

## **Mona Lisa's smiles in Leonardo's drawings**

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## **Mona Lisa's smiles in Leonardo's drawings**

### **A. Soranzo, Danyeko O. and Zavago D.**

'Mona Lisa' (1503-05) is the most-visited, written about and parodied work of art in & Soranzo .the ambiguous allure it features is not unique ,However .the world Newberry (known painting 'La -found a similar display of ambiguity in the lesser (2015 They suggested that most of the ambiguity of both portraits can .Bella Principessa' be explained in terms of a spatial frequency contingent illusion concerning the direction of the mouth. When viewed closely, the slant of the mouth appears to turn the edges ,or when the image is blurred ,but when viewed from afar ,downwardsof the mouth appear to take an upward turn. This apparent modification in mouth slant results in a change of facial expression. The ambiguity may therefore be explained by the perceptual instability of the mouth slant. We have now extended this line of research and discovered that a similar illusion of direction is also present in two Leonardo's drawings: La Scapigliata (1508) and another Female Head (1470-76). This discovery supports the suggestive hypothesis that Leonardo studied the generation of ambiguity in the expression of portrayed subjects as matter to 'moti mentali', i.e. what we may now identify as micro expressions.