

by Pierre Lemarquis, neurologist and essayist

Whether musical, pictorial or literary, the work of art has incredible power over us. With a fabulous voice or resonating score, it delights the brain and sends a whole panoply of emotions coursing through our being. A sculpture, a painting or a poem bring delight and, miraculously, can even heal. For proof, look no further than Farinelli.



n 1734, the city of London was the setting for a battle of sorts between Handel, who was seen as the maestro of Covent Garden, and Neapolitan composer Nicola Porpora. The Italian musician has brought over, at great expense to himself, his student, the famous Farinelli, to sing his arias. The famous castrato is wearing a flamboyant costume inspired by bullfighters and with the multicolored plumes in his helmet he looks like some imperial bird striking up its spring mating call. Underscored with red, his eyes are fixed on his prey, a woman reading in her box and tinkling a little spoon against her teacup. Farinelli is infuriated and takes the affront as a challenge. After a sequence of extremely virtuosic vocalizing, he aims a massive high C in her direction, sustaining the note with his powerful lungs. Intrigued, curious, surprised, the woman looks up and stares at the castrato's red lips and tongue, standing out against the extreme pallor of his face. Seduced by the crystalline voice, her heart begins to beat stronger and faster. Eyes glowing and pupils dilated, her throat now tightens. Fascinated at the scene, she feels slightly dizzy and blushes. Her breathing quickens, her mouth opens as if she, too, wants to sing or utter a cry of ecstasy. Her head tilted back, a smile of happiness playing about her lips, she lets go, completely satisfied. She has same way when we chance upon something just experienced a musical orgasm—quite an achievement for a castrato. Down in the stalls, two women faint, falling in a heap to the floor.

Farinelli would later travel to Madrid at the invitation of Elisabetta Farnese, wife

of Philip V, to lighten the thoughts of her depressive husband. The melancholy king was losing interest in affairs of state and refused to leave his palace or receive visitors. The castrato gave a recital beneath his window, and the effect was immediate: the king was saved. Philip regained his love of life. From that point on he wanted the singer at his side so that he could hear him every night.

The human voice has aphrodisiac, anti-depressive qualities. It acts directly on the system of pleasure and reward deep in our brain, which produces a vital élan by secreting the serotonin that sustains one's mood, and dopamine, that precursor of adrenaline, agent of desire and movement, as well as endorphins, which relax us and soothe our suffering. Responsible for the shivering and goose bumps that accompany our strongest emotions, the latter also engenders the addictions that ensue. This Dionysian process activated by music can help the anxious and the melancholy, reassure the premature baby in its incubator, lift the spirits of the autistic and sufferers of Parkinson's, ease the pains of rheumatism and trigger the emotional memory of those afflicted with Alzheimer's. Other muses, too, enlist its powers, and it comes into play in the we like, something that chimes with our past such as a work of art. It can help in responding to the gaze of another, in those first steps of a dance when two people are teetering on the edge of love.



Works by Gully PAGE 41 Rockwell meets Hitchcock, Lichtenstein and Picasso 2, 2013. ABOVE Rockwell meets Lichtenstein 2, 2014. FOLLOWING PAGE Dohanos meets Warhol 1, 2014.

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atch the couple down on the dance floor, observe their choreography: each anticipates the other's movements, adapting in perfect emotional resonance in the triumph of mirror neurons. These neurons are what allow us to imitate the world around us. In childhood, they show us how to speak by reproducing the phonetic sounds made by adults; later in life, they help us assimilate the techniques used by a music teacher or other sets of skills. Coupled with the circuits of empathy, which are wired to the systems of pleasure and reward, they enable us to get inside other people's minds.

The opposite path is also possible, and truly vertiginous. When we listen to music, our brain functions as if it was singing and dancing, even if we are simply sitting still in the concert hall. The same goes for the visual arts. These stimulate the zones at the back of the brain dedicated to vision, and we recognize them the way we recognize a human being before then incorporating them via our mirror neurons, which mimic the actions observed and assign them a meaning. When it comes to abstract art, the movement that gave rise to the work is echoed and reproduced. Looking at Concetto spaziale by Lucio Fontana, the subject perceives the knife strokes with which the artist slashed the canvas.

It's the same phenomenon with literature: the part of our brain where the zone dedicated to vision intersects with the zone of language recognition perceives letters as images that speak. Connections are created with the sensoriality evoked by the words that are read. For example, if a word related to smell, such as "cinnamon" or "jasmine," comes up, the olfactory brain is triggered. Metaphors involving notions of texture, such as "a velvet voice,"

stimulate the sensorial zone relating to touch. If notions of movement are concerned, then the motor cortex portion of the brain comes into play. After a few days of regular reading, the strengthening of these sensory-motor circuits persists, as if the fictional characters were now living in our brain, sharing with it their perceptions and emotions. As Flaubert said, "Madame Bovary, c'est moi!"

The artwork takes possession of the open, unresisting receiver and becomes incarnated in them. Simulating emotions, it leads them into unexplored territories, helps them to know themselves and better understand others and the world around them.

Listening to music, admiring an artwork or reading a book all lead to the same result: our brain behaves as if the music, a painting or the characters in a novel had moved in, a process described by philosophers such as Maurice Merleau-Ponty and Robert Vischer. Writing in 1872, the latter named this *Einfühlung*: aesthetic empathy, or inner imitation.

In this situation, thought paradoxically becomes matter. It's a case of the word turned into something concrete rather than the brain producing a thought as the neurosciences usually have it. Through our senses we perceive only the appearances of things. What they are in themselves, their inner reality, escapes us, unless we enter into resonance with them by means of empathy. This is not a simple matter of mirroring but a true modification of our neuronal circuits by a work of art that can perhaps lead to new emerging processes. The whole formed by the work, the beholder and the links between them is much more than the sum of its parts. A therapeutic effect is possible, a true rebirth that Aristotle (before Freud) called catharsis. This is an extreme form of the art of memory, in that, through his or her work, the creator lives again in the mind of the viewer, who takes up and incorporates their striving for eternity, feeding it from their own body as they would a newborn child.

Finally, there are certain stones in which we can make out natural landscapes or burning cities, such as the landscape marble of Italy and the "dream stones" that stimulated the imaginations of wise men in China. Their shiny texture and strata have a musical quality, as if their beauty were an ephemeral sound trying to find eternal form in our brain like some repeating echo.

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