

Critical thinking on

Technology, Development



War as Catalyst of 20th Century-Technological Development

Introduction

The capability of humans to utilize knowledge has led to the introduction of various innovations, particularly technological developments. The discovery of fire by the Peking man became a catalyst for technological development. From there, humans were able to expand their knowledge with further discoveries and applications leading to technological enhancements (Kaempffert 432).

Yet, it is important to note that technological developments would not have risen at a magnanimous rate had there been no underlying incentives to motivate humans in their innovative processes. This study will tackle a possible motivating factor that supported the pace of technological development – war. Focus on the 20th century is crucial for this study, for it is during that time when several international conflicts – most especially World War I and World War II, has been credited for the rapid rise of technological innovations that proved helpful in contemporary times. Verily, this study will seek to establish the hypothesis that war has catalyzed technological developments in the 20th century, alongside implications that are both positive and negative.

Discussion

Preceding the 20th century, Karl Marx and Friedrich Engels, both being proponents of socialism and anti-capitalist sentiments, both held that military affairs have a significant effect in technological developments.

Engels, in his observations of the Crimean War and the American Civil War, among earlier military conflicts, further emphasized that weapons and other sophisticated tools are essential in securing victory in warfare. The coincidence of the Industrial Revolution in 1789 and the onset of succeeding conflicts in Europe such as the French Revolution and the reign of Napoleon ushered in an era where war has fueled the pace of technological developments. The permeation of war into the social consciousness of people towards the 18th century enabled new creations and their increasing utility. Among those that imposed significant influences are the steam engine and other improvements in transportation, factory-type modes of production and the enhancement of various disciplines in the military centering on the concept of esprit de corps and unwavering loyalty to service (Jensen and Wiest 3-5; Kaempffert 435).

Military conflicts have a great bearing to the emergence of machines early on in the 20th century. Scientific advancements, all of which have taken off from the Industrial Revolution and succeeding innovations, have led to the constant mechanization of militaries, which became more apparent during the rise of regimes in Europe such as that of Adolf Hitler's Nazi Germany. Increase in mining activities, the further flourish of industrial laboratories and factories and the introduction of cutting-edge mechanical creations all advanced the cause of those regimes. In turn, those regimes have derived their notion of superiority from those processes; the more technologically advanced they are, the more that they could do to become influential domestically and internationally. Hence, the struggle for superiority, involving overlapping interests, has led nations to engage in conflicts against

one another. Each of those nations sought the use of more advanced technological innovations to increase their chance of becoming more powerful militarily (Kaempffert 438-441).

Implications

The development of technology through war has produced several implications – both positive and negative. The motivation to prepare against military conflicts and be ready in the face of war has necessitated the emergence of more sophisticated equipment that found applications in both warfare and outside of it. War has enabled people to speed up the pace of scientific research and innovation to enable the creation of technologically advanced tools and mechanisms. In this wise, machines and other material endowments are not the only entities that emerged from war-motivated technological developments. Production of those entities has affected society through necessary modes of production and disciplinary measures – most of which have become the main contention of Marx and Engels. Nevertheless, the foregoing effects have benefited the contemporary state of technology and the processes involved for the creation of future innovations (Jensen and Wiest 3-5; Kaempffert 438).

Yet, war demands people to surrender their aspirations of a peaceful life in favor of a momentary yet urgent need to counter aggressive players in the system by creating and using technological developments. Alienation from peace is one major implication of war-motivated technology, as military bodies under the ideals of esprit de corps would inevitably entrench on the welfare of other people, particularly their enemies, whose casualties may involve innocent civilians. That endangers the necessity to foster a greater

social good for technological development, for war has the potential to diminish populations and the talents imbued in every person within.

Technological development should thus take off from a more constructive approach, in which there is a uniform conduction of scientific endeavors across different fields, not just in war and security-related concerns (Kaempffert 444).

In sum, there is truth in stating that the need to engage in war has characterized much of the technological developments of the 20th century, as apparent in major global conflicts such as the two World Wars. While positive implications lie on the emergence of technological developments in the process, negative ones such as alienation from peace has created a divergence against paths to achieving lasting peace and the distribution of innovation across different fields.

Works Cited

Jensen, Geoffrey, and Andrew Wiest. War in the Age of Technology: Myriad Faces of Modern Armed Conflict. New York City, NY: NYU Press, 2001. Print.

Kaempffert, Waldemar. "War and Technology." American Journal of Sociology 46. 4 (1941): 431-444. Print.