EGALITARIANISM WITHOUT CATASTROPHE?

Teotihuacan's Challenge to Walter Scheidel's Four Horsemen Theory

Author: Matthieu Marienbach

Abstract   This paper explores the Teotihuacan civilisation's low levels of inequality, challenging Walter Scheidel's Four Horsemen theory which posits that only catastrophic events can significantly reduce inequality. Analysing Teotihuacan, a large pre-Columbian city noted for its egalitarian structure, the paper refutes the idea that only mass warfare, pandemics, revolution or state collapse can flatten social hierarchies. It suggests that Teotihuacan's unique formation and governance, influenced by a multiethnic population influx following a volcanic eruption, fostered a decentralised and egalitarian society. The paper contributes to the discussion on designing equal and sustainable societies, offering an alternative historical perspective to the inevitability of social inequality.

1. Introduction

Renowned historical sociologist Charles Tilly emphasised the importance of contextualising contemporary inequalities within a historical framework (2007). Tilly was a leading figure in the study of social change, and his work calls for a deep understanding of how past societies have managed inequality. In response to this call, this paper explores the classic period of the pre-Columbian city-state Teotihuacan to seek insights into how to foster large, stable and peaceful low-inequality societies today. It tests Teotihuacan against the theory on inequality developed in Walter Scheidel's book *The Great Leveler* (2017). Scheidel's theory leaves little room for optimism, arguing that, since the 10th century BCE Pharaonic Egypt, only massive and violent shocks have significantly flattened inequality. These shocks, it claims, come in four types—Scheidel's Four Horsemen—namely: i) mass mobilisation warfare such as WWI and WWII, ii) transformative revolutions such as communist expropriations in China and Russia in the 20th century, iii) state failures such as Somalia since 1991, and iv) lethal pandemics such as the Justinianic plague.

However, Scheidel's theory fails to address an anomaly in ancient large societies. Indeed, the Teotihuacan civilisation, the largest city in Mesoamerica in the first millennium CE, is believed to have been radically devoid of much of the inequality that was characteristic of large, pre-industrial cities (Kohler et al., 2017; Appendices 5 and 6). This paper contributes to the literature by testing the robustness of Scheidel's Four Horsemen theory against the Teotihuacan anomaly, finding that it falls short of explaining Teotihuacan. It starts by providing a primer on the Teotihuacan civilisation and the techniques used to measure inequality in the ancient world. Then, it tackles each of the Four Horsemen, relying on the vast literature on Teotihuacan, concluding that Scheidel's theory does not hold. Finally, it puts forth the theory that Teotihuacan's low inequality could be attributed to the unique circumstances that governed its emergence as a socially heterogeneous society, which allowed for a lengthy period of decentralised and egalitarian government.

This paper was motivated by a desire to address a critical challenge for the future of humanity: achieving sustainable development amid growing global inequality (Wilson, 2002). With the UN projecting a population peak of 11 billion by 2100, up from 7.5 billion in 2017 (United Nations, 2017), concerns about rising inequality have become increasingly relevant. Scholars argue that such inequality drives environmental degradation and social instability (Sklair, 2002). Countless scholars, in the footsteps of James Boyce's seminal works (1994, 2002), hold that inequality is a significant cause of environmental destruction (Cushing

et al., 2015; Jorgenson et al., 2016; Kashwan, 2017; Laurent, 2014). Walter Scheidel's theory posits that significant reductions in inequality historically result from catastrophic events. This paper challenges that view by examining Teotihuacan as an example of a non-violent, equal society. Exploring Teotihuacan's social and political structures demonstrates that sustainable, equitable societies could be achieved without catastrophic events. These insights aim to offer a hopeful perspective for designing modern societies that emerge and sustain non-violently, being both more equal and environmentally sustainable, countering Scheidel's grim outlook and providing a historical blueprint for balance and sustainability.

2. Background

2.1 A Primer on Teotihuacan
Teotihuacan is an ancient Mesoamerican civilisation rooted in a city in the valley of Mexico, 40 kilometres northeast of present-day Mexico City. Teotihuacan started thriving around 150 BCE, reaching a golden age in AD 200, which lasted more than 300 years. During its golden age, its population remained stable, between 125,000 and 200,000, while it gradually expanded its influence to 1,000 kilometres south into present-day Guatemala. From AD 550, it experienced a century of decline until its collapse in AD 650 (Cowgill, 2007; Storey, 1992). During its golden age, Teotihuacan was better thought of as a civilisation anchored in a city-state, with direct control over its surrounding rural areas and a military-supported trading empire with a strong influence in other distant city-states (Turchin, 2017).

Teotihuacan stands out in Mesoamerican history for three reasons. First, it was the largest city to ever exist in Mesoamerica until the rise of Tenochtitlan seven centuries later. Second, Teotihuacan had a significantly lower degree of inequality in its three centuries of stability than any other city in the New World or the Old (Feinman & Carballo, 2018; Kohler et al., 2017). Third, Teotihuacan's urban planning and design differed from Preclassic (1500 BC to AD 300), Classic (AD 300 to AD 900) and Postclassic pre-Columbian city-states. Teotihuacan had an orthogonal design with a single straight avenue, the Avenue of the Dead, around which more than 2,000 standardised, high-quality apartment compounds were built in the shadow of three disproportionately large pyramids (Appendix 1 and 2). Additionally, archaeological studies show scant evidence for ballcourts and royal palaces, which were staples of almost all other Mesoamerican cities (M. Smith, 2017).

2.2 Scheidel's Theory of the Four Horsemen

In his book *The Great Leveler* (2017), Walter Scheidel presents a theory focusing on the trends and mechanisms by which societies historically reduced inequality. Scheidel argues that significant reductions in inequality have typically occurred through catastrophic and violent events, which he refers to as the Four Horsemen, consisting of:

1. Lethal pandemics: pandemics, such as the Justinianic plague, are argued to have reduced inequality by decreasing the population, thus altering the ratio of labour to land, reducing land values and increasing wages for the surviving population.

2. Mass mobilisation warfare: Large-scale conflicts, such as WWI and WWII, have historically mobilised vast resources and populations, destroying wealth and resulting in subsequent redistributive policies that reduce inequality.

3. Transformative revolutions: events like the communist revolutions in China and Russia, which involved the expropriation of wealth from elites and significant structural changes, are seen as critical in levelling inequality.

4. State failures: examples like Somalia's collapse since 1991 show how the breakdown of state structures can disrupt established economic hierarchies, leading to a reduction in inequality.

Scheidel's argument centres on trends rather than static levels of inequality. He contends that catastrophic events are necessary to significantly reduce inequality, and peaceful, non-violent means have rarely, if ever, produced similar results.

2.3 Measures of Ancient Inequality

Scheidel and Mesoamerican scholars, such as Michael Smith, rely on the Gini coefficient to evaluate the measure of inequality in societies. A Gini coefficient measures the extent to which the distribution of income or material assets deviates from a perfectly equal distribution. A Gini of 0 indicates that each population member receives or holds the same resources. Conversely, a Gini of 1 indicates that one member of society controls all the resources and everybody else has nothing. The more unequal the distribution, the higher the Gini value (OECD, 2006).

Whereas Gini coefficients can be calculated with precision in societies with a tradition of collecting and archiving population data, inequality in the distant past can often only be estimated indirectly. Scheidel's ancient and early medieval examples (Greece, Babylonia, some aspects of the Roman empire, Aztec Mexico) rely on Gini coefficients calculated based on proxy archaeological evidence such as patterns of land ownership, variation in house size, and the dispersion of stone tools (Scheidel, 2017).

In the case of Teotihuacan, Smith (2014) relies on a simple spreadsheet-based method described by Siegel and Swanson (2004), assessing the area per household and yielding a Gini of 0.12. This low Gini coefficient is explained by high-status houses whose surface was only marginally larger than the average apartment compounds and the absence of a royal palace. Additionally, low-status, non-permanent households are smaller but contribute little to increasing Teotihuacan's Gini. These findings are consistent with other archaeological findings, namely an above-average access to wealth at the lowest end of the spectrum compared to other Mesoamerican cities, combined with a lack of ostentatious wealth at the high-status end (Appendix 3). In the following sections, Teotihuacan's low inequality during its golden age is tested against the Four Horsemen.

3.   Testing the Four Horsemen

3.1   The First Horseman: Lethal Pandemics

Scheidel's first inequality-levelling Horseman is the lethal pandemic, which is unlikely to have been a factor in Teotihuacan's egalitarian society due to evidence of its population stability during its golden age and the general absence of pandemics in the pre-Columbian Americas.

The Great Plague (1347 to 1351) is the most representative pandemic, which originated in Mongolia and spread to Europe through trade routes, killing 30% to 60% of Europe's population (Alchon, 2003), yet leaving physical infrastructure and tax policies untouched. Pandemics of this type had an inequality-levelling effect in premodern, agrarian societies by changing the ratio of land to labour, depressing the price of land and raising the price of labour. Landowners typically saw a decrease in their net wealth, compounded by the need to pay higher wages to maintain the cultivation of their lands. As a result, inequality began to plummet in 1350, only recovering to pre-plague levels around 1600 (Scheidel, 2017; Appendix 4).

McNeill (1998) offers a general picture of disease in pre-Columbian Americas, which remains credible today, showing that populations were relatively free of infectious disease and lacked the strong epidemic patterns found in densely-populated regions of the Old World. While Teotihuacan concentrated the densest population in Mesoamerica in the first millennium, its only domesticated animals were dogs and turkeys. This low level of domestication is believed insufficient to create a reservoir of domestic animals likely to cultivate and spread disease like in the Old World. Additionally, large-scale lethal "crowd-type" pandemics do not appear to have been a feature of the New World prior to contact with the Spanish (Newman, 1976).

Testing McNeill and Newman's general theories with evidence at the Teotihuacan level is difficult. Whereas violent events are generally recorded in skeletal remains, diseases like the plague leave scant archaeological evidence. Nevertheless, Storey's (1992) extensive work on the skeletal remains of a lower-status neighbourhood block of Teotihuacan, Tlajinga 33, supports this general pre-Columbian thesis at the Teotihuacan level. Storey's findings show a high infant mortality rate and a likely overall decrease in life expectancy in the decades preceding Teotihuacan's collapse. She stipulates that while Teotihuacan's dry climate was likely conducive to reducing the proliferation of disease, the city's lack of a year-round water supply meant poor hygiene and sanitation. Indeed, Teotihuacan relied on a water reservoir that only replenished during monsoon months. She ties mortality patterns to endemic infections and parasites partly caused by the abovementioned conditions. However, she does not observe a pattern suggesting a massive, plague-like die-off. Her findings also cohere with the consensus that Teotihuacan's population remained stable throughout its zenith period.

3.2 The Second Horseman: Mass Mobilisation Warfare

Scheidel's second inequality-levelling Horseman is mass mobilisation warfare, in which large-scale conflict penetrates society, mobilises people and resources, destroys wealth and catalyses radically redistributive policy changes (Scheidel, 2017). This section compares Teotihuacan's archaeological evidence of warfare to 5th century BCE Athens, yielding insufficient evidence for warfare-driven equality.

Scheidel extensively covers WWI and WWII as the greatest levellers in history, yet these examples do not provide an adequate analysis framework for pre-industrial societies. Fortunately, Scheidel details the levelling factors that acted as catalysts for the stable and egalitarian 180-year period of Classical Athens. In the 6th century BCE, nearing the end of the Archaic period, Athens suffered from growing inequality fuelled by population growth and abundant labour. Megara, a polis located 40 kilometres away, experienced a rebellion by its poor citizens. They established a radical democracy that unlocked widespread participation in naval warfare, increasingly challenging Athens. In response, Athenian leader Solon embarked on a series of reforms in 594 BCE that relieved the labouring class from its quasi-enslavement, partly to increase the army's size. A century later, Sparta's short-lasting invasion in 508 BCE prompted leader Cleisthenes to establish a popular democracy, inaugurating Athens' classical, egalitarian period. During this period, Athens had to maintain a permanently high level of military mobilisation during which it fought, in turn, the Persian empire during the first (490 BCE), second (480 BCE) and third (477-449 BCE) Greco-Persian wars, then Sparta during the Peloponnesian war (431-404 BCE) and the Corinthian wars (395-338 BCE).

The primary mechanism through which these wars levelled Athenian inequality was the sources of funding for naval warfare, where the wealthiest citizens were required to fund triremes, the standard-oared warships, individually. In addition, salaries were paid to the less wealthy Athenian citizens who rowed, compounding the levelling effect: any increase in naval power would lead to more costly boats to be funded by the wealthy, operated by up to 200 poorer citizens whom the state would compensate. Overall, the convergence of military mass mobilisation, democracy, progressive taxation, a sizeable state share in GDP, and substantial civilian spending levelled Athens's Gini coefficient of 0.38 (Gabrielsen, 2010; Scheidel, 2017). This coefficient is a far cry from Teotihuacan's Gini of 0.12. However, one must bear in mind that large New World societies typically place between 0.05 to 0.15 points less than Old World societies due to the absence of large domesticated animals, which allowed higher agricultural surpluses, as well as the development of a dominant mounted warrior class (Kohler et al., 2017; Appendix 5). In any case, the Athenian experiment in democracy ended with its conquest by the Macedonian kingdom in 338 BCE.

In *War and Society in Ancient Mesoamerica*, Ross Hassig (1992) provides the most exhaustive interpretation of Teotihuacan's military operations during its golden age. During their Classic phases, Teotihuacan and Athens had comparable population sizes, respectively 150,000 and 300,000. Athens had to regularly combat neighbouring city-states such as Sparta (pop. 50,000), 150 km away, and larger kingdoms and empires such as the Persian Empire (10+ million in 500 BCE). On the other hand, Teotihuacan dominated most of its neighbouring rural areas in the valley of Mexico and was by far the largest civilisation in Mesoamerica. No equal or more extensive empire loomed in the distance. Its only potential rivals were both smaller and located much further away. Kaminaljuyu, located close to modern Guatemala City, numbered only 20,000 inhabitants and was more than 1,000 km away, as was Tikal, with 50,000 inhabitants. Monte Alban, a civilisation only 500 km away, dominated the Oaxaca valley yet only numbered 17,000 at its peak.

This configuration supports Hassig's thesis that Teotihuacan was a hegemonic empire. Hegemonic powers differ from territorial powers, which must rely more heavily on force to maintain borders and control troops across an empire year-round at a high cost. In contrast, hegemonic empires such as Teotihuacan allow local forces to maintain control in distant areas at their own cost. Teotihuacan's dominant relationship with potential rival states would have been sustained via supremacy over the trade of rare goods. Indeed, Teotihuacan developed a large artisanal manufacturing sector throughout its zenith, producing obsidian objects, tools and ceramics. Teotihuacan would trade with states that were far less equal,

partly due to their elites' monopoly over the local trade of Teotihuacan goods after purchasing them wholesale. Teotihuacan thus established colonies and military enclaves that allowed it to perpetuate its control over the market of imported items (Hassig, 1992). There is a high degree of similarity between Teotihuacan's hegemony based on a large-distance supply chain, supported by military-enforced outposts and Tyre's monopolistic expansion over the Mediterranean supported by its monopoly over silver and refined ceramics (Moore & Lewis, 2000).

The configuration of Teotihuacan's hegemonic empire does not support the need for a mass mobilisation army like that of 5th century BCE Athens. Indeed, in Athens, the high probability of attack or conquest of the city-state would have compelled the wealthiest citizens to protect their high position as well as the integrity of their state by accepting, perhaps grudgingly, to divert a large proportion of their wealth or income to military expenses, which in turn would result in economic levelling. Teotihuacan faced no such adversaries. Hassig (1992) stipulates that Teotihuacan's military was far from being a catalyst for an egalitarian society and more of a consequence. Indeed, in aristocratic societies, the poorer classes would be motivated to join an army with the promise of pay and booty. Teotihuacan's meritocratic society would have presented a different motivation: the prospect of social advancement. Additionally, the Mesoamerican landscape presented a different configuration from that of Athens. Indeed, Greek warfare involved mass movements of soldiers on costly ships. In contrast, Mesoamerica lacked countless capital-intensive technologies that could support the projection of large forces at a distance, such as ships, paved roads or wheels (Dorothy & Dewan, 2009).

Overall, mass mobilisation warfare experienced by Classical Athens likely did not cause Teotihuacan's low inequality. Indeed, it appears that the relationship of causality between egalitarianism and military mobilisation was the opposite—Teotihuacan's meritocratic society may have created an incentive for its poorer, status-seeking members to join an army mainly dedicated to protecting their city's commercial supremacy over the region.

3.3   Two Unlikely Horsemen: Revolution and Societal Collapse

Scheidel's third and fourth levellers of inequality are revolution and societal collapse. As mentioned in the previous sections, scholars are unanimous that Teotihuacan's golden age was relatively stable and egalitarian from the moment its population rapidly increased around 100 BCE until its decline after AD 550 (Cowgill, 1997; Vehik et al., 1987). Thus, revolution and societal collapse are unlikely to have been the catalysts for the Teotihuacan anomaly.

Scheidel devotes several paragraphs to Teotihuacan's downfall, demonstrating how societal stratification after AD 550 may have led to increasing unrest. This

unrest culminated in a combination of revolution and societal collapse, during which people burned the structures on pyramids and desecrated the skeletons of higher-status buried citizens (Scheidel, 2017). This paper will not cover the downfall phase of Teotihuacan, since addressing it would do little to explain the preceding 300 years of egalitarian prosperity, and existing literature already covers this period well.

These considerations reveal a puzzling hole in Scheidel's Four Horsemen theory, since there is insufficient evidence that lethal pandemics, mass warfare, revolution or societal collapse caused Teotihuacan's abnormally low inequality from AD 100 to AD 550. Moreover, Scheidel considered the downfall of Teotihuacan, from 550 AD to 650 AD, while writing *The Great Leveler*. Perhaps he never inspected Teotihuacan's earlier phases?

Regardless of the reason for this gap in understanding why Teotihuacan was such an egalitarian society, the following section will suggest two additional factors.

4.   Alternative, Non-Violent Levelling Factors

This section offers an alternative explanation for Teotihuacan's exceptionally low level of inequality. Two primary factors are discussed: the origins of Teotihuacan's multiethnic population due to a significant volcanic eruption and the potential influence of a unique collective political society as modelled by mathematical frameworks.

4.1   Population Exodus and Volcanic Eruption

The Popocatepetl stratovolcano, less than 100 kilometres from Teotihuacan, experienced a massive eruption between 90 BCE and AD 20. This eruption, classified as VEI-6 on the Volcanic Explosivity Index, was comparable in magnitude to notable historic eruptions such as Mount Pinatubo in 1991 and Krakatoa in 1883. The resulting ashfall from Popocatepetl's eruption covered extensive areas to the south of Teotihuacan with over a meter of ejecta, severely impacting the fertility of surrounding lands and halting the development of nearby cities for decades.

The devastating environmental effects likely triggered a large-scale exodus of various small communities toward Teotihuacan. This influx would have rapidly increased Teotihuacan's population, transforming it into a heterogeneous society of multiple groups with diverse cultures and bloodlines. This significant demographic shift created a foundation for a socially diverse and dynamic urban environment (Plunket & Urunuela, 1998).

4.2   Mathematical Modelling and Artistic Evidence of Collective Political Society

Building on the notion of a diverse population, Froese et al. (2014) developed a mathematical model to understand how such a heterogeneous population could contribute to the formation of a unique collective political society in Teotihuacan. Their model uses a variation of the Hopfield network to simulate the stability of a distributed collective government. This model evaluates collective action challenges within a heterarchical system, where rational and selfish individuals are typically unlikely to achieve cooperative solutions.

The model suggests that Teotihuacan's government might have been an alliance of approximately 20 different social units, such as clans or ethnic groups, that arrived following Popocatepetl's eruption. To overcome the inherent challenges of collective action, these groups may have suspended social norms and participated in ritual intoxication during large-scale events. This practice would have facilitated long-term egalitarian collaboration among the diverse groups (Figure 1).

Teotihuacan's artistic and cultural traditions provide further evidence supporting this model. Unlike other contemporary Mesoamerican societies, Teotihuacan's art does not feature aristocratic figures or public dynastic monuments, indicating a lack of centralised, hierarchical power structures. Instead, the art reflects a collective ethos and a focus on communal identity, aligning with the idea of a distributed and collaborative governance system.

4.3   Implications for Stability and Downfall

The model also helps explain Teotihuacan's eventual downfall. As the city's rivals grew in power around AD 550, the ritualised self-optimisation processes within Teotihuacan's polity network likely became less effective. The influx of returning colonists and increased external pressures may have led to the overextension of the city's resources and the fragmentation of its social groups (Hassig, 1992). This breakdown in collaborative governance could have contributed to the city's decline, aligning with historical accounts of internal unrest and the desecration of elite structures.

4.4   Broader Implications

Exploring these alternative, non-violent factors suggests a potential for creating stable, egalitarian societies through decentralised and inclusive governance structures. While Teotihuacan presents a potential exception to Scheidel's framework, its egalitarian nature may still be partly attributed to the catastrophic eruption of Popocatepetl. This event, although not fitting Scheidel's specific criteria of mass warfare, lethal pandemics, revolution or state collapse, significantly reshaped the social and political landscape, potentially fostering a diverse and collaborative

society. Thus, Teotihuacan's experience indicates that diverse and collaborative political systems, supported by a shared cultural identity, might sustain low levels of inequality without the typical catastrophic events. While speculative, this historical perspective offers valuable insights for designing more equitable and resilient societies in the modern world. Conversely, a possible case for a fifth levelling criterion could be made: natural disasters.

5.   Conclusion

Walter Scheidel's Four Horsemen theory paints a bleak picture that does not explain the Teotihuacan anomaly. Disease, war, revolution and societal collapse are unlikely to have acted as the catalysts of an abnormally low society. Surprisingly, Scheidel overlooked this exception, despite using Teotihuacan's later collapse to support his argument. To some extent, a large-scale disaster—the Plinian eruption of Popocatepetl—can be linked to Teotihuacan's exceptionally heterogeneous society, which may have been conducive to a democratic society.

While further research on the validity of Froese et al.'s (2014) model is warranted, the possibility that Teotihuacan's long-lasting egalitarian society was due to a decentralised, collaborative government, in which culturally heterogenous groups peacefully maintained a flourishing trading empire, provides a welcome counterargument to Scheidel's dark conclusions.

Nevertheless, Teotihuacan's golden age seems to have depended on its commercial relationship with the elites of highly unequal, aristocratic city-states such as Tikal—much like communist and egalitarian Cuba relying on tourism from capitalist and unequal countries as its most significant source of income. A simulation of Teotihuacan's stability, if its trading city-state partners were to have adopted the same egalitarian political organisation, would provide an even stronger counterargument to Scheidel and help make the case that Teotihuacan can serve as inspiration for a more peaceful and equal world in the 21st century.

**Figure 1 - Tepantitla Mural 3 – Mountain of Abundance (Taube, 1986)**

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Appendix

Appendix 1 – Historical trajectory of urban planning in central Mexico (M. Smith, 2017)
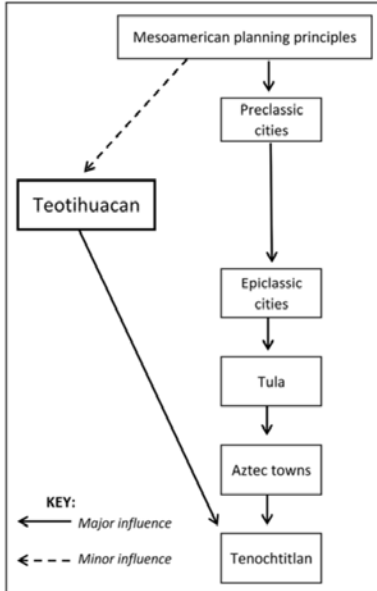
Appendix 2 – City Plan of Teotihuacan (M. Smith, 2007)
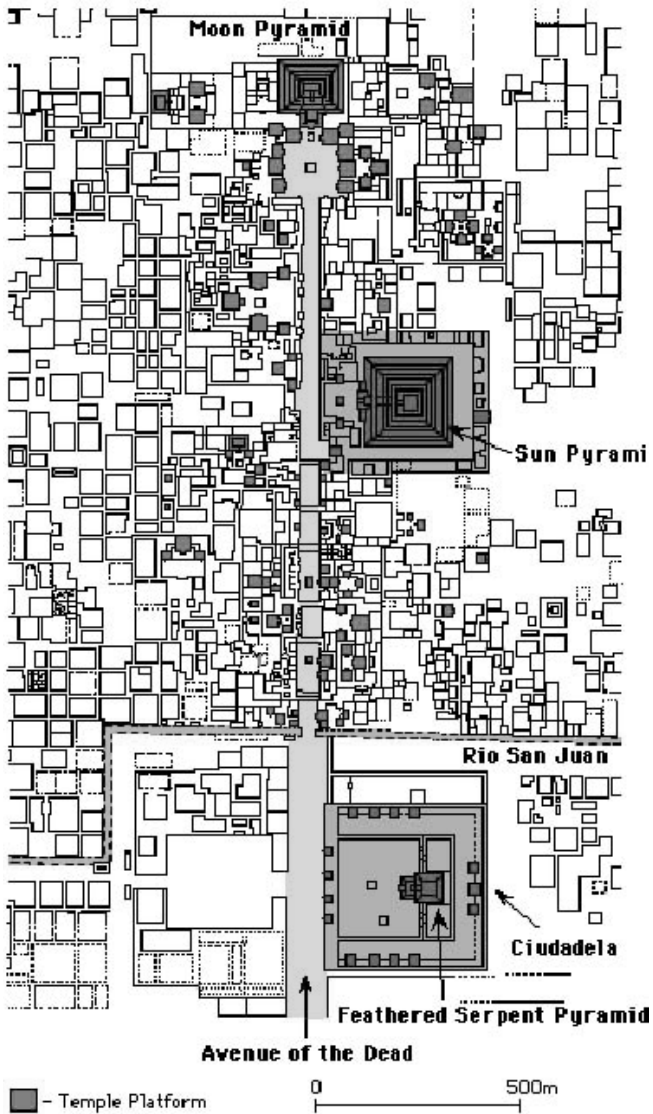
Appendix 3 – Gini Scores in Mesoamerica (M. E. Smith et al., 2014)

TABLE 1. Gini Scores and Summary of Cases

Community	Type	Period	Gini	N	Mean	Std. Dev.	Median	High	Low
Agricultural plot area:									
Huitzillan	Town	Early Colonial	.49	179	399.3	1,189.5	30.0	16,000	0
Quauhchichinollan	Town	Early Colonial	.45	126	301.5	404.6	200.0	3,000	0
House volume:									
Capilco	Village	LPC-A	.06	7	23.8	2.6	23.8	28	19
Capilco	Village	LPC-B	.09	21	25.1	4.2	25.2	38	18
Cuexcomate	Town	LPC-A	.46	43	44.0	113.9	26.6	781	13
Cuexcomate	Town	LPC-B	.19	135	28.4	22.2	28.0	277	13
Yautepec	City	LPC-B	.33	1,619	40.8	428.8	27.0	17,221	27
House area:									
Capilco	Village	LPC-A	.10	7	19.6	3.8	19.6	46	12
Capilco	Village	LPC-B	.16	21	22.1	7.0	22.1	27	13
Cuexcomate	Town	LPC-A	.48	43	35.7	83.3	22.8	570	7
Cuexcomate	Town	LPC-B	.25	135	24.7	21.7	22.8	248	7
Yautepec	City	LPC-B	.21	1,619	32.9	156.3	26.0	6,175	26
Teotihuacan	City	Classic	.12	14,485	305.4	213.9	349.7	1,412	25

Note: Units for agricultural plots are matl (see text). Volume is expressed in cubic meters and area in square meters.

Appendix 4 – Inequality trends in Europe in the long run (Scheidel, 2017)

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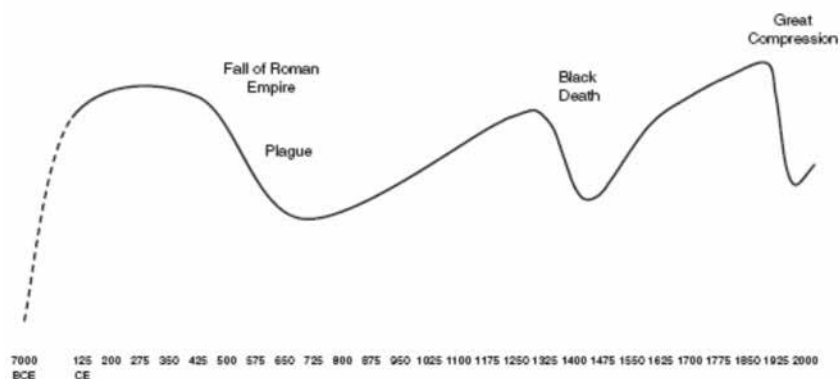
Appendix 5 – Robust regression of Gini coefficients on sample dates (Kohler et al., 2017)
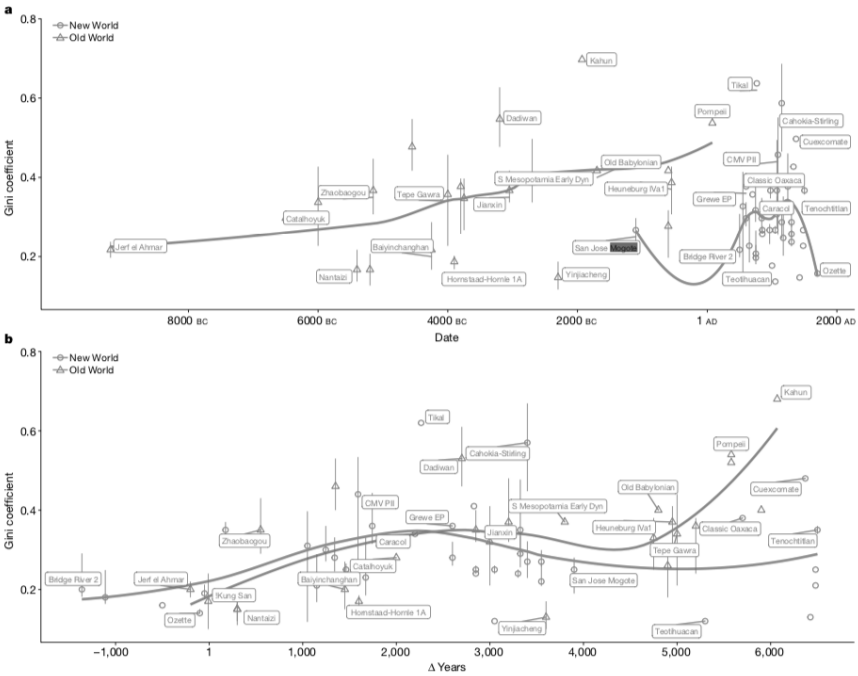

Figure 3 | **Robust regression** (using locally weighted scatterplot smoothing) of Gini coefficients on sample dates. **a**, Coefficients by absolute date of sample (calibrated BC/AD ^{14}C, tree-ring date or calendar date); $n = 62$; !Kung San was excluded. **b**, Coefficients by Δyears (date of sample − date of the local appearance of domesticated plants); $n = 63$. S Mesopotamia Early Dyn, Southern Mesopotamia Early Dynastic; CMV PII, Central Mesa Verde region Pueblo II.

Appendix 6 – The Archaeology of Wealth Inequality (Shaer, 2018)