

# Robot painter draws on abstract thoughts

The Painting Fool is a piece of software that produces its own artwork. So could it ever be taken as seriously as a human artist? Its designer, Dr Simon Colton, believes that it could

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**Gemma Kappala-Ramsamy**

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Detail from *The Dancing Salesman Problem*, an artwork created by software called the Painting Fool. Photograph: Simon Colton

**In 2006 Dr Simon Colton, a researcher in computational creativity at Imperial College, London, started to explore whether a computer program with the capacity to create art could be taken as seriously as a human artist.**

**Where did the idea for the program you call the Painting Fool come from?**

As a hobby I wrote software that would turn a photograph into a more artistic piece, but six years ago I brought it into my field of research. I realised that the Painting Fool was a very good mechanism for testing out all sorts of theories, such as what it means for software to be creative. The aim of the project is for the software itself to be taken seriously as a creative artist in its own right, one day.

**How does it work?**

The Painting Fool produces artwork in a number of ways. The first is the simplest one: the software paints according to user-defined input, such as a photograph. But last year I had an exhibition in Paris called *No Photos Were Harmed* that challenged the public perception of computer art. I presented a couple of pieces, one of which was *The*

*Dancing Salesman Problem*, where the figures were generated by a context-free design grammar, which is similar to the grammatical structure of natural language but for images.

I've also paired the *Painting Fool* with emotion-detection software by Maja Pantic, a colleague of mine, so it paints pictures in different styles according to the subject's mood, like the *Really Sad* picture of me, where it chose muted colours and graphite pencil. Each of these projects tries to challenge a notion about computer programs - that they can't be imaginative, that they can't appreciate how the output might affect people.

### How will you know when it is taken seriously as an artist?

People want to know artwork has been constructed with an intelligent thought process, so perhaps once the software produces pieces that are culturally valuable, that get people talking, and are not necessarily anything that I'm keen on aesthetically or conceptually, that would be a good indication of its independence from me.

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**msmlee**

1 April 2012 4:39AM

I presented a couple of pieces, one of which was *The Dancing Salesman Problem*, where the figures were generated by a context-free design grammar, which is similar to the grammatical structure of natural language but for images.

That still sounds like it's merely an image generation software based on human designed input rather than genuine machine creativity. I had expected something along the lines of

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simulation-based emergent design computational models rather than a human defined "design grammar", albeit a context-free one. It looks like that, instead of feeding the base image and applying image manipulation protocols, as per standard Photoshop, you succeeded in not needing to feed the machine a base image in order for it to generate a new one. Which is great, but which isn't creativity when you as the software designer is providing the protocols (or grammar) by which the machine is to generate new image rather than enabling it to come up with its own grammar and "ways of seeing", which is what true creative artists, and not the derivative kind, do.

I've also paired the Painting Fool with emotion-detection software by Maja Pantic, a colleague of mine, so it paints pictures in different styles according to the subject's mood, like the Really Sad picture of me, where it chose muted colours and graphite pencil.

Again, it would be instructive to know if the Painting Fool chose "muted colours and graphite pencil" because the in-built design grammar already stipulated that sad moods are to be associated with a muted palette, which means that the choice of presentation is really Colton's own artistic sensibility rather than creativity on part of the machine.

How will you know when it is taken seriously as an artist?

People want to know artwork has been constructed with an intelligent thought process, so perhaps once the software produces pieces that are culturally valuable, that get people talking, and are not necessarily anything that I'm keen on aesthetically or conceptually, that would be a good indication of its independence from me.

Maybe when the artwork has been created with genuine creativity, defined at the most basic level as the creation of new entities / concepts / styles / techniques / meanings through the surprising combination or juxtaposition of existing entities / concepts / styles / techniques / meanings (with such combination and/or juxtaposition acted by the machine on its own accord rather than through the edict of a human designer), and with the result that the machine-created artwork is both novel as well as being a stage in an iterative cultural conversation in which human beings can participate meaningfully, then, and only then, could the machine be taken seriously as an artist in its own right.



## **undersinged**

2 April 2012 2:15PM

People want to know artwork has been constructed with an intelligent thought process

Obviously not, or we would not see "spin paintings", "dot paintings", "colour field abstractionism", and so on in the art galleries.

The images are clearly not art in the sense that a Rembrandt self-portrait is art. The "artist" has no empathy with its subject, and the viewer has no empathy with the artist. Nor is the computer free in the way that a human artist is. It is merely obeying a set of rules. To admire its creativity or taste would be absurd.

However, in the present "anything goes" climate, the images created by the artbot could be sold as art if the marketing pitch were right. Conceptualism can justify (to superficial minds) anything at all as art, just as long as the seller knows the right patten to use.

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