

## GENERAL

# A Critique: Jared Diamond's *Collapse* Put In Perspective

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Jared Diamond's book *Collapse* captivated readers with its tales of past great civilizations succumbing to dramatic cycles of decline, and among them are the ancient Maya. Diamond's model of the Maya collapse has become quite popular since its publication, however numerous other divergent theories exist as well, which attempt to explain the phenomenon. Diamond, buoyed by the success of his book and his renown as an author, is the assumed authority, despite academic criticism. By comparing Diamond's *Collapse* with current research I hope to critique Diamond and thus elucidate the condition of the Maya decline concerning the roles of the environment, the regional variability of various sociopolitical dynamics, such as those that were played out in the Petexbatun region, and the extent of Post Classic continuation of Maya tradition.

### **The Maya 'Collapse' According to Jared Diamond**

Diamond defines collapse as, 'A drastic decrease in human population size and/or political/economic/social complexity, over a considerable area, for an extended time' (Diamond 2011: 3). He developed a single general formula outlining how many of the world's great civilizations fell, a process he explains as 'ecocide'. Ecocide, as the name

suggests, describes a society that destroys the very environment upon which they depend, thus ensuring its own demise (Diamond 2011: 6). Diamond's proposed trajectory begins with population growth, spurring the need for intensified agriculture. This leads to the expansion of farmland into marginal areas to accommodate more people. This intensification gradually damages the environment and results in problems such as erosion, deforestation, and habitat destruction, as well as water management issues, overhunting, and overfishing, among others. Due to this land degradation, previously cultivated marginal areas are once again abandoned. Food shortages ensue inciting wars for control of the depleted resources. Finally the disillusioned populace overthrows their elite counterparts and political, social, and economic structures disintegrate (Diamond 2011: 6). The severely diminished population is thus left with the remnants of their doomed civilization. Diamond uses this tale of woe to warn his readers of the consequences of poor environmental management today (Diamond 2011: 7). He attributes the collapse of the ancient Maya to this same self-inflicted progression.

In the case of the ancient Maya collapse, Diamond emphasizes the role of environmental degradation compounded by climate change. Although Diamond labels the Maya as one of the most advanced Native American societies, he claims they were responsible for irrevocably damaging their landscape.

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Without the aid of friendly neighbors but rather contending with hostile ones, their actions placed them within a context from which they were unable to recover (Diamond 2011: 21). According to Diamond, the lowland Maya might have lived in an area of karst terrain and unpredictable rainfall, but their environment was not especially fragile (Diamond 2011: 159). However, through their actions they made it so. Their sustenance strategy, characterized by intensified agriculture through terracing, irrigation, and raised or drained fields, was limited by an alleged maize monoculture, a humid climate which diminished long-term storage capability, a lack of animal powered transport or plows, and a lack of protein from large domesticates (Diamond 2011: 163–164). Erosion and deforestation were two of the most prominent consequences (Diamond 2011: 159). Diamond suggests that plaster production for covering buildings may have been a major cause of deforestation also since it required burning trees as fuel. Increased erosion, sediment accumulation in valleys, and even reduced rainfall due to trees' role in the water cycle may have resulted (Diamond 2011: 169). The worst drought in seven thousand years, which peaked in AD 800, ensured the Maya decline (Diamond 2011: 173). In this way, Diamond's theory is primarily environmentally determined.

Diamond seldom addresses the role of culture, although he does cite elite mismanagement as a factor in the dramatic depopulation of the Maya lowlands. In his opinion, Maya kings and nobles were too engrossed in their own short-term concerns to attempt to address the underlying problems in the region. They spent their time and the region's resources waging chronic and futile wars, erecting monuments, and competing among themselves for wealth and power (Diamond 2011: 177). Seventy percent of the Maya were peasant farmers who were required to support these activities by providing food and labor (Diamond 2011: 164). The peasants sustained the lavish lifestyle of the king

and his court because they believed the king had a supernatural connection with the gods and could thus deliver rainfall and prosperity to his people (Diamond 2011: 168). When the effects of climate change on a damaged environment began to significantly reduce agricultural yield, the people blamed the king for the failings (Diamond 2011: 170). As a result of disillusionment and agricultural stress, ninety to ninety-nine percent of the Maya population had disappeared by AD 800 (Diamond 2011: 172). While some suggest they merely relocated, Diamond emphasizes depopulation by a lower birth rate and a higher death rate from thirst, starvation and violence (2011: 175). The institution of kingship, long count calendar and political, cultural, and economic complexity disappeared along with the Maya population (Diamond 2011: 171). In this way, Diamond claims that while environmental catastrophe was the primary catalyst for the collapse, mismanagement by ruling elites may have hastened the decline.

### Should Diamond Be Believed?

There are many different accounts of the Maya collapse, and while Diamond's account may be the most popular, it is certainly not the most accurate. His strength is in his simplicity (Powell 2008: 20). He made the topic accessible to all readers, even those without a historical or archaeological background, which he himself lacks, but at a cost. Norman Yoffee said, 'If you talk to 20 different historians you will get 20 different histories. We know that. But Diamond is wrong, and he's wrong in ways that matter' (Powell 2008: 20). It is clear something collapsed, declined or was transformed at the end of the Maya Classic Period, but the cause is less evident. Suddenly the archaeological manifestations of the Maya system of theater states ruled by *k'ul ajawob*, or holy kings, and their patronage networks of redistribution came to an end. The previously prevalent inscribed stone monuments, royal funerary cults, and tomb temples were forsaken, and

this political shift was accompanied by the depopulation of major cities, and a drastic reduction of public architecture (Demarest 2004: 9). Diamond cites these phenomena in *Collapse*, but misinterprets their origin. For example, while environmental degradation can induce political and economic insecurity, the unchecked exploitation of resources may be the result rather than the cause of such instability (Page 2005: 1058). Additionally, the phenomenon Diamond calls the Maya 'collapse' occurred with pronounced local, regional, and temporal variability (Hodell et al. 2005: 1425; Aimers 2007: 332). Such a multivariate event cannot be explained away so simply.

### The Role of Environment

Diamond's theory of the Maya 'collapse' relies heavily on the presumption of environmental damage due to climate change. He claims a society's collapse cannot be attributed solely to environmental factors, and yet these are the driving forces to which he attributes the Maya decline (Diamond 2011: 11). For this reason he has been critiqued for environmental determinism. Powell claims Diamond's theory of collapse emphasizes environmental degradation to further his own ecological agenda. In this way he manipulates past civilizations as cautionary tales of environmental mismanagement to stimulate green consciousness today (2008: 18). While this may be an admirable goal, it produced a biased interpretation of the Maya collapse.

The evidence of drought during the Mayan Late Classic period is variable. Lake records from central Mexico record the driest conditions of the Holocene occurring around AD 700–1200, approximately the time of the Classic Maya decline (Metcalf & Davies 2007: 169). However, sediment cores from Laguna Azteca (Hidalgo) in Northern Mexico indicate conditions in the Late Classic and Early Postclassic were just as wet as the present, and possibly wetter (Metcalf & Davies 2007: 180). Speleothem oxygen

isotope analysis of stalagmites from Macal Chasm in western Belize indicates a series of four droughts occurred one after another from AD 700–1135 (Webster et al. 2007: 1). Stalagmites from the Northern Yucatan Peninsula reveal a similar sequence of four separate dry periods of ten to twenty years during the Late Classic Period (Medina-Elizalde et al. 2010: 258). According to sediment cores from Lake Chichancanab in northern Yucatan, these droughts may have been separated by fifty years of intervening moister conditions around AD 870–920 (Hodell et al. 2005: 1413). The severity and timing of these arid periods surely varied by region, and each region's response to such unfavorable episodes was equally diverse (Polk et al. 2007: 53; Hodell et al. 1995: 394). Even Diamond admits that concerning environmental strain, some societies collapsed and some did not (Diamond 2011: 10). While climate change seems to have been taking place, there were certainly other factors contributing to the Maya decline.

Most scholars now agree drier conditions persisted in the Late Classic period, however the role of climate change in the Maya decline continues to be debated. This period of drought might have been produced by subtle variations in the sun's brightness, a phenomenon caused by oscillations in solar activity, which tended to recur approximately every two hundred years (Kerr 2001: 1293; Medina-Elizalde et al. 2010: 257; Hodell et al. 2001: 1369). However, in the past the Maya had overcome and adapted to these periods of cyclical drought (Masson 2012: 18237). If Maya communities were truly vulnerable to drought, collapse would have occurred abruptly, but instead the Maya decline lasted over one hundred and fifty years (Medina-Elizalde et al. 2010: 255). Additionally, large Maya capitals in the wetter southern lowlands such as Copán, Quirigua, Piedras Negras, and Yaxchilan were among the first to cease new construction while sites in the drier North Puuc hills were beginning an ambitious phase of

monumental construction (McAnany 2010: 155–156; Medina-Elizalde et al. 2010: 260). Finally, if the Maya decline had occurred according to Diamond's theory of environmental degradation, individuals living during this time should have experienced considerable health stress as a result of insufficient resources for the growing population (Demarest 1997: 217). This was not the case since Maya health remained relatively stable throughout the Classic period (Wright 1996: 183). Answers must thus be sought in the political and cultural spheres.

### **The 'Collapse' in One Instance: The Petexbatun Region**

The Petexbatun region of the western Petén, Guatemala is where the earliest and most drastic instance of the Maya collapse occurred (Demarest 2004: 83). It is unique because warfare played a large role in its decline, whereas evidence of such violence is ambiguous for other areas (Aimers 2007: 347). The region experienced a hundred and fifty years of expansion and hegemony until about AD 760 when it disintegrated into endemic warfare (Demarest 1997: 215). This preceding period was characterized by intense inter-elite competition, which manifested itself in architectural and ritual displays of wealth and power, long-distance trade to acquire exotic status goods, and involvement in interregional alliances and conflicts (Demarest 1997: 220). By the mid-eighth century, defensibility became the main concern in determining site location and even took precedence over proximity to good subsistence sources (Demarest 2004: 89). Fortification walls, palisades, and moat systems became common throughout the region (Demarest 1997: 219). Unsurprisingly, economic transformations began after rather than before the late eighth century intensive warfare, and even then the region's agricultural potential was not exhausted. This suggests agricultural failure due to drought was not a major cause of the collapse (Medina-Elizalde et al. 2010: 259; Dunning et al.

1998: 147). This period of decline resulted in the devastation of the region's centers, rapid depopulation to less than ten percent of the areas original presence, and dramatic socio-cultural devolution (Demarest 1997: 217). Some suggest this early ruin of the Petexbatun kingdom and may have set events in motion or accelerated later occurrences of collapse elsewhere in the Maya world (Demarest 2004: 101), each region with its own unique manifestation.

### **Rethinking the Collapse**

In some regions, the causes leading up to decline or transformation are not as easily recognized or identified. Numerous different theories about the Maya collapse have been posited, including disease, earthquakes, foreign invasion, peasant revolt, shifts in trade routes, and of course radical climatic change (Demarest 1997: 209). It is now clear that there was no single catalyst but rather a combination of multiple concurrently shifting variables that instigated a transformation and affected different regions in diverse ways (Demarest 2004: 9; Medina-Elizalde et al. 2010: 255). Untimely climatological events may have worsened the decline or perhaps exacerbated social and political conflicts already underway, but they were not the sole cause of the Maya 'collapse'. For example, during the Late Classic height of Copán in western Honduras, the center's population came close to exceeding the carrying capacity of the valley. The lesser diversity of food available to low-status individuals compared with elites in conjunction with lower agricultural yields may have resulted in nutritional stress and thus unrest among the common people (Lentz 1991: 269, 284). In this way, sociopolitical issues were compounded by climate change. Still, elsewhere climate does not seem to have played a significant role, such as at Ek Balam in the northeast Yucatan Peninsula (Aimers 2007: 339). It may be that each instance of decline was motivated by a different combination of stresses, climate being only one possibility.

### Post Classic Continuation

Although the Maya collapse did involve dramatic depopulation in some regions, it was certainly not a complete obliteration of the Maya population. Indeed, hundreds of thousands of Maya remained to meet the Spanish centuries later (Diamond 2011: 175), and more than seven million descendants of the ancient Maya are alive today (McAnany 2010: 164). The Maya 'collapse' was a political or social crisis to which the divine rulers could not adapt, and were thus deemed irrelevant (McAnany 2010: 159). Schwarz emphasizes the role of common people in fashioning solutions to the new problems they faced in the Postclassic with components of regeneration, rearrangement, continuity, and innovation (2013: 243–244). Similarly, Powell suggests abandonment and migration may be a strategy of people living in marginal environments rather than the result of total population annihilation (2008: 56). In fact the depopulation in the Southern Lowlands is mirrored by an increase in the number of people residing in the north of the Yucatán Peninsula closer to the coast (McAnany 2010: 160). Some Maya centers like Cobá and Mayapan were not completely abandoned and maintained a small population into the Postclassic (Leyden et al. 1998: 120). Thus collapse-induced depopulation was actually a combination of migration, reorganization and persistence, which occurred over centuries (Kennett et al. 2012: 791). The Maya did not disappear; they merely restructured.

It is clear even throughout the collapse that some societies remained functioning or even thriving despite the conflict. For example, Lamanai in Belize, and Marco Gonzalez just off the coast maintained a lively and prosperous system of commerce and trade throughout, although significant facets of culture and religion altered (Graham et al. 2013: 165–166). This can be seen in the new burial position exhibited by some burials from the collapse period, face-down and legs-bent-back. The way in which a person

is buried is closely related to the society's worldview and thus changes in burial practice must reflect changes in culture (Graham et al. 2013: 175–176). The Postclassic Maya certainly reduced their investment in monumental construction but they retained a lively and dynamic existence, especially in regard to mercantile activity. For example sites like Tulum that were strategically located near the coast or major waterways and thus had access to canoe navigation and faster travel and transport of large loads of trade goods seemed to prosper in the Postclassic (McAnany 2010: 159). This increased interregional interaction may have led to more extensive or intense religious or sociopolitical networks across Mesoamerica (Aimers 2007: 334). Although there appears to be less social stratification and power centralization in the Postclassic (Aimers 2007: 332), new Maya rulers emerged who were able to realize the reality of an increasingly commercialized pan-Mesoamerican world (McAnany 2010: 162–163). In this way the Postclassic was merely a continuation of the Maya civilization as they adapted to a new milieu.

### Conclusion

Although Diamond can be credited with inspiring many of his readers to take an interest in the ancient Maya civilization, he may have done more harm than good by propagating a biased theory of the collapse to further his own agenda. In addition, he may have been too harsh on the ancient Maya by suggesting they themselves are to blame for the environmental mismanagement that he claims led to the civilization's downfall. Recent scholarship indicates the Late Classic Maya decline was not the result of a single catalyst but rather the culmination of a variety of different stresses, each played out on a different regional stage. Finally, although it is labeled a 'collapse', the Maya did not die off but rather adapted to a new situation to continue on transformed, and are still alive today.

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**How to cite this article:** Gause, E 2014 A Critique: Jared Diamond's *Collapse* Put In Perspective. *Papers from the Institute of Archaeology*, 24(1): 16, pp. 1–7, DOI: <http://dx.doi.org/10.5334/pia.467>

**Published:** 29 September 2014

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