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# Can Machines Do Art? Non human interventions in art and fashion

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**Abstract** The first step in the evolution of technologically driven visual art genres was taken with the application of controlling spray guns and electrical brushes by David Alvaro Siqueiros 1920. The decisive break occurs again in contemporary fashion designs and installations (Savage Beauty 2011). Hence we have to emphasize upon the growing insularity and autonomy of technologically rebellious art – in the reduced human intention in patterns on dresses exhibited by the fashion maverick Alexander McQueen. We shall be able to appreciate the fact that the form of representation is most likely to be similar to a mechanics of accident and autonomy, rather than control, and reflective of the independence of the machine itself, now called the machine being.

**Keywords** *Art, Fashion, Gesture, Robots, Technology.*

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### As máquinas podem fazer arte? Intervenções não humanas na arte e na moda

**Resumo** O primeiro passo na evolução das artes visuais impulsionadas pela tecnologia foi dado com a aplicação das pistolas de ar e aerógrafos utilizadas por David Alvaro Siqueiros em 1920, embora uma ruptura decisiva tenha ocorrido novamente nos designs e instalações da moda contemporânea (Savage Beauty 2011). Portanto, devemos enfatizar a crescente insularidade e autonomia da arte tecnologicamente rebelde por intenção humana focada nos padrões de design exibidos pelo inconformista da moda Alexander McQueen. Apreciaremos o fato de que a forma de representação tem mais probabilidade de ser semelhante a uma mecânica da acidentalidade e da autonomia, do que ao seu controle, e que reflete a independência da própria máquina, agora chamada de *máquina*.

**Palavras chave** Arte, gesto, moda, robô, tecnologia.

### Pueden las máquinas hacer arte? Intervenciones no humanas en el arte y la moda

**Resumen** *El primer paso en la evolución de las artes visuales impulsados por la tecnología se dió con la aplicación de pistolas de aire y aerografos utilizados por David Alvaro Siqueiros en 1920, unque una ruptura decisiva se produjo nuevamente en los diseños e instalaciones de moda contemporánea (Savage Beauty 2011). Por lo tanto, debemos enfatizar la creciente insularidad y autonomía del arte tecnológicamente rebelde por la intención humana enfocada en los patrones de diseño exhibidos por el inconformista de la moda Alexander McQueen. Apreciaremos el hecho de que es más probable que la forma de representación sea similar a una mecánica de accidentalidad y autonomía, en lugar de su control, y que refleje la independencia de la máquina misma, ahora llamada ser máquina.*

**Palabras clave** Arte, gesto, moda, robot, tecnología.

## Introduction

Although conditions necessary for the technique of drip painting has been studied in detail (Taylor et al 205; Taylor 26), the physical method of dripping and throwing paint as an expression of what Jackson Pollock called “chaos” evolved into a kind of unpredictable non-human intervention (Moses 5; Clark 355; Altieri 24)<sup>1</sup> in domains of art that is only beginning to get acknowledged.

The first step in the evolution of technologically driven visual art genres was taken with the application of controlling spray guns and electrical brushes by David Alvaro Siqueiros, the Mexican muralist in his conception of the great revolutionary murals painted after the Mexican independence of 1920. But the second decisive breach with the past occurs with the direct intrusion of digital (robotic) arms and the later, completely hidden sensor mechanisms of biorobots and cybernetic designs.

The history of artistic production has undergone changes corresponding to the insightful use of machine behavior in the contemporary electronic era. But even then, one may fail to notice that in the theoretical corpus of such art as of the great muralists of the Mexican Revolution and in Pollock, critics have looked at on the visual plane of the art, rather than the technical mode of its production. The visual art of Pollock for instance, has mostly been explained in terms of the extensions of fractal geometry (Taylor 34). What Siqueiros’ blast contains in a central nodal area of the painting like the *Collective Suicide* (MoMA) is the enigmatic symbolism of states of being, relegated to its most invisible, neural level; it reappears without location, like a rhizome of its memory in two directions: first, in contemporary fashion design and installation (Savage Beauty 2011). Hence, we have to acknowledge upon the growing insularity and autonomy of technologically rebellious art (Thompson; Mukhopadhyay 2020)– in the reduced human intention in patterns on dresses, such as those exhibited by the fashion maverick Alexander McQueen.

Second, human role is partially supplanted in machine installations like Jean Tinguely’s revolving chain, with their frenetic technological interventions and motion. This development occurs at the same time as when we see an aesthetics of abstract robotics like the biocybernetic machines of Gilberto Esparza (Kac 60; Burnham 35). The form of representation is similar to a mechanics of accident and autonomy, rather than control, and reflective of the independence of the machine itself – just as Aristotle described a possible *symbebekos* (accidental cause) of material conditions in which an object acquires characteristics from an indeterminate future of possibilities (Metaphysics Book VIII).

What emerges from the long history of technical interventions in art is the recognition of a chance impulse, inviting a contemporary aesthetics of the material conditions of art – the objects have themselves undergone transformation. Experimentation becomes creative, as the logic of technical innovations, like the fractal drip of Pollock’s “chaotic” art becomes a

non-teleological, indeterminate creation. The experimental enthusiasm of David Alfaro Siqueiros (1896-1954) led him to trace murals by an electric projector (a technique used years later by the abstract expressionist Franz Kline in his paintings of broad brushstrokes, which were retouched with the brush, but also to the use of new products such as automotive paints, sprays and air guns, thus leading to an adaptation of the technical conditions imposed by the new architecture. The vitality, momentum and frenzy at the new discovery - characteristics defined by Luis Cardosa y Aragon - allowed the muralist to organize workshops for American students who shared the same spirit in their minds. Manuel Rodríguez Lozano a contemporary painter inspired by Siqueiros states that the latter's last painting at the Polyforum Cultural in Mexico City was "a painting robot; he and his disciples used nothing more than mechanics: they photograph the subject, pull out the slide, project it and put the gun in the air."<sup>2</sup> It is clear that the terms in which Rodríguez Lozano expresses Siqueiros' artistic technique vis a vis will have resonance in the current scenario. What we shall establish is the secret rise of the technical agency of art, and its living colonial power over the sphere of modern art and media, including self-sustaining robotic, or proto-Cyborgian representations.

The pictorial-visual conditions prevalent during the period when Pollock's major works were executed in the sixties, now already started changing with respect to the murals made at the beginning of the century. Technical perfection is supplanted by more radical experimentation in the artistic process. We must remember that in the second decade of the last century Marcel Duchamp (1887-1968) with his work *Apolinère Enamelled* 1916-1917, a readymade painting modified with gouache and pencil on painted sheet, originally inaugurated *Sapolin Enamel*; it hinted that an advertisement poster could re-appear as a painting with a sequence of touches that could produce the best results - in case of Duchamp's enamel sheets, the surface becomes a metaphor of the arbitrary process which conjures something as perfect as the poetry of Apollinaire out of unsuspected material or medium. It is not surprising then that in the 1950s, Jean Tinguely through his investigations of mechanical automatons created the serie of *Meta-Matic* in the mid fifties, one of those was the piece *Meta-Matic no. 6* (a drawing machine) in 1959. In this a mechanistic non-subjective Automat drew on the paper surface (for Kant drawing was considered as the precursor of all works of plastic art and therefore of the same essence as the subject)<sup>3</sup>. Like his art Tinguely's aesthetic criticism was aimed to counteract the abuse of mechanized systems of our times as they tended to hypnotize capitalist society. Donald Kuspit refers to the work *Homage to New York*, one which Tinguely produced in 1960, as a: "self-destroying machine - not exactly a technological prodigy and obviously having no constructive value - it was about to what extent such technology-dependent art produces an "aesthetic" attraction"<sup>4</sup>.

Tingueley's art shows that the aesthetics of the machine had opened a wide range of conceptual and expressive forms, and would remain an unfinished dream within the framework of this kind of art; we could simply remind ourselves of more artists who have been guided in their creative efforts by the use of technological mechanism for the plan or presentation of their work.

With the coming of the nineties a new direction can be seen in the machine arts of Rebecca Horn (b. 1944). In her performances two decades earlier Horn's use of bodily extensions such as breasts, fingers, arms or masks already revealed the place that would be taken years later by the mechanical arms powered by an electrical source and then more recently by those adapted to computer systems. Her explorations in this sensitive ground plan for mechanical systems soon turned to the production of more sophisticated designs which were achieved with the help of specialist engineers in the field. Her kinetic sculptures emphasize on the spiritual absurdity of contemporary life. About her sculpture *Finger Gloves* (1972), used for an exhibition at the Tate Gallery mentions the following note on their website:

The ideas of touch and sensory awareness are explored in this work. Horn has described how wearing these gloves altered her relationship with her surroundings, so that distant objects came within her reach: 'the finger gloves are light. I can't move them without any effort. Feel, touch, grasp anything, but keeping a certain distance from the objects. The lever-action of the lengthened expressions the various sense-data of the hand fingers; ...I feel me touching, I see me grasping, I control the distance between me and the objects.' Implicit in the work is the idea that touching makes possible an intimacy between our own body and those of others.<sup>5</sup>

An evolution in Horn's work takes her from the objective system of a body and its sensory dimensions to experiments with more sophisticated mechanisms, which culminated in production of the piece *Les Amants* in 1991. In this work machines act as humans, or more precisely, as the title suggests like lovers who in accordance with the classical European creed of imaginative (Platonic) creativity also draw and paint. Horn says:

My machines are not washing machines or cars. They have a human quality and they must change. They get nervous and must stop sometimes. If a machine stops, it doesn't mean it's broken. It's just tired. The tragic or melancholic aspect of machines is very important to me. I don't want them to run forever. It's part of their life that they must stop and faint.<sup>6</sup>

In Horn's words, mechanical systems tend to take an anthropomorphic, and a definitively humane personality to which scientists hope robots will arrive at a given time.

Years later and at the dawn of the new millennium, innovation in the creation of mechanized systems came directly not from the artistic circle, but paradoxically from developments in the fashion industry, specifically with Alexander McQueen's Spring-Summer Collection of 1999, in which robotic arms fired paint on the model, simulating an attack of machines. Gone are the blasting gestures of Siqueiros, Jackson Pollock or Yves Klein's living brushes. The theatricality of the model and the non-human performers conceived by McQueen is not without a strong erotic charge. A machine delivers a kind of spray on the impeccable white dress of the model. The dress becomes a canvas under a threatening, phallic gun. The idea of the blasting in Pollock's painting is transformed by McQueen into a violent attack loaded with anthropo-psychic sensuality – in a sense this also resembles *La Mariée mise à nu par ses célibataires*, meme, produced between 1915 and 1923 by Marcel Duchamp who projects the metamorphosis of human beings in a technological mechanism.

McQueen's action is reflected in the affirmation of Marcuse's conviction that "the death instinct becomes, in its own right, the companion of Eros in the primary instinctual structure, and the perpetual struggle between the two constitutes the primary dynamic"<sup>7</sup>. From Marcuse's perspective, the duel in McQueen's work is established between the robotic arms and the woman; the arm-guns unload their ink (black and yellow) on the woman. Aggression reaches a climax when the legs and the face of the girl are seen to be stained. Similarly, Vanessa Beecroft explores the body in the commercial context of the system. For example, in the work VB61 completed in 2007 Beecroft gave a twist to Siqueiros or Pollock's drips, or McQueen's inkjet sprays by depicting a corporal massacre of deaths and blood to focus on the genocide in Sudan. Santiago Sierra treated a no less controversial theme, such as illegal immigration with the performance titled *Line of 250 cm tattooed on six persons paid* (1999) in which the line, tattooed on the skin of illegal immigrants can appear only to be deleted by death, thus also echoing the idea of branding of cattle. In all such paintings we get to see the genealogy of the technical, de-subjectivized arm participating in an art work, and creating a new anthropomorphic machine arm in its place, a machine-being living out its life like a graphic function.

If we consider how Alexander McQueen designed his fabric we get to see the how patterns are evoked in a randomized manner – creating an aesthetics of Mendelssohnian blocks of color or pendant streams. The couture has an erotic outline but its visual fillings are generated by digitally improvised printing on appliqué. It is indeed possible to predict a digital or robotic loom which could generate shapes from the drip, in a cycle of feedback and transformation; the site precisely of a visual performativity and reflection. In *Savage Beauty* 2010 a skull gets superimposed on a manikin's face. The feedback graph, as we know, always utilizes a pattern from a data

base of impressions. The adjustments of a spray printer, or a fabric loom which could generate randomized patterns would none the less be improving on the stock of pre-existing patterns in the history of textiles but then the total effect is likely to be startling: the innovation shall not necessarily need to be a result of thought and contemplation –or as such be a product of the subjective certitude of a pre-Modernist aesthetics or art, but paradoxically it so by virtue of evolving in that instant of space. But machine-art can take various directions. Computer generated art can take us further down a surreal pathway whose potential might never have been realized by human cognition alone - given the existing levels of neural evolution. In fashion industry garments now flow out of this proto-human but artificial intelligence that represents patterns whose stock vestiges lie in the actual biological brain of the human designer but more radically in the advancing drift of an intelligent machine. The print may become more bizarre rather than beautiful in its conventional sense, like the colored patterns which are initially generated in nature for camouflage or mating protuberances.

McQueen's Highland Rape (1995-96) is a wonderful example of the impromptu pattern, the frenzy of a digitally generated blood strings here being a direct competitor of any finitely humane imagination with its narrowly conventional organic designs. Perhaps even Pollock's crazy dotted lines are transcended in the flowing twisters of the Plexiglas shows (1998-2000) which neither resembled the necessities of the catwalk, nor differed from the gameplan of a consumer oriented fashion industry.

The robotic arm has of course played a more significant role in the automobile industry, and in all other instances of the post-industrial age where painting a consumer article has been left to the perfection that only robots can achieve - with a level of precision that come to humans only by chance or stroke of luck. Indeed machines may teach us by reverse engineering that humans are also not alien to the process of motion that propels robots to execute targets.<sup>8</sup> Post-Enlightenment aesthetics has largely ignored the duration of time that is required before it is possible for an individual to generate a piece of visual information, and with so much affective content as conventions will allow. In fact the individual itself is an illusion. The individual acts with a neuropsychological baggage of equipment - hence the proposition of the necessity of duration and the engineering that make artistic creation possible at all. The creative process is a non-subjective, instrumental feedback engineering in which end of a product remains invisible till a point of time in which intervention ceases for itself, to leave behind a visually executed body (Bedau 395; Correia 795).

The great sculptures of the Renaissance must have been born out of a process of adjustments made across a context of visual conventions. They may be understood only in terms of the insights developed from the manner in which a robotic arm functions in order to achieve a so-called end result (Kac 65; Lin 4). Machines which function in accordance with feedback intelligence provide a norm for artistic modifications –incidentally the process is visible in the fashion industry more than in visual archetypes like

painting or even photography, unless the latter undergoes alteration and enhancement with the help of multimedia. The line of demarcation seems to be clear. Machines have the smartness that humans have been using from its Acheulean and even earlier pre-historic phases. Now that they can function like automatic creators they can also reveal the secret technology of aesthetic reproduction, unlike in Descartes or Kant's allegories of the spirit, in the methods implicit in the spirit of that allegory.

- 1 In, what we appear to need are art practices that adhere to the urgencies of the nonhuman, and first and foremost, that means that we have to refashion what we have in mind to do when we invoke 'description'.
- 2 Casado Navarro, Arturo and others. *El Arte Mexicano. Arte Contemporáneo*. Volume n.13. SEP, Salvat. Querétaro, México: 1986
- 3 In painting, sculpture, in all the Visual Arts, in architecture, in the layout of gardens, as they are fine arts, drawing is essential, and in this, the basis of all the provisions for artistic taste is not what recreates feeling, but what pleases for its form. Kant, Immanuel. *Critical judgment*. Collection Austral. Espasa Calpe. Madrid. 1990.
- 4 Kuspit, Donald. *El fin del arte*. Aka. Madrid: 2006 p. 60
- 5 <http://www.tate.org.uk/servlet/ViewWork?workid=25&tabview=work> (From the display caption April 2004).
- 6 <http://www.artnet.com/magazineus/features/kuspit/kuspit9-17-07.asp> Rebecca Horn, *The Bastille Interviews II*, Paris 1993
- 7 Marcuse, Herbert. *Eros y civilización*. Edit. Ariel. Barcelona, Spain. [1953] 2003. p 40
- 8 Leonardo da Vinci for onemay has anticipated the mechanics of automata in the *Codex Atlanticus* (Moon 18).



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