

# A bird's eye view of art

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Pigeons could be art critics yet, according to a new study which shows that like humans, pigeons can be trained to tell the difference between 'good' and 'bad' paintings. According to Professor Shigeru Watanabe from Keio University in Japan, pigeons use both color and pattern cues to judge the paintings' beauty as defined by humans, as well as their texture. Professor Watanabe's work has just been published online in Springer's journal, *Animal Cognition*.

The concept of beauty is based on two properties. Firstly, humans derive pleasure from viewing aesthetically pleasing art and experience [negative emotions](#) from aesthetically unappealing art. Secondly, we can tell the difference between 'good' or beautiful paintings and 'bad' or ugly paintings and therefore form a concept of what is aesthetically pleasing. Professor Watanabe's research looks at pigeons' ability to distinguish between paintings based on their beauty; in other words, can they form a concept of beauty similar to that of humans, and if so, how do they do it?

A mixture of watercolor and pastel paintings by children from a school in Tokyo were classified by the school's art teacher and 10 other adults as either 'good' or 'bad'. Paintings were considered 'good' when the [images](#) were clear and discernable, and viewers could see the specific characteristics of the subjects in the paintings. Pigeons from the Japanese Society for Racing Pigeons were placed in a chamber where they could see a computer monitor displaying the children's art.

In the first series of experiments, four pigeons were trained to recognize

'good' paintings by being rewarded with food if they pecked at the 'good' pictures. Pecking at 'bad' pictures was not rewarded. They were then presented with a mixture of new and old 'good' and 'bad' paintings and the researchers noted which paintings they pecked at. Pigeons consistently pecked at the 'good' paintings more often than at the 'bad' paintings. When the paintings' sizes were reduced, the [birds](#) discriminated just as well between the two types of paintings. However, when they were presented with grayscale paintings, they were no longer able to distinguish between the paintings, indicating that they use color cues for discrimination. When the paintings were processed into mosaics, the pigeons also found it difficult to distinguish between the paintings, showing that they also use pattern cues to make their beauty judgments. Hiding part of the picture did not affect the pigeons' ability to tell the difference between paintings.

In the second series of experiments, Professor Watanabe looked at whether pigeons could discriminate between watercolor and pastel paintings. Eight new pigeons were trained to recognize the texture of paintings - four were trained to peck at watercolor paintings and four were trained to peck at pastel paintings. As in the previous experiment, when presented with a mixture of new and old paintings, pigeons used both color and shape cues to accurately discriminate between textures.

Taken together, these experiments suggest that humans and pigeons use similar visual cues to identify 'good' paintings and [painting](#) texture. Although there is a considerable difference in humans' and pigeons' brain architectures, they can function in similar ways to make complex visual discriminations.

Professor Watanabe concludes: "Artistic endeavors have been long thought to be limited to humans, but this experiment shows that, with training, pigeons are capable of distinguishing between 'good' and 'bad' paintings. This research does not deal with advanced artistic judgments,

but it shows that pigeons are able to acquire the ability to judge beauty similar to that of humans."

More information: Watanabe S (2009). Pigeons can discriminate between 'good' and 'bad' paintings by children. [Animal Cognition](#); DOI 10.1007/s10071-009-0246-8.

Source: Springer

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