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Mechanical Clock Social Impact

Essay 2 ENGR195B

According to Lewis Mumford, the author of *The Monastery and the Clock*, the typical symbol machine of the industrial revolution is actually a mechanical clock, not a steam-engine. However, how and where did it form and establish in modern civilization? Very few people have an understanding the origin of the mechanical clock, the motivation of its development and evolution, and the impacts to people. This paper talks about three historical events of the mechanical clock, discusses social and economic forces that affected its development, and how the development of it affected Europe as well as the United States.

The history of the mechanical clock started back in the early 13th century. Mechanical clocks were mentioned in the medieval literature such as in *Divine Comedy* by Dante Alighieri, and from then on, we progressively saw more references to it in literature and paintings (Glenhaber, 159). According to Lewis Mumford, mechanical clocks were first established in the monasteries of the West during the collapse of the Roman Empire. The monks in the monasteries established a way to keep track of their everyday activities such as masses and daily prayers. Monks sounding the bell every hour (with accurate intervals) served as a timekeeping tool for the entire town — to keep track of the time to eat and sleep, the time for merchants to open and close their stores, and the time for laborers to start and finish work (Mumford, 13). Another crucial event in the development of the mechanical clock is the introduction of escapement, a device, usually a pendulum or balance wheel, that counts the number of oscillation. This event has led

experts and people to count time in minutes and seconds, thus considering time as quantitative. This consequently contributed to creating “the belief in an independent world of mathematically measurable sequences, the special world of sciences” (Mumford, 15). The third crucial event in the development of the mechanical clock is the standardization of time. Standardization has resulted in coordination and synchronization of people in different places. It has resulted in the elimination of timekeeping discrepancies in the train transportation business (Boerner *et al*, 12). Standardization has substantially changed people’s daily routines. Workers didn’t have to start working just because the sun is up, but at a designated time that employers and employees agreed on.

There is a social aspect that affected the development of the mechanical clock in the end of the 13th century. For instance, the introduction of the small domestic clock in England and Holland affected the social relationship and statuses of their people. The aristocrats (upper class) were the only people who could own small domestic clocks — not because they were the only ones who could afford them but because it was a way for the society to categorize their social statuses. During this time, owning a small mechanical clock verified someone’s social status; it was a symbol that he/she was a successful being and/or belonged to a noble and respected family (Mumford, 16).

Europe was affected by the development and use of mechanical clocks in the early modern period. An example is the introduction of the use of mechanical clocks in the eastern civilization. During the industrialization of the Soviet Union, it was common for Soviets to carry a watch with them, this is to further enable and influence the people to practice the concept of punctuality. For this reason, timekeeping had become popular and the need for mechanical

clocks had increased, which led Geneva to produce cheap standardized mechanical watches (Mumford, 15).

The United States is also affected by the development of the use of mechanical clocks. The early American culture has transformed and established the idea of an American Dream: a belief that is associated with working hard, treating time as a valuable commodity, and doing things as quickly as possible, which has made the United States the fastest-paced country in the world. The notions that “time is gold” or “time is money” have always urged Americans to focus on general advancements. These two sayings emphasize the contribution to modernity — productivity and efficiency, which has always associated to the percussion of new technologies and inventions that are evident not only in the United States but in different parts of the world (Boerner *et al*, 12).

Mechanical, electrical, or atomic clock timekeeping has affected my everyday life as a person and as an engineer. Time is a universal concept, an authoritative abstraction that directly commands me how to function and do the things that I’m supposed to be doing. For example, I eat lunch or dinner not because I am hungry, but because it is lunchtime or dinnertime, I go to sleep not because I am tired and sleepy, but because it is nighttime and everybody else is sleeping, and I get up from bed at six o’clock in the morning so that I can make it to my nine o’clock class. This notion agrees with Mumford’s statement in the book, “for the clock is not merely a means of keeping track of the hours, but of synchronizing the actions of men” (Mumford, 16). As an engineer, the mechanical clock, and time in general, is driving me to be productive and efficient by keeping track of my day-to-day activities by dictating and telling me to keep with my schedule and responsibilities.

References

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