The Reasons For The Collapse Of The Mayan Civilization

The polarised debate surrounding the collapse of the Classic Mayan Empire has divided historians since the first documentation of the magnificent ruins in 1841 that allowed the wider world to hear of its existence, and though evidence remains inconclusive, over the years several theories have begun to dominate and gather strength. These include Arthur Demarest's theory that warfare was the cause of the collapse, which he explores in his book Ancient Maya: the rise and fall of a rainforest civilization. In contrast to this, Jared Diamond's Collapse: how societies choose to fail or succeed, argues that the Mayan degradation of their own land and subsequent human-caused climate change meant they could not survive as a society, while Richardson Gill, in his work The Great Maya droughts; water, life and death, highlights the role of climate change as a natural and uncontrollable force in the fall of the Mayan civilization. The classical Maya period lasted from 250-900 AD and is referred to as the Maya Golden Age. They were a religious society, worshipping gods of various elements of nature, who saw their kings as descended from the gods, and who thrived on crops of squash, maize and beans. At its largest, the Mayan population may have reached 2,000,000 people. Following the peak of their power in 600 AD, the Mayan civilization began to collapse in late 800 and early 900 AD, with most cities abandoned by late 900 AD.

Warfare has not always been a primary consideration as a reason for the Mayan collapse, as early historians thought that they were an entirely peaceful society, ignoring the evidence to the contrary. However their taste for bloodshed is clear, as indicated by the prevalence of obsidian weapons, stone carvings of wars and evidence of human sacrifices. Early Mayan archaeologists ignored this and perpetuated the views of Mayans as a peaceful group of people. Later, when the language of the Mayans began to be translated from the large, inscribed stone blocks (stelae) on which it was recorded, it became explicitly obvious that these records of kings, their battles and sacrifices, did not originate from pacifists. Now it has been well established that these people went to war, but is this what caused an entire civilisation to collapse? Arthur Demarest insists that this is the case. In Ancient Maya: the rise and fall of a rainforest civilization, Demarest says of the Mayans that their volatile and dynamic political structure, and their vast investment in ritual and, importantly, political ideology was to be their downfall. Through warfare, cities changed hands, as shown in the stelae of the time, which displayed whichever king was in power, and this brought instability. Warfare is also costly; requiring food, fighters and obedience. When resources for civilians diminish because of the need to supply fighters with food, exacerbated by the breakdown of trade networks between now warring neighbouring states, it is conceivable that what followed was the breakdown of the status of the kings who relied on the blind worship of their subjects to continue in their position. A cornerstone of Mayan society was religion, and when they became disenfranchised with this, life as they knew it began to crumble. The strength of this interpretation lies in the evidence which exists of increased warfare at the time of the collapse; including more findings of arrowheads, murdered elites, and, as Demarest himself found, hastily built fortifications. What caused this warfare, according to Demarest, was 'too many elites.' The system of power being passed down was not very clearly defined, and when many people have a claim to the throne, chaos ensues. When the elite fall, chaos turns into a collapse. But this interpretation has some unexplained aspects: war does not arise from nothing, and overwhelmingly has been motivated by other factors, namely climate change, across history. While war and ultimate political

destruction may be a result of this, they are not necessarily the cause. As such, other factors must be considered as being possibly more influential in the fall of the Mayans.

In contrast to Demarest's explanation, in Collapse: how societies choose to fail or succeed Jared Diamond sees the Maya collapse, including the warfare and fall of the elite, as being the result of human ecological sins. He describes the evidence of populations expanding and making use of the hills (as opposed to their usual fertile valleys) for fields. Evidence of erosion and nutrients leaching from the soil indicate this use would have been short lived, resulting in low crop yields, with the unfertile soil blanketing any fertile soil. But why were the hills eroded? Diamond cites deforestation as the culprit, with harvested timber used for the purposes of fuel during the construction of the magnificent Mayan plaster monuments, which required a vast amount of fuel create. To make one square meter of plaster would need the heat of twenty trees. A lack of trees leads to decreased precipitation, increased temperature and therefore drought. This interpretation is feasible, as there is much evidence of severe drought at the time of the Maya collapse. However, it has also been argued that Jared Diamond's personal experience as a modern historian may mean that he has a bias: the Maya collapse mirrors closely our current climate catastrophe, and parallels with the past serve to warn against repeating mistakes; a cautionary tale, but not necessarily an accurate interpretation. Diamond has been criticised for his selective use of information (only exploring information that fits his hypothesis), and for his unsystematic approach, where he casts aside scientific methods in favour of a great sounding story-

"Diamond has failed to be systematic in evaluating societies, preferring to give long-winded accounts based on a combination of anecdote and speculative interpretation of data rather than collecting and analysing data in a way that would enable a truly systematic analysis." There exists evidence for a drought, and there exists evidence that could mean the Mayans deforested more than they should have, but that does not mean that the latter caused the former. Theoretical information on the amount of precipitation that would exist should the Mayans deforest their areas is not evidence that they did this and should not be extrapolated upon to the extent that Diamond does.

Similarly, Richardson Gill believes a change in the climate was the cause of the Mayan collapse. However, he believes that the Mayans themselves were not wholly to blame for their predicament. In The great Maya droughts: Water, Life, and Death he explores the evidence that leads him to believe that the Mayan civilisation collapsed because of drought, the root cause of which being independent of humans. As he sums up in the journal article 'Drought and the Maya collapse', "Fairly small, independent changes in climate- which are not the fault of human beings or the result of human actions- can have discernible effects on the well-being of human populations. If that is the case, then it is reasonable to conclude that catastrophic climate changes can have catastrophic effects on human populations and even rise to the level of causing the collapse of an advanced society."

The strengths in this argument lie in its overwhelming physical evidence. A lake sediment core studied, shows that at the time of the Maya collapse, the area was the driest it had been in 7000 years. He also notes that it occurred simultaneously across 1000 kilometres, further evidence for climate change. Human activity, as Jared Diamond believes the cause to be, is not uniform. Diamond's argument for deforestation stopping rainfall would only strongly affect the areas where there was deforestation to a great extent, and as such Gill's reasoning here is far stronger. Gill also argues that shifting ecotones brought first the favourable conditions that

allowed the Mayans to thrive in the classic period, then brought about the collapse when the ecotones shifted to less favourable conditions. But Gill understandably has not avoided criticism of his interpretation of this highly polarised debate. The weaknesses of his argument are brought up in an article by none other than Arthur Demarest, whose primary complaint is the selective information use by Gill (although Demarest does not include examples of this).

The interpretation of the collapse of the classic Mayan empire as being a result of warfare and subsequent political and social breakdown established by Arthur Demarest is flawed and unsubstantiated by physical evidence that war drove the collapse, though much evidence of increased warfare means it could certainly arise as a result of other factors. Jared Diamond's claim that human interference with their environment led to drought could be highly influenced by his motivation as a modern historian with an ecological agenda, and his information regarding drought does not prove that humans caused it, just that drought occurred. Scientific facts about the climate at the time of the collapse are explored by Richardson Gill, whose basis in evidence rather than just theory means that his explanation of climate change as being responsible for the collapse of Mayan civilisation is, as such, the most plausible interpretation thus far.?

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