

## Presentation

SINCE ANCIENT TIMES, images have been central to humanity. In early civilizations, visual representations such as Egyptian hieroglyphics and cave paintings served both to record information and to tell stories. As history progressed, the use of images in science and art began to diverge, developing unique characteristics and purposes.

During the Renaissance, a remarkable convergence between art and science occurred. Artists such as Leonardo da Vinci not only created masterpieces of art, but also conducted detailed scientific studies of anatomy, botany, and physics. Leonardo's anatomical drawings, for example, were not only artistically impressive, but also scientifically accurate, offering a deep understanding of the human body.

In modern science, visual representations have evolved to include photographs, graphs, diagrams and digital models. The invention of photography in the 19th century allowed for more accurate and objective documentation of natural phenomena. Medical imaging techniques, such as magnetic resonance imaging (MRI) and positron emission tomography (PET), have transformed the diagnosis and treatment of diseases by providing detailed representations of internal body structures.

Computer simulations and 3D visualizations have revolutionized fields such as physics and biology. In physics, particle simulations and data visualizations have allowed scientists to explore and understand phenomena at unimaginable scales, from the behavior of quarks to the structure of the Universe. In biology, electron microscopy images have revealed the detailed structure of cells and viruses, offering unprecedented insight into the building blocks of life.

Modern art has undergone a similar transformation in terms of visual representations. With the advent of new technologies and media, artists have found new ways to express themselves. Photography, film and digital art have expanded the boundaries of creativity, allowing artists to explore new dimensions and techniques.

Abstract art, for example, relies on visual representations that do not necessarily reflect objective reality, but instead express emotions and concepts. Abstract artists such as Wassily Kandinsky and Jackson Pollock used shapes, colors, and lines to create compositions that evoke feelings and thoughts, challenging the viewer to find their own meaning.

Despite their differences, science and art often intersect and influence each other. Scientific representations can inspire artists, while artistic techniques can enhance scientific communication. For example, visualizations of scientific data often require an artistic approach to be effective and understandable. Collaboration between scientists and artists has led to innovative projects that combine scientific accuracy with artistic creativity.

Images of fractals, which are complex geometric structures that repeat at different scales, have been used in both mathematics and digital art. These images not only have aesthetic value, but also illustrate deep mathematical concepts, demonstrating how beauty and science can converge.

Visual representations are essential for communication and education in both fields. In science, graphs and charts make complex data easier to understand, allowing scientists to identify patterns and trends. In scientific publications, images help make clear and support the arguments presented in the text, making findings more accessible to both the scientific community and the general public.

In art, images are the primary means of communication, allowing artists to convey their ideas and emotions. In art education, visual representations are fundamental to teaching techniques, styles, and concepts, helping students develop their skills and creativity.

This issue of **INTER DISCIPLINA** devotes its dossier to bringing together a group of theoretical works on the subject of visualities, showing different facets of the topic at hand.

The Independent Communications section brings together works on food security, education and legal sciences. The issue also contains three book reviews. **D**

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