

I.O.P. I.E.D. (Inside Out Printer Improvised Explosive Device)

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Abstract

From 2008 to 2010 the aesthetician Jesse Boardman Kauppila created a series of aesthetic experiments, "Aquatint Explosions." These experiments were designed to capture the violent experience of an explosion. These experiments failed.

Violence and visual art are perceived differently. Representing violence through art is difficult if not impossible because art abstracts violence. It may, however, be possible to get the viewer to reflect on this process of abstraction.

Commercial technologies are designed to conceal these processes of abstraction and aim for a seamlessness which can be used to create, manipulate, and "enable" consumers. For the "Inside Out Printer Improvised Explosive Device Project" it was hoped that an alternate narrative for understanding the abstract systems which govern our lives could be discovered.

Using a printer hack, toner was exploded onto glass plates. Photographic prints were then made from these plates. These prints were analyzed.

Through re-inventing digital technology

1 Introduction

Understanding how we perceive the world around us is critical in the world today.

This engagement comes through the use of materials, technology, and imagery that the viewer understands at least on some level. This new project I.O.P. I.E.D. engages the viewer by

I hope to explore similar issues. I have, however, re-evaluated that

These prints are directed towards the effect of an explosion on a plate which is then printed and interpreted by the viewer's eye. The relationship between the explosion and the viewer's eye is interrupted by the

. Whereas a photograph is seeking to mimic the way in which light is reflected into the eye in a particular situation, no parallel process occurs with these prints. There is only the event of the explosion and the evidence of the explosion left by the results of the explosion on the plate. A parallel process would mean exposing oneself to the explosion.

This new experiment "I.O.P. I.E.D." (Inside Out Printer Toner Improvised Explosive Device) is used to create abstractions

Francisco Goya mastered a new technology which he used to quickly create his "The Disasters of War." This series of prints is one of the most powerful anti-war statements ever created. The technology: aquatint.

To create an aquatint Goya used a box filled with powdered resin that could be spun like a hamster wheel. After spinning this box, the resin would slowly settle at the bottom of the box. A copper plate was placed inside this "aquatint box"

to collect an even dusting of resin. The plate would then be heated and the resin would melt and adhere onto the surface of the plate to create an acid resist. A plate so treated and then etched would produce an even half tone when printed.

While quick and easy this technique did not come without its dangers. The spinning of the aquatint box could create sparks that would ignite the volatile resin dust. This would result in a devastating explosion. Similar explosions are known to take place in grain silos, mills, and coal mines. These dust explosions were demonstrated on the PBS Nova program, "Kaboom!" In this TV show a scientist explodes baking flour by sprinkling it down a tube that has a lit candle placed on the bottom of it. Flour explosions were further explored by Jesse Boardman Kauppila at West Barnet Middle and Elementary School and presented in their 1998 Science Fair.

Combining Nova and Kauppila's scientific research with an obsolete printmaking technology, an experimental methodology was developed to attempt to create a new mode of representation. This resulted in a series of aesthetic experiments conducted by Jesse Boardman Kauppila at Niel Borch Jensen's in Copenhagen, Denmark; at the alt.Space Network of Artist Research Groups in Malmo, Sweden; and at The Studio for Color Etching in Barga, Italy. This series of projects was entitled "Aquatint Explosions." The results of these experiments were inconclusive and further research was necessary this time employing the power of photography.

Goya was trying to capture the violence of war through a representational process that was itself potentially violent. After Goya technologies were invented to avoid the hardship and violence of the representational process. Not only were explosive-proof aquatint boxes developed, photography made it much easier and quicker to create representational imagery.

Jumping to the present day, to develop digital photos one needs not even come in contact with the noxious substances that chemical photography necessitated. For those wealthy enough to possess this technology, the dangers of the representational process has gradually been eliminated, this violence being deferred instead to the factories in which cameras and computers are made. This displacement has facilitated the virtually seamless creation of visual representations for those wealthy enough to participate in these new technologies.

Technology has made it easy to translate the world into two dimensional images. Yet it remains unclear if an easy and painless representational technology can truly communicate violence. While photos of office workers jumping out the windows of the World Trade Center, Holocaust survivors walking away from concentration camps, and the tender bathing of a deformed victim of nuclear radiation do document horrors, they simply serve as documents; recordings of events. They do little but repose the laments Goya wrote out on the bottom of prints in his "The Disasters of War:" "This too I saw."

Following the Manhattan Project another group of researchers attempted to understand not how to rip apart molecules, but how to understand a world that was, and could be again, ripped apart in such a manner. These Abstract Expressionists created their own technology to carry out their work. They intended to represent the violence and non-logic ushered in by the atomic age. But what about the logic that allowed for the creation of the atom bomb itself. Could retracing the history of technology and science provide some insight?

Scrupulous, often scientific, methodologies and the way in which these systems can be used to commit large-scale acts of violence often go un-represented or misrepresented. By starting where Goya's laments and his technology left off and using the scientific method that created the atomic bomb, it may be possible to understand the representation of violence.

2 Materials and Methods

What you will need:

- HVAC tubing and stove pipe of varying lengths and widths (cardboard works, coffee cans are ideal)
- "Trick" re-lighting birthday candles
- Tape, tin flashing, and hose clamps (to connect tube lengths together)
- Lighter
- Printer toner powder (harvested from used toner cartridges, either color or black)
- Sieve (to hold and sprinkle the toner down the tube)
- Blacksmith tongs (to hold the sieve away from the body)
- Flame-resistant gloves
- Respirator or gas mask
- Eye protection
- Pliers
- Glass plates
- Photo sensitive paper
- Threaded rod, aluminum "C" sections and angle iron, wire rope, turnbuckles, aluminum swedges, quick links, and assorted nuts and bolts (to create scaffold to hold glass plates over the explosion)

The apparatus used to create the I.O.P. I.E.D. consisted of various lengths of tube set over a lit, "trick" re-lightable birthday candle (Safeway brand for the discerning consumer). A scaffold was constructed to hold a glass plate over the top of the tube. A handful of toner was then placed into a small sieve. The toner was sprinkled down the tube and the aesthetician's body positioned so as to avoid the resulting explosion.

3 Results

As expected, the toner powder did explode and these ignited particles did project out of the tube and adhere to the glass plates. It was possible to use these plates as negatives to make photographic prints. The ability of these prints to communicate the chaotic, unattended results of scientific methodology was more difficult to determine.

It is not conclusive that combining an obsolete printing technology with scientific methodology can create a more perfect means of representation. And why should it?

Traditional camera based photographic technology was explicitly developed to mimic the way in which the human eye perceives light. These prints are directed towards the effect of an explosion on a glass plate. Whereas a photograph is seeking to mimic the way in which light is reflected into the eye in a particularly situation, no parallel process occurs with these prints. There is only the event of the explosion and the evidence of the explosion left by the results of the explosion on the plate. A parallel process would mean exposing oneself to the explosion. There is very little correlation between the effect that explosion would have on a person's body and the effect it does have on these plates. There is similarly little correlation between the effect the light produced by an explosion has on the viewer's eyes and the effect that explosion could have on that viewer.