

# *Why do civilisations collapse? Is our civilisation in danger?*

**By Elizabeth Zhang**

Flames flicker and smoke fills the air as a young boy, hiding from attacking tribes, struggles to suck air into his lungs. His breaths are raspy as he watches from around the corner. Only his mother is there to comfort him. His father and brothers were drafted into the army to fight some war or another; they have long since died, but this boy and his mother do not know that. The two of them watch, powerless to do anything as they see their land torn apart, their emperor dethroned by a Germanic tribe's leader. For centuries, everything has been escalating to this moment. It is AD 476 and Rome has fallen.<sup>1</sup>

Civilisations crumble due to a lack of stability, and although there is no singular reason why they become volatile, climate change has historically played a major part in the downfall of a society.

Many of the world's greatest civilisations such as the Roman Empire, Persian Empire, Ancient Egypt, as well as Ancient China flourished in areas that are within a certain temperature range. Beyond this range, it grows exponentially harder for civilizations to thrive in the same way. Why? According to the University of Arizona, anywhere between 20° C and 25° C is the ideal temperature for a resting human body such that one is not expending large amounts of energy in order to make up either for a loss of or an excess of heat.<sup>2</sup> Humanity is made to function at a certain temperature and when we leave that bubble of comfortability - well, let us simply say that it has never ended well for us.

The Roman Empire was situated in a warm climate, one that fostered the growth of agriculture and made living in the Mediterranean preferable to other lands. This warm, humid weather was perhaps one of the most critical factors in their well-being as an empire, so intertwined in their day-to-day operations that when the temperature dropped, chaos ensued. According to a study published by Karin A. F. Zonneveld in Scientific American, historical records of disease in Ancient Rome line up with every single instance of the climate growing colder.<sup>3</sup>

One particularly noteworthy disease is The Antonine Plague, which is often credited with establishing the conditions which caused instability in Rome's society and led to its inevitable downfall in AD 476.<sup>4</sup> The plague occurred between AD 165 and 180 - a time period that has been found to have had temperatures lower than the preceding centuries by nearly three degrees celsius.<sup>5</sup> This drop in temperature may have weakened immune systems and allowed people to become more susceptible to germs and disease, which were already rampant at the time. Soldiers who fought in war quickly spread the sickness, as they were regularly engaged in close combat with people of various lands whilst also living together in close quarters.<sup>6</sup> Those infected with the disease showed symptoms of fever, vomiting and diarrhea that indicated gastrointestinal bleeding due to its blackish colour.<sup>7</sup> Modern analysis has found that this sickness was likely smallpox and originally reached the Roman Empire through the Silk Road as well as trading ships.<sup>8</sup> The

Antonine Plague was truly disastrous, with an estimated 2,000 people dying every single day in the city of Rome alone.<sup>9</sup>

What does that mean for today's society? According to NASA, since 1880, the Earth has warmed about 1.36 degrees celsius - making the past ten years the hottest the planet has ever been.<sup>10</sup> These high temperatures are not only destroying natural habitats and causing water levels to rise, but they are also drying out the earth - which leads to droughts becoming more commonplace.<sup>11</sup> However, all of that evaporated liquid ultimately leads to even heavier rainfall and more flooding.<sup>12</sup> In September of 2023, the Mediterranean was ravaged by Storm Daniel. Libya, specifically, suffered greatly, with more than 11,000 people dead and at least 10,000 missing as a result of two dams collapsing under the intense rain.<sup>13</sup>

Still, for the most part, business has continued as usual, the train of materialism constantly chugging along its tracks, leading the world to things bigger, better, and newer. Wildfires are increasingly common: recently, New York City's skyline turned orange from flames lit in the forests of Canada - flames that were fueled by rising global temperatures and the melting of icebergs.<sup>14</sup> Despite the spike in asthma-related hospitalizations in New York that followed, little changed in terms of government policy or intervention.<sup>15</sup> All the warning signs are flashing right in front of our faces, yet it seems we would rather go blind than see them.

The consequences of climate change are compounded by the recent pandemic, COVID-19, which may well be our Antonine Plague. With COVID-19's estimated death toll close to seven million and the Antonine Plague wiping out between five and ten million Romans, the similarities are eerie.<sup>16, 17</sup> The resulting economic uncertainty of such a wide-scale disease combined with ignorance and apathy spell danger for even the greatest of civilisations. In its final years, the Roman Empire suffered from civil unrest that divided the country and led to the corruption of its leaders as it grew in size.<sup>18</sup>

All too familiar are the elements of decline and instability in our modern story. People grow increasingly suspicious of those different to them, social media and news outlets acting as kindling for the fire. All over the globe, leaders are failing to do what they promised they would, civilians are losing trust in their government. In the U.S., pockets of Africa, South Asia, and elsewhere, the very police who were meant to serve and protect the population are now seen as a force to fear. Treaties and promises have been made and broken; nuclear weapons have become reality rather than nightmare.

This is only the tip of the iceberg (which itself is endangered, thanks to humanity). We are once again leaving the temperature range in which we thrive as homo sapiens and hurtling ourselves towards our demise - we are killing ourselves, from the inside out. Having failed to learn from the fatal mistakes of our predecessors, we, as a civilisation, are in grave danger.

## Endnotes

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