

**How does the brain respond to beauty?<sup>1</sup>**

**After analyzing this text, you will show that there are individual variations in the organization of the brain.**

**Using your knowledge and the document, explain how the brain works.**



Pursued by poets and artists alike, beauty is ever elusive. We seek it in nature, art and philosophy but also in our phones and furniture. Philosophers such as Santayana have tried for centuries to understand beauty, but perhaps scientists are now ready to try their hand as well. So what part of our brain responds to beauty? The answer depends on whether we see beauty as a single category at all. Brain scientists who favor the idea of such a “beauty center” have hypothesized that it may live in the orbitofrontal cortex, the ventromedial prefrontal cortex or the insula. If this theory prevails, then beauty really could be traced back to a single region of the brain.

If the idea of a beauty center is correct, then this would be a considerable victory for theory of functional localization. Under this view—which is both widely held and widely contested—much of what the brain does is the result of highly specialized modules. To simplify the idea a bit, we could imagine assigning Post-it notes to areas of the brain with job descriptions underneath: “pleasure

center,” “memory center,” “visual center,” “beauty center.” While some version of this theory is likely true, it’s certainly not the case that any kind of mental state you can describe or intuit is cleanly localized somewhere in the brain.

It will probably be many years, perhaps even generations, before we have something like a neuroscience of aesthetics that both physiologists and humanists will find truly convincing.

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<sup>1</sup> Adapted from: “*Scientific American*, by [Jason Castro](#) on February 2, 2021”

### Piste des attendus

Les premières études menées sur le cerveau réagissant à la beauté permettent aux scientifiques d'émettre l'hypothèse que le « centre de beauté » se situerait dans le cortex frontal ou le cortex préfrontal donc situé dans une seule région du cerveau. Cette idée est à la fois largement répandue mais aussi très contestée. Les scientifiques ne sont qu'aux prémices de cette étude.

La difficulté semblerait être due au fait que la beauté est plurielle : « la beauté d'un visage n'est pas la même que la beauté d'une peinture ».

### Les idées relatives au programme :

Aires corticales (communiquant entre elles par des voies neuronales), plasticité cérébrale et comportements addictifs peuvent être abordés lors de la discussion

La réaction à la beauté, l'attraction est bénéfique sur le plan de l'évolution.