

# The Development of Science and Technology Leads the Future of Art

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## Abstract

**In the rapid development of modern science and technology today, art and science and technology are more and more closely combined, this paper on the development of science and technology on the impact of artistic creation and opportunities to explore, the progress of science and technology has driven the development of materials, for the performance of art added vitality. The expression form of art also breaks through the limit of frame and frame, and the limitation of traditional modeling means. We look forward to the technology to bring more inspiration to artists' creations.**

## Keywords

**science and technology; artistic creation; artistic expression.**

## 1. Introduction

Modern society is a society with rapid development of science and technology. From slash-and-burn farming in the ancient civilization period to large-scale mechanized production in the industrial revolution period to today's scientific and technological development leading the world, human beings have used their intelligence and wisdom to change their way of life and living conditions. The development of science and technology has not only brought revolutionary changes to human life, but also to the expression techniques and forms of sculpture art.

## 2. Art Creation Combined with Technology and Art

When Nobel Laureate in Physics Li Zhengdao and famous Chinese painter Wu Guanzhong jointly launched the first International exhibition of works of Art and Science in 2001, many people could not understand some of the modern physical phenomena painted by several famous Chinese artists. At the time, Lee Said, "Science and art are two sides of the same coin. Creativity is the link." For a long time, though, there has been skepticism about the "combination" of art and science. However, the combination of science and technology and art plays an important role in promoting the growth of culture, education, economy, and other aspects of society.

In particular, when artists are making works, they probably need to study a certain science and technology first, so that it can be reasonably applied to the expression of their artistic ideas. For example, there is a kind of modern sculpture called dynamic sculpture or dynamic art model, whose principle is mostly combined with science and technology. In changing the fixed traditional form of easel sculpture, the work can generate aesthetic feeling and artistic conception under the dynamic form, and even guide the concept of the work. Member of Chinese Academy of Sciences, such as the international fluidization technology discipline one of the renowned scientist, the pioneers of fluidization technology in China, and academic leaders moosom kwauk "geometric dynamic art" metal abstract modelling work "climb", its

dynamic form consists of three parts of the isosceles triangle and spread from one by one according to the rules. The three parts can be divided in any way. When the three parts are connected, the second part changes constantly in order to fit the width of the tail part of the first part, and finally combines with the tail part of the first part, and so on. This combination of art and mathematical principles makes the work very ingenious.

And "Dancing Shadows" by a Bulgarian artist. This work was inspired by the natural element of fire. It depends on the wind to rotate, so it is also known as the "dancing shadow". Driven by the wind, the figure constantly changes position, which enhances the effect of "dance". Compared with traditional easel sculpture, "Olympic Monument", a piece of work by Swiss artist Ralph Swender about the Olympic Games, is more vivid and interesting and attracts the attention of viewers. This kind of art form brings the viewers a pleasant and novel visual experience.

### 3. Art Creation Combined with Technology and Art

Theo Jansen is a Dutch artist and dynamic sculptor whose extraordinary imagination and stamina have left people amazed at the expressive power of his work. For the past 20 years, Theo has devoted himself to a huge project to create a group of wind animals out of yellow hollow plastic tubes and plastic bottles. These giant, multi-footed "beach monsters" feed on the wind, roaming the beach, avoiding obstacles with simple sensors, and locking themselves in the wet sand when a storm hits. Theo called them "beach animals." He even allows his "creatures" to compete with each other, choosing winners to recreate and "evolve" into increasingly complex "creatures".

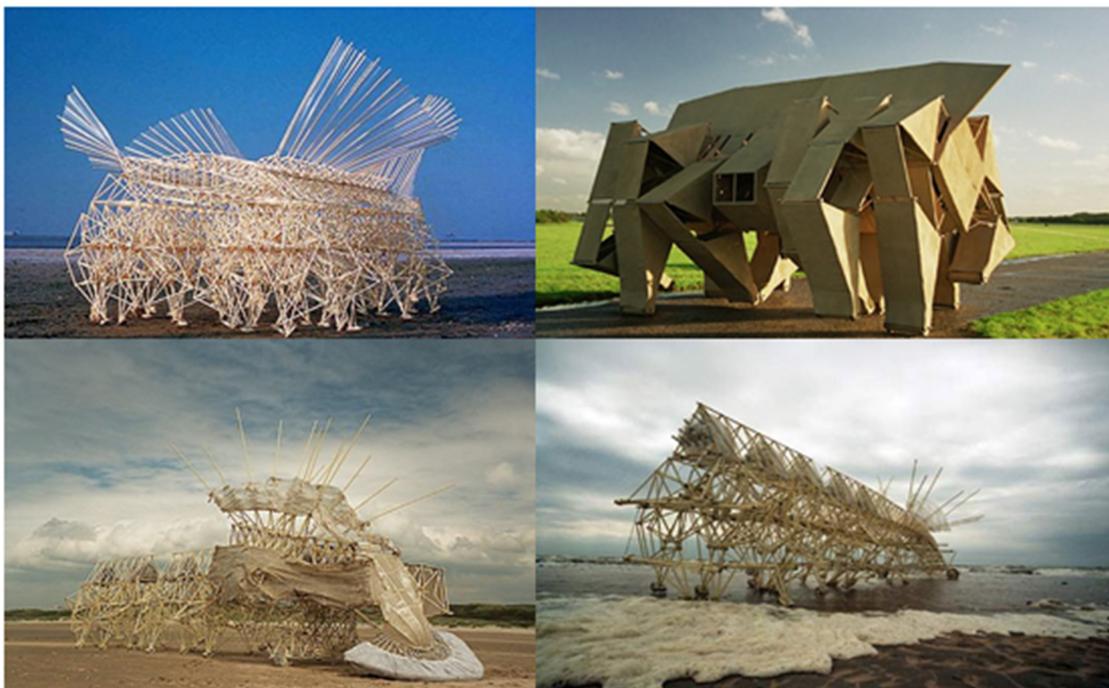


Figure 1: Theo Johnson's beach monsters

### 4. Creation under Cell Life

AdInfinitum by Ralfonso Ralfonso, a world-renowned dynamic sculpture artist, means "infinite" or "endless" in Latin. Through its different movement direction and speed, the invisible wind "changes" into visible form in front of the viewer. The center of the work is a queue composed of 36 metal disks, and its wonder lies in that it can rotate along multiple axes at the same time.

Its unique and intricate internal combination allows the audience's psychology and vision to intervene at the same time, so as to obtain a unique aesthetic experience.

In addition to the above these mechanical dynamic sculpture, in the moment we can also see a lot of other types of relying on science and technology of sculpture art, such as the British artist Luke Jerram. Luke Jerram in virologists and glass blowing with the help of the workers, glass sculpture made of viruses and bacteria, including e. coli virus, acquired immune deficiency syndrome (AIDS) viruses, n1n1 virus, smallpox, T4 phage virus and so on can be fatal. The virus form, which can only be seen under the microscope, is transformed into the form of sculpture and directly presented to the audience through the processing of the glass material.

We can also see some sculptural works that require the support of microbial technology to actually grow bacteria, such as the sculpture in a large glass petri dish shown in the image below. This sculpture surface coating were full of bacteria grow out, so that was similar to the Chinese ancient architecture model of the sculpture modelling, formed the corruption mildew visual effect, but this kind of bacteria grow the green and golden brown, did not make the sculpture looks dirty evil, but a little more gloomy uncanny aesthetic feeling, let it looks like a sinking at the bottom of the ocean one thousand years of construction, let the viewer associated with the culture of the missing and fall.



**Figure 2:** Architecture in a glass petri dish

In addition, in modern landscape design, there are a lot of praised landscape sculptures are designed with enlarged plant cells as inspiration. The Cell Garden in the 2005 German Federal Garden Exhibition shows how the microscopic world of cells has changed people's usual way of observation and daily visual experience. It consists of 12 small theme gardens with different nuclear forms, such as footprints garden, bird's nest garden, puddle garden, changing seasons, forest experiments, whispering plants and so on. It adopts the design method of changing the scale of natural things, so that people can feel the wonder and fun of the unseen world.

## 5. Summary

With the development of science and technology, a variety of practical experience has been increased, and human cognition has also been constantly improved, affecting the spiritual and material world of human beings. The progress of science and technology has driven the development of materials and added vitality to the performance of art. The expression form of art also breaks through the limit of frame and frame, and the limitation of traditional modeling means. We look forward to the technology to bring more inspiration to artists' creations.

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