



i before e and u after q

Geometric Languages by Stefan Samociuk

If you see geometric patterns in my work, your eyes and brain are working out the syntax, grammar and overall narrative of the exhibit. They are a lattice of positive whole numbers and to render them to our visual senses I change the number to a coloured dot, 1 = blue, 2 = red etc. In a language like English, we have an alphabet of symbols, some basic rules, the syntax, on how to build up composite structures of symbols, the words, and a set of rules that explain how words are used, the grammar. The languages I study are called geometric languages because the alphabets consist of geometric cells, the symbols, and they have their own rules of syntax and grammar. Without these rules you would only see a chaotic jumble. So where do I find these languages? It appears each prime number contains an alphabet and rules defining its own particular geometric language and I use an algorithmic system, called prime number cellular automata, to generate geometric narratives. Normal syntax might, for example, specify using i before e. Geometric syntax becomes dimensional and specifies the right symbol combination not just to the right or to the left but also up, down, diagonal or many permutations of neighbouring symbols. Some of us perceive this as order and structure whilst others see my work as a random collection of coloured dots. As an intrinsic property of prime numbers, these languages are truly universal and independent of intelligence. Any species that can convert the numeric structures to a sensory faculty has the potential to experience geometric language. Now that I have grasped the foundations of geometric language my next body of work is to gather a team of individuals sensitive to geometric art to catalogue all these languages into a structured framework. Practical applications? We could be looking at memorising specific narratives to create unique synaptic connections in our neural pathways to augment cognitive ability or generate a whole new nano materials technology involving the geometric patterning of metamaterials and metasurfaces.