

Metamorphosis

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For Julio Cortázar

*Fama,
cama, carma,
croma, crono,
cronolio, cronobio,
Cronopio*

Otto looked to see what time it was on the old grandfather clock on the wall opposite the entrance to his study. He opened up the book by Comte on his desk, and got ready to finish the article. It was raining outside, but he still hadn't noticed; the thick walls that his grandfather had laboriously built, isolated and protected him from the outside world. Without moving his head, his eyes ran almost mechanically over each line in the text. Suddenly something didn't quite fit; it was as if a gear had jammed. "*The words are really ambiguous,*" he thought, "*I should add more equations.*" His fingers then went back to the keyboard and one by one he saw the symbols appear on the screen that would make his argument sounder. He didn't know, he couldn't know, that the text that he was just putting the final touches to would change him so radically. There was a certain degree of inevitability and at the same time a certain degree of liberation in that text that dealt precisely with numbers and transformations.

Numerous archaeological records enable us to think that the concept of numbers emerged very early in the history of humanity. Primitive man already had a rudimentary idea of the concept of numbers. Some tribes used the words "man", "woman" and "several" to denote the numerical amounts "one", "two", and "three", respectively.

And from one minute to the next it was as if he were split into two, as if he had left his body, as if he were not one but actually two; and while his fingers continued to tap away, he recalled the unavoidable series of events that had brought him to this point. The chess games with his grandfather; number puzzles; the early discovery of the beautiful perfection of mathematical proofs. And then college, the gold medal, becoming best student and graduating with honours. His father was proud of him; he was becoming an upright man of integrity. He felt that everything had always been predetermined and this made him feel more relaxed. The idea of a random, unpredictable, subjective world horrified him, and he had found a perfect refuge in mathematics, that great truth-maker. The objectivity and efficiency of the Queen of the Sciences fascinated him. Otto looked at the clock and carried on working.

Primitive man gradually learned how to make use of the concept of numbers for his practical utilitarian needs. As a result, different kinds of numbers slowly and gradually began to appear. Naturally, the first to appear were natural numbers, the ones we use to count. Later on, much later, zero would arrive; then the development of trade would introduce negative numbers. Natural numbers, zero and negative numbers then formed the first great set of numbers: integers.

And from one paragraph to the next Otto gazed at the huge library in his study, and smiled and remembered how the maths books had slowly displaced the fantasy stories, superhero magazines and adventure books. As he was shy and suffered from stage fright, he didn't mix much with others and had very few friends. He used to say to himself that he didn't have any time to go out with girls, but privately he was terrified of the fact he had no kind of control over other people's feelings and decisions. He

conceived of human relationships as being a branch of logic; but for some reason that he still didn't know things didn't work like that, especially with girls. His withdrawal inside himself also had its counterpart in the outside world: he rarely went out, hardly ever visited any neighbouring towns and had never left his native province. Mathematics didn't require any experience of the senses and he thought that this was wonderful. Mathematics had captivated him once and for all; he was obsessed by the unique possibility it offered of discovering the mysteries of the world, of knowing that the world can be understood and that we actually do understand it.

Numbers began to play an increasingly more important role in the life of men. Apart from trade, which had taken a qualitative leap forward with the invention of mathematic, first of all, and then of money, afterwards, numbers began to play an important role in magic, witchcraft and working out horoscopes.

He looked to see what time it was and stopped to rest for a bit while he ran his eyes over the shelves in his library. His violin was there, that amazing instrument that was able to transform mathematical theorems into extraordinary sounds. The photo of his grandfather was a little higher up; from one corner he watched over him and reminded him that his destiny was already determined and that all he had to do was fulfil it. Gradually the mathematics books recurred again and again until they formed a uniform monotonous backdrop. He covered the books with different coloured paper depending on the subject that they dealt with, and in each category he arranged the books by author, in alphabetical order. He thought it was a highly efficient method that enabled him to find the book he was looking for as quickly as possible; although all the

spines were the same, he never picked up a book by mistake. Gradually he systematically removed any hint of chance that might occur in his life.

By the time of Ancient Greece, numbers had become an object of veneration and study. The Pythagoreans associated the numbers one, two and three with the “primordial unit”, “woman” and “man”. For the Pythagoreans and their disciples, numbers governed the Universe. They linked music and mathematics for ever through the Pythagorean theory of proportions; rational numbers, the ones that can be expressed as a fraction of two whole numbers, made it possible to explain not just musical harmony, but also the motion of the planets that the Greeks imagined to be “music of the spheres.” Everything could come down to numerical relationships.

However, just like the Greeks, he didn't know that every idea carries within itself the seeds of its own contradiction. The rationalists denied, they denied to themselves, an important part of reality. He thought that chance and irrationality were feminine qualities, and as the good male he was, as the good male he thought he was, he pointlessly tried to keep away from them. *“Never turn your back on them,”* his grandfather had repeatedly told him again and again: *“they are really dangerous and as soon as you don't look out, they get inside you, filling you with doubts, uncertainties and fears.”* And then at some point, without realising, unwittingly, in an almost common, innocent way, fate flipped a coin that landed on the wrong side and he tasted the forbidden fruit. Almost by accident, he opened a door, a book, and chance, that never forgives mistakes, sneaked in. *“What could be wrong in an essay written by a physicist about reason and money? After all, he was a scientist.”* His father had warned him: *“Listening and opening up, is really dangerous, you run the risk of them*

convincing you.” He wasn’t convinced, but he did start to have his doubts, and the thing is doubt is chance disguised as boasting. And then came another essay and more doubts, and uncertainty, and fear, and not knowing where it was all heading.

Tradition also attributes the proof of the theory of Pythagoras to the Pythagorean School, which had drastic unexpected consequences for them. The discovery that there are certain numbers that cannot be written as a fraction of two whole numbers, that is, they are not rational, contradicted the basic doctrine of the Pythagoreans. Legend says that the Pythagoreans tried to keep the secret of irrational numbers and that Hippasus, one of the members of the school, was murdered for revealing it. Incidentally irrationals were to give later generations a lot of headaches.

And his grandfather died, and he timidly started to get to know people, and someone gave him a book, and the same person introduced more people to him, and without realising it, he found he had become politically active; and he met up at night in secret in filthy back-alley dives, and finally a pair of legs and a new world opened up for him, she opened up for him; and that very same person appeared one day with his head cracked open through a brutal incomprehensible outburst of hatred, and without realising it, he was shut up in his room, trembling with fear. He had set foot in a new world, in what he would soon call reality, for which he had no maps, directions or compass.

Real numbers, reality, consists of the combination of rationals and irrationals. Both are necessary, but it was not until the mid-19th century that this way of understanding reality was accepted. Beyond real numbers complex and imaginary

numbers were to be found. Imaginary numbers included real ones as a special case, but they were infinitely more numerous, interesting and intense. Fact is never stranger than fiction; this is just something the rational have made up.

Suddenly he noticed a strange reflection on the monitor, his eyes were red and the numbers and letters were going in and out of focus alternately. He put his face close up to the monitor, he couldn't recognise the text, the image or his reflection. He was tired, but he had to finish the article. The reflection became more intense, and then he did recognise a pair of eyes that weren't his own. He stared intently and tried to fathom the mystery of this other gaze, which was partly his own but partly a female-like gaze. Completely captivated, he couldn't understand it but at the same time she couldn't stop looking; I felt, I perceived that something was changing, but I couldn't put it into words, I couldn't make sense of this feeling of seeing myself, but from the outside, as if I were someone else, but at the same time I was him, although no longer male; now nothing would be like the way it was before, I had crossed a line and there was no going back. I rubbed my eyes and took my glasses out of my handbag. I then took advantage of the reflection in the monitor to arrange my hair; I slipped out of my high heels and made myself comfortable. Now I felt better, I was still tired, but I could see things more clearly. I wanted to finish the article.

Rationals were always more malleable, more predictable, easier to interpret; irrationals, on the other hand, always caused problems; they didn't fit into the theoretical mindset of the rational and it wasn't easy to define them or deal with them. Later on it was discovered that not all the irrational are the same, some of them are transcendent and indispensable.

As soon as I stopped typing Bertolt Brecht's quote crossed my mind. I leaned back in the wicker armchair, drank a bit of water and let my fingers wander along Osiris's dark fur while my mind drifted off. In the library the maths books climbed up to the following shelf to make way for the philosophy books, essays and some science history books. And there was my grandfather's picture, regaling me with his smile and advice; and the violin and the grandfather clock, which one day got tired of ticking and began to swing rather strangely, and dribble paint (it would later be called dripping) until it turned into a Pollock.

Neither the rational nor the irrational can explain reality by themselves. Rationality needs irrationality, and its spontaneous unpredictable flashes, that trace marks at random on the taut white canvas of reason, like lighthouses in a stormy sea. These fleeting moments of irrationality, such as dreams, lapses in concentration or delusions, are what allow reason to have something to say; irrationality and imagination provide the raw material of reason.

And the mathematics books slipped out of their monotonous covers and continued to gain height, pushed on now by the philosophy books that made way for the first novels, story books and bland art books that sneaked in without anyone noticing. The books in that library were perfectly disorganised, but I only needed to look for a moment, out of the corner of my eye, to know which books were there. In some way I just couldn't explain, I knew the exact position of every book in that sea of words. Even so I used to enjoy running my fingers along the spines and stopping at a book that I had forgotten about. I passionately believed in literary osmosis; I only had to look at a book

to feel that the words were running through the tips of my fingers; then I read the contents and the introduction and imagined the rest. As long as they were in the library I could talk about books that I had never read as if I had written them myself.

Right from its beginnings in Greece, Western culture has generally proved to be rather biased against irrationality and imagination and its products. Plato already criticised artistic creation as a mere second-class copy of the ideal world of pure forms, and considered that artists were madmen possessed by demonic powers.

And the truth is that to a certain extent this was the case, after many years I had discovered that the cathartic power of art was greater than any psychoanalytic therapy. I had spewed out hundreds of demons in the form of stories, novels and paintings that possessed and tortured me. I could recognise myself in my texts and my paintings and I felt fine about that. I had found a personal way of looking at the world and I no longer felt bound to any mission or vision or prison. And sometimes I felt as if I had been born again, as if once again the world revolved around me, but in a different way; it was a world that I created and recreated and that created me; it was a sounding board in which I was fused and confused with my other world.

It was only in the Renaissance that scholars began to consider that imagination could help to interpret the outside world. However, imagination was only acceptable if it could be controlled by reason. During the 17th and 18th centuries the Enlightenment took it upon itself to reinforce the message by establishing that humanity had to be guided by “the light of reason.” The Enlightenment associated imagination with

ignorance, subjectivity, superstition, irrationality and prejudice. It was only in the late 18th century and early 19th that imagination was seen as being a positive quality.

You couldn't hear it raining any more; I went up to the window, lit a cigarette and saw how a patch of starry sky was defiantly sneaking its way in among the clouds. It was then that I realised that sunlight prevents us from enjoying the immense beauty of the sky at night. Astronomers don't contemplate the heavens by day, neither do poets. That kind of light dazzles them and eclipses the boundless riches that the world has to offer us. The sky is unattractive by day; there is the sun, lord and master of the sky, and down below everyone revolving, guided by the light, like sunflowers, that have no option; they cannot choose; but the world isn't just made by the light of day.

Although imagination is necessary, and as far as we know vital to (believe we can) understand and change the world, it's not enough in itself. A further level is required that makes it possible to transform these images into aesthetic objects, into fiction, into knowledge; in short, into something that can be passed on and can be perceived and interpreted by other minds. Creativity is the driving force behind this further level, but that... is a subject for another article.

I closed the book by Breton and left it on the desk. And once again images, there were always images, spinning around in my mind, although this time they weren't fiction but memories. Is there really any difference? I unwittingly remembered the incredible series of events that had brought me this far. The early discovery of the classics; the chess games with my grandfather; the Russian writers that my grandmother read to me; the number puzzles; and university; and the discovery of the beautiful

perfection of mathematical proofs; and those incredible years with Cortázar, Márquez, Bioy Casares, and Borges; and Paris, and Buenos Aires, and Central America, and Madrid; and then, imagination, and embarrassing poems and lousy stories, and then starting again; and finally, good stories, a novel. Literature had captivated me definitively; this unique possibility of inventing worlds and knowing that reality cannot be grasped but nevertheless wanting and hoping to understand it still thrilled me. Hadn't that always been the case?

San Sebastián, 30th of November 2005

*This short story is part of the book "The other side" published by Amazon.
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