Artist’s experiment and scientific experiment: the “provability” and creative distinctiveness of an artwork

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Abstract

I would highlight one more parameter encountered in art: creative distinctiveness and creation of a “trademark”, "personal style". This is the use of a common visual element or theme that makes the artist and the art recognizable, distinguishable. A “trademark” can also be created for substantive or commercial reasons. The question is: to what extent do we see this "trademark" in technological art and hybrid art approaches? Works by Eduardo Kac, Heather Dewey-Hagborg, Thomas Feuerstein, Paul Vanouse, Dmitry Gelfand and Evelina Domnitch, Julius Popp, Timo Toots are discussed.

Keywords

Hybrid art, Artscience, Bioart, Installation, Generative Art, Computational Creativity, Interactive Arts.

Introduction

If we examine the category of hybrid art, questions about “provability” and verifiability arise. How true are they, aside from being compelling artworks?

The problem is that artists create works that are so complex and technically opaque that it is not possible to evaluate the work’s technical structure without specialized skills or technical instruments. An artist’s work as an artistic statement cannot be refuted without an expert analysis.

An artist’s experiment is distinct from a scientific experiment in the sense that provability is not the main consideration in art. The finding of the artist’s work is presented as a visualized, digitized or objectified position. Its truth-value is confirmed or disproved by art-critical text. It may happen that subjective, non-true, “bluffed” art work that is based on scientific knowledge takes on a value in social discourse, having something to say to the public or in the art context in an original way.

An art-critical text accepts or disputes a work. But a critic may be just as misled as the viewer. A critic may deem as truth whatever the artwork presents through the artist’s “mouth.” The chain reaction of acceptance that comes about as a result makes it pretty much automatic that ordinary viewers will accept the value of the work.

If the work is declared “false,” fraudulent, this could have the same significance than were it to be deemed true. In the case of art the most important thing is whether it “works” – does it generate a response and interest, and not leave viewers ambivalent. If projects in science can be distinguished as either true or false, in art truth can mean that it functions in terms of art communication. On the other hand, a work that does not generate feedback, and as a result is invisible – even if the assertion it makes is scientifically true and correct – may be false.

I would highlight one more parameter encountered in art: creative distinctiveness and creation of a “trademark.” This is the use of a common visual element or theme that makes the artist and the art recognizable, distinguishable. A “trademark” can also be created for substantive or commercial reasons. Considering that achieving distinctiveness became a consistent artist strategy in the visual art of the 20th century, the question is: to what extent do we see this in technological art and hybrid art approaches?

Works that require specialized competence

Works that require specialized competence are ones that must be evaluated by a specialist in a technology or profession in order for its truthness to be validated.

Eduardo Kac’s “Natural History of the Enigma” (2003/08) involved a protein produced by Kac’s genes in petunia leaves. In a private conversation with the biologist, I learned that it was not possible to interlace plant and human tissues. I could ask whether I would be able to distinguish the “edunia” created by Kac from natural petunias.” A biologist might be able to do so. As an art observer, I am completely within my rights to agree or disagree with Kac when I see bio-art-manipulated plants that do not differ to any notable degree from the originals.

Thus the viewer cannot prove without additional technology that Kac’s work is what the artist claims it to be. The question mark on whether the work is true or not is, in fact, what constitutes his or her “artistic truth.” This is so even if it remains just a conceptual project, a proposed idea for a possible future work.

Looking for counterarguments, I happened upon the blog of Danny Chamovitz (professor of molecular biology and plant ecology at Tel Aviv University since 1996), who believes that Kac’s “Enigma” is not a “hybrid” but 0.003% Kac and 99.997% petunia (he sees the term hybrid as more biology-based; it has a somewhat different shade of meaning in art). [1]

In his writing, Chamovitz refers to the fact that plants have genes (BreA and Cfrt), that are shared by humans,
and thus all plants are “plantimals” – the word that Kac used in his project. We could also say that people have genes (Det1 and Cop9, which are necessary for photomorphogenesis) and these are also shared by plants – could we be viewed as “aniplants,” then? [2]

To what extent can laymen viewers be fooled? The question is about the possibilities of innovation and novelty in art as a whole. In a situation where art (and even innovative technological art) has exhausted many of its possibilities, artists are gravitating to adjoining specialities, harvesting ideas and bringing them back and thus refreshing their work. The critical discussion is centred on the result and the question of whether new meanings and discussions arise. If they do, the crossing of various fields and hijacking of ideas has been productive. If not, then it is just a simulation of innovativeness and the emperor is wearing no clothes, as it were.

Heather Dewey-Hagborg’s “Stranger Visions” (2013) deals with genetic tracking, which makes no bones about the fact that the portrait generated is vague, conjectural and imprecise (Figure 1). The work raises the question about whether genetic tracking is possible, something we could fall victim to unwittingly. [3]

In the case of Dewey-Hagborg’s project, vagueness and conjecture is an overt part of the work. For instance, people could not be ID’d in reality based on their portraits. Her artwork contains social, technological and scientific commentary - essentially that the technology in the future will be better and allow the owner of genetic material to be determined with portrait-like accuracy.

She writes: “Stranger Visions” is meant as a provocation, a confrontation with the viewer containing the possibility that someone can analyze DNA and identity on the basis of a footprint he has unintentionally left.” [4]

This example does not hide the fact that the project is limited, insofar as the result – 3D portraits – is vague in spite of the fact that the state of the art technology is used. All of this is completely acceptable when placed in the art context. We could ask whether a “vague” result would be acceptable in science. Likely not, and this would expose the different tolerance in the art and scientific fields have with regard to accuracy and verifiability.

A work by an Austrian artist, Thomas Feuerstein’s “Pancreas” (2012, glass, brain cells, steel and technical equipment, measuring 230 x 800 x 200 cm) was executed at the Innsbruck Medical School radiotherapy and oncology radiation department (Figure 2). The author writes that the process-based sculpture “Pancreas” transforms books into sugar (glucose), which feeds people’s brain cells. [5] Pancreas is a pataphysical machine that uses biotechnology for translating books into material and flesh. [6]

Feuerstein’s project does involve scientific equipment and convincing manipulations, but the goal of the process – feeding a “brain” – is handled as an artwork, sculpture, and installation. This makes the solution playful as a whole, something witty and ironic, but in any event, only a half-realized scientific experiment and moderately interesting artwork, or so it seems to me. The possibility of producing glucose from cellulose might seem novel to a layman, but not to a specialist.

The projects by these three artists – Kac, Dewey-Hagborg and Feuerstein – have in common a use of scientific technology, but the result is vague or half-realized. It is impressive that the projects were executed, but it is not enough for critical observers and those interested in innovation.

Figure 1. Heather Dewey-Hagborg, Stranger Visions, Self-portrait Based on mtDNA, Ancestry Information Markers and 50 trait specific SNPs describing gender, eye color and detail, hair color/baldness, hair curliness, complexion, skin lightness/darkness, tendency to be overweight. © http://www.deweyhagborg.com

Figure 2. Thomas Feuerstein, PANCREAS, 2012 glass, brain cells, stainless steel, technical equipment, 230 x 800 x 200 cm biotechnological realisation: Thomas Seppi, Department of Radiotherapy and Radiooncology, Medical University of Innsbruck. © http://thomasfeuerstein.net/50_WORKS/75_LABORATORY/72_PANCREAS
Creative distinctiveness and the signature of technological artists

To what extent does an artist’s “creative character” and “individual signature” manifest itself in artscience and hybrid art?

We know how the artist’s signature was fetishized in 20th century art, which has been critiqued and which artists have attempted to “overcome.”

Let us look at examples that can be categorized as artscience and hybrid art.

In his works “Latent Figure Protocol” (2007-09), “Ocular Revision” (2010), and “Suspect Inversion Center” (2011-), Paul Vanouse has consistently pursued an interest in DNA analysis themes and has varied them using different ideas and visualizations. [7] In his work “Latent Figure Protocol,” he calls the objectivity of DNA tests into question and shows how to create analogous forms using a synthetic plasmid. Critical commentary is related to the risks related to assigning credibility to DNA tests. Other aforementioned works are similar to an experiment installation in the sense of the hardware and software used. Vanouse operates within the bounds of a recognizable “trademark,” as an artist DNA tester. With “Latent Figure Protocol,” the result is perhaps the most like a traditional artwork, and most accessible to the general public. It deserves to be mentioned that the installations are performative, with a certain time and public participation necessary for execution, the questions and answers thus provide an additional dimension and educating the audience is not just of passing importance.

Dmitry Gelfand and Evelina Domnitch create environments that can be perceived and grasped with the senses, uniting physics, chemistry and computer science with an unusual philosophical practice. [8] The installations are characterized by the dimension of mutability, they are performative.

“Camera Lucida” (2003) is the quintessence of this quality, it bombards a gaseous environment with ultrasound waves to create sonoluminescence. [9] The heat of the bubbles that burst in this environment are almost as hot as the Sun. Before the viewers are taken to the installation, they stand in total darkness for five minutes so that their eyes can adjust, as the art is otherwise almost imperceptible. The authors themselves argue that too little attention has been paid to this phenomenon in physics and chemistry, hence their interest in an ephemeral and audibly generated visual environment.

Their works “10000 Peacock Feathers in Foaming Acid,” (2006), “Sonolevitation” (2007), “Hydrogeny” (2010) and “Memory Vapor” (2011) all involve delicate physical, chemical and acoustic processes that are reminiscent of a scientific experiment balancing on the border of credibility. To the viewer it sometimes appears like a trick but that makes the effect all the more captivating, and even specialists are convinced.

The authors’ fragile experiments is the “signature”: science experiment-based and imperceptible, fleeting events; participation in them is a performative ritual that becomes an esoteric performance.

The German artist Julius Popp makes original and creative use of technology to create projects that transcend artscience. He has three project series: bit.series, macro.series and micro.series.

If we take a closer look at the three works “bit.code” (2009), “bit.fall” (2001-2006) and “bit.flow” (2008), the first thing we see is the name as a trademark. The works are about the frequency of use of words on the Internet and deal with displaying them through various visualization media. The installations are part of the same family in the visual sense.

In “bit.code” the viewer sees black and white moving plastic strips on the walls, which from time to time form words. [10]

In “bit.flow” we see fluids of different colours being pumped through plastic hose; they occasionally form graphic images – words. [11]

“bit.fall” for its part is a curtain of falling water on a dark background, [12] where a computer-controlled water diffusion system allows drops to fall with perfect timing so that over a fraction of a second, we see the words that appear most often in news sites. [13]

The author calls the work a net-based installation.

“The water droplets are like building blocks, like bits that are used to form information. These minute information components are just as ephemeral as time, which our media-centred society needs to grasp, exchange and update information.” [14]

No matter how the artist accounts for the work and the critics’ reviews, the “bit.fall” installation is a direct hit: it is vivid, captivating and popular. No explanatory texts or analysis must be read to understand it – it works with an immediacy that needs no intellectual filter.

What Popp’s installations have in common is that they use words, are controlled by a computer algorithm and feature online text search.

Conclusion

There are other examples from Estonian artists as well – such as Timo Toots’s ID card or the document-reader-based installations “Autahvel/Hall of Fame” (2009) and “Memopol” (2011). [15] Taavi Suisalu’s “Epicenter” (2010) harvests real-time text from 30 news sites and displays it in the form of a minimalist screen installation in conjunction with an audio environment. [16]

These projects also demonstrate what I described earlier: web-based text generation and discernible interaction mechanism.

Returning to the assertions I made earlier, such the problem of specialized competence, which we need to perceive technical artworks and creative distinctiveness and the artist’s “signature,” we see what we could also see earlier, in the 20th century.

The problem of specialized competence does not only exist in technological art but in other art forms where the
viewer is expected to be educated and have a more in-depth understanding of the work. The viewer must be aware of games revolving around the materiality of the art, the nature of the work as an object and the ideas that led to the specific artwork – after all, it does not exist in a vacuum, but in a cultural and temporal context.

The examples of arts/科学 detailed in this essay are a critical example of a situation where only specialists – not to say scientists in a very arcane field – are capable of gauging the trueness of the works. The artist generally does not create his or her works for such specialists; they are intended for the layman, who is sometimes hoodwinked. But this situation imposes quite a high competence requirement on the audience and the critic, the need to be an expert not only in the art process but in the field of the specialized science which informed the creation of the work.

The projects by Eduardo Kac, Heather Dewey-Hagborg and Thomas Feuerstein required scientific expertise and readiness on the part of viewers to deal with technologies that are not exactly commonplace. But all of the projects were, in a sense, unfinished, playful, disputable and questionable in the sense of the visual elements.

Nevertheless, they received recognition from the conceptual viewpoint. Creative distinctiveness and artist’s signature in technological art are presented here as a provocative question that I have tried to answer briefly through examples of art.

Here as well, the artist is bound by the deliberate and intuitive games that work not only in art but in human culture more broadly: to make oneself visible, one has to identify and define oneself with media and topics. We see this in the case of Paul Vanouse, Dmitry Gelfand and Evelina Domnitch and Julius Popp, who use definite themes, technologies and recognizable rituals in the performative sense. The authors have aspired to a certain style, visual distinctiveness, comprehensiveness or methodological uniformity. As a result, we can describe their projects using words previously used for museum and gallery art. We also see that although the art changes in some respect, recurring universal principles come up, which the artists observe and which also works from the standpoint of the audience.

References

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Author Biography


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