

TOOLS FOR A BETTER VIEW

EW: Your recent show *Tetrachomat* in Bergen featured a large sequence of paintings from the *Fold* series – canvases that have been folded and wrinkled to produce a three-dimensional topography and then spray-gun painted before being drawn back out onto stretcher frames. The color gamut at once evokes both the aesthetic affect of digital imaging as well as the sun-faded ghost of analog photography, resulting in an extraordinarily seductive set of images resistant to the traditional discourses within painting. In reviewing past writing on the series I noted that the term *Trompe l'oeil* comes up quite often – though there is disagreement as to whether you are employing the illusionary technique or are in fact producing its antithesis: a topological trace of the material process of painting. Having such fundamentally different implications, it's unusual that a painting could swing so widely in its interpretation, but this strikes me as the essential point that the work raises: the phenomenological problem of the incongruity between thing and perception. Here the canvas comes to stand in for the retinal field on which the object necessarily becomes a sort of *trompe l'oeil* in the process of being perceived by the mind. In this space the image and its referent object reach a sort of equivalence.

TA: I've had mixed feelings about the term *trompe-loeil* being used to describe the *Folds*, and I've really come to embrace that. Although they fit the description in some ways, it's a bit too simple to stop there, because the term doesn't account for the fact that each painting is a representation of one or more states of a particular surface on that same surface. There is a direct 1:1 indexing that has taken place, like a tally of the depth of each spot recorded on the same spot.

It also sort of gives me too much — or at least the wrong kind of — credit. The believability of the rendering is not a result of my painterly skill, in the traditional sense. Sure, I make subjective, artistic decisions about folding patterns, color, contrast and texture, but the lines and shadows are to a large extent not contrived by me. When I fold the canvas, I can't even see—let alone control — what is happening inside the little bundle I'm making. The material wrinkles and bends internally in ways that I am not privy to until I unfold it and lay it on the ground before spraying.

The resulting image is a natural result of a system I've devised, rather than my ability to generate a convincing rendering of a scene that I've either imagined or observed. In a way, I'm “cheating” the same way taking a photograph was once considered cheating: by recording something rather than fabricating it. It's also like the photographic process in that the pigment acts like raking light, and the image is the result of a certain length of exposure to that “light”.

It's because of this that, as you rightly point out, the canvas can be a stand-in for a photosensitive surface like the retina, and there is a kind of collapse that occurs when the thing one is seeing and the surface on which the first part of seeing occurs bear a process-like resemblance. I think you articulated this better than I did just now. Your question also makes me think about memory as a kind of *trompe-loiel*. A trick of the eye wherein you “see” a reconstruction of an image.

Right, you make a great point... to me all of those cognitive abstractions performed by the brain call into question the possibility of differentiating between the source object and the mind's reconstructed object. So – to speak in more art-historical terms – I wonder if the modern distinction between pictorial and abstract image production is really a useful way to think about your Fold paintings. Is there perhaps some third term that is synthesized in the process? or is it preferable to sidestep the issue altogether and look to science for terminology external to art history?

To be honest, I think a lot about art, but I don't think all that much about art history. My mind is just on other things— topology, physics, music, feminism. I'm more than happy to have the discussion of abstraction vis a vis representation, and I've deliberately tried to calibrate these paintings so that they have a complicated position within that debate, but when I think about those issues privately I quickly drift into different territory. I think about how remarkable it is that we can look at say, a printed image and see it as meaning something other than “flat surface with some shapes on it”—something totally abstract. Then I marvel at the fact that representation is even possible, especially inter-dimensional representation. And then, I might think about how other animals experience representational imagery, and ask myself what a dog thinks when it looks in the mirror. Does the dog have a sense of self? Does it know that the image of a dog is different from an actual dog? I spend a lot of time thinking about other types of consciousness being inside of other people's or other creature's brains.

The issues of perception is a recurring theme in your work; in fact the title *Tetrachromat* refers to the ability of certain animals to detect an additional color beyond the human eye's normative three (Red, Green, Blue). As I understand it, there is also a theoretical possibility that certain women may possess this trait. You mentioned feminism just now so I'm curious if this might have been one of the considerations for the title of your show - maybe you could talk a little bit about how this plays out in your practice...

That's right, some women are tetrachromats! The genes for opsins — the retinal pigments that react to color— are located on the X chromosome. This is also why most color blindness occurs in men. I didn't arrive at my fascination with tetrachromacy by way of gender-political interests, but I was certainly tickled by the fact that women have the potential for special sensitivity and complexity in their vision. Not that I want men to miss out!

I've never been asked to articulate the connection between my thoughts on feminism and my work, but here it goes: I suppose I take a similar approach to these things and it boils down a will to cultivate active and adventurous imagination. I think men should spend time imagining that they are women and women should spend time imagining that they are men. We should use our minds to put ourselves inside one another's bodies and experiences and actually devote some serious effort to getting better at doing so.

On the more personal side, I feel out of step with gender norms in a lot of ways. All of my relationships have been with men but I don't feel represented by the word “straight”. I think deep commitment to another person is beautiful, but I have a political problem with marriage and think the institution should

be done away with. I think monogamy should be a choice, not a default, and children should be raised by whoever is willing and able to love them —gay, straight, transgender, a group of people instead of a couple. I don't think sex should determine one's strongest commitments or obligations, and I'm not really sure that it should be considered a necessary extension of romance.

Speaking of romance, there's an intriguing continuity between what you're saying and one of the texts you excerpted in the catalog for the Bergen show: Flatland, the 19th century mathematical satire. Appropriately enough the subtitle of the original novel is 'A Romance of Many Dimensions!'; which, besides being a treatise on extradimensionality, also overlays a geometric logic to class and gender stratification - all the while acknowledging the inevitable subjectivity of a figure's position within the limited horizon that defines the Flatland world. In a way that seems to have resonance with your art, mathematics offers a coordinate system onto which the subjectivity of the body - be it gender, sexual orientation or color perception - is drawn or made visible. Implicit in this model is the possibility that a person might exceed their own subjectivity given the right instrument or perspective - does art serve this function for you?

Absolutely. In a lot of ways this is the motivation of the show — to make tools that facilitate a better ability to imagine something that might be perceptually unavailable: a four-dimensional color experience, and by extension, a four-dimensional spatial experience. One of the biggest revelations I had in the research and making of the show was that we should not necessarily conceive of these things as “beyond” our existing perceptual limits, but rather as nestled in between the experiences we already have. The tetrachromat's additional color receptor is most likely in the yellow range — between the red and the green. It's not beyond the typical visible spectrum, but within it, and would express itself as an ability to distinguish between colors that look the same to us trichromats. It's more about an increased richness and sensitivity to nuance than it is about breaking wildly out of the boundaries. This is why a lot of the work in the show is monochromatic— woven with unbleached cotton canvas. After thinking about it for more than a year, I decided that one of the best ways I could gain a little access to the tetrachromat's experience would be to work at making variety occur using one color (or sort of non-color). For me this is also the reason for meditation — not to exceed my subjective self, but to cultivate a richer and more finely-grained sensitivity with the limited mind I've got on hand.

Using spatial depth as a means to render a 4th dimension in color space has a similar logic to that other model of color that has become so common to us by way of Photoshop: RGB colorspace - the definition employed by computers, often rendered as a three dimensional cube. And, of course, you've appropriated this for your series RGB Colorspace Atlas, giving it a very real, even weighty physical presence. How do you think about the effect of digital culture on art or rather, digital-as-sculpture?

I don't think as much about the culture that takes place on digital media as I do think about the shape and texture of the technology itself. Of course these things are related, and the social aspect of that is interesting, but I tend to come at it from a technical perspective. In my view, the defining feature of digital language is that it quantifies whatever is put into it and makes it granular. Ambiguity and fluidity are represented by strategically arranging unambiguous and discrete units. When quantifying color digitally, people had to ask what a suitable unit size would be, and as I understand it, in the standard digital RGB space, there are 256 possible values of each primary, so you get more than 16 million discrete colors.

I personally I love the RGB cube because of its elegance and relationship to the way we perceive space. Each of the three light primaries— red, green and blue— is assigned an axis , and the cube is essentially defined as the area within which the values for red, green and blue go from 0% - 100%. At the origin, where all three values are zero, there is no light and so that corner of the cube is black. At the opposite corner where all three values are a 100%, there is all light and so that corner is white. The other six corners of the cube are the light primaries and light secondaries, which also correspond to the process primaries - cyan, magenta and yellow.

A lot of mathematical color models predate digital technology. Folks have been working on this type of thing since Newton first published published Opticks. Newton, in fact, attempted to draw a rational relationship between harmony in sound and harmony in color. Many people have tried to do this because the visible spectrum is approximately an “octave”, where the highest frequency is half the lowest frequency. So far, mapping light onto sound hasn't been all that useful, but mapping it onto space has been, and it's not just the RGB cube. Probably the most famous spatial color model is the Munsell system, which started as a three dimensional colorspace established in the early 1930s. The shape of this color solid is roughly cylindrical, with a grey scale running along its vertical axis, the various hues arranged radially around it, and a gradation of chromaticity (similar to saturation) defined by the space between the axis and the full saturation of the colors at the outer surface. There are also models that use color opponency as an underlying structure, and there are models that exist in more than three dimensions. Since I was trying to figure out a way of entering the tetrachromat's colorspace, which would be four dimensional, I thought one way would be to render a colorspace based on trichromatic vision theory in such a way that you could manipulate it, crack it open and move around it from outside the space.

You told me earlier that you've been at the Smithsonian in Washington DC researching various historical color models - could you say a little more about what you've been studying there? Have you made any exciting discoveries?

Yeah, I had a fellowship for two months this fall at the Smithsonian researching tetrachromacy, color models and color in general. It was great! I think I came away with a more complicated notion of what seeing color really means. One thing that I kept running up against is that these rational models don't take into account the context in which a color is seen. Or rather, they have accounted for it by defining one standard viewing condition and a standard viewer, which does help us organize the spectrum but it doesn't necessarily get at how we are experience each color. Joseph Albers' Interaction of Color does a great job of proving that a color's neighbor plays an extremely powerful role in how a color is perceived. So much of seeing happens in the brain, not in the eye, and the understanding of that system is still a work in progress.

I applied for this fellowship not knowing how much research had been done about tetrachromacy. I'd been somewhat obsessed with it, I'd made a whole show about it, but when I started my research on the subject a few years ago there were only four or five articles available to the general public online. When I got to Washington and had access to academic science journals for the first time, I happily realized that there had been many studies on it. I also learned that there had been research into correcting color blindness, and that the success of those experiments implied an ability to induce tetrachromacy in people who have the right genetic makeup. It would be a risky and terrible process that no one is ever going to spend this money

to develop, wherein you'd have a virus injected directly into the eyeball, but just the theoretical possibility excites me. If it was likely to work, I'd probably sign up.