

The role of science fiction films in technological development

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Summary:

Science fiction is a type of thinking that people resort to while seeking new and unfamiliar ideas, perceptions, and experiences. It is a mix between what is fictional and what is real. It has been defined as a mixture of science and prediction (Hugo Girensback), or it is a realistic estimate of future events (Robert Heineline). Science fiction is the engine and inspiration for most of the inventions that we live in today, and science fiction is clear through science fiction movies, and some of the stories mentioned in science fiction are due to the emergence of scientific innovations that have been produced and become a tangible reality. The world also witnessed a huge breakthrough in the field of technology in all areas, nanotechnology and smart products have emerged, and the daily things that we use have been developed amazingly. The ideas of designers and authors, which we considered as science fiction and future aspirations in science fiction films, became a tangible reality through technological development. Many scientific technologies in science fiction stories and on cinema screens in the past began to appear, such as mobile phones, computer technologies, satellites, submarines, aircraft and autonomous cars. So the research problem is summarized in answering the following questions: Do science fiction films have a role in technological development? What is the evidence for that? The research aimed to identify the role of science fiction movies in technological development and to reach this goal, the research used the analytical approach by reviewing the concept of science fiction, science fiction films and examples of some innovations and inventions that first appeared in science fiction films and then became a tangible reality such as flying skateboard and self-tying shoes, flying car, self-driving car, three-dimensional holograms, which is now known as hologram technology, virtual reality and star wars technology and robots, where Flying skateboard surfaced first in the movie "Back to the Future" which was produced and displayed in 1985, as illustrated in the form (1 / a, b). This Flying skateboard was not presented on the ground, but in 2014 the French artist Neil Guadagnin created a slide that flies in the air, as shown in the figure (2 / a, b). By creating an electromagnetic field and a laser system to balance it, it balances the magnetic poles to keep the slide above the earth under the pressure it is exposed to.



(a)



(b)

Figure (1 / a, b) shows the flying skateboard from the movie "Back to the Future".



Figure (2 / a, b) shows artist Neil Guadagnin and his creation of the flying skateboard

After that many different designs appeared, including Lexus Slide Hover Board, as shown in Figure (3), where Lexus Motors revealed a prototype for the plane board on August 5, 2015, where an electromagnetic plate that raises itself from the ground is used, but it needs a special path equipped with a permanent magnet to achieve the magnetic height.



Figure (3) shows Lexus Slide Hover board

Then appeared the Arca board, which is an electric flying board developed by Arca Aerospace Company and is operated using 36 electric motors as shown in the form (4 / A, B, C / D) and does not require a special path or surface and can fly for up to 6 minutes.

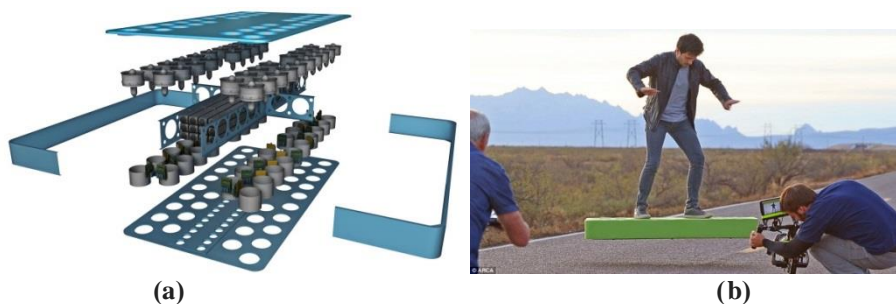


Figure (4 / a, b) illustrates the Arca Board skateboard and its main components

The self-tied shoes are shoes that could tie itself. These shoes appeared in the movie "Back to the Future", Part Two" in 1989 as shown in Figure (5). Now these shoes, because of technology became a reality through Nike Company in April 2009, where Nike filed a patent. for self-tied shoes, with a design similar to that was worn by Marty in the 1989 movie "Back to the Future" Each shoe has a sensor, battery, motor, and cable that adjusts fit based on an algorithm pressure equation as shown in Figure (6/ a, b)



Figure (5) shows the self-tied shoe from the film Back to the future



(a)



(b)

Figure (6 / a, b) shows the parts and components of the Nike self-tying shoe

The flying car is a car that can walk on the ground as it can fly, and this car appeared first in the science fiction movies in the past and one of the most important films that appeared in the movie "Back to the Future" Part Two, as shown in Figure (7 / a, b)



(a)

(b)

Figure (7 / a, b) shows flying cars with science fiction movies

Since that movie, the dream of a flying car began to appeal to many, and there are more than 80 patents registered in the patent and trademark office in the United States of America, for different types of flying cars where Robert Fulton in 1947 tried to make a plane that can walk on roads by removing the wings The plane's tail is used to meet road travel. The fan can also be stored inside the fuselage, and it was called (Airphibian). As shown in the figure (8 / a, b).



(a)



(b)

Figure (8 / a, b) shows the Airphibian flying car that was invented by Robert Fulton

In 1990, Kenneth Vernicke formed a team of space technologies to develop a small car flying wings under the name (Air car), as shown in Figure (9 / a, b).



Figure (9 / A, B) shows the Air car created by Kenneth Vernic

After that, the TF-X flying car appeared in 2011, as shown in the figure (10 / a, b / c / d) through the parent company of Chinese Volvo.

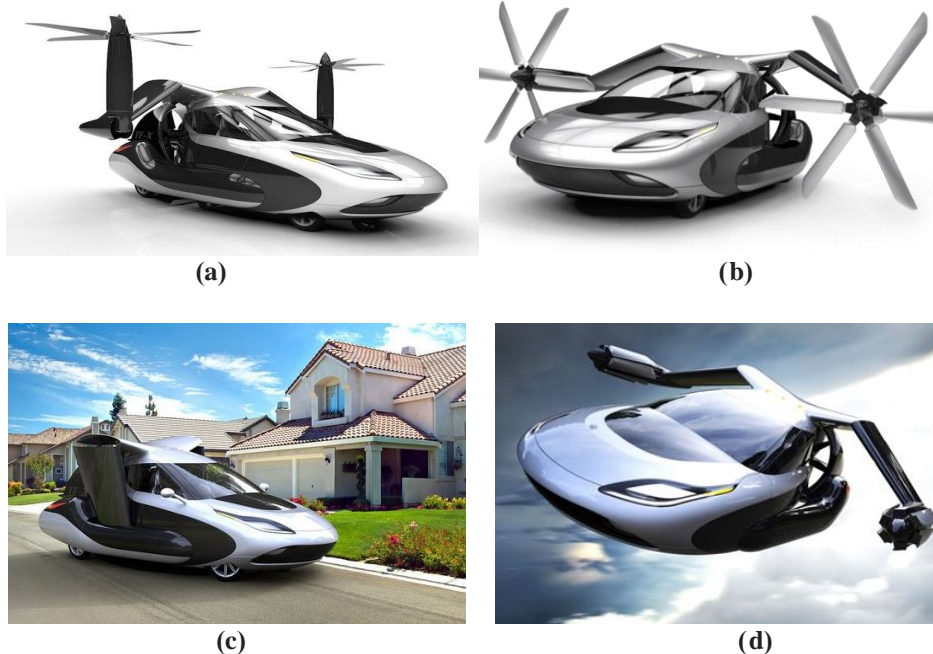


Figure (10 / a, b, c / d) illustrates the TF-X flying car that was developed by Volvo Corporation of China

The self-driving car appeared, as it is the first appearance of self-driving cars through the Knight Rider series, a science fiction TV series that is credited with presenting the self-driving car as shown in Figure (11).



Figure (11) shows the Knight Rider



Figure (12) shows a Google self-driving car

Google recently announced the design of a driverless car as illustrated in Figure (12), as it inspired the idea from the “Knight Rider” series and got its first license to test it on the streets of Las Vegas successfully. Google supplied its car with a laser radar to determine the direction and avoid the collision, and I started working in this field Since 2009, I launched a new model for a self-driving car in May 2014 that does not include a steering wheel, a pedal or a brake, fully self-developed and many of the self-driving technologies were developed by Google, Uber, Tesla and Nissan. Google prototypes were used in different stages, laser devices Radar, high-power cameras and power, after that many autonomous cars appeared, such as the EQ Car 2018, as shown in Figure (13 / A, B). The technology used in autonomous cars is artificial intelligence technology (AI), a field of computer science that focuses on creating smart machines that work and interact like humans.



Figure (13 / a, b) shows the EQ Car 2018 self-driving vehicle

Three-dimensional holograms and hologram technology appeared, which is a three-dimensional image that is reproduced for the original image through the division of lasers and their reflection on mirrors and lenses, known as holograms. The year 1966 witnessed the display of the famous American series (Star Trek), a series that is classified within the works of science fiction, which Pictures for the first time, the idea of moving objects from one place to another with a technology that perfectly simulates the idea of optical holograms as shown in Figure (14). After six years, the scientist Lloyd Cross (Lloyd Cross) was able to manufacture the first device through which he could present a HOLOGRAM model that combines a hologram Dimensions in 1972.

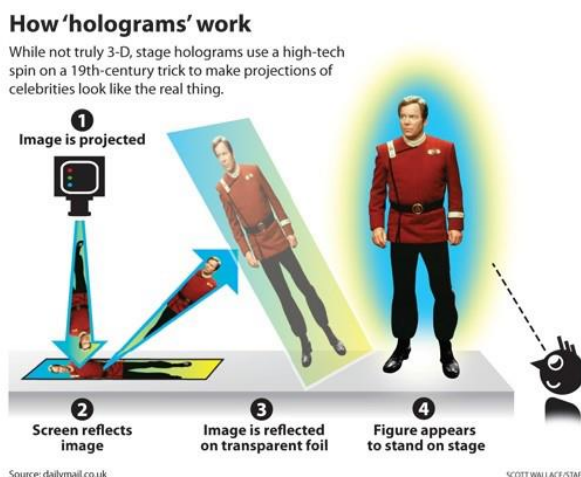


Figure (14) illustrates the use of hologram technology in the Star Trek series.

The hologram technique first appeared in the movie "Star Wars" in 1977 when the image of Princess Leia appeared through R2D2 as shown in Figure (15).



Figure (15) shows the hologram technique in the movie Star Wars

Virtual Reality glasses are common techniques in science fiction films such as "Total Recall", "Matrix" and "Hackers", where some depicted the technology as an advanced chair that transports the body to another world, while others portrayed it as headphones displayed in front of users' eyes as the virtual world, which is what the technology has now reached, so it can be said that the world has entered the world of virtual reality through cinema where the minds of the authors, especially those who write science fiction stories, have referred to virtual reality and virtual reality devices without mentioning this term and the device called "Sensorama" "Or" Senso rama "as illustrated in Figure (15) of the first attempts to enter the world of virtual reality, where the idea "Morton Heilig", which is called the father of virtual reality and who published a research paper in 1955 in the name of "Cinema of the Future", then crystallized his idea in the device that he developed after that he bore the name "Sensorama" and registered his patent in 1962. Morton has a patent that was registered in 1960 talking about a device called "Tele sphere Mask" as shown in Figure (16), which is the first device installed on the head and very similar to reality glasses. Virtual reality on the market today is the first real virtual reality glasses that bears the name "The Sword of Damocles" km Figure (17) which began to be developed in 1966 by the world "Ivan Sutherland" and one of his students in "MIT where he invented the American computer scientist, Ivan Sutherland on the head-mounted display laboratories called "The Sword of Damocles" connects to a computer to have a fee. Then the "Virtual Boy" was released in 1995 as shown in Figure (18).



Figure (15) shows the Sensorama device



Figure (16) shows the Tele sphere Mask



Figure (17) shows the Sword of Damocles



Figure (18) shows the virtual boy

Then the movie Star Wars appeared in the year 1977 by the producer and director George Lucas, and the film turned into a technical phenomenon, where what is now called Star Wars Technologies have emerged due to the fact that many of the techniques or technical predictions that appeared in the movie became an order reality in our time, which led to the emergence of the term Star Wars technology. Among the most important of these technologies is robots, where an army of robots appeared in the movie, including a battle called "Battle Droids", as shown in Figure (19), and it is controlled by computers. Robots "Battle Droids" and they were called big dogs "Big Dogs" as shown in Figure (20), which are robots that are controlled remotely and are able to resolve future wars

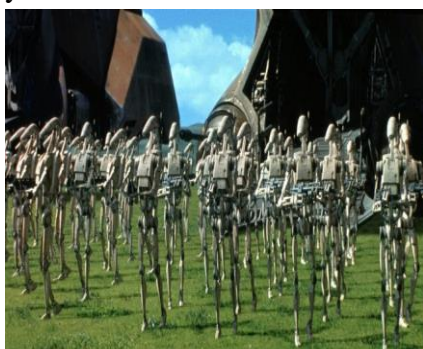


Figure 19 shows Battle Droids with Star Wars movie



Figure (20) shows the Big Dogs robot developed by the US Army

C-3PO "R2" D2, two of the famous robots in the movie Star Wars as shown in Figure 21, has appeared, now because of technological development we can see such a duo in the real world where Honda developed the advanced step-in (ASIMO) company Innovative Mobility) "as shown in Figure (22).



Figure (21) shows the famous robots in the movie "Star Wars"



Figure (22) shows the robot (ASIMO) Honda company

Through the analysis of the previous studies, the following results can be reached:

1. Innovations and inventions with science fiction films have a role in technological development in all areas.
2. The ideas of authors and designers, which we consider science fiction and future aspirations that can be a tangible reality.
3. No limits for design or technology.
4. Design can precede technology through the emergence of modern designs inspired by innovations that appeared in the past with science fiction films.

Also, the most important recommendations are:

1. Designers and authors should unleash their ideas and designs, as these ideas and designs can in the future become a tangible reality.
2. The attention, designers and technologists follow all the innovations and inventions that are presented in science fiction films as they are considered a source of design ideas in addition to future technological ideas.
3. The necessity of research and studies on techniques and designs in science fiction films that have not been implemented yet.

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