

**Mario Verdicchio**



**Topic: Art**

**Authors:**

**Mario Verdicchio**

University of Bergamo,  
Department of  
Information Technology  
and Mathematical  
Methods  
Italy  
www.unibg.it

**References:**

- [1] Noel Carroll,  
“*Philosophy of Art: A  
Contemporary  
Introduction*”, Routledge,  
1999  
[2] Terry Barrett, “*Why Is  
That Art? Aesthetics and  
Criticism of  
Contemporary Art*”,  
Oxford University Press,  
2007  
[3] Marcel Duchamp,  
“*Fountain*”, New York,  
1917  
[4] Mario Verdicchio,  
Marco Celesti “*Painting  
with Outliners and  
Fillers*”, GA2009, 2009

**Contact:**

mario.verdicchio@unibg.it

**Paper: Generative vs Non-Generative Art in the Verification of the Institutional Stance**

**Abstract:**

As illustrated by a great number of works in the literature (e.g. [1], [2]), many efforts have been devoted to the task of determining the defining properties of art.

Such enterprise was made ever more difficult by revolutionary as well as disruptive statements by renowned artists in the 20th century (e.g. [3]), who have opened the door of the art world to works that defy all attempts of defining art made until then.

Being faithful to reality (realism), expressing and provoking emotions (expressionism), or providing aesthetic pleasure through colour and form (formalism) cannot be considered as canonical criteria to distinguish art from simple craftsmanship any longer.

In such a context, the only stance that seems to hold is the institutional one: a work is considered an art work if and only if it is recognized as such by a significant number of members of the institution of the art world.

To verify such hypothesis, a visual test has been created, with figures depicting different works, some of which are shown in what appears to be a typical art world setting like the exposition space of a museum. The test aims at verifying whether the works depicted in such a specific environment get higher scores in terms of "artistic dimension" by a selected audience.

Moreover, by enriching the experiment with generative art works [4] side by side with non-generative, man-made works, a further hypothesis, orthogonal to the first one, can be tested: in the verification of the institutional stance the computer-generated works obtain similar results to the others, and, thus, are undistinguishable from this point of view.



Figure 1: Generative art in an art world setting

**Keywords:**

Experimental Aesthetics, Institutional Stance, Art World, Visual Test

# Generative vs Non-Generative Art in the Verification of the Institutional Stance

**Mario Verdicchio**

*Department of Information Technology and Mathematical Methods*

*University of Bergamo, Italy*

*cs.unibg.it/verdicchio*

*e-mail: mario.verdicchio@unibg.it*

## Abstract

The institutional stance, according to which art is what experts of the art world consider as such, is put to the test with an experiment in aesthetics. Members of the art world are asked to evaluate generative and non-generative art works, depicted in a neutral or museum-like environment. Such test provides also the chance to compare how well computer generated paintings fare with respect to classic man-made art.

## 1. Introduction

As illustrated by a great number of works in the literature (e.g. [1], [2]), many efforts have been devoted to the task of determining the defining properties of art.

Such enterprise was made ever more difficult by revolutionary as well as disruptive statements by renowned artists in the 20th century (e.g. Duchamp's "Fountain", or Magritte's "The Treachery of Images"), who have opened the door of the art world to works that defy all attempts of defining art made until then.

Being faithful to reality (realism), expressing and provoking emotions (expressionism), or providing aesthetic pleasure through colour and form (formalism) seem not able to be considered as canonical criteria to distinguish art from simple craftsmanship any longer.

In such a context, the only stance that seems to hold is the institutional one: a work is considered an art work if and only if it is recognized as such by a significant number of members of the institution of the art world.

This work aims at verifying whether the institutional stance has a real impact on the perception of the artistic value of a work. Such verification is performed by means of a visual test, with figures depicting different works, some of which are shown in what appears to be a typical art world setting like the exposition space of a museum. This test aims at verifying whether the works depicted in such a specific environment get higher scores in terms of "artistic value" by a selected audience.

Moreover, by enriching the experiment with generative art works [3] side by side with non-generative, man-made works, a further hypothesis, orthogonal to the first one, can be tested: in the verification of the institutional stance the computer-generated works obtain similar results to the others, and, thus, are undistinguishable from this point of view.

The paper is organized as follows: Section 2 investigates in more detail the concept of "definition", in particular with respect to art, and discusses the institutional stance; Section 3 illustrate the test and its twofold use, which includes a comparison between generative and non-generative art; finally, Section 4 presents and analyses

the results.

## 2. Definition of art and declaration of art

The definition of a concept  $C$  aims at describing the conditions under which an entity is an instance of  $C$ . Following a logic-based notation, we would write:

$$C(x) \Leftrightarrow A(x) \quad (1)$$

to mean that for any entity  $x$  to be  $C$ ,  $x$  *must* be  $A$  ( $A$  is necessary to be  $C$ ), and that if entity  $x$  happens to be  $A$ , then it is also  $C$  ( $A$  is sufficient for being  $C$ ).

If we let "Art" take  $C$ 's position, the search for an adequate concept that could be  $A$  in formula (1) equates to the attempt of defining art. Such quest has failed so far, in that for every candidate for  $A$  there exists a counterexample which is widely accepted as an artwork:  $A$  cannot be "Realistic" because of Cubism, for instance; Magritte's stance on representation in "The Treachery of Images" is intellectually engaging, but because of its own rational nature excludes "Expressionistic"; the status of artwork enjoyed by Duchamp's urinal would certainly create a contradiction should we substitute "Formalist" for  $A$ . The list can go on: no proposed characteristic seems to be able to single-handedly cover the multifaceted variety of artworks. We had better look for a definition with a different structure, which may look like a long list of disjunctions:

$$C(x) \Leftrightarrow P_1(x) \vee P_2(x) \vee P_3(x) \vee P_4(x) \vee \dots \quad (2)$$

With an inclusive definition like (2), we would be able to define "Art" as anything that enjoys one of the disjuncted properties  $P_i$ , which may include all the definition proposals so far. Moreover, should a new work emerge in the art world, that defies all previously listed characteristics, the list can be easily updated:

$$\begin{aligned} & Art(x) \Leftrightarrow \\ & Realistic(x) \vee Expressionistic(x) \vee Formalistic(x) \vee Duchamp'sFountain(x) \vee \dots \end{aligned} \quad (2')$$

Definition (2') is not only meant to be thought-provoking (and possibly failing at such task) but it actually embodies the institutional stance on the definition of art: works are ultimately artworks when considered as such by members of the art world, so that we can easily get back to definition (1) by writing:

$$Art(x) \Leftrightarrow DeclaredArt(x) \quad (3)$$

The institutional stance has sparked strong criticism. Galanter provides an overview of the objections in [4], and we would like to focus on one in particular, regarding the members of the art world who are supposed to perform the declarations that make a work of craftsmanship an artwork. Although agreeing on art from the past (no critic would question Duchamp's urinal today), their opinions often diverge when it comes to new (potential) artists. For instance, well-established art critics were strongly disagreeing on whether to consider Jeff Koons' "Made in Heaven" exhibition art or pornography back in 1989. As there is no unique opinion provided by all the members of the art world, the equivalence between being art and being declared art

is weakened and may not properly work as a definition. It seems like we traded the blurred boundaries of art for those of the art world. Still, there is undeniable evidence that if a piece of work convinces a significant part of the art world, it can be generally considered art.

Let us then investigate the dynamics within the art world that can lead a piece of work to be approved by a group of experts big enough to qualify that work as art. For those who agree with the institutional stance, this task coincides with the first purpose of defining art; for those who do not, this analysis is not about the definition of art, but about what convinces people to declare that something is a work of art.

### 3. Design of the test

The factors that convince people about the artistic value of a piece of work can be numerous. We have focused on a hypothesis that is related to the institutional stance. The test's context is restricted to paintings.

#### *Hypothesis 1:*

works that are shown in a typical art world setting like the exhibition space of a museum tend to be valued more than works that are shown in a neutral setting.

To verify such hypothesis, two works like the one in Figure 1 (left) have been inserted into a photograph of an exhibition (right).

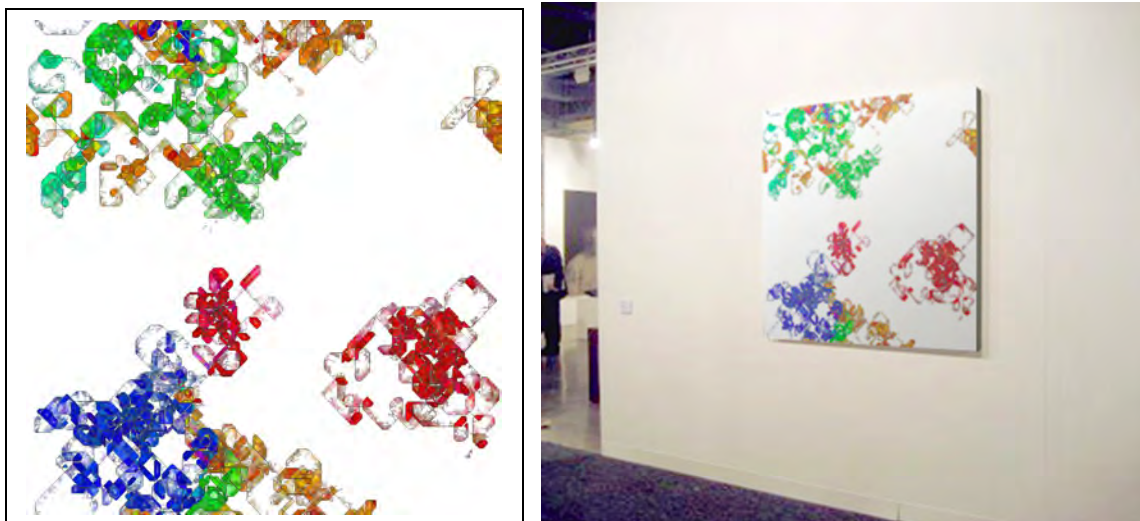


Figure 1: generative artwork (left) inserted into a typical art world setting (right)

To compare the performance of such generative artwork with paintings by human artists, the same treatment has been performed on two paintings by Sarah Morris [5].

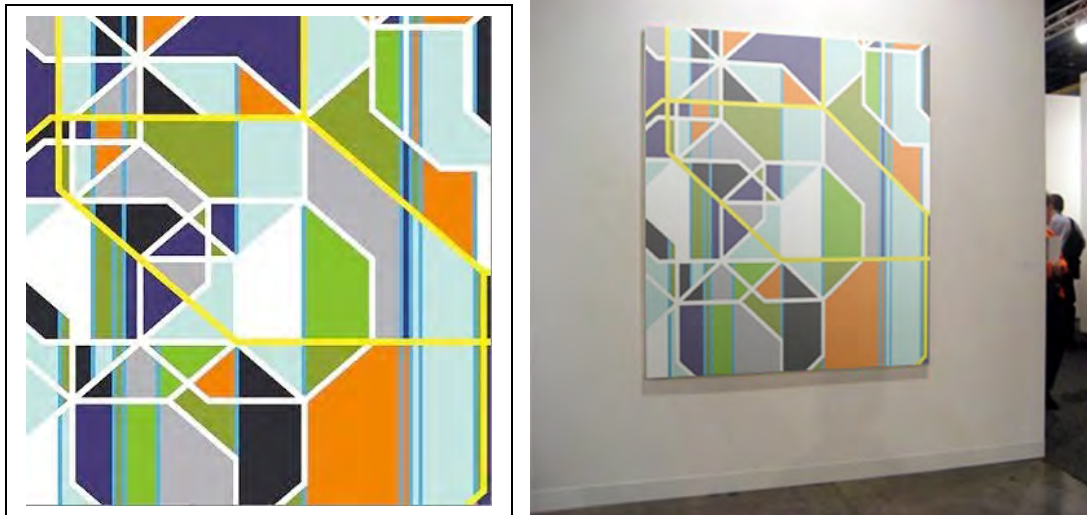


Figure 2: a painting by Sarah Morris (left) in a typical art world setting (right)

This artist has been chosen because of the similarity of her style with the generative works, to verify the following hypothesis.

*Hypothesis 2:*

generative works and paintings by human artists perform similarly.

Each participant has been shown four pictures: two generative art works, one of which in a museum setting; two man-made works, one depicted in a museum. Each participant has been asked to score each of the depicted works, on the basis of their aesthetic and artistic judgement, with a minimum of 1 and a maximum of 10 points. 45 members of the art world (painters, art gallery directors, designers, and so on) have taken the survey.

#### 4. Results of the test

The following table shows the average score of each of the works.

painting	neutral set	museum set
Generative 1	5.6	5.6
Generative 2	6.5	6
Human 1	5.6	6.1
Human 2	5.9	5.3

Hypothesis 1 must be rejected, whereas hypothesis 2 is confirmed.

The museum setting, which was aiming at showing that other members of the community had already accepted the depicted work as art, has proven not to be influential. The test subjects have provided interesting feedback after scoring the paintings: they declared that positive (>5) scores were given for several reasons:

- "the painting's structure reminds me of a big flower" (art as impressionism)
- "the colors are very vivid, and I like the curved shapes" (art as formalism)

The classic definitions of art were involved also when score were negative (<5):

- "I do not get any warmth from this work" (art as expressionism)

- "the lines are too messy and not harmonic" (again, art as formalism)

When asked about whether the museum setting had had any influence on their evaluation, less than half of the subjects had noticed the difference, and those who had, declared that it did not play a significant role, as they were more concentrated on the aesthetic experience provided by the works.

The other interpretation of the scores deals with the comparison between computer-generated and man-made paintings. The scores are similar, proving that, when it comes to abstract art, generative art can provide a satisfying experience, indistinguishable from the one provided by paintings by human artists. Competition in other styles would surely require further development in software and hardware. We will not make the mistake of questioning the value of the artist with whom the generative paintings competed (Mondrian's artistic value has been doubted in [6]): heuristics to find original ways for artistic expression are still to be found.

## 5. Conclusion

The traditional definitions of art may not be comprehensive of the varied and multifaceted aspects of artistic expression, and revolutionary artworks in recent years may have questioned them even further, leading to controversial proposals, such as the institutional stance, that seem to describe the art world as a self-referential paradox. However, the survey presented in this work shows that, when judging and evaluating potential artworks, the experts end up looking for colour, form, and emotion. In the restricted context of abstract art, generative programming techniques provide results comparable to well-established artists.

## References

- [1] Noel Carroll, "*Philosophy of Art*", Routledge, 1999
- [2] Terry Barrett, "*Why Is That Art? Aesthetics and Criticism of Contemporary Art*", Oxford University Press, 2007
- [3] Mario Verdichio, Marco Celesti, "*Painting with Outliners and Fillers*", GenerativeArt2009, 2009
- [4] Philip Galanter, "*Against Reductionism: Complexity Science, Complexity Art, Complexity Studies*", Complexity and Philosophy Workshop, 2002
- [5] <http://www.whitecube.com/artists/morris/>
- [6] A. Michael Noll, "*Human or Machine: A Subjective Comparison of Piet Mondrian's 'Composition with Lines' (1917) and a Computer-Generated Picture*", *The Psychological Record* (16), 1966