

When Does Art Become Science and Science Art?

Author(s): Y. A. Grillo

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The simplistic answer to this question is: Never.

One might very easily get lost in a maze of pointless semantics in considering this question, as there are many areas, operations and procedures that can justifiably be described both as art or as science. It goes without saying that the arts—visual, musical, literary or even performing—have for centuries been beneficiaries of the bullish quest and breakthroughs in science and technology; but is this not a one-way traffic?

A concise definition of art is “human creativity.” These two words are significant. Man, in art, is bringing into being something that had never existed outside his own being. He is creating. This being so, no matter how stunningly artistically beautiful a computer-generated piece of music or painting may be, it cannot be called art.

Science, on the other hand, is systematic knowledge derived from observation and experiences. The scientist begins a project from a definite knowledge point and successfully terminates it at another specific point; there is then a Q.E.D. The starting point is in the physical and intellectual realms. The scientist, for instance, wonders how a bird can fly, and he sets himself the task of making a man fly. According to myth, Icarus experimented with flying in ancient Greece. He literally “grew wings,” but his materials failed him. The great Leonardo da Vinci designed an ornithopter around 1500 A.D., but he did not reach the Q.E.D. The Wright brothers were able to build the precursor of the modern airplane between 1900 and 1902. This progression is the nature of science.

Art, on the other hand, starts from the spiritual, the subconscious, the imaginative. Michelangelo, in his Sistine Chapel fresco, started from within himself, his emotions, his belief, his imagination, his personality. Through his art, he let us into who he was and what he conceived to be the form of God and heaven. He created God in man’s image. He started to sing a song that never ends, but he decided to stop at one point for one reason or another.

These very different origins of art and science are what make it impossible for one ever to become the other.

However, the insatiable ways in which art has been appropriating the dividends of scientific quests appear to be thinning the gap between art and science. This is very evident in areas such as industrial design, product design, architecture and in some crafts. One does speak (and rightly so) of the art or science of glass blowing, photography, ceramics, music and the like. Perhaps the only place in which the difference between art and science can actually disappear would be in the mind of the artist/scientist, particularly that of a genius such as Leonardo, who might without any conscious effort move in and out of art and science in operation. Is a painting such as his *Last Supper* art or science?

We would all say that this is a ridiculous question. It is art, of course; but have studies not revealed so much science in it? Drawing the picture of any object, we would all say, is art; but could the same picture not be drawn by a scientist who placed or imagined a transparent graph in front of the object?

Even the most artistic artwork has elements of science in it. The difference between a Giotto and a Leonardo da Vinci is the quantum of science (mathematics, perspective) in either of them. Those who have the unenviable task of adjudicating art examinations or competitions could very easily go the way of “I don’t know anything about art but I know what I like.” Would this be fair? Art is essentially subjective, and thus one work cannot be adjudged

better than another. How then does one rate one work excellent, another fair and yet another poor?

The procedure so far accepted as satisfactory is breaking the works up into component sections: those of science and art. Take a pictorial composition, for example. One can evaluate how good the drawing of the items in the pictures is; this is essentially science. The colors, how pleasant or communicative? This is essentially art, as it depends on the feeling and taste of the artist. The design and how the picture space has been used? This is partly art, because it depends on the feeling and taste of the artist, and partly science, because of the need to achieve an equilibrium on the picture plane. But the part of the work that is 100% art is the personal quality and imagination the artist has been able to project; it is this that instinctively makes the viewer react strongly one way or another on seeing the picture.

All told, art is art and science is science like East and West; never will the two become one; we do have Chinatown in Los Angeles nonetheless!

Y.A. GRILLO
Leonardo Honorary Editor
28, Ogunlowo St.
P.O. Box 5667
Ikeja, Lagos
Nigeria