Blindness and Photography:
Recognition vs. Excavation

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They say that “seeing is believing,” and for the majority of sighted people, it's true. We trust our lives to vision and perception. So accurately does sight appear to recreate the external world that we implicitly rely on it to function in nearly every waking moment. What goes unsaid after the infamous phrase is that vision is not a direct copying process. Understanding how our eye acts as a lens is not a solution to understanding how mental images are created from the information gathered by our sensory inputs. The mechanical processes, that are so successful in transmitting light onto our retinas, are just the first step. The light that lands on our retinas still has to be transmitted to and interpreted by our cognitive processes. Those processes in turn create our internal aesthetic representations of the external world and are the basis for sighted experience. It is my intention here to stress that internal aesthetic experience is fundamental to human development, especially for those without mechanical vision. Engaging in the work created by blind artists can help unlock that internal experience and connect it to the visual world.

One simple way to demonstrate the dominance of cognition over mechanical sight is to engage with any number of optical illusions. One such illusion, the Troxler Effect (discovered in 1804 by Ignaz Paul Vital Troxler), demonstrates the adaptation of neurons in the visual system to different sensory inputs, or qualia. In this case, a stabilized image on the retina induces a certain lack of peripheral vision when presented with patterns and motion. The brain adapts to the motion, creates a hierarchy of importance, and fixates on the stabilized/centralized retinal image while omitting some information being presented in the periphery. This is direct empirical evidence that what we see is not in fact always a direct copy of the reality in front of us.

To approach the idea of blindness in art and photography, we first have to understand some of the conditions that lead to a lack of mechanical vision. Among the
leading causes of blindness today, excluding accidents, are cataracts, retinitis pigmentosa, macular degeneration, diabetic retinopathy, and glaucoma. All of these conditions and diseases are generally associated with the mechanical aspects of vision. The fields of neuroscience and psychology are better equipped to address problems with cognition and perception than the biological sciences, which have played an integral role in defining these causes of blindness.

Cataracts usually develop over time, but can also be present and prominent at birth or in early stages of childhood development due to genetic deficiencies. Protein clumps build up in the lens of the eye and obscure the transmission of light. Someone who suffers from cataracts can usually differentiate between high and low light levels, but is presented with an extremely blurry image, like that of a fogged mirror. Cataracts generally worsen with age. Retinitis pigmentosa (RP) is a condition primarily affecting night vision, by way of rod and cone damage. The onset of this condition is usually caused by genetic defects as well, and involves the destruction of light receptors on the outside of the retina. Nearly 90% of the “photo cells” on our retina process greyscale images, and the center 10% deal with processing color. When the outer black and white cells begin to degrade, all vision is lost around the perimeter and patients with RP gradually experience increasing tunnel vision as the disease worsens. Macular Degeneration (MD) is also a disease related to the retina, although it occurs primarily in the center of the retina, over and around the macula, rather than on the periphery. There are two types of macular degeneration: wet and dry. Wet MD is similar to retinitis pigmentosa, in that excessive or burst blood vessels near the retina can cause pressure-related detachment of light cells from rod and cones, rendering them inoperable. The pressure pushes cells up and away from the rod and cones, destroying their connection, so that even when all are functional, the information received
is not transmitted. Dry MD involves the direct degeneration of photo cells, and happens independently of excess retinal pressure. Both types can obscure central vision completely, and are the leading causes of vision loss for persons over the age of 60. Diabetic Retinopathy also involves the swelling and/or bursting of blood vessels, but is not limited to a specific area of the retina and often involves improper growth of additional and excessive vessels. Glaucoma involves damage to the optic nerve, which carries retinal information to the brain. Excess pressure is built up within the eye itself and is directed onto the location of the optic nerve, which in turn diminishes its ability to transmit accurate information.

Having established the causes of many prominent forms of blindness, and with the discovery that internal aesthetic representation is at least partly a product of consciousness rather than purely mechanical, it seems pertinent to discuss the work of Barbara Maria Stafford and her approach to the study of consciousness. Stafford is a writer and speaker with numerous professorial experiences at the University of Chicago, Loyola University, and the Georgia Institute of Technology. Her current work centers around the connection between the visual arts and the biological sciences, emphasizing the need for a re-engagement with images and art in a new way. She promotes a cross-disciplinary study of the arts and images by fields ranging from neuroscience to art history, and proposes that we may learn something new about the origins of consciousness if we approach images in a non-traditional way.

Part of the goal of Stafford's work appears to be the establishment of a unified theory of visual experience, one that could perhaps allow us greater insight into the nature of sight and perception. These insights could then ideally lead us to a greater understanding of the nature of consciousness. She doesn't advocate for a completely objective view of
vision and perception, but rather a collective expression about what we know on the subject of vision and culture, shared across any and all disciplines that engage the visual realm. “How does the brain produce a cohesive consciousness from physical substances what waft, caress, vacilate, shimmer, or drift outside of us and yet manage to touch and alter us internally?”¹ she asks.

Stafford ultimately proposes that it could be possible for the mind to exist outside of our notion of the body and self, having its own place in the universe just as gravity and time do. Although cutting edge science has not yet exposed the mind as either a set of epiphenomena or something independent from the physical world we can observe, Stafford suggests that by working together in harmony the arts and the sciences could provide a new way of thinking about our perception of aesthetics. She goes on to address the pictorial nature of consciousness by focusing on our “vivid internal picture of the external world.” When we experience visual stimulation, neurons fire in the brain in certain groups and patterns, and they do so across different regions simultaneously. The question we look to neuroscience to answer is how these seemingly independent neural activities can form a cohesive internal representation of our external world. If fine art can be viewed as an accurate representation of the culture it was born out of, and that culture is dependent on aesthetics, perhaps re-engaging art with new methods of analysis can help us better understand the foundation of aesthetics and subsequently our minds?

In terms of cultural construction, our internal aesthetic representations of the world are rich with influences from sources other than the direct mechanical interpretation of light landing on our retinas. The way we see, and the way we use context to help us understand what we see, changes as time and society progress. Egyptians certainly did not

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actually see hieroglyphs in the external world, but their culture dictated that they represent the things they saw as such. Applying this concept to sighted photography exposes the cultural construction of what we collectively think a “good” picture should look like. We know they should be sharp and in focus, exposed properly and composed according to aesthetically pleasing principles. We know that faces are more interesting than backs of heads, and we know distracting elements serve to take attention away from more important elements in the frame. The truth in all these notions springs forth not from the depths of existence, but rather they emerge gradually as culture is exposed to developing technology, which in turn continually changes the way images are produced and consumed.

One prime example of this cultural training is the development of a new artistic genre, tentatively named the “New Aesthetic” (NA). This term is a blanket term to describe contemporary art that reflects digitally and technologically-based culture. Just as Stafford says we look to recreate our external aesthetic representations back into the external, artists of the NA seek to re-represent the digital influences on society back into the external “real” world. At the start of the NA, artists often incorporated pixelated, screen-generated imagery into their works, and the movement has now evolved to encompass any number of different aesthetic and conceptual references to digitally-driven culture. Many artists are also of the age that they are becoming nostalgic for the 8-bit Nintendo culture that they grew up in, and are increasingly aware of the “hyper-reality” that is developing out of ultra realistic computer generated imagery. The deployment of pixelated images both stands in opposition to the proliferation of the digital, and accepts it as inevitable, simultaneously. Even though other artists from the past have created images reminiscent of this new aesthetic (see Dali's *Lincoln in Dalivision* and Picasso's *The Student*), it wasn't until digital technology became prevalent in mainstream culture that those paintings took on new
understanding. This new meaning is a direct result of the familiarity of a certain style because of increased exposure. The average amount of time contemporary society now spends in front of screens seems to be exponentially increasing, and this constant exposure is dictating the way culture interprets other images immensely. Just as the Egyptians represented life in hieroglyphs, we are now representing reality in the form of pixelated, digital imagery. One hundred years ago, a picture from a balloon of striped, multi-colored tulip fields would appear as just that. Now, those same fields instantly take on a recognizably digital aesthetic, appearing that the fields have been “corrupted” somehow like an image upload gone wrong. The New Aesthetic represents the transition to an increasingly digital world, and that transition is marked with a notable change in collective perception. We see what culture and evolution want us to see, our cognitive processes try to make sure of it.

With blind photography, the artists are not relying on any of these cultural, visual constructions and structures that guide the sighted back into Plato's cave. This offers us the potential to approach and re-engage with their images in a new way, one free from the preconceived notion of what a proper photograph should look like. Blind photographers such as Evgen Bavcar stress their images as important representations and recreations of their own imagination: “That is to say, my gaze exists only through the simulacrum of the photo that has been seen by someone else.”2 Rather than looking for something to capture in the world like many sighted photographers do, many blind photographers aim to recreate their internal aesthetic back into the external. If we are to successfully interpret these images under new light, one must approach them in a new way. This could be a key to helping us understand the origins of consciousness, Stafford says.

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In her article *The Evidence of Sight*, Julia Adeney Thomas addresses the photograph's dual capacity by examining two radically different ways to process and interpret images, one focusing on the pre-cognitive aspects of visual perception, and the other which engages analytically with the cultural content of the image. This approach seems to satisfy Stafford's call for a multidisciplinary collaboration towards understanding consciousness through art and visual perception. Ultimately Thomas links her methodology to photographs and “the way historians use them,” but it is my intention here to show that the application of these methods can be beneficial in analyzing certain contemporary images in a new way. Thomas opens with this line in the abstract:

“Photographs seen as discursive objects may provide understanding of past political and social relations, but we lose any assurance that we can recognize and intuitively understand their subjects. In short, we risk blindness.”

Of course the blindness she speaks of is not the type of blindness caused by cataracts or macular degeneration, but a theoretical and/or conceptual blindness that addresses the way the sighted see. Thomas proposes that we will always be unsatisfied with the knowledge gained from photography, and “because the evidence of sight is simultaneously sensuous and cognitive, it appears to promise complete satisfaction, but delivers instead two different... types of perception.” This appears to be a very insightful look into why we seem to be so drawn to aesthetic spectacle, and why we continue to perceive images as truthful in the face of all evidence to the contrary. Thomas breaks down the consumption of images into two categories: recognition and excavation, which can potentially expose the dual capacity of an image to both lie and tell the truth at the same time.

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Michel Foucault was a post-structuralist who was primarily concerned with creating and engaging in discursive formations. However, according to Thomas he also acknowledged “the enigmatic treasure of 'things' anterior to discourse,” and in doing so acknowledges a pre-discursive reality. This reality is represented by the recognition stage of image interpretation according to Thomas, and deals primarily with the pre-cognitive perception of similarity and difference. This is the evolutionary function that kept us alive on the plains of Africa, when our primary concern was food and survival. The article points out that current research suggests this visual recognition function happens pre-cognitively. “We see and make determinations about what we are seeing before we are conscious of doing so,” Thomas says. We form opinions on what we are looking at before we even have time to process what exactly is in front of us.

Having established the context of “recognition,” the author then proposes that of “excavation”, which is similar to Foucault's method of discursive analysis. Instead of relying on instinctual, pre-cognitive assumptions, we need to break down and deconstruct every aspect of the image within its own cultural context. Thomas uses a nice example of this by highlighting an image taken during the second world war. It shows two young Japanese children apparently abandoned on the street, smoking cigarettes and begging for change. Under the gaze of recognition, the image speaks towards the hardships many Japanese children faced during and after the war, and the social values that seemingly forced them into poverty. We rely on species identification and empathy on a fundamental level to arrive at this conclusion, and this seems to happen before we have a chance to apply critical-rational thought or analysis to the image. However, through research into the political, economic, and social context of the image, Thomas uncovers that the children in the image may not have actually been starving and the photographer may have had
questionable intentions in making the image. This is not to say that the image was completely staged, but rather that by framing the content a certain way, a context can be created that does not lend itself to the reality of the situation. Thomas challenged the continuity of direct visual experience and came away with perhaps a more truthful analysis of the image. She blinded herself to recognition by engaging the image with excavation instead. Only in this way can an image or artwork serve as evidence for its own historical context. Consuming images with indifference to hermeneutics appears to be a fail safe way to misinterpret the aesthetics of any given representation, and raises the question as to whether the recognition mode of our visual perception provides as much insight as we attribute to it when being deployed outside of its own primary context, namely survival.

She concludes by proposing a moderate balance between both recognition and excavation. “When we approach photographs as likeness, we lose our grasp of the historiocity of experience...” she says of recognition. However, she also criticizes excavation in that “when... we approach photographs as embedded in their own discursive worlds, we blind ourselves, no longer able to... trust our sensual experience to provide evidence.” She praises the accuracy of recognition on the merits of successful pre-cognitive image processing, but emphasizes that through excavation we are really just saying that these visual interpretations need interpreting, a method which she says many people, including art historians, often ignore. Examining the difference between recognition and excavation exposes the nature of sight as having a dual capacity, one that allows for sensation and meaning to, at times, be “distinct and in conflict.” Thomas suspects, unlike Stafford, that a unified theory of visual experience may not be possible because sensation and meaning are both distinct from each other and so often in conflict. This distinction allows for multiple, simultaneous, conflicting interpretations of an image,
and could in part be the source of our gravitation to aesthetic spectacle. Because the survival aspect of our intuitive processing doesn't appear to be nearly as essential in contemporary society (lest not being hit by a bus), that precognitive function goes unchecked and can cloud our perception when trusted absolutely in the face of aesthetic chaos. In this sense we are forced to make a decision when confronted with an aesthetic experience that offers us the potential for understanding; abandon our evolutionary instincts and risk losing “any assurance that we can recognize and intuitively understand [photographs]⁴,” or remain firmly under the influence of them and remain blind to the culturally derived meaning available both inside and outside the frame of reference.

The excavation of photographs made by blind or visually impaired artists offer the viewer the unique experience of engaging with an image that exists only as a representation of the artist's imagination, and is not bound by the collectively accepted cultural rules regarding proper image making and taking. When tasked with understanding the visually impaired relationship with art, the question is often asked: “Why even bother creating something you can't see? Why take a photograph?” Executive Director for the Association of the Blind and Visually Impaired (ABVI) Rick Stevens was kind enough to lend me his time and answer a few of these questions, as were a number of volunteers and members of the association. The main sentiment expressed by nearly all those I spoke with was that those who suffer from visual impairments and engage in the visual arts are simply laying claim to an aesthetic world from which they have been excluded due to lack of mechanical vision. They emphatically emphasize the importance of internal aesthetic representation, and use those internal processes for the basis of their entire physical being.

⁴ Thomas, 151
Because they cannot see does not mean that they cannot experience vivid internal aesthetics.

Charis Austin, a visually-impaired client advocate for the ABVI, expressed the same sentiment. Aesthetic experience, even in the absence of visual input, is fundamental to human consciousness, functionality, and development. “Everything you know comes from someone else,” said an anonymous member of the ABVI, taking part in a group interview. Everyone made it abundantly clear that culture was a major building block in the way they create understanding and functionality in their daily lives, in terms of relying on others to provide the missing pieces to fill in their internal aesthetic world. Charis addressed this lack of visual input by repeating a question she is often asked: “Isn't it depressing not seeing all the christmas lights?” Her answer is always a frank “no”. The cultural construction of colorful, seasonal lights isn't part of her internal aesthetic reality, so there is essentially no way for her to miss them. “Perhaps the depressing bit is that [sighted persons] can only see what is actually there,” limiting their imagination to the increasingly banal visual stimulation provided by the external world. She may miss “the good ones”, but she doesn't have to see the wretched displays of hastily installed lights and mismatching color strands, and isn't exposed to the spectacle of contemporary collective aesthetics that so often stand for nothing other than a misguided notion of cultural acceptance.

Charis was born sighted, but suffered severe cataracts at an early age. Once removed, the limits of her cataract-free sight were established only as recognizing light from dark, the damage was irreversible. She can now tell if the lights are on in a room as she enters, but that is it. Surprisingly, she does not rely at all on her memories of being
sighted, as she says they do not exist anymore. Her interaction with the world comes solely from other sensory input and the help of her community.

Another reason blind artists engage in the visual arts is to establish an emotional connection with the visual world. Photographer Gerardo Nigenda makes black and white images of his life experiences, and then overlays braille onto the images to remind him of, and allow access to, the feelings and emotions he experienced while making the images. He doesn't just imprint a description of the photograph, but rather captures his feelings of the moment that were not subjected to visual input. Artist and photographer Annie Hesse approaches her work in a similar fashion: she makes images based on alternate sensory experience and then, with the help of others, reviews the images at a later time to help her establish an internal representation of what she experienced. Only after belated review does she come to learn exactly what it was she saw and photographed. All these artists share one thing in common: they engage with and rely on the internal aesthetic experience in a fundamental way. There is also a fundamental difference between the way they approach photographs. Sighted photographers chose and frame their images based on visual conventions established in the industry and image culture. By picking a specific perspective, they can manipulate the meaning of the content and subject to stand in contrast to what could be considered objectively true. Blind photographers attempt to make the invisible visible by recreating their purely imaginative mental images back into the material world. Given that the images are born from a different set of qualia than those made by sighted photographers, perhaps they should be interpreted differently as well? The application of critical/rational excavation appears to be an absolute necessity in terms of accurately interpreting any image, but especially those made without the capacity for sight.
Recognition alone only shows us what we already know, excavation opens up the image and the way it was created under a specific cultural context.

The nature of images and visual interpretation is thus granted a dual capacity. One method of interpretation exposes the way we are trained to recognize similarities and differences, and the other allows us to look deeply into an image in search of contextual meaning. This duality between a pre-cognitive function and a culturally encoded message allows for the sighted to be rendered blind in the face of the spectacle of simulacra, and allows those without sight to be free of external influences and visually-interpreted surface signifiers. Recognition allows for a collectively agreed upon, objective view of physical reality, and excavation exposes the subjective differences in image interpretation and consumption, and the reality those interpretations create.

When we gaze upon an image that has been created without any direct visual reference to the “that-has-been” represented on the surface of the photograph, we must convince ourselves that simply consuming the image without any regard to the implications of cultural context leads only to the illusion of understanding. Recognizing the similarities and differences in a photo and comparing them with our own experiences can only go so far in uncovering any truth or meaning in a given image, and will inevitably force us into a cycle in which what we see only serves to enforce our culturally-contrived, subjectively deployed notions of sight, and those notions of sight reinforce what it is that we actually see. The excavation of images created without visual reference, by blind artists, can help break this cycle and offer the potential for understanding based not on cultural constructions, but rather on the purity of consciousness and internal aesthetic representation.
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Vision with Cataracts
Retinitis Pigmentosa
Vision with Retinitis Pigmentosa
Macular Degeneration
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Diabetic Retinopathy
Vision with Diabetic Retinopathy
Recognition vs. Excavation

Two different methods for approaching and interpreting images, especially from an art historical standpoint.
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