17. The Fractal Ring from Art to Art through Mathematics, Finance, and the Sciences

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In the beginning was the picture and the heartening story that is about to be told. Although it takes many odd turns, ultimately it ends with pictures.

A featherless biped does not become human until he conquers fire and spices and decorates bodies as well as homes and temples. For millennia, those decorative patterns become increasingly refined.

Some — homes, temples, pins and simple necklaces — help give birth to standard geometry.

Other decorative patterns are closer to nature but wait until around 1900 to enter mathematics. Great scholars, proclaiming themselves of a divine race and recognizing no ancestors, distill those patterns into monsters, shapes whose sole role is to free pure abstraction from the constraints of the real world and pictures.

In around 1960 the speaker reveals how those monsters can throw some light on the murkiness of financial markets.

In 1975 he publishes a book in which some esoteric mathematical monsters are named *fractals* and their fundamental features are — ironically — identified with those of many very familiar natural objects — including music. Because of past limitations, geometry and science had to leave those familiar objects aside and call them amorphous, that is, without specifiable form.

In 1982 the speaker publishes another book that extends his earlier one and also attracts the mathematicians by using pictures to advance many conjectures, endlessly enchanting the specialists.

As the computer's graphic prowess grows, fractal images, once deemed to be solely utilitarian, are revealed to be spectacular. They enchant the students and specialists, who perceive them as decorative — even artistic.

Thus, having crossed and linked to one another several areas of disinterested or practical knowledge, and of feeling, the fractal ring finally closes: having begun long ago with art, it returns to its beginnings.