

The Canadian

When science proves that art is good

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Who is aware of the inner tumult that is born in us and the explosion of substances that strike us when a work of art meets our eyes? Similar to a human encounter, sometimes capable of triggering an almost loving feeling, a work stirs up quantities of neurotransmitters and painkillers in our brain. Yes, art is good. Pierre Lemarquis, neurologist and graduate in Chinese medicine, traces in *Art that heals* the mysteries as well as the detours, now proven, of a pleasure known as “aesthetic empathy”.

“The brain has two functions. It keeps us alive and makes us want to live, poses the specialist in ethology. These two systems are complementary and necessary. A computer will never be able to replace it.” The dual ability of the brain is often compared to a rider on his horse. The first represents the intellectual brain while the second symbolizes that of pleasure and reward. *“But sometimes the rider struggles to lead a mount that does not intend to obey him. And, luckily, it’s always the horse that wins.”*, he sums up. Thus are born errors, fantasies or certain desires that move us away from rationality, but also, define us as humans.

Sculpted brain, caressed brain

“Now, a work of art addresses the two faculties of our brain”, continues the scientist. *“She sculpts him by making him discover what he does not know. She caresses him, giving him pleasure and reward. This phenomenon has been studied a lot in music, and we have shown that it also operates in the field of visual arts.”* One of the experiments carried out to do this consisted in quantifying and measuring the reactions of a museum visitor – his heart rate, his sweating – to a work he observes. If she likes her, her stress decreases because her production of cortisol (the hormone used to wake up in the morning and kick in) slows down. The heart beats less quickly, the body relaxes, while the brain (from pleasure and reward) secretes dopamine (the hormone of the joy of life). More so, endorphins (which give the impression of well-being) and oxytocin (hormone of attachment and love) – about which it has been shown to be produced during listening to music – could, by extension, be part of the chemical arsenal that unfolds in us in front of a work of art.

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In terms of perception, the Italian biologist Giacomo Rizzolatti has studied the golden ratio. *“The harmony induced by its use in sculpture is aimed at our brain “evolved” or Apollonian, but does not necessarily convince that of pleasure and reward, dedicated to Dionysos. Rizzolatti who was the first to identify mirror neurons [qui commandent le mimétisme], scientifically revealed that one could appreciate a work for its aesthetic qualities, for its proportions and to find it beautiful, without liking it.”* This means that our “two brains” can

function independently. Between them, there are ways of connection, an area called "insula", seat of the aesthetic empathy which unites the intellect with the emotion

Of the interest of beauty

These findings have found various applications. In addition to the prescription of visits to the museum – which is practiced, for example, by certain doctors of the Pitié-Salpêtrière Cardiology Institute, in Paris, who can prescribe, by museum prescription, a visit to the Château de Compiègne, in Oise -, many initiatives in France have already borne fruit. The association L'Invitation à la beauté, founded by psychologist Laure Mayoud and chaired by Pierre Lemarquis, bringing together scientists, caregivers and artists, has been granted the patronage of Unesco for its research at the cellular and neurological level. , psychological and social. At the service of internal medicine of the Lyon-Sud hospital, patients who so wish can choose a work to hang in their room. *"In the same way that a book can do as much good as an antidepressant, a work that one can hold on to in times of suffering provides the balance necessary for healing. When they left the hospital, the patients changed their relationship with art "*, insists Pierre Lemarquis. Could it be thanks to the effect of art on man that beauty exists? Plato, transported by the sensation of the beautiful, was he saying something else?

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The materiality of the works, the sustainability of the museums that house them, testify to a reassuring vitality, at a time when live shows and cinema are severely hampered. In the museum, as in the books, art is combined on a daily basis. A privileged space for aesthetic empathy, it takes people beyond oneself. *"The German philosopher Robert Vischer explained the feeling that one experiences in front of a work "*, recalls Pierre Lemarquis, sharing the thinker's conviction that *" each becomes the work he observes "* : if we contemplate *Mona Lisa* we become a bit of a *Mona Lisa*. Then, whatever your culture, you will take your memory and a bit of human genius with you. Because art speaks to everyone, science has demonstrated it. Whether his perception is sensitive, chemical or cognitive, he feels and experiences himself. To believe that it would be reserved for an elite would be wrong.

"The Art that Heals", Pierre Lemarquis, Hazan, to be published on November 4, 2020, 192 p., € 25.

"Aesthetic empathy. Between Mozart and Michelangelo ", Pierre Lemarquis, Odile Jacob, 2015.

Find the collection "The Ideal Museum" published by "Le Monde" on [the site dedicated to him](#).

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