

Do Machines Produce Art? No. (A Systems-Theoretic Answer.)

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Abstract

Machines do not produce art, social systems do.

Machines and Art

Since early experiments with computer-generated art in the mid 1960s, the idea of “art machines,” entities that are not merely tools or assistants for human artists but capable of autonomous art production, has undergone a significant development. [1] Both technological progress and shifts in art appreciation have contributed to this.

Our modern understanding of (capital-A) Art and the related concept of Fine Arts emerged during the 18th century. [2] However, like any established notion of art this understanding has faced critical re-negotiation. Thus, Postmodernism rattled those fundamentals while Machine Art disturbs newly formed agreements what constitutes art. [3] Proponents of algorithmic art seek to re-define aesthetic concepts in information processing terms, questioning conventional anthropocentrism. [4][5][6]

Recent contributions like Michael Matejas’ Expressive AI, Leonel Moura’s stigmergic robots and Marius Klingemann’s uncanny neural imagery push the aesthetic boundaries of generative machines and computational procedures. [7][8][9]

But do those machines and algorithms produce art? I give an answer that I base on Niklas Luhmann’s systems-theoretic thinking, and this answer is: no. [10] Likewise, humans do not produce art either. Art is not created by any biological or nonbiological entity, but within social systems, constructed through recursive networks of communication. [11]

The answer does not change if we recast generative art as variants of the Turing Test. [12][13] It does not even change if we conceptualize machines and humans as ensembles or take into consideration the fluidity of their difference. [14][15]

This observation invites us to refocus on different distinctions than the still prevalent discourse around humans vs. machines. To understand the ramifications of the shift from the artist as an individual auteur to art as a social system, it is useful to observe and explore forms of art that make this approach visible. “The new artist” by Alex Straschnoy et al. presents a robot that is performing for a robotic audience. [16] Techne is an algorithmic community that produces as well as mutually critiques digital art. [17] In both projects, the relationship between art, artist and audience is re-negotiated and humans become second-order observers of the art production. [18]

Machines do not produce art, social systems do. We may begin to ignore the difference between human and machine; it does not make a difference. What we need to do is to restructure our expectations and to invite more machines into our art system.

To achieve this, it may be well worthwhile to revisit systems art as a bridge between cybernetic tradition and currently emerging generative techniques. [19][20] Before that we have to update concepts of art and systems in order to understand the art of machines. [21]

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Biography

Michael Straeubig (@crcdng) is a Marie Curie Fellow and former Award Leader for Game Arts and Design at Plymouth University. He is researching and exploring the relationships between systems, play and games in various media with a focus on mixed reality and posthuman play.