

Beauty is in the eye of the beholder? Actually, in its neurons

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"The center of gaze," in which the focus of attention is clearly directed by Mariano Molina's technique. Credit: Mariano Molina

A novel research project spearheaded by the University of Leicester and part-funded by The Leverhulme Trust aims to shed new light on the way people perceive art.

By bringing together an artist and a neuroscientist, both disciplines seek to learn from each other principles of visual perception. In the process of the research, both artist and scientist are gaining new insights into what truly lies in the eye of the beholder.

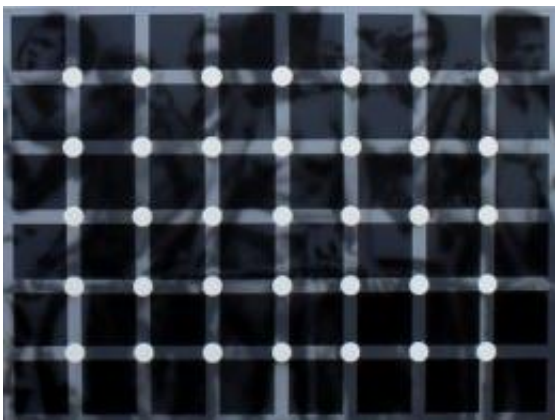
Rodrigo Quian Quiroga, Neuroscientist and Professor of Bioengineering at the University of Leicester is working with renowned Argentinean artist Mariano Molina to assess the connections between [art](#) and visual perception- and the way the brain processes these images.

Mariano Molina's residency in the Department of Engineering at the University of Leicester will result in a public exhibition drawing together art and science in a public space.

Professor Quian Quiroga said: "As a neuroscientist I should say that we are sometimes studying things that artists have known at least intuitively for centuries. We come up with something new, and then find artists knew about it all the time.

"One thing we have been exploring together is the different ways people process high frequencies in art (detail you see close up) and low frequencies (the overall effect you see when you stand back from a picture).

"We are also interested in optical illusions. These are a big thing in neuroscience- visual illusions teach us how the brain processes information, and Mariano is fascinated by this."



"Circules" by Mariano Molina. Credit: Mariano Molina

As part of the research, Mariano Molina has worked with an eye tracker

to find out how people perceive images.

He said: "It's made a difference because I can tell that artists have this ability to realise many neuroscience concepts, but perhaps not in a scientific way. For us it's mainly intuition.

"I am finding out about the way neurons represent images and I am currently looking for connections between art and visual illusions. Now that I'm starting to know the way the brain works and perceive things I can try to use this knowledge in my painting. It really is affecting the way I work.

Professor Quian Quiroga paid tribute to Mariano Molina's commitment to the residency: "Five months is a lot of time for him to commit to coming here. I think not everyone would be so open-minded as to come; it's quite a big jump for him to be here in the lab discussing science and art with us.

"When we are designing a Neuroscience project Mariano will come up with something different which is highly valuable. We sometimes don't have that insight because we're not artists. It's very good to have him here, because it's like a partner from the other side."

Mariano Molina's residency is also linked with a project Professor Quian Quiroga is undertaking with Dr Sandra Dudley, in the University's School of Museum Studies and David Barrie, the former director of the Art Fund. Professor Quian Quiroga said: "The main goal of that project is to link art and anthropology with our expertise in neuroscience and [visual perception](#). It is related to the perception of art, and from the very beginning I thought that for a real breakthrough it would be great to have an artist on board."

Provided by University of Leicester

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