The meiji era and its significant scientific developments

Art & Culture



In 1912, the external powers of western foreigners had an extensive impact on traditional Japanese culture. The Meiji Restoration began with the collapse of the Tokugawa Shogun and the reinstatement of the Japanese emperor Mutsuhito. This led to the transformation of feudal principals and culture into a modernistic western based society. Mutsuhito's reign was known as the Meiji restoration meaning enlightened rule. The rule of the Shogun resulted in a military weak country, separated by social class, with no development in their economy. The arrival of unwanted foreign powers forced the nation to suffer unequal treaties which were instigated by foreign supremacy. Japan soon realised that modernisation was the best way to counter western influence. The Meiji Era arose with significant scientific developments, a modernised army and an established industrial sector based primarily on the latest technology. However, although Japan had become a newly modernised society, Japan still maintained their structure of oligarchy.

The arrival of the west instigated transition of battles fought with traditional weaponry into battles fought with western guns and arsenal. This was achieved through the abolition of the samurai class which was replaced with a western imitated military. The traditional role of elite samurai was replaced by conscripted civilians trained in western tactics and weaponry. By 1890, "the country had several dozen warships and 500, 000 well-trained, well-armed soldiers. It had become the strongest military power in Asia". The Conscription Law established in 1873 made military service compulsory for all men in their twenties. According to Columbia University, the conscription required three years of service from all men, samurai and commoners included. This legislation was a significant reform in the Meiji Era as it

abolished the samurai's monopoly on military power and consequently their elite status. Western weaponry such as rifles and cannons were imported from Europe and manufacture was commenced in Japan. The country had established their long desired independence and equality in international affairs when they won a war against Russia over Manchuria proving Japan's growth in modernism. By 1930, the army was fully modernised; "the first line would be 740, 000 strong, the second line 780, 000, and the third line about 3, 850, 000". The military rapidly emerged as the largest scale organisation where their need for resources induced the development of other systems within their economy.

The Meiji period instigated development of industrial sectors and economic growth in order to be on equal footing with foreign powers. The traditional structure of Japan was based strongly on agricultural farming and with the abolishment of feudalism, millions of people were able to choose their occupation. This also led to the development of new industries and technology. The government invested in public infrastructure such as railways, shipping, communication, ports and lighthouses. The Meiji leaders also invested a high amount of their national revenue into setting up contemporary factories and in importing western technology and built its first railroad in 1872 and by 1914, had more than 7, 000 miles of railroads. The end of the first decade of the Meiji Era saw " less than 10, 000 cotton spindles in Japan but by the second decade that figure was up to 100, 000". By the end of the Meiji Era, Japan emerged as superior in the textile industry. The increase of steamships also founded the tremendous growth of foreign shipping and telegraph lines and postal services were built in 1886. Coal

production grew from "half a million tons in 1875 to more than 21 million tons in 1913". Government-invested corporations built large amounts of infrastructure and developed change to their industry and transport and rapidly emerged as a nation economically and technologically on par with European powers.

Modernisation insisted heavily on the education of all Japanese citizens, aiming to enrich the country with intelligent minds to later benefit the country. The reformed education system was modelled from the Prussian education system which according to Historian James Bowen, aimed to make students respectful, loyal, obedient and patriotic. The authoritarian Prussian system also intended to foster national unification, high literacy and the knowledge of science. According to Shunsuke Sumikawa, who is writing a thesis on the modernisation of Japan, the Education Order of 1872 declared that education would no longer be solely for the elite and was available for commoners. Citizens undertook a complete program of public schooling which began with elementary school, middle school, high school and national college for some. The government encouraged students to discover and develop talents, hoping these students will benefit the nation in some way. School districts developed the literacy rate of "the total population on the eve of the Meiji period was somewhere in the region of 40%, but by the end of the Meiji the literacy rate had doubled to about 80%". Sumikawa states that in 1871, "the Meiji government sent 50 officials and 50 students on a 22 -month trip of Europe and America in order to discover all western concepts known as the Iwakura mission". Upon return, the Iwakura mission transformed the original schooling system into an American education

system. Past principles of feudalism were replaced in favour of individuality, egalitarianism and other western concepts.

Although changing much of its economic, social and political structure, Japan's true structure was actually in the form of an oligarchy. Although Japan eagerly fostered development in industrialism and education, Meiji leaders did not actually intend to adopt western political concepts such as democracy, basic human rights, and freedom of speech or equality from individuals. Control of Japan was not actually issued by Emperor Mutsuhito, but instead by a small group of Meiji elites who held all the reins of power. Similar to the era of reigning Shoguns, the Japanese emperor was just a spiritual head of power who symbolised nationalism and pride but did not effectively rule "It was from this group that a small number of ambitious, able, and patriotic young men from the lower ranks of the samurai emerged to take control and establish the new political system". Feudal Japan has long used the symbolism of the emperor to justify their rule and legitimacy. This Meiji oligarchy was the same structure used to instigate control and although much of Japan insisted on new western concepts, they strongly kept to their traditional values.

The arrival of external powers impacted traditional culture to a tremendous extent bringing major changes in the military, economy and social sectors. The government's support of developing military prowess, imitating western industrialisation and encouraging education development allowed for Japan to be on equal footing with foreign powers. The Meiji restoration abolished traditional samurai and social classes, transformed Japan's agricultural

sectors into an industrial state and gave them much opportunity to seek wealth and status. Japan. However, the country held on to their traditional values and the emperor remained a figurehead for more leading powers to control. The Meiji era modernised Japan to such an extent that they achieved an imperialistic status that rivalled Western powers and made Japan one of the greatest leading nations in economy, military and society.