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The Imagined Scientific Drawing as a Representative of the Content Provided by Emotions to Scientific Rationality

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Abstract: From the epistemology of emotions, one of the topics of current reflection is the function that emotions fulfill in the rational processes involved in scientific activity. So far, three functions have been assigned to them: selective, heuristic, and carriers of content. In this last function, it is argued that emotions, like our perceptual organs, contribute relevant content to reasoning, which is then converted into linguistic statements or graphic representations. In this paper, of a qualitative and philosophical nature, arguments are provided for two hypotheses 1) if emotions provide content to the mind, which then translates it into language or representations, then it is important to take up the idea of the Saussurean linguistic sign to understand this process. This sign has two elements: the signified and the signifier. Emotions would provide meanings, and reasoning creates the signifier, and 2) the meanings provided by emotions are properties and qualities of phenomena generally not accessible to the sense organs. These meanings must be imagined, and the imagination is nurtured by the feeling that "maybe this is the way." One way to access the content provided by emotions can be through imagined scientific drawings. The atomic models created since Thomson, the structure of crystals by René Just, the representations of lunar eclipses by Johannes, fractal geometry, and the structure of DNA, among others, have resulted fundamentally from the imagination. These representations, not provided by the sense organs, seem to come from the emotional involvement of scientists in their desire to understand, explain and discover.

Keywords: emotions, epistemic functions of emotions, scientific drawing, linguistic sign

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