

Drawing and Technology

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Technology is just a tool. Although digital technology is implied by this call (Drawing and Technology), I would say that mechanical technology still bears investigation in relation to drawing.

If digital translates into virtual space and electronic tools – possibilities for the future - mechanical technology equates with real space and physical tools, and carries a lot of baggage from the past. The industrial revolution is based on machines completing physical tasks more cheaply and speedily through progressive deskilling. Although deskilling is and was used by small artisans, it reaches its peak in factory production.

My interest is in deskilling as a concept and a process, and as a means to appropriately represent contemporary concerns.

How does deskilling relate to drawing?

A pencil is a tool, but drawing with a pencil isn't usually a deskilled activity. Deskilling means that the skill is moved from production or "creation" (the back end) to the set up (or front end). It does not mean that no skill is involved.

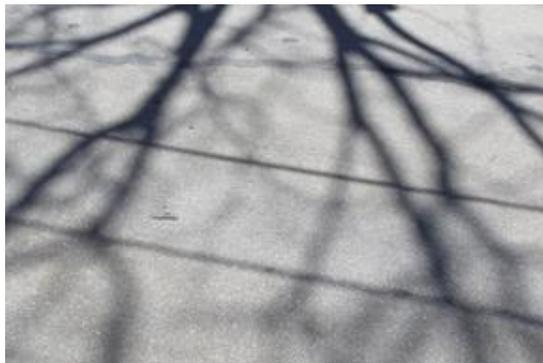
- An artist drawing in the sand (or cave) with a stick applies skill at the back end. Same for an artist with a pencil and paper. The stick or pencil is not complicated, and the artist is needed to create the complexities of the drawing as it occurs.
- A Balinese batik craftsman using a pre formed tjap or block demonstrates a situation where skill is applied at the front and middle of the process. The pattern is devised ahead of time and the block created, then the craftsman (who may not need to know how to make the block or devise the pattern) uses skill in manipulating and applying the block. This process hugely speeds up the creation of a complex pattern by someone with a different set of skills.
- A fabric factory using an automated rotary screen printing press applies skill fully at the front end. Skill is required in creation of the design, and to make it replicate seamlessly using complex machinery; expensive cylindrical screens must be made for each printed color, and all set up to operate automatically. The workers at the factory may use some skill in operating the machine but do not create the machine, the setup or design themselves.

In relation to drawing, deskillling translates primarily into stenciling in my work. Although stenciling can be a highly skilled operation as noted above, the use of a stencil removes a specific skill from an operation as a whole. I think:

- A drawing can be called deskillled if in the moments of creation it has not involved the use of traditional artistic skills. Although various artistic skills may operate within the process at some point – either in the idea, the initial set up or later selection of the drawing - the drawing *could* be completed by someone without those skills if they adhered to a set of instructions.
- The term deskillled can also describe something that happens automatically, or inevitably, given certain actions and conditions. For example I consider a shadow a deskillled, mechanical, automatic drawing because once the power is switched on, objects in the path of a light beam will create an image of themselves on a flat receiving surface. It's a given.
- Non-traditional processes lend themselves to non-traditional media.

Though the term “deskillled” was only applied to art by conceptual artist Ian Burn in 1981, deskillling has been used by artists throughout the modernist period and has been perceived in various ways including (briefly): it can imply that artists no longer have adequate skills or knowledge to make art, it can question the idea of artistic genius, it can be used as a means to redefine what art may be.

I am interested in deskillling as it is used in industry – ie as a tool that both replaces an artist's collection of visual information and facilitates the output of that information (in relation to image making) – but NOT used for the reasons that industry uses it, ie to replicate innumerable copies, according to market demand. In the context of this paper then, I explore the idea of using stencils and stenciling as a means to collect or provide information that can be transferred into a visual format. This changes factors within the industrial type process and opens the door to possible redefinitions of what art may be.



Still from *Drawings from the street*, 2009, 1.3 minute DVD loop

How using light as medium expands possibilities:

A shadow is a stenciled image created without skill, but it could be seen as a drawing according to traditional criteria in that it accurately translates a 3D situation into 2D format consistent with a particular viewpoint, incorporating edges and perspective. If this redefinition can be accepted, what does it bring to drawing?

A shadow or light drawing accurately describes reality but it does not create an illusion of reality. It does not always provide an illusion of depth although this can be suggested by angles that we interpret as corners, and in differing degrees of focus.



Ladder, 2020, ladder and acrylic paint, 108 x 72 x 48 inches

Unlike a traditional drawing, the light drawing (as any projected image) exists indefinitely and unseen in space until meeting with a physical object or receiving surface that makes it visible. This may occur at an enormous distance - think of the moon. The receiving surface(s) will distort the shadow image if not perpendicular to the light beam, or are curved/not flat. Though shadows record perspective information from the object itself, receiving surfaces that are more parallel to the light beam apply their own “perspective” in which the light source becomes a vanishing point – long shadows at dawn or dusk. The receiving surface may also be fragmented like dust or mist - like sunlight through the trees, the projections of Anthony McCall, or Olafur Eliasson’s *Reimagine*, 2002.

Unlike a traditional drawing, a light drawing is separate from its viewing surface and may be scaled up or moved to other locations, engaging directly with its surroundings. Light drawings can be created and removed instantly, leaving no trace. The drawing can be controlled through the power source, and introduces questions of energy, permanence, value and ownership. Any shadow created through intentional power use (ie not using the sun) involves technology of some kind.



Installation view of site specific exterior projection 2010

Unlike a traditional drawing the shadow image occurs naturally in infinite numbers every time the sun shines, forming perhaps - if we could take it in - an enormous, continuous drawing the length and breadth of a continent. Shadows created by the sun are also animated, with a time based element as they change from minute to minute with the earth's rotation. (It is understood that the means by which these events become "art" is the selection of or focusing of attention on aspects of the event).

Light drawings - either consciously created, or selected from existing situations - are not necessarily conceived by the artist according to the same concerns as a traditional drawing. Other elements within the process have an effect, and can be explored. The irrational decisions of conceptual art are perhaps built in to the shadow-forming process, as there are new or unlikely rationales available to guide the work, allowing for new outcomes.

The light drawing involves no traditional artistic skills associated with drawing, ie the collection and redistribution (via the artist's brain) of visual information. Instead the light drawing becomes simply a direct transfer, as in a photograph or photogram. So the image has not been mediated in a conventional sense, although choices made about all the differing variables could be seen as mediation.



Installation view of *Elements*, 2010, granular rutile, 120 inches diameter

Using other media:

Exploration of light drawings and more physical activities in my studio have fed each other. I used stencils with paint for a few years, finding paint “atomized” by a spray gun quite effective but after sawdust in my workshop formed the image of an electrical plug by chance I started working with powdered materials. I have been sifting powders over different objects and letting gravity complete the transfer of information. The stenciled image created this way is in effect a shadow with its initial stages compressed. The “image” exists in space for a moment until it hits the paper or ground - only inches (or less) away. There’s a certain amount of “bounce” once particles meet the surface and this can reveal undercuts otherwise shielded from the material, providing some illusion of depth. The result can be temporary or more permanent depending on whether the particles adhere to the receiving surface or are left loose.



Installation in progress, *Elements*, 2010

Stenciled images as I am using them rely on tools and physics, or the application of physical phenomena. Light travels in a straight line – and a particle drawn downwards by gravity travels in a straight line (given ideal conditions).

Deskilled drawings in relation to drawing function:

If then deskilled process can technically be seen to create a drawing and expand some possibilities within the nuances of image generation, how do the results engage with or contribute to drawing as understood in terms of function? Taking Angela Eames’ wonderful exploration of drawing as a starting point, how do these new possibilities fare against her

description of risk and smudging, of drawing as “imagination, probing and confrontation”?¹
Is the deskilled drawing as described above simply a variation of photograph or photogram?

Drawings generally depict selected information. In fully rendered photorealistic drawings not much visual information is left out, but in most value or contour line drawings only certain information is represented. The selection gets more acute in diagrams and conceptual drawings that infer activities or situations through non-representational marks. Selection allows for emphasis, and is part of the artist's contribution, or artistic mediation. The *artist* is the process in traditional drawing.



Objects from a kitchen drawer, 2009, light installation (detail).
120 x 180 x 180 inches

Stenciling with light (shadows) or stenciling with powder also records selective information – each process applies its particular physics (ie factors irrational to art) in recording only the negative space around an object. The slippage between the object(s) we recognize and what the light or powder depicts provides risk, and a sort of smudging maybe. A muddying or ambiguity at least. Stenciling does not usually achieve this or desire it. As regards shadows, they CAN be controlled tightly as in the case of conventional film, or pre-cut figures like Kara Walker's silhouettes but when shadows arise out of real objects in space there is room to alter a lot of the components experimentally. It is like using a multi-layered stencil, a spatial stencil. Creating stenciled images - physical or light based - for me includes “imagination, probing and confrontation” because though this is not intrinsic to the deskilled process, I use all these qualities in the exploration of the idea. The stencil (ie deskilling) has become a tool in the way that the pencil is a tool – it can be directed by the artist.

I think that while applying technology the artist can still practice Eames' "knowing and not knowing" and her "alert, organized and rational" approach that also balances a "continual open-mindedness". Technology – digital or mechanical – as used by the artist is guided by the particular goals of exploration and discovery. This activity adds back in the very elements that industry and intensively productive artisans have intentionally removed from the long term use of technology, instead it goes back to the research and development phase to tinker with rationales directing the outcome.

Eames says that artists and designers advocate a spirit of adventure and have an aim to "make technologies work for them". This statement applies to any technology. Of course new technology - digital, virtual space – is fertile ground for artists in the ways it potentially repositions and poses questions, and in its capacity for new representations of form, but making ANY technology do something different means becoming aware of and somehow going beyond the dominant framework within which its regular use is understood. Eames goes on to say that in making technologies work for them, artists "raise issues pertinent to all areas of visual practice, technological development and ultimately drawing as the beginning of visual conjecture".

To my mind, using processes appropriated by industry in ways that don't conform to an industrialist's goals achieves some of the above. I also think that in an industrial context, doing so is subversive, it reclaims choice for the individual - decisions about what technology will make and why – and reactivates the imagination as a gateway to endless possibilities. I see it as conceptual art practice engaging life and art - opening the door to possible change.

The contribution of process

The selection of information involved in drawing demonstrates various things, including the artist's thinking, or understanding. When a *process* is used to create an image it also selects information. The means of creating the image can supply a layer of cultural, archaeological information revealing something about itself and the era that created it – as well as the artist's thinking, or understanding in their use of the process at that time. Lazlo Moholy-Nagy's and Man Ray's early exploration of photograms *could* be seen as drawing using technology in this context. Their works demonstrate imagination and probing, they communicate excitement and discovery, as interesting drawings do, but yet their work can be understood within the histories of both art and technology.

When a process or technology becomes invisible and reveals little of itself it has not much risk left in it. Taking a digital photograph could be seen as a deskilled activity. Skill operates in the front end equipment design, the artist's selection, or post-production – ie digital manipulation (interpretation of collected data via syntax²). Coincidentally in the last 15 years there's been a resurgence of interest in photographic processes (ie deskilled information collection) in which the process is still visible and selects information in different ways, so altering the results or the framing of that information. This could be seen as the application of a non-digital syntax. For example in the 90's the artist Pinky Bass appears to

have created a pinhole camera in a bible, with the resulting images becoming significant for their situation and their simplicity or roughness. Selected information carries its own cultural archaeological coding. Process and technology are visible as representing their time and understanding.

Other aspects

Something that deskilling can add is worth noticing. There's a direct connection between the image and the object that created it, playing in to a complex system of signs and references. Ingrid Calame traces victory lap tire marks on the Indiana Speedway – her work is significant to us as having somehow touched the real, exuberant and one-off marks left by an event unrelated to art. They are the same size, they have not been translated by “too much” technology. They connect us to the real thing where as a photograph of those marks is not as thrilling somehow, it is too easily replicated, too far removed from the original. Denise Hawrycio puts etching plates under the wheels of a hospital bed – recording small movements of the bed as scribbly lines. We can only imagine what events, banal or tragic, occurred to create those marks. In these artists' work deskilled process is a means of collecting information that both stands for something, but is also a real record of that thing. I think that they are drawing, they are representing situations, but that deskilling in this case also is playing with signs. Using the object you intend to depict to aid in depicting itself means the results are directly or physically connected to the object they represent.

As Olafur Eliasson creates images of water using light in work like *Beauty*, 1993, or *Notion Motion*, 2005 I think he is drawing for all the already given reasons, but what he introduces to the equation is drawing in real time. No longer is the drawing a recording of something that was, but it is a drawing occurring right before the viewer's eyes.

Is it a bit of a stretch to think of these artists as using technology or pushing technology further? I see them as using readily available and reasonably simple technology – there's nothing really startling about it – but managing to demonstrate that there is still more to learn from it. I think this is really important.

Design and technology

The value of technology to art – and art to technology - seems to be that artists use it for their own ends, they alter the framework somehow. Back to Eames' spirit of adventure and the artists' “aim to make technology work for them”.

Technology is involved in the production of all kinds of images in the commercial world but that framework doesn't accommodate an artist's questions in a significant way. Design itself works within technology, the designer's brief is to meet the demands of industry's very fixed goals. Fabric design for example of course works unhesitatingly within formats that facilitate production – however cleverly and deliciously graphics are manipulated, and however ingeniously fashion is interpreted. Drawing, in whatever form, is harnessed in service of the market. It seems to be left to the artist to question the framework itself, and to mess with those formats.

Conclusions?

I end up with more questions. I believe I am exploring some aspects of industry and the commercial framework when I use deskilled process, and that this is a vehicle for examining what drawing can be. It is not a linear search and I can't know what I will find next but I do think it is turning up interesting connections. Developments to date suggest fruitful avenues to pursue. The potential references and links available when using process are exciting.

Like many artists I look to make art that relates or is relevant to my life and my understanding of the world. I live in a consumer society and I am more familiar with mass-produced items than I am with natural ones perhaps. Complex cultural positionings regarding products, perceived values, expectations etc are understood within contemporary society and are available to me as an artist. Our primitive core needs of reproduction and provisioning are interwoven with factory produced goods, with particular understandings directed via advertising by visual and symbolic information. The histories of advertising and fabric design alone chronicle social norms, ideals and politics, as well as reflecting technical advances and the rise of industrial production. The history of art chronicles other artists who have explored parts of this road before, adding more layers of possible references.



Drawing (oven ring), 2008, cast iron brake grindings, acrylic medium, Paper, 10.5 x 13.5 inches

Factory products also chronicle events – fashions, lifestyles, technological development, and... the incredible ingenuity of humans. Using different processes I am searching to understand possible relationships between art and technology. If I admire a mass produced object and the wonder of its achievement, it seems appropriate to describe it using ways that reflect a knowledge of factory process. By the same token I want to make drawings that relate to production formats like repeat pattern development - but without arriving at the same end product. As an artist, there are many ways I can respond to my era, with differing degrees of awareness. How can I reflect aspects of industry that have

social implications? For example, fabric production has largely been deskilled and automated but people still make clothes (in sweatshops) because sewing technology has changed little in over 100 years³. How can I acknowledge the situation where I can buy cheap goods made by people who would have been artisans long ago, but who are now pieceworkers for multinational corporations? My responses, including my approach to drawing or mark making must relate to technology – its history, its effects, its inferences - if they are to be relevant to these concerns. I am feeling my way forward in ways that for me liberate drawing as a process and make it available to me as a tool with new potential.

The idea of technology providing utopia is recognized as having failed. Technology doesn't bring anything by itself of course – it is just a tool. We have developed enormously sophisticated tools but seem curiously blinkered in our use of them, and being so deeply immersed in industrialized life it is hard to recognize that industry frames technology within a particularly narrow value system. The history of industrialization is a catalogue of profit-seeking by the few at the expense of many,⁴ and at the expense of the environment. However, in a fascinating parallel to conceptual art, a US company -Interface - has shown that small changes to the framework can make a massive difference. This company turned conventional accounting on its head by reconsidering one set of figures. By adding the “hidden” or usually disregarded cost to the environment into their profit and loss calculations they found that activities that were previously unthinkably expensive became acceptable to shareholders and stockbrokers alike. The company is still profitable and operating within the capitalist system but has made new outcomes possible. They have amongst other things, reduced their greenhouse gas emissions by 71%, when the Kyoto agreement (7%) was seen as impossible⁵.

As an artist interested in the human situation I want to engage with this kind of information. Awareness of the framework within which we base our assumptions and actions is important – this applies to drawing as much as it does to industry.

References

1 Eames, A., *Too Much Polish and Not Enough Spit (or my own attempts to eliminate excess polish and keep hold of the spit)*. Loughborough : Tracey. 2002.

2 Fratzeskou, E. *Primary Solids*. Loughborough : Tracey. 2002

3 *No Sweat: Fashion, Free Trade and the Rights of Garment Workers*, Andrew Ross (Editor), Verso Books, 1997

4 Perelman, M., *The Invention of Capitalism :Classical Political Economy and the Secret History of Primitive Accumulation*. Durham : Duke University Press. 2000.

5 Anderson, R. C., and White, R. *Confessions of a Radical Industrialist : profits, people, purpose – doing business by respecting the earth*. New York: St Martin's Press. 2009.



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Exterior projection, Heather Lewis
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Drawing (elements) in progress. Claudia Bueno
Objects from a kitchen drawer. Steve Mann
Drawing (oven ring). Steve Mann