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MIT Press, 1998.**Abstract:**

During the last thousand years, mathematics has attained a meaningful and close relationship with various arts which have become a common theme of many tribes and nations. The creativity inherited from natural thought has let the scholars to express skills and abilities usually beyond the scope of worldly restrictions. Integrity, unity and comprehensibility have been considered the growth factors of human knowledge based on mathematics. The intimacy of mathematics and number with music by Pythagoras and the presence of philosophy and wisdom in Farabi and Avenicena's thought in Iran are obvious examples of this trend. The nature-based knowledge of these masters of Science aimed at describing a pure explanation of nature to generate the underlying relationships among the phenomena to help the science attain the explanatory adequacy. The most beautiful tiling and adornments have emerged in buildings where mathematics played a great role and the most pleasant music has linked with musical mathematics of nature while all and all the mathematics based its realm on nature.

The time turned the human in to a one dimensional being causing the subdivisions in science fields. The result was some kind of plurality in science which created different subdivisions in one single branch leading to expansion and distributed. This current was outstanding in modern and postmodern art which drove the creation spirit toward projection and self centeredness in which artists of postmodernism entered any field of feeling and thought uncontrollably. The last step of this path was awesome for all. No one could imagine any step further and most believed to have attained the peak of mastery in art. The most startling one can be attributed to Mandelbrot and his discovery in geometry named fractal geometry. He used computer graphics to elucidate mathematical argumentation in juxtaposition with intricacies of art similar to what Chomsky did with language and mathematics. He postulated a generative template for geometrical studies penetrating in different branches of science. Recursiveness of natural phenomena was expressed in terms of fractional dimension and self-similarities to generate every sophisticated form in a simple and straightforward innateness. Art changed from prescription to description and separated modularity became a unified modularity. Fractal art preserved the parameters and created universalities to make it accessible for every scholar to carry the thought on the wings of regularity and chaosity. This paper aims at determining the examples of various convergences in science and art on fractal foundation to open the horizon of generative thought in unregular art.

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Mathematics, art, language, fractal, postmodernism