depopulation, with farming communities beginning to move away by 730 to escape the chaos. Note that this south-western Petén Armageddon began at least 50 to 100 years before any initial evidence of drought or climate change, eliminating that popular theory as the general cause of Lowland collapses, although it was a factor later in some regions.

Further south, on the Pasión River, the rich trading port of Cancuén had a later florescence (c.750–800), with the construction of palaces, splendid ballcourts, a ritual water system, formal port facilities, and nobles’ palaces placed to supervise workshops and port activity. This extraordinary period of prosperity and internationalism may have been based in part on immigration from the collapsing Petexbatún kingdoms to the north. More importantly, Cancuén was the largest port centre of Classic Maya times, located at the start of the Pasión/Usumacinta river route and at the intersection of the Highland valley land route south and the east-west land route to Chiapas, Tabasco, and Veracruz (figure 315). This strategic position in international trade was responsible for the site’s splendour in art and architecture, showing influences from many parts of Mesoamerica.

Influences from the west and from the Highlands might help to explain the changes at Cancuén in its last half century. In that period its economy turned to long-distance exchange of jade, obsidian, and other materials with ceramic imports from Veracruz and Tabasco. At the same time, there was a shift to a division of power between the *k’uhul ajaw* and a large elite hegemony as represented in its oversized political/ritual/administrative—rather than residential—royal palace and a dozen smaller sub-royal elite palaces. Those nobles’ palaces were positioned to oversee port movements, a jade workshop, and highly segmented and coordinated production of stone tools. Monuments and their texts also present this partial division of powers, with the *k’uhul ajaw* still the focus of ritual and political authority but the internal activities and foreign wars managed by other nobles, administrators, and war leaders (figure 317).

Nonetheless, for the same underlying reasons and limitations as in other southern Lowland states, Cancuén’s experiment with the new western and Highland economic and political order failed. The site was destroyed in about 800 and its king, queen, and more than 40 nobles were executed with great ritual, most of their bodies deposited in full regalia into a sacred cistern.

It is not surprising that the collapse of centres and the even earlier process of depopulation of villages and rural landscapes occurred first in the Pasión River region and its critical trading nodes. The increasing status-rivalry between the growing elite class put



Figure 316. Uaxactún, Guatemala. This city was abandoned towards the end of the Late Classic, like most of the El Petén area.

ever greater pressure on the western routes that carried jade, shell, pyrite, quetzal feathers, and other sacred goods necessary to royal and noble ritual and patronage. However, in the face of intensified competition through warfare, a few major centres survived, such as the militaristic kingdoms of Ceibal (figure 309) and Altar de Sacrificios, with their strange amalgam of Pasión and foreign styles in artefacts and art. Some smaller sites in highly defensible locations also continued, such as the riverine site of La Amelia and the fortified peninsula of Punta de Chimino. Meanwhile, however, most of the other Pasión centres retained little or no population and rural areas were abandoned.

As with Cancuén and later Ceibal, some sites to the east and north, like Machaquila, had late florescences, perhaps based on the absorption of the labour of displaced populations and the elimination of competition over key routes of exchange. However, such positive side effects were short lived. Machaquila collapsed 30 years later, while other sites, like Ceibal and Punta de Chimino, held out longer but then slowly declined.

THE VARIABLE 9TH-CENTURY COLLAPSES AND DECLINES IN THE SOUTHERN LOWLANDS

In the Pasión River valley the final specific regional collapse was obviously caused by warfare, destruction of trade routes, and emigration of populations. Yet it is clear that the deeper root causes led to such regional crises and changes. This same sequence also occurred slightly later farther north, along the Usumacinta branch of the trade route at centres like Yaxchilán and Piedras Negras. There, throughout the 8th century, such major centres waged great wars against each other, celebrated in monuments and art. New archaeological evidence from smaller centres and forts along the Usumacinta River, and the landscape bordering it, has uncovered small fortified sites and defensive constructions responding to the constant struggles in the 8th century to control minor detours and portages as the main routes and portages were closed by war.

Following a broad and irregular west-to-east trend (figures 224 and 316), states in the central Petén, like Tikal and Uaxactun, had their own problems and regional pressures on their kingdoms and agricultural base, probably a result of overpopulation

and consequent environmental deterioration. Again, however, we should note that elite and non-elite population spirals were driven by the underlying force of the Classic-period structural characteristics that had accelerated and intensified to become flaws. The splendour of 8th-century Tikal and its central Petén neighbours is perhaps the best example of the counterproductive responses to stress by Classic-period rulers. As in many southern Lowland centres, Tikal's rulers sought to reinforce their power and propitiate gods and ancestors with the construction of their greatest temples, palaces, and monuments, all in the last century before the radical decline of their kingdom. This final frenzied activity came at even greater economic and ecological costs.

The earlier western Petén population displacement and the end of western exchange routes would have added to their problems. These emigrating populations, probably in the thousands, would have had a great effect on other zones. As demonstrated today in central Africa and the Middle East, the devastating impact of war is seen not only in deaths and destroyed cities, but also in the migration of refugee populations.

These various sources of internal and external stress were exacerbated significantly by drought in some zones, such as Campeche, north-western Belize, and far southern Quintana Roo. Paleoecological evidence indicates drought in these areas, but it occurred too late to explain the much earlier spiral of unsustainable change in the late 7th and 8th centuries, the earlier collapses in the west and elsewhere, and the failure to respond to such crises. Drought was, in all probability, an important secondary factor at Tikal and the central Petén, but it was a more critical blow to some states in the drier zones of southern Quintana Roo, the north-eastern Petén, and north-west Belize, where deep fossil geological faults drain much of the surface water. The droughts in some areas were part of the multiple regional manifestations of the final end of Classic Maya civilization across much of eastern Mesoamerica over a period of nearly three centuries.

In the south-eastern Maya area of Guatemala and Honduras, aspects of status-rivalry led to a similar sequence of “dysfunctional” apogees of construction, proliferation of elites and sub-royal hegemony, population growth, anthropogenic environmental destruction, and the decline of great centres in the south-eastern Petén zone of Copán and Quirigua. In the Copán valley, in particular, the impact of soil erosion might have been important as a final regional factor.

TRANSFORMATION AND DECLINE IN THE NORTHERN LOWLANDS

In the northern Lowlands the sequence of collapse, decline, and transformation was very complex and its chronology is debated. Whatever the specific sequence might have been, it is clear that processes of Terminal Classic changes were under way by 700 and continued for 300 years between interacting, sometimes allied, and often battling, distinctive versions of Maya civilization in the northern Yucatán Peninsula.

In the Puuc zone of northern Campeche and Yucatán, the period 750 to 1050 was a “golden age” in wealth, construction, and splendour, perhaps due in part to greater interaction and long-distance trade with the non-Maya states of central and western Mesoamerica. The overlapping epochs of greatness of Cobá, the Puuc region, and Chichén Itzá in this period might have been related in part to the shift to maritime trade and to the elimination of the competing Pasión/Usumacinta exchange routes of the declining or abandoned cities to the south.

It was not until a century later that the northern Lowland cities of the Puuc area began to face a similar sequence, driven by problems of rivalry and intense investment in ritual splendour, by warfare, and by population growth. In the north these processes might have created a vulnerability to drought in the 10th century. Another final factor in the north was competition and brutal warfare with new political entities like the militaristic state of Chichén Itzá (which in many of its characteristics was more like central Mexican civilizations). The northern Lowlands also, like Cancuén earlier, had woven new features into its political and economic fabric, probably reflecting interaction with

non-Maya states to the west. New forms of more divided political and institutional power might also have been important factors. Imagery in monuments, architecture, and other aspects of visual culture indicates a very different variant of Maya civilization in northern Yucatán, in city-states of the Puuc, and even more so Chichén Itzá. Previously, these centres had been regarded as Post-Classic societies, but now we know that they were complex, overlapping, transitional political and economic entities of the 8th to 11th centuries.

However, as with Cancuén two centuries earlier, their transition to the “new order” failed. The reasons for the failure of the Puuc states in terms of final causes are unclear, but the great centres had been abandoned or nearly depopulated by 1050. The major centres of population had moved from the Puuc and Chichén Itzá to the far less spectacular Post-Classic sites that relied heavily on the coastal trade routes. Thus, a very irregular and complex sequence of events and final causes led to the end of the last transitional forms of the Classic-period political system with a baffling sequence of final crescendos.

* * *

The end of Classic Maya civilization cannot be explained by any simple event or process. Rather, like the end of most complex societies, it reflected the gradual accumulation of problems caused by the fundamental structural characteristics that had led to its brilliance. Success eventually strained all aspects of those societies, reaching a breaking point at different times in different regions and with varied final factors and crises. At most Lowland centres, rivalry for power and prestige led to competition between city-states for followers and for power, not just through war, but more importantly through the construction of temples, palaces, monuments, plazas, and other stages for gigantic and costly mass rituals. These have left a legacy of sublime architecture, monuments, and art. As with the South-East Asian theatre states this splendour “made inequality enchant” (Clifford Geertz).

In this way the great “golden age” of the Late Classic period in the Lowlands was itself a manifestation of impending collapse, a symptom of a deepening and fatal political disease. Then, as things began to fall apart, in each area rulers worsened the situation by intensifying their expensive rituals, warfare, and architectural displays to compete with rivals and to propitiate clearly disaffected deities and ancestors.

While there were many varied regional histories for the end in the Maya Lowlands, in all cases what ended was the Classic Maya socio-political order ruled over by the “divine lords”. Its sublime material manifestations leave us breathless at their beauty today, but they came at an ever-increasing cost to the ancient Maya states and their populations.

Yet with the fall of the Classic Period Lowland city-states, the great Maya tradition did not end, but only began a new Post-Classic cycle, one of the myriad and continuing manifestations of the Maya cultural tradition.

