

Historical Milestones of Ergonomics: From Ancient Human to Modern Human

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Editorial

The name Ergonomics was derived from the Greek words: Ergon-work; Nomos-natural law. The word Ergonomics was first used in 1857 by Prof. Wojciech Jastrzebowski in Poland. He used this word in philosophical narrative, "based upon the truths drawn from the Science of Nature". In 1949, Prof. Hugh Murell proposed official use of word Ergonomics at a meeting of the British Admiralty, name 'Ergonomics' officially accepted in 1950 [1].

As per International Ergonomic Association Ergonomics is defined as it is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance [2].

It is interesting to note that the principle behind the history of Ergonomics has been in existence for a long time. As rightly pointed out by Christensen the importance of a ergonomics by humans was probably realized early in the development of the human species, as today it is clearly understood that Australopithecus Prometheus effectively selected and used pebble tools and made scoops from antelope bones in a clear display of selecting or inventing objects to make work or tasks easier to accomplish. Over centuries, the effectiveness of hammers, axes and plows which were used by ancient humans are improved. The same principle of ergonomics continued at the work environment. To make work more worker friendly the selection and creation of tools, machines, and work processes continued and will remain evolving.

19th century saw historical Industrial Revolution especially in western countries. The importance of ergonomics was understood like never before. The industrial tool, machines such as the spinning jenny and rolling mills were developed to improve work processes. This is the same motivation behind much of ergonomics today. In the early 19th century, the production of industry was still largely dependent on

human power and ergonomic concepts were developing to improve worker productivity. Frederick W. Taylor was a pioneer of the scientific management as well as ergonomics approach. He evaluated jobs to determine the easy as well as best ways of doing it. The most important example of his work was at Bethlehem Steel. Taylor dramatically increased worker production and wages in a shoveling task by matching the shovel with the type of material that was being moved. Frank and Lillian Gilbreth made jobs more efficient as well as less fatiguing through time motion analysis and standardizing tools, materials and the job process. World War II prompted and initiated greater interest and research in human and machine interaction especially in sophisticated military equipment. Design concepts of fitting the machine to the size of the soldier and logical as well as understandable control buttons evolved. After World War II, the focus was shifted to worker safety as well as productivity which initiated many new research as well as applications [3]. From 1960s onwards Computer use dramatically changed the day to day work which became very easy, safe, efficient as well as very productive which was followed by use of various computer softwares and the recent internet evolution leading to much improvement. Today ergonomics is a combination of various disciplines, including psychology, engineering and physiology [4].

To conclude with, the two primary aims of history of ergonomics can stated as the attainment of good health and productivity.

References

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