Pandemics & Our Environment – a Historical Perspective

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Specia

Introduction

Diseases have been around from the time life appeared on the planet. Everything that is born must die one day and diseases are one of the several ways by which this mechanism of birth and death is maintained in nature. Diseases that go beyond local coverage and affect living organisms across a larger area in a certain span of time become termed as epidemics. When these go across even larger swaths of the world, largely globalized, they become pandemics.

Given that diseases – whether they have been directly induced by nature or indirectly by the acts of one of nature's creations, the human being – have been around for quite a while, what is the effect that they have historically had on the onerous role played by humans on the environment? This article explores this aspect by looking at examples mostly from Japan, which can be extrapolated to a considerable extent to other parts of the world.

Nobody wants to fall sick – except, perhaps in a mild manner, children who would like to avoid school for a few days or adults who may wish to do the same by taking sick leave at work. In the ancient Indian holistic medical system of Ayurveda, disease is defined as an imbalance in the perishable body-mind complex that can up to limits be set right or at least alleviated through appropriate medicine, food and yogic methods. Mankind has through thousands of years of living with disease tried to cope with it in many ways. At an ever-increasing pace this continues, with medical issues that have yet to be resolved and others that pop up fresh.

Mankind's response to disease has been an eclectic combination of the environmental, medicinal, religious and spiritual.

Japan's Epidemiological Heritage

In the year 735 AD, smallpox became the first recorded epidemic in the history of Japan. According to Akihito Suzuki in his paper "Smallpox and the Epidemiological Heritage of Modern Japan: Towards a Total History" (*Medical History*, 55, 2011), it raged for a couple of years and is estimated to have decimated a third of the country's population. Over the next five centuries, 28 smallpox epidemics were recorded at intervals ranging from 13 to 24 years, until at last it became more localized, acquiring endemic status during the Edo Period in the 1800s. Suzuki refers to smallpox as laying the *epidemiological heritage* of Japan, calling this the basis on how the state dealt with subsequent epidemics that struck, including measles and cholera, right up to moulding modern health policy, pretty much as the plague laid the *epidemiological heritage* for Europe.

To handle smallpox and restore the well-being of the people and country, the then Emperor Shōmu ordered the construction of the Great

Buddha in the capital city of Nara. There were many more state temples, the *Kokubunji*, which were established across the country to worship the Buddha and seek divine grace to mitigate the effects of the pestilence. In addition to seeking divine help, economic and environmental measures were taken to ease the devastating situation.

Over the years that followed, efforts were made to assuage the unseen spirits that were thought to be behind the diseases. The Gion

festival in Kyoto has its roots in this and continues to be celebrated to this day, though ironically it was suspended in 2020 to discourage social proximity. Another ironic similarity is the temporary closure of the small purification tanks at the entrances of temples and shrines. The scientific concept behind having these was as a protection against disease while congregating in large numbers (*Photo 1*).



Photo 1 · Author

Closed purification tank at Miho Shrine, Shimizu, Shizuoka Pref.

Gion & Gozu-Tenno

About 100 years after smallpox was first recorded in Japan, a deity originally imported from India was propitiated to ward off the recurring epidemics, the ox-headed *Gozu-Tenno*. To quote from RodsShinto.com, *Gozu-Tenno* is the Hindu god *Gayagriva*, who like many other gods of Hindu origin eventually came to be worshipped in Japan. *Gayagriva*, as an incarnation of the supreme Godhead *Mahavishnu*, is a protector from disease. *Gozu* (牛頭) literally means "ox-head", and it could be related to a mountain of that name in southern India which is supposed to have produced a species of sandalwood with unparalleled fragrance lauded in Buddhist texts and stories as the raw material for the finest incense; a wood that is used for carving divine images and in cremations, and has medicinal properties. With such impeccable credentials for healing, *Gozu-Tenno* had an important role to play in Japan.

At some early point in time, *Gozu-Tenno* was welcomed into Shinto as the Japanese god of storms, *Susanoo-no-Mikoto*. According to the *Encyclopedia of Shinto*, "With origins as a spirit causing disease, *Gozu-Tenno* was in time transformed into a tutelary that protected his worshipers from epidemics, and further, as a deity of justice and truth." Interestingly, in the Hindu pantheon, this is attributed to Yama, the god of death. The syncretism of Hindu-Buddhist-Shinto was once again complete.

Tokyo-based DJ and broadcaster Peter Barakan describes *Susanoo-no-Mikoto*'s role as subduer of the spirits of disease in an NHK World commentary, https://www3.nhk.or.jp/nhkworld/en/ondemand/video/2032212/ (*Photo 2*). In this program, Barakan talks to art



historian Yamamoto Satomi, who specialises in the subject of disease and its impact on people as expressed through the medium of art. She elaborates on how many festivals, including the famous Sumida River summer fireworks show in Tokyo, can be Photo 2: Soga, copy of work by Katsushika Hokusai, public domain, via Wikimedia Commons



Susanoo-no-Mikoto subduing Spirits of Disease

traced to steps taken to ward off disease.

Gozu-Tenno's headquarters was the Gion area in Kyoto, the equivalent of *Gayagriva*'s principal location at the *Jetavana* monastery in northern India. The newly established Meiji government in 1868 deemed it politically savvy to officially separate the centuries-old syncretism of Buddhism and Shinto. The Gion Shrine was one such place that was targeted, but the tradition continues as a purification ritual in summer under an alias at the Yasaka shrines that dot the country, the principal one being the Yasaka Shrine in Kyoto. The concept of the Gion festival is celebration, including a float procession of *Gozu-Tenno*, a method of placating vengeful spirits and turning them into protective deities.

Chofukujuji

For protection against disease, Chofukujuji temple in the Chonan area of Chiba Prefecture about 90 kilometers from central Tokyo, was founded 1,200 years ago by the Buddhist monk Ryogen, also known as Ganzen Daishi and Tsuno Daishi (the Great Horned



Chofukujuji Temple, Chonan, Chiba Pref.

Monster) (*Photo 3*). It is said that the venerable monk transformed himself into a devilish monster and frightened away spirits that transmit epidemics. Prayers are offered here and silk amulets embroidered with an image of the great master are available for purchase.

Protecting Our Environment

While prayers, rituals and festivals play a valuable role in giving succour to mankind in coping with pestilence, the importance of coupling these with actions to protect the environment and advances in medicine is paramount. Pandemics have often led to a resurging nature and advancement in hygiene awareness. In Japanese tradition, the spirits behind pandemics are often depicted as gods of world renewal *(Yonaoshi-no-Kami)*, showing a deep underlying veneration for nature along with all that it brings.

In an article titled "Pandemics and the Global Environment" (*Science Advances*, July 2020) by eminent environmental and natural history researchers Kip Hodges and Jeremy Jackson, they say that pandemics remind us that Earth itself is a complex, dynamical system. No process in such a system – including the spread of disease – is truly independent of other processes.

In the years after World War II, Japan went into a frenetic mode to rebuild the devastated country. While this indeed led to the mindboggling result of an economic and technological wonderland, the environment took a heavy blow. Diseases like Minamata disease, Yokkaichi asthma, Itai-itai disease and many other health problems caused by industrial effluents raged in the 1950s and 1960s, until legislation and serious efforts to stop this disastrous trend were taken thereafter.

Japan recovered remarkably from the damage caused during the industrial boom. Realising the health hazards, with

equal zeal an ecological revolution of sorts occurred backed by legislation and intent. Forests were restored, rivers revitalised, emission controls implemented, and greenery mandated in urban areas. Pollution levels dropped dramatically. At the northern end of the Izu Peninsula – known for its views of Mt. Fuji – is an area which suffered during industrialization. Today, in the geologically significant town of Mishima, flows the Gembegawa River completely revitalised (*Photo 4*). In a series by



Gembegawa's revival

Ishi Hiroyuki, a scholar who has researched environmental degradation in the world, he travels around Japan throwing light on its recovery from industrial damage (https://www.nippon.com/en/series/ remarkable-recovery-the-modern-history-of-japan%E2%80%99senvironment/).

In her book *Pandemic* (Macmillan, 2016), author Sonia Shah argues that mankind plays a key role in enhancing the possibility of pandemics. We use up natural forested land for our cities, mines and farms, destroying wildlife habitats. On top of this wildlife farming – catching wildlife to be kept and sold in utterly unhygienic conditions – further aggravates the situation. While great strides in medicine have helped considerably in curing traditional bacterial diseases, we have to combine these with strong steps towards changing the fundamental relationship between us and nature.

Conclusion

About 200 km from Tokyo is the city of Shizuoka, a port town on Suruga Bay which holds the record of having the deepest point in the waters that surround the Japanese archipelago. The Fuji-no-kuni museum here (Photo 5) is dedicated to environmental history. It chronicles humanity's relationship with nature and asks visitors to ponder upon what "a rich life" truly means. Mankind has consistently worked towards creating an affluent society fuelled by desire for comfort and convenience. As we do this. let us be aware of the risks we pose to our environment and ensure that future generations may also savour the natural beauty of sunrises and sunsets (Photo 6). JS





Entrance to the Museum of Environmental History, Shizuoka



Sunset over Suruga Bay

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