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Jules Verne's Technological Predictions: How He Influenced Future Inventors and
Environmentalists Alike

Jules Verne explored the potential of technology, from early portable electric lights to massive all-electric submarines, in novels such as *Journey to the Center of the Earth* and *Twenty Thousand Leagues Under the Sea*. Other devices he explored were underwater suits and air filtration systems. He inspired inventors to create new technology and aided people in becoming more aware of humanity's impact on the environment.

Verne demonstrated his awareness of the development of technology during his time by incorporating new devices into the plots of his stories. In his novel, *Journey to the Center of the Earth*, Verne frequently mentions the instruments used by Otto Lidenbrock and his nephew, Axel. As they travel below the surface of the planet, Axel explains how their "light came from Ruhmkorff's ingenious device. If by misfortune [they] had carelessly explored this tunnel with torches, a terrible explosion would have put an end to traveling by eliminating the travelers" (Verne 111). Verne sets the scene in such a way that allows him to include his knowledge of the Ruhmkorff device, an early form of a portable electric light (Heise 63). He demonstrates his understanding of the device's function by explaining the alternate scenario in which an explosion occurs. Verne's knowledge of technology is displayed in his work by use of events that employ the use of real world inventions. Furthermore, in an article exploring Verne's *Twenty Thousand Leagues Under the Sea*, Edward Whitman comments on the fact that, "[f]or a non-specialist,

Verne was unusually well-informed about recent progress in the science and technology of his times” (Whitman 29). This displays how Whitman conducted research to prove that Verne was cognizant of contemporary technology. Whitman’s commentary also demonstrates Verne’s personal interest in technology and his choice to integrate what he has learned into his work. Verne wanted his novels to be both scientific and entertaining, as demonstrated by Whitman’s article.

Additionally, Verne made sure that he included accurate information in his work. A documentary about Verne contradicts the common idea that he was the father of science fiction by stating that “he even distanced himself from the emerging genre, stating that his own work was based in real knowledge” (Gardiner 00:17:41-00:18:05). This proves that Jules Verne put as much effort into the accuracy of the scientific side of his novels as he did the fictional side. He went out of his way to properly display the realistic aspect of his work. In an article about preventing plastic pollution in the ocean, Katie Allen presents a similar point about conducting one’s research. She explains, “[s]cientific research provides crucial information that is necessary to the success of our ideas and efforts” (Allen 3). Verne’s novels would be drastically different and far less scientific if he did not gather his own research. In the present day, humanity would not be where it currently is without advancements in science and technology due to years of study. Through his novels, Verne proved to future generations how important accurate information is.

Furthermore, Verne used his imagination to elaborate upon existing technology or to create new ideas. In *Twenty Thousand Leagues Under the Sea*, Verne takes electricity and expands its capabilities far beyond what the public would have believed to be possible back then. Nemo, the captain of the *Nautilus*, explains that his submarine is powered by “a powerful agent,

obedient, rapid, easy, which conforms to every use, and reigns supreme on board [his] vessel. Everything is done by means of it. It lights it, warms it, and is the soul of [his] mechanical apparatus. This agent is electricity” (Verne 64). By simply claiming that an entire vessel, let alone a submarine, is motorized solely by electricity, Verne is jumping far ahead of his time. Moreover, a submarine on a scale as large as Nemo’s would have been deemed unfeasible by many readers. Some may have even thought his ideas to be magical. Writer Natalie Atkinson argues that “[t]he French novelist's vision wasn't magic, but logic based in reality - even if it was only theoretical at the time” (Atkinson L3). Verne had to be open-minded in order to turn early inventions into fully-functioning machines. His imagination was creative enough to think of such enhancements. Jules Verne added his own ideas onto existing technology and turned it into something more advanced.

In addition, Verne took what was new at his time and presented it as being far more advanced than it actually was. In an article regarding Verne’s futuristic visions, John Frederick addresses how the author had a fascination with exploration since childhood. Verne poured that passion and a penchant for learning into his work, placing him “a century ahead of all other science fiction writers” (Frederick G1). Verne did not always have to add onto to existing inventions to create what became known as science fiction. Merely describing current technology with a certain enthusiasm is enough to make it seem futuristic. Because of Verne’s vivid imagination, some people see him as a children’s author. However, William Butcher contradicts that claim by stating, “Verne's reputation in the English-speaking countries, of being a simplistic and unliterary figure, is... totally misinformed” (Butcher 1). Fantastical plots are not only meant for children. That aside, Jules Verne put effort into doing research in order to accurately write about technology, proving that his work is worth the reader’s time. Verne was

able to write about technology in such a way that displayed it as being years ahead of where it was because of his research.

Jules Verne was also aware of how mankind's actions affected nature. A common theme in *Twenty Thousand Leagues Under the Sea* is humans' interactions with nature. For example, Captain Nemo displays a disapproval of hunting for sport. In his narration, Aronnax comments, "[t]he barbarous and inconsiderate greed of these fishermen will one day cause the disappearance of the last whale in the ocean" (Verne 223). Verne voices his own concern for wildlife through the commentary of his characters. He expresses his objection to the notion of killing just for the sake of it. Additionally, other writers have picked up on similar concerns in nineteenth century literature. Margaret Drabble writes, "[w]e now reread 19th century classics for early signs of awareness of ecology and environment and entropy" (Drabble 51). Today the world is faced with several environmental issues such as endangered species and global warming. Through the years, people have learned more about how actions affect nature. Verne's concern for the state of nature continues even today.

In addition, environmental awareness and concern have grown over time, and inspired people to take action to protect the world around them. For example, a *National Geographic* article explains different types of marine pollution. Marine pollution has existed for centuries, with "evidence that the oceans have suffered at the hands of mankind for millennia, as far back as Roman times" ("Marine Pollution" 1). It makes sense that Verne wrote about protecting the environment, since such issues existed long before his time. Owing to Verne and people like him, a greater consciousness of environmental impact emerged. Still, pollution worsened as technology advanced, as it did in the Industrial Revolution. Simultaneously, the drive to combat pollution also grew. For example, France intends to utilize geothermal energy because of the

country's "goal... to reduce the carbon emissions that contribute to global warming while ensuring the nation's energy independence" ("France Bets" 1). Fossil fuels power several aspects of daily life. Something on such a large scale, no matter how harmful it may be to the environment, is difficult to change. France and other countries have taken the initiative to protect the environment.

Some of Verne's readers remembered inventions from his books and later turned them into reality. For example, Austrian physicist Hermann Oberth was intrigued by Verne's *From the Earth to the Moon*. While Oberth read the novel, he "became captivated by the idea of an interplanetary rocket, though he took issue with Verne's use of black powder" (Teitel 2). Although Verne's idea alone was not perfect, it was enough to spark Oberth's interest. He was compelled to make improvements to Verne's design and eventually build it. Today, the human race has come very far in the field of space exploration. In January of 2018, a nanosatellite about the size of three apples stacked on top of each other was launched in order to observe a young star whose "planet is also young and still going through formation. Such an observation would be an incredible opportunity" (Strickland 2). Ironically, the human race is reaching farther and farther away in hopes of learning more about Earth's beginnings. This is proof that what seems impossible does not always stay that way. Verne's ideas were followed by the creation of actual inventions.

However, not everything based on Verne's ideas came many years after his work. Some inventions came about almost concurrently with Verne's novels. For example, the Peral submarine, the first electrically powered submarine, was launched in 1888, only eighteen years after the publication of *Twenty Thousand Leagues Under the Sea* ("Isaac Peral Submarine" 3). With the success of its launch, "[n]ews of Peral's invention quickly spread around the world, in

some cases a little too quickly and with too much detail” (“Isaac Peral Submarine” 4). This demonstrates the extent of which Verne was influenced by the scientific community. This influence is evident in the way he wrote about the electric submarine, only to have the actual machine built less than two decades after the publication of the book. Later on, electric submarines became more prominent in the military. One was the USS Holland, which “serve[d] as a training vessel and experimental craft for the United States’ first crop of submariners” (Andrews 10). The evolution of submarine technology is displayed here, emphasizing Verne’s impact on technological advancements and vice versa. Although Verne may not have directly impacted the creation of the electric submarine, his novels were still one step ahead of inventors at the time. Verne was so well informed about technological advancements that a few of his seemingly imaginary inventions became realities in a matter of years.

Verne’s ideas seem rudimentary when compared to what mankind is striving for today, such as expanding the reaches of space exploration and preserving the environment. However, his revolutionary thinking set off a chain reaction that greatly affected literature and science. A new literary genre, science fiction, emerged and inventors were inspired to bring his ideas into the real world. Several of his predictions turned out to be correct. Some of the more prominent few are submarines and the moon landing (Andrei 2). His novels also addressed important environmental issues about which society started taking action. For example, people were compelled to protect endangered species and reduce pollution. Through his work, Jules Verne greatly influenced modern society.

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