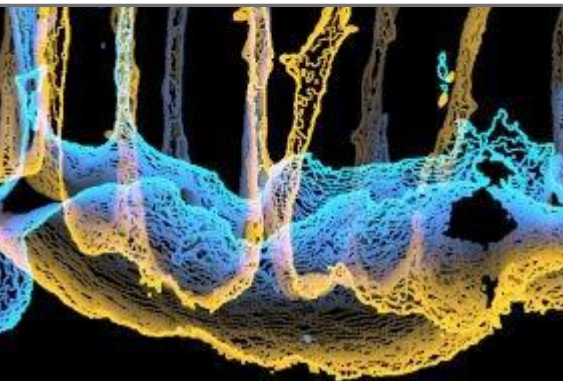


Explore what science art is, when it originated, and what role it still plays today.

This guide is filled with useful examples, making science art relatable to everyone.

Introduction to Science Art

Zeeks – Art for Geeks Ltd



Introduction to Science Art

Explore the concept of science art, its origins, and its ongoing significance today. This guide is filled with examples that make science art relatable to everyone. Discover the synergy between art and science.

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Overview of The Connection Between Art and Science

What is Science Art?

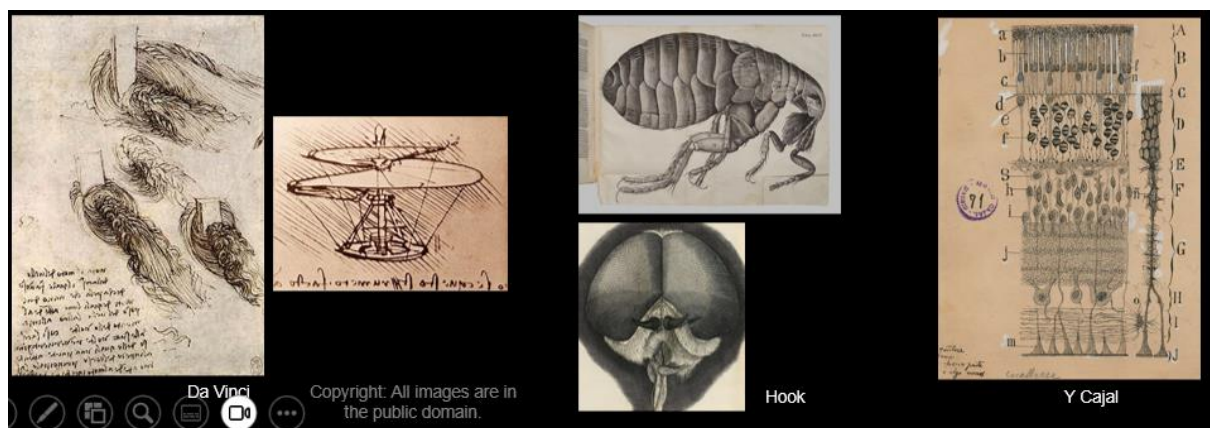
Science Art is an interdisciplinary practice that merges scientific concepts, methods, and aesthetics with artistic expression. This genre explores the beauty and complexity of scientific phenomena through various art forms, such as visual arts, installations, and digital media. By integrating scientific data, imagery, and techniques, Science Art aims to communicate scientific ideas visually engaging and thoughtfully. It fosters a deeper public understanding of science, stimulates curiosity, and bridges the gap between the scientific community and the general audience, highlighting the interconnectedness of art and science in exploring and interpreting the world.

Broadly speaking, the connection of science and art can be found in three main classes:

1. **Art secondary to science**, which is what we find when looking at historical polymaths, such as Leonardo da Vinci.
2. **Art to help science communication**, which is found in the fields of data visualization and illustration.
3. Science Art as an **appreciation for nature and science**.

Science Art in History

Science art has a rich history, with notable figures like **Leonardo da Vinci** in the 15th century, **Robert Hooke** in the 18th century, and Santiago Ramón y Cajal in the 20th century exemplifying the close relationship between science and art. **Before** the advent of **photography**, these pioneers **needed to draw what they observed** under the microscope, blending scientific observation with artistic skill.



Why Are We Fascinated?

Science art captivates us for several reasons:

1. **New Insights:** It reveals previously unseen aspects of the world, offering fresh perspectives.
2. **Opposite of Stargazing:** While stargazing looks outwards to the vast universe, science art often delves into the minutiae of the natural world.
3. **Cultural Stories:** It helps us learn new stories from other cultures—much of preserved archaeology, such as Roman golden pins, centres around art and everyday life.
4. **Interdisciplinary Collaboration:** Science art often involves collaboration between scientists and artists, leading to innovative ways of visualising and understanding complex concepts.
5. **Emotional Connection:** Art can evoke emotional responses, helping people connect with scientific subjects on a deeper, more personal level.
6. **Inspiration for Innovation:** Science art can inspire new scientific and technological innovations by offering unique visual perspectives and ideas.
7. **Environmental Awareness:** It can highlight environmental issues, showing the impact of human activity on a microscopic level and fostering a greater sense of responsibility.
8. **Historical Context:** Examining historical science art provides insight into how scientific understanding and artistic techniques have evolved.
9. **Public Engagement:** It plays a crucial role in public engagement, sparking curiosity and interest in scientific fields among diverse audiences.
10. **Cultural Integration:** Science art often integrates cultural and scientific heritage, creating a rich tapestry that reflects the interconnectedness of human knowledge and creativity.



A Short History of Science Art

During the **Enlightenment in the 17th and 18th centuries**, the pursuit of a more **formalised** and specialised **scientific method** began, leading to a gradual drift between science and art. A dedication to reason and knowledge marked this era.

However, the **boundaries** of what we now call "science" were only **defined late in the 19th century**. Before that, a scientist could be an explorer and philosopher, a doctor and a poet, a botanist and a politician. Science was a fashionable concern of the educated elite. For example, explorers were not just sportsmen but also contributors to geology (James Hutton), evolutionary biology (Charles Darwin), and cultural studies (Pitt Rivers).

Today, there is a "**re-appreciation**" for the synergy between science and art. Both fields deconstruct complex topics and help us understand individual components and their relationships. Together, science and art require multi-dimensional and cross-functional thinking, as exemplified by da Vinci's aerial screw. Combining science and art can foster new ways of communicating scientific ideas, enriching our understanding and engagement with both disciplines.

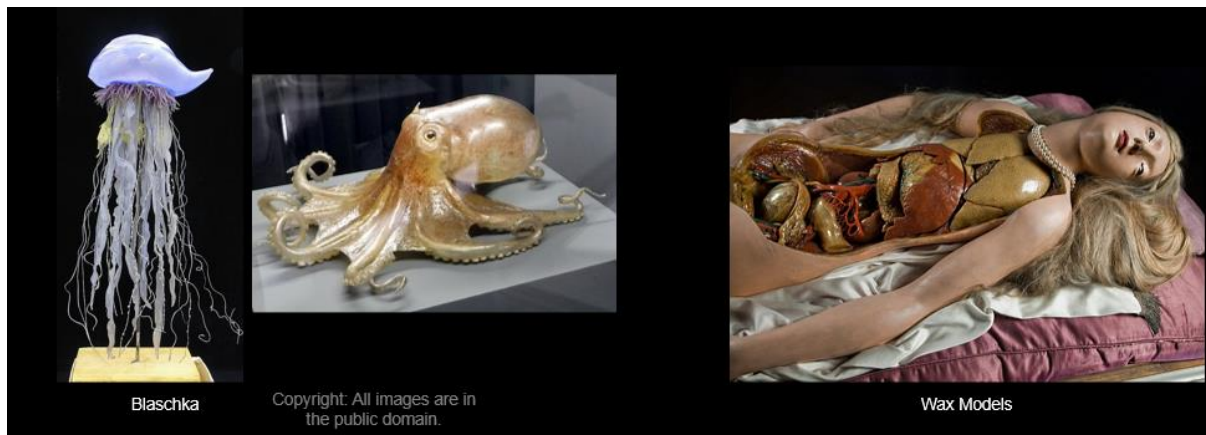
Case Studies – From History

Blaschka - Glass Models (19th and 20th centuries)

The Blaschka family, known for their intricate glass artistry, created stunningly detailed models of marine invertebrates in the 19th and 20th centuries. These delicate glass sculptures captured the beauty of these organisms and served as valuable scientific tools for study and education.

Anatomical Wax Models Ordered by Emperor Joseph II (18th century)

In the 18th century, Emperor Joseph II commissioned the creation of anatomical wax models for educational purposes. These detailed and lifelike models helped medical students and practitioners understand human anatomy with unprecedented clarity and precision.



Case Studies – From Now

Needles & Neurons

Needles & Neurons showcases the intricate beauty of the nervous system through fine needlework. This unique approach combines scientific accuracy with artistic craftsmanship, offering a visually stunning portrayal of cellular structures.

NeuroWoodWorks

NeuroWoodWorks is a contemporary endeavour that sculpts biological forms using wood. By blending traditional woodworking techniques with modern scientific understanding, NeuroWoodWorks creates captivating pieces that bridge the gap between art and science.

Metal Art

Bryan Welm's metal bacteriophage sculptures epitomise the fusion of art and biology in the 21st century. With meticulous attention to detail, Welm transforms these microscopic viruses into striking metal sculptures, highlighting the beauty and complexity of the microbial world.

Microscopy Art

Elisabeth Kugler's science art prints and drawings offer a unique perspective on scientific subjects in the 21st century. Through her skilful use of colour, line, and form, Kugler brings scientific concepts to life, inviting viewers to explore the wonders of the natural world through art.



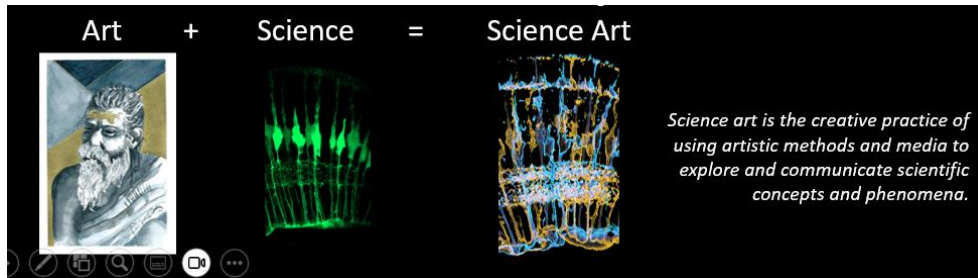
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Your Creator of this Guide

Dr Elisabeth Kugler is a scientist who has worked internationally with image-based data for over a decade. She has always been enthralled by science and art. She is passionate about all things data.

Elisabeth leads the company, shapes client experiences, and oversees training delivered by Zeeks.



Elisabeth's academic and non-academic work has been featured in several journal covers.



Exhibitions Displaying Dr Kugler's Work

- exhibition "Female Tyrolean Artists" 2024
- solo science art exhibition in Austria 2023
- the University Engineering Exhibition 2019
- FocalPlane webpage gallery items
- the Royal Microscopy Society Conference 2021



[Explore our digital exhibition.](#)