The grid, the fractal and the blot

We are used to thinking in words, and how they can help us think, but don’t we also think in images? Don’t images act as important metaphors for the various ideas we come across in our daily lives? Can’t they both extend and constrain the range of thoughts we can have? Don’t new images occasionally enter Human consciousness and expand the types of thoughts we can have?

Certain images become archetypes or shorthands for ideas. A circle can mean inclusiveness or wholeness, the square: logical thought, the triangle: forward movement. These are all simple visual concepts, but perhaps we need icons for more complex ideas too.

One of the benefits of pictures is they can instantly communicate complex ideas in a way that we can all grasp in an eye-blink. Our world today is now too complex for the Human mind to fully grasp. Many systems, such as our economies, institutions, and industries, are made up of hundreds or thousands of variables all interacting in apparently chaotic and unpredictable ways. There are endless worlds of complexity in nature, the human mind, and in our technology. Perhaps we need the equivalent of visual ‘words’ in order to give us the thinking-tools to begin to come to grips more with our complex world? I believe there are, in particular, three icons that can help us understand some of these complex visual ideas that we see around us: the grid, the fractal and the inkblot.

The Grid

The grid, as a graphical device, has become of central importance to our culture. It’s the imposition of order and measurement on our visual field. The entire domain of computer

graphics (giving rise to industries such as computer aided design, video games, and computer-generated movie special effects) is based on the idea of the grid.

The fact that grids can be stretched and squished accords with our modern understanding that space itself can be warped. The grid is a way to understand an area of space even if you aren't in it. It can still be mapped and maths applied to it. Through its regularity and order, it makes a space easily searchable.

Another name for a grid is a network or a web. The world-wide-web can be viewed as a grid, and its increasingly becoming a metaphor for how to organize human life. It is apparently artificial and maybe even mechanical, but it also embodies holistic thinking as it shows that everything is connected. Like a spiders web, one 'tap' on the grid reverberates across the whole.

The grid stands for the ability to connect everything together in one map, so that it can be reproduced, at different scales, with some elements bigger or smaller as required.

The Fractal

A fractal is basically a self-similar pattern: you zoom in and it looks the same as when you zoom out. The maths behind them has its roots in the 17th Century, but it took the power of computers in the 20th Century to begin to fully visualize and appreciate them. The term itself was coined in the mid-70s by a mathematician called Benoit Mandelbrot (after whom one of the most famous fractals – the Madelbrot set – is also named).

Fractals occupy a weird position, seemingly halfway inbetween order and chaos. Their edges can't be measured in the traditional sense: to put it simply, you can never find a ruler or measuring stick of the right shape to put up against the outer rim of a fractal to measure even a section of it.

Fractals are everywhere in nature: in clouds, rivers, mountains, coastlines, crystals, snowflakes and even in DNA. There are even fractal patterns in time in our heart-rates. Fractals have been found in art, music and architecture. The apparently random paint drippings that compose the paintings of Jackson Pollack have been shown to be fractal. As fractals are found so often in nature, understanding their maths has enabled

Often fractals are created simply by repeating a simple equation over and over. They show us that apparent great complexity can be born out of something comparatively simple.

The fractal stands for natural appearing patterns that are born out of simple maths.

The Blot

The inkblot, or Rorshach test, is a well known psychological measure: an ambiguous shape is presented to the person and they are asked to say what they see. It’s a mirror for their unconscious mind to reveal itself. Whilst psychoanalysis per se is no longer accepted by the establishment, the probing of non-conscious beliefs is as important in psychology as ever.

Created by Swiss psychologist Hermann Rorshach, the Inkblot test was originally intended for the diagnosis of schizophrenia, but became more widely used in clinical and personality testing.

Inkblots are a good example of what psychologists call pareidolia: the tendency for us to project patterns where they don’t exist. For example, seeing a meaningful pattern in a cloud or rock formation. Not only do our brains have a tendency to do this, we are probably doing it constantly, not just with natural formations, but with the everyday world around us. One way in which this effect can be used is in art. The composer Leonard Bernstein thought that the reason why poetry and music can create such deep experiences for people

is because they are often ambiguous, so it forces people to ‘fill in the gaps’ with their own interpretation, thus it because a deeper/personal experience. A lot of really popular pop songs have had almost nonsense or at least ambiguous lyrics. They work more on a right-brained/ambiguous route to our emotions. The same is particularly true of visual art.

The Inkblot stands for things that don’t have a meaningful pattern, but trigger off our brain’s tendency to see one.

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