

16 December 2005

COMPUTER SOLVES RIDDLE OF MONA LISA SMILE

Computer 'solves' the riddle of Mona Lisa's enigmatic smile

By Tom Pettifor

A PUZZLE that has baffled art lovers for five centuries has been "solved" at last - by computer.

Now historians may themselves be glad to know the state of mind behind the Mona Lisa's smile is happiness. Well, 83 per cent happiness.

For the "emotion recognition" software used to decipher the enigmatic expression painted by Leonardo da Vinci between 1503 and 1506 also found La Gioconda - the alternative name of the renowned Italian's work - was experiencing three other feelings.

The sitter, most probably the wife of a leading Florence citizen of the day Francesco del Giocondo, was also nine per cent disgusted, six per cent fearful and two per cent angry.

No wonder scholars and devotees of arguably the most famous portrait of all time have been squabbling for so long about her mystifying mouth.

But the conclusion that Mona Lisa was "mainly happy" was made after the painting, on view in The Louvre in Paris, was analysed at the University of Amsterdam.

Their computer rated features like the curvature of the lips and crinkles around the eyes, the journal *New Scientist* was told.

The programme, co-developed with experts at the University of Illinois, drew on a database of young female faces to derive an average "neutral" expression. The software then used this as the standard for comparisons.

And it finally came up with the answer to the enigmatic smile that has captivated the legions of admirers of the small painting Leonardo called his "favourite".

Now the capability for recognising emotions just by looking at photos could lead to PCs that adjust their response depending on the user's mood.

But not everyone agrees on the findings on the Mona Lisa, which features in the new film *The Da Vinci Code* from Dan Brown's novel.

Art expert Michael Daley said yesterday: "The point of this work is that it's a riddle - and the inaccessibility of the emotions on her face is why people are so fascinated by it.

"The idea that a computer can come up with four emotions to explain it is just ridiculous.

"Perhaps it's possible with photos - but it is impossible with some-thing created by the human hand.

Theories on the portrait, which was stolen from The Louvre in 1911 and not recovered for two years, include the view that she did not show her teeth because they were bad.

Another reckons that the opening of the lips at the corners was simply considered elegant in that age.

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- BOOK IT
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- GO THERE
- TRY IT
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- JUST SHUT IT, SHARON
- MURDERED BY THE BOY WHO NEVER GREW UP
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