

Science and Art

A decorative graphic element consisting of several horizontal lines of varying lengths and colors (teal and white) extending from the right side of the title area.

Подготовила: Чернова Е.М.

Emergence of many inventions has been predicted in sci-fi books.

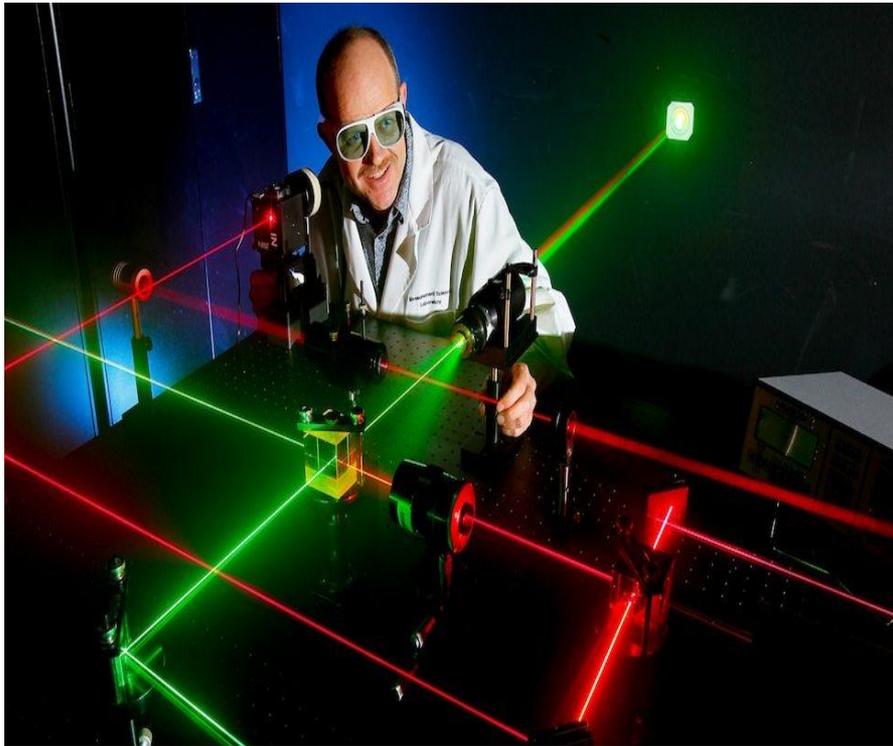


Herbert George Wells



Herbert George Wells (21 September 1866 – 13 August 1946) , was an English writer. A futurist, he wrote a number of utopian works and foresaw the advent of airplanes, tanks, space travel, nuclear weapons, satellite television and something resembling the world wide web.

Herbert George Wells



1. Heat Rays

The Martian invaders in Wells' 1898 *War of the Worlds* relied on a heat ray as their primary weapon. The military has developed its own heat ray weapon. The Active Denial System, designed to be a non-lethal weapon against enemy troops, projects a wavelength that causes an intense burning sensation without leaving permanent damage.

Herbert George Wells



2. Genetic Engineering

A central theme in 1896's *The Island of Doctor Moreau* is genetic engineering, specifically animal modification.

Wells envisioned actually sewing parts of creatures together to make a new whole. In reality, genetic science works in a more exacting way and given us everything from herbicide tolerant crops to glow-in-the-dark cats.

Herbert George Wells



3. Automatic Doors

"Instead of going through the archway as he expected, walked straight to the dead wall of the apartment opposite the archway. A long strip of this apparently solid wall rolled up with a snap, hung over the two retreating men and fell again."

The first automatic door wasn't installed until 1960, but Wells described one in 1899's *The Sleeper Awakes*. Now you can even get automatic sliding doors on your vehicle.

Herbert George Wells



4. Atomic Bomb

Written in 1913, nearly 30 years before the Manhattan Project started, Wells' *The World Set Free* describes cities around the world being devastated by what he called "atomic bombs." Wells predicted not only the mushroom cloud we associate with atomic bombs, but their lasting radiation as well.

Herbert George Wells



5. Tanks

In 1903, 13 years before tanks made their first appearance among the trenches of WWII, Wells was already describing tank warfare in his short story *The Land Ironclads*.

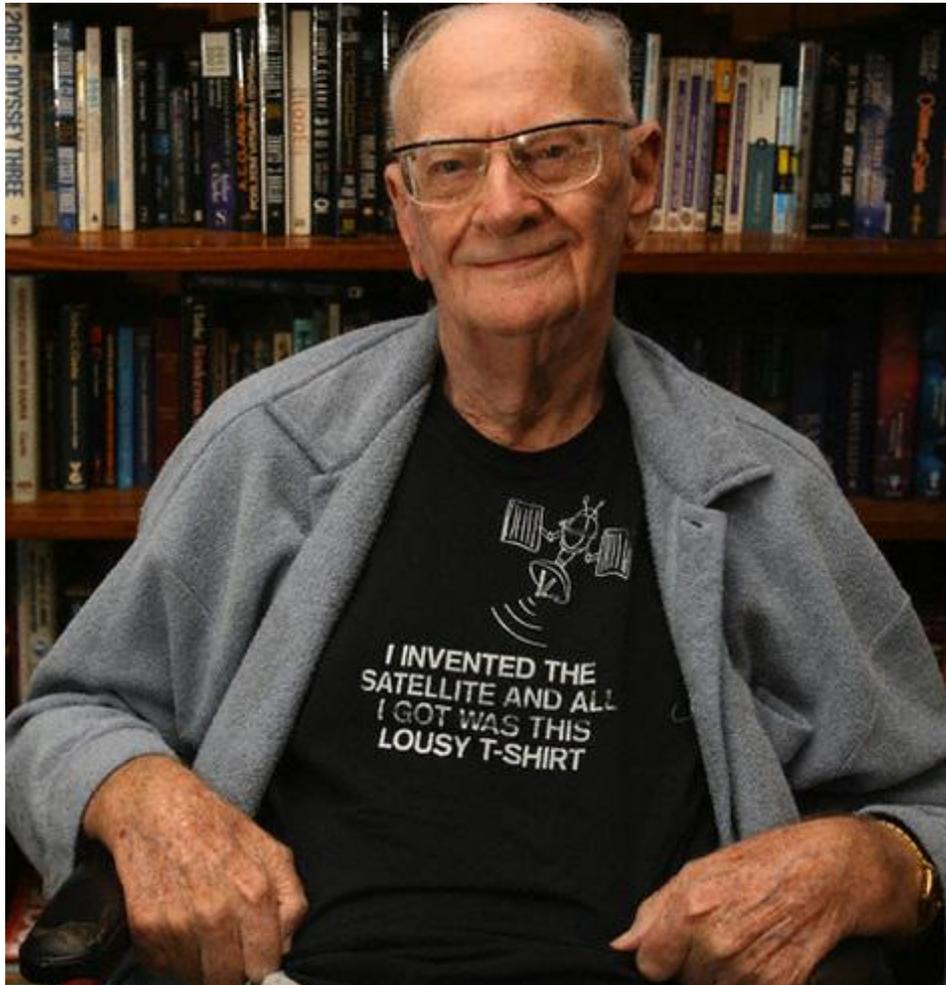
Herbert George Wells



6. Cell Phones

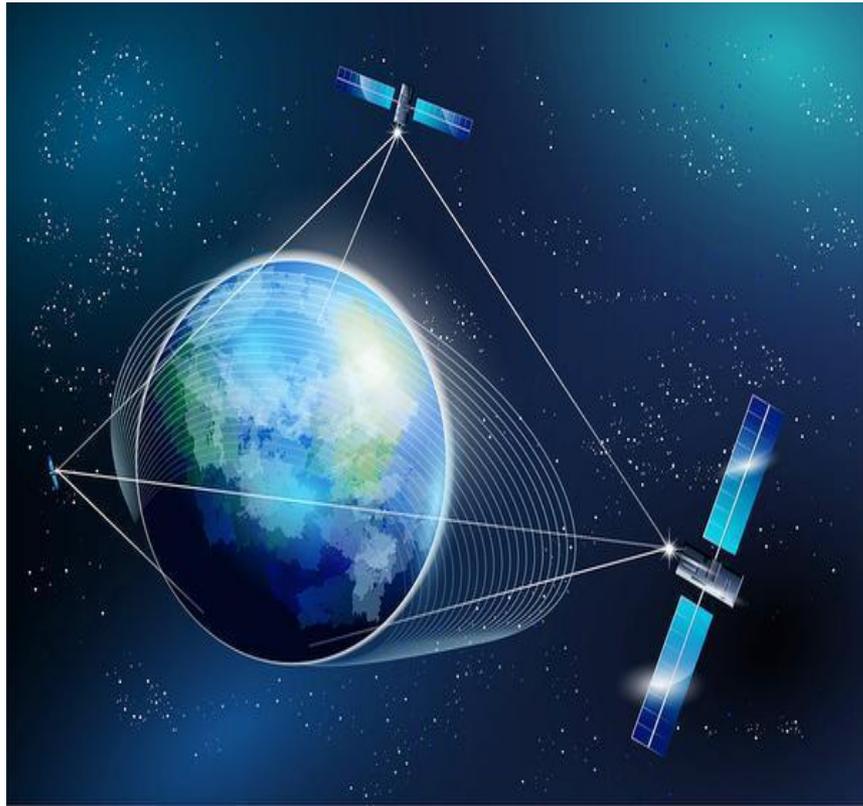
He may not have called them cell phones, but Wells definitely predicted them. He described wireless communication devices in his 1933 novel *The Shape of Things to Come*. He even created something very similar to modern email and voice mail in his 1923 book *Men Like Gods*:

Sir Arthur Charles Clarke



Sir Arthur Charles Clarke (16 December 1917 – 19 March 2008) was a British science fiction writer, science writer and futurist, inventor, undersea explorer, and television series host. He is famous for being co-writer of the screenplay for the 1968 film *2001: A Space Odyssey*, widely considered to be one of the most influential films of all time. Clarke was a science writer, who was both an avid populariser of space travel and a futurist of uncanny ability. On these subjects he wrote over a dozen books and many essays, which appeared in various popular magazines.

Sir Arthur Charles Clarke



1. Geostationary communications satellite

Arthur C. Clarke was not the first to suggest using geostationary orbits

His conceptual leap, outlined in a 1945 article in *Wireless World* magazine, was to propose using a set of satellites in geostationary orbit to form a global communications network.

The first satellite was placed into geostationary orbit in 1964, just 19 years after Sir Arthur's paper.

Networks of satellites in this orbit now provide services including phone calls, data transmission, and TV signals for most of the world's inhabited regions.

Meteorological and ground observation satellites also follow the path Sir Arthur mapped out, and the term *Clarke Orbit* is sometimes used to describe their trajectory

Sir Arthur Charles Clarke



2. iPad

When announced Apple the new product under the name iPad, it is caused many jokes. However when Arthur K. Clark has constructed the similar device, he in the choice of the name for him has gone in the same way, as Apple, having christened his newspad.

Sir Arthur Charles Clarke



3. Earthquake prediction

In *Richter 10*, his 1990 collaboration with science fiction author Mike McQuay, Sir Arthur tells the story of an *attempt to predict and prevent earthquakes*.

The plan is to "spot weld" the earth's tectonic plates at 50 strategic locations, stopping their movement and therefore stopping the catastrophic splits that cause earthquakes.

Sir Arthur Charles Clarke



4. People freezing

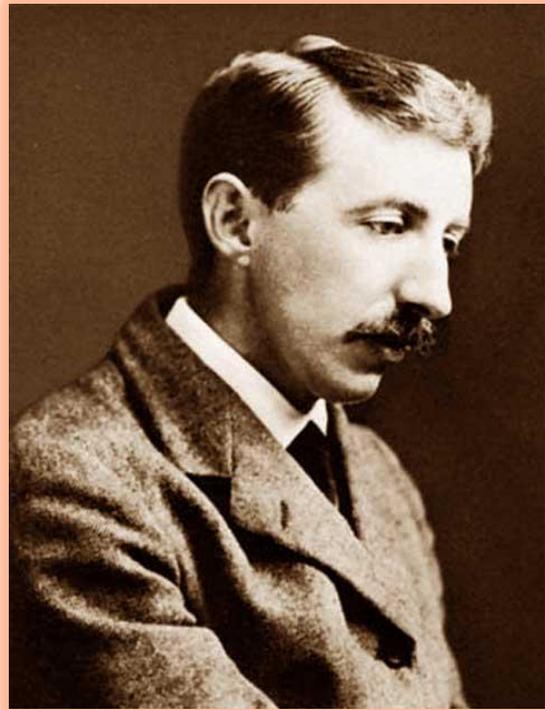
Arthur C. Clarke's preoccupation with interplanetary space travel led him to consider how humans could survive for the long periods needed to cross vast tracts of space.

One of the answers he came up with, outlined in the story *The Songs of Distant Earth*, was cryogenic suspension.

The plot sees the human race having to leave Earth in a convoy of spaceships as the Sun is about to explode.

Currently, cryogenic preservation of living people is impossible, and in many countries it is illegal to attempt it. More than 150 people, mainly in the US, have been frozen in liquid nitrogen after their death.

Edward Morgan Forster



Edward Morgan Forster, is more often E.M. Forster

(On January 1, 1879, London —

On June 7, 1970, Coventry), the English novelist who was occupied by inability of people various social (class, ethnic) of groups to understand and accept each other.

Edward Morgan Forster



"The car stops" (1909) —
fantastic anti-Utopia about
far come dependence of
people on the equipment.
The Internet,
videoconferences, social
networks are predicted.

Edward Elmer Smith



Edward Elmer Smith (May 2, 1890 – August 31, 1965) was an American food engineer (specializing in doughnut and pastry mixes) and an early science-fiction author, best known for the *Lensman* and *Skylark* series. He is sometimes called “**the father of space opera**”.

Smith was widely read by scientists and engineers from the 1930s into the 1970s. Literary precursors of ideas which arguably entered the military-scientific complex include stealth (*Gray Lensman*).

Edward Elmer Smith



1. CD

In 1934 the writer has published the novel "Triplanetary" in which I have described disks with a metal covering as the data carrier and also the scanning beams.

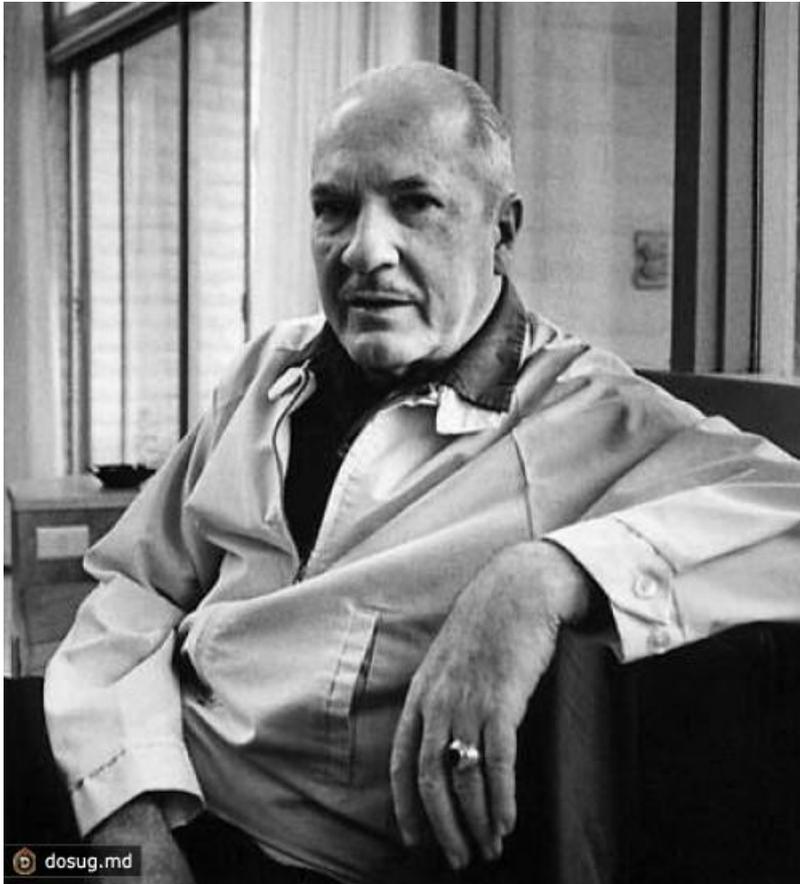
Edward Elmer Smith



2. Artificial eye

In the book "Galactic Patrol" (1937-1938) Smith tells readers about the invention of artificial eyes, and in 1942 in the novel "Gray Lensman" introduces the term "deep space" for the first time.

Robert Enson Heinlein



Robert Enson Heinlein

(7 July 1907—8 May 1988), the American writer, one of the largest science fiction writers who in many respects has defined the person of modern science fiction. He is called "[the dean of science fiction writers](#)".

In English literary tradition of Heinlein together with Arthur Clark and Isaac Asimov carry to "The big three" of science fiction writers. He became the owner of the prestigious awards "Hugo" and "Nebula", the only writer who has received Hugo for five novels. In his honor the asteroid and a crater on Mars are called.

Robert Enson Heinlein



Robert Heinlein has predicted emergence of the microwave oven, mobile phone, ATM and also has entered “space tourism”. He has written about the news television searcher, an analog of modern portals on the Internet.

Robert Enson Heinlein



Among the inventions of the American fantast embodied in the future: air hand-drier, escalator, analog of Seagway.



Robert Enson Heinlein



SOVETS.NET



In 1961 in the book by Heinlein "The stranger in others country" water mattresses are for the first time mentioned. The first water bed has appeared seven years later after a publication of the book.

The Sci-Fi Quiz

1. Match the inventions with the titles of G.Wells books:

1) Heat ray

2) Genetic Engineering

3) Atomic Bomb

4) Tanks

A) The World Set Free

B) War of the Worlds

*C) The Island of Doctor
Moreau*

D) The Land Ironclads

2. Who has predicted?



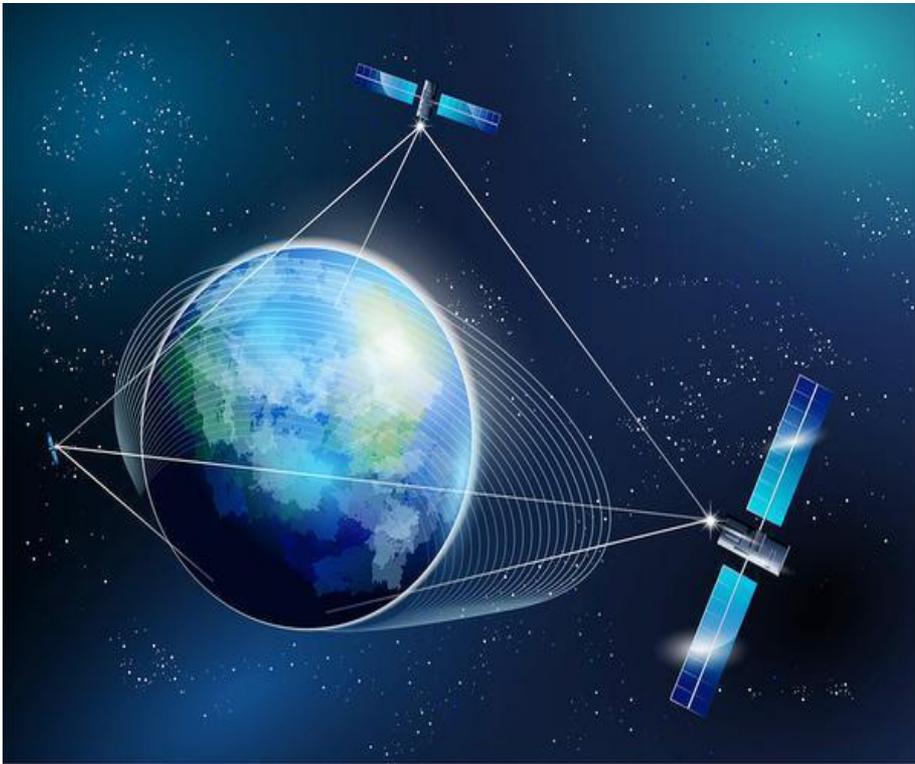
- 1) **Herbert George Wells**
- 2) **Sir Arthur Charles Clarke**
- 3) **Edward Morgan Forster**
- 4) **Edward Elmer Smith**
- 5) **Robert Enson Heinlein**

3. Who has predicted?



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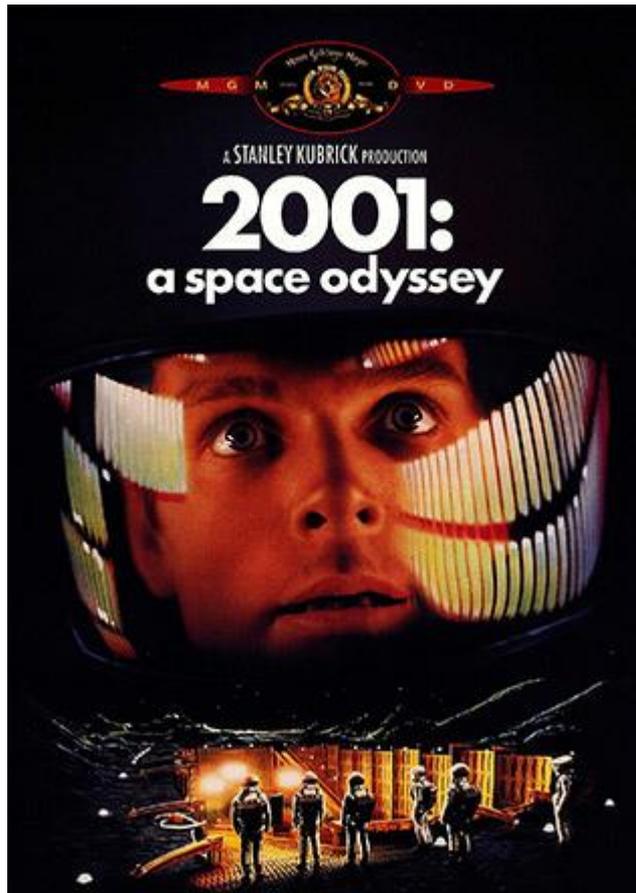
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5. Who has predicted?



- 1) Herbert George Wells**
- 2) Sir Arthur Charles Clarke**
- 3) Edward Morgan Forster**
- 4) Edward Elmer Smith**
- 5) Robert Enson Heinlein**

6. Who has written *A Space Odyssey*?



- 1) **Sir Arthur Charles Clarke**
- 2) **Edward Morgan Forster**
- 3) **Edward Elmer Smith**

7. Who was called?

- “The father of Space opera”

- 1) **Herbert George Wells**
- 2) **Sir Arthur Charles Clarke**
- 3) **Edward Elmer Smith**

8. Who was called ?

- “The dean of science fiction writers”
 - 1) **Herbert George Wells**
 - 2) **Edward Elmer Smith**
 - 3) **Robert Enson Heinlein**

Your science predictions

Think up the invention of the future





PARIS FUTUR _ 10ème _ GARE DU NORD