

*Art of the Blind*

Becoming blind is a fear many artists have—knowing their work in the visual arts would be limited or even end without the use of their eyes. That is why it seems so surprising to find out there are visual artists who have never seen their work. Sense of sight has been pondered since the beginning of time, and different philosophies and theories have developed, debating if what the eye sees is reality or just a trick of the brain. In 1608, an Oxford Academic named George Hakewill believed blindness led to higher moral standards, that sight was responsible for all major sins in the world including greed, envy, lust, and adultery (Stein 247). Later on, scholars like Damien Hirst believed the brain developed a connection with the eyes in order to help humans survive. Once the fight for survival was made easier by the development of tools and weapons for hunting and gathering, the brain, aided by the eyes, developed the creative mind (Stein 246).

Another leading philosopher in the theory of “sightedness” is Barbara Stafford, a professor in the History Department at the University of Chicago. Her work focuses on the assumptions surrounding perception, sensation, emotion, mental imagery, and subjectivity as it relates to vision (*Barbara Maria Stafford*). According to Stafford, images exist between the mind and reality, or the brain and the apparatus for viewing: the eyes. Artists who are blind or have only limited vision depend on other senses, such as hearing and touch, to determine space and direction to create the visual art they cannot see. Barbara Stafford’s theory that the image exists between the mind and reality further validates the

true value of blind artists in contemporary art by explaining that an image is formed by a combination of the senses and the brain and not purely through the eyes alone.

In order to understand how blind artists create visual art, a brief explanation of the function of the eye and brain must be given. Before writing and computers, the eyes and brain primarily worked together to carry out everyday tasks for survival. Perception in these early times was combined with sensations to guide humans through the treacherous world around them (Land and Tatler 3). According to *Looking and Acting: Vision and Eye Movement in Natural Behaviour*, there are four interactions between the brain and the eyes that lead to activity.

The first interaction is locating a desired object. This is done when the brain sends a message telling the body to locate an object—a pencil, in this case. The body will then shift the eyes or rotate the body in search of the pencil; this is referred to as the use of the gaze system. In the next step, the body obtains the object and uses its motor system. The eyes confirm the image of the object—the pencil, sitting on a desk—and direct the body toward the object (Land and Tatler 3). Once the body has moved into position to grab the pencil, the visual system confirms the movements of the motor system and its actions to obtain the pencil. In the fourth and final interaction, the brain sends a new message to the visual and motor systems, creating a new task for the body (Land and Tatler 4).

The brain uses visual history in order to know when and where objects are located, and what to do with them. The visual system is located in the occipital lobe and parts of the parietal and temporal lobes of the brain (Land and Tatler 5). Gaze and motor control are located in the frontal and parietal regions of the brain, working hand in hand for normal-sighted people. Six muscles surround the eye, allowing rotation and the gathering of information to create images within the brain (Land and Tatler 15). Perception also plays a

major part in the process of viewing. Perception is, “the extraction of information from consciously available images for the discrimination and identification of objects” (Land and Tatler 7). Studies have shown there are many cognitive factors that can largely influence how people see images and objects in the world (Land and Tatler 7).

In a study of a photorealistic portraitist, scientists used motion detecting cameras and sensors to map the artist’s hand and eye movements while working on a series of drawings. The scientists found that while observing the model, the artist was able to fixate on one particular part of the model rather than two or three parts like a normal eye would do (Miall and Tchalenko 38). In the everyday vision of normal-sighted humans, the eyes will fixate on an average of three different, distinct locations every second (Land and Tatler 184). While working on life-like drawings, scientists found that the portraitist interrupted his work up to twelve times per minute while drawing (Miall and Tchalenko 35). The eye was mapped at returning to the same place on the model every five seconds giving the artist a refreshed look at the model. In those five seconds, the artist was able to draw about 1.5 centimeters of detail per each fixation (Miall and Tchalenko 37).

In normal vision, this is different. Scientists have mapped the eye during normal viewing, doing discontinuous sampling of the area in front of the person. Most people do not focus on one thing at a time, which could lead to the inconsistent viewing of images by people who are looking at the same object (Land and Tatler 183). This study overall is an example of how focused an artist can be when working. Unfortunately, when people are blind they lose their ability to focus in this particular way, but still have been known to use their brain to visualize their images without the visual cues from their eyes. This is where a blind person can use their other senses of touch and hearing, as well as factors such as

distance and direction to help map out their images, in-turn creating a mental image of their work.

Blindness can be caused by many factors, from being born without eyes to developing disease later in life. There are six main causes of blindness, according to a 2002 study by the World Health Organization, including accidents, cataracts, macular degeneration, retinitis pigmentosa, diabetic retinopathy, and glaucoma. The effects and symptoms of these diseases can vary from disease-to-disease and person-to-person. According to the World Health Organization, cataracts are the number one cause of blindness, affecting 47.9% of blind people throughout the world. This disease forms in the lens of the eye causing the person to see fog instead of the objects around them. Cataracts are found mostly in people over the age of sixty and can be treated with surgery (*How Blindness is Caused*).

Glaucoma is the second leading cause of blindness, affecting nearly 12.3% of people. Glaucoma causes a build up of fluid in the eye that can create enough pressure to damage the nerves in the eye, creating black spots in the peripheral vision field. Though found mostly in adults, there are rare cases of child glaucoma. If diagnosed early on, glaucoma can be prevented with the use of medications (*How Blindness is Caused*). Unfortunately for photographer and musician Henry Butler, he was one case of infantile glaucoma, resulting in the loss of his eyesight at a young age. Although completely blind, Butler has created images documenting the streets of New Orleans, Louisiana, and that people he runs into on his journeys.

Henry Butler is known as the “Pride of New Orleans”, hailed for his jazz piano and Louisiana blues, but what many don’t know is that he is also an accomplished photographer. At birth Butler was diagnosed with infantile glaucoma (Harris). Henry

Butler started playing music at the age of eight and found himself growing up in an environment filled with different forms of art. After moving to study music at Michigan State University, Butler received his bachelor's degree in 1974. He returned to Louisiana after graduation, pursuing his dreams of becoming a musician. In 2009, after hurricane Katrina, Butler left New Orleans for New York, but not before capturing revealing images of people from around the city.

Henry Butler's interest in the visual arts was not fully realized until he started visiting art exhibits and museums with friends. After hearing the excitement in his friends' descriptions of the works, Butler found himself with a desire to join the visual arts world. He said, "I feel empty without participating in the visual arts" (Butler, *Eye of the Beholder*). Finally giving in to his desires in 1984, he bought his first camera, a Kodak Instamatic, and headed out to the streets. Ever since, his aim has been to affect the consciousness of sighted people. After finding that his Kodak Instamatic took about two weeks to develop the film, Butler moved to a Polaroid camera in order to get an instant image, and instant feedback from his assistant (Butler, *Eye of the Beholder*).

The use of an assistant is crucial to Butler and his photography. His assistant not only guides him through the streets of New Orleans and now New York City, but also helps him aim his camera in the right direction. Even with his guide, Butler still uses sound to determine distance and the height of a person as best he can (Butler, *Eye of the Beholder*). His assistant also describes what is going on in front of him, from peoples' appearance to what they are doing. If that description sounds interesting, then Butler starts a conversation with the subject to get a better sense of the person's character, demeanor, and position within the camera's viewing area (*IRIS Nights Lecture Series*). Butler says he can feel the energy of a person in their voice. That, combined with the description of his

assistant, creates an image in Butler's head of what a scene might look like, even though he has no real reference to objects.

The image, *Big Ol' Kiss* (c. 2005), was taken by Henry Butler while he was still living in New Orleans. It captures a woman with long silver hair, dressed in the bright greens, yellows, and purples of the Mardi Grass celebration. Although Butler could not see the celebration, he could hear the sounds and feel the energy, and through those feelings he was able to capture the image of the woman as she passed by. *Big Ol' Kiss* captures the energy of the celebration in the vivid, elaborate clothing of the woman, and her gesture of blowing a kiss is a light-hearted, flowing motion. The image is cropped close to the woman and none of the surroundings are very easily noticeable, except the face of a passerby and the front of a red truck. This cropping is a signature style of Butler's as many of his images are cropped to show only the subject in front of him. This cropping allows his audience to look closely at his subjects to see the details that Butler himself cannot see.

Another common disease that can cause blindness is retinitis pigmentosa, which attacks rod photoreceptors inside the eye. Blindness occurs gradually for those affected, starting with the loss of peripheral and night vision. It is found mainly in young adults, and gets worse over time, resulting in tunnel vision and later total, permanent vision loss. Unfortunately, there is currently no cure for retinitis pigmentosa (*How Blindness is Caused*). Pete Eckert is a fine arts photographer who discovered he had retinitis pigmentosa while in college. He is now completely blind, but uses his other senses in order to create the images he sees in his head.

Pete Eckert started his career in the arts by training as a sculptor and an industrial designer. His plan was to go to Yale to study architecture, until he started losing his sight. Upon first hearing the diagnosis, he was unaware of its life-changing effect, until he

watched a television show featuring Dr. Dean Edell, who explained there was no cure for retinitis pigmentosa, and that people with it would eventually go completely blind.

Although devastated by his newfound future, Eckert continued working as a carpenter until his sight became so bad that it was dangerous for him to continue. By graduation, he had extreme tunnel vision and was almost completely blind (Eckert, *Pete Eckert*).

After college, his two main worries about becoming blind were that he would not be able to make any money, and that he would not be able to defend himself. Eckert set out to relieve himself of his worries by going back to school for a Masters of Business Administration, and by training for a black belt in marshal arts. After two years of schooling and training, he began creating art again. The first works he produced as a blind artist were hand-made woodcuts. Eventually, he trained himself to use an electric wood lathe, but found that this medium was too slow for him (Eckert, *Pete Eckert*).

It was not until he was rummaging through some old belongings of his mother-in-law's that he first laid his hands on a 1950's Kodak camera. He showed his wife his discovery and had her describe all of the settings and buttons. Eckert then learned the camera had an infrared setting, and decided he had found his new tool of choice for creating visual art. Eckert stated, "I found it funny that a blind man could take images in a non-visible wavelength" (*IRIS Nights Lecture Series*). He had no idea how to use a camera or develop film, so he took the camera down to the local camera shop, asking question after question until finally learning how to capture photographs. Eventually, that camera shop owner allowed him to borrow a medium format Mamiya Flex camera, which lead him to buy his own medium format camera, allowing him to create large images of scenes from his mind (Eckert, *Pete Eckert*).

Pete Eckert's artistic process is different than other blind artists. He does not use assistants or guides when shooting his images. In fact, the only help he receives is from his guide dog, who protects him during night shoots. Sighted people only come into play when Eckert is looking for a critique of his images before heading to the darkroom. "I am a visual person. I just can't see," says Eckert. "I slip photos under the door from the world of the blind, to be viewed in the light of the sighted" (Eckert, *Pete Eckert*). He believes his work cannot be altered or tainted by any sighted person—if it is, then it is not truly from the world of blind.

Visualization is the key to every image Pete Eckert creates. He sees himself as a conceptual artist before a photographer (Eckert, *Pete Eckert*). He has no vision, and has therefore trained his optical cortex to visualize images using other senses. Eckert uses a light meter with Braille numbers to take readings of the light, starting from the outside and working his way in toward his subject. He then uses the sound of his voice bouncing off of objects to determine the distances between objects, almost like the way bats use echolocation to fly and locate food. Lastly, Eckert uses direction, north, south, east, or west, to determine the position of the natural light (*IRIS Nights Lecture Series*). All of these elements combine in Eckert's head, giving him a visualization of his photograph.

Eckert's images range from black-and-white to color photographs, and use techniques like motion blurring and light painting—both of which involve extreme stability of the camera and long exposure of film through slow shutter speeds (Eckert, *Pete Eckert*). *Cathedral*, a black-and-white image from a church service, captures Eckert's use of motion through the movement of figures. The priest and altar boys are dressed in vivid white robes which appear to flow as the men walk around the altar. Unlike *Cathedral*, images such as *Night Dream*, *Looking Out*, and *Electro Man* depict Eckert's use of light

painting in vivid, large format, colored prints. To create these, he tells his subjects where to stand and how to position themselves. He then turns the room pitch black and uses long exposures as he walks around the figures, highlighting them with different colored lights and popping off hand held flashes.

*Electro Man* shows these processes almost perfectly by the presence of light marks around the figure, following Eckert's path as he walked around his subject. The image is of a person standing in the middle of a dark room. Eckert told his figure where and how to stand and then had them stand completely still as he bounced his voice off of his subject in order to figure out his own position in the room. Once he found his spot he turned on yellow, red, and blue lights, waving them around and over the figure, giving the subject a bright presence within the photograph. The name *Electro Man* fits the image, as the figure, although standing still, looks to be filled with electricity from the brightly colored lights.

Pete Eckert and Henry Butler are just two of the many blind artists creating work today. Blind artists can be found in almost every medium of art and each of them has developed their own unique way of creating stimulating images for the world of the sighted. The eyes of sighted people may be used to gather information, but the apparatus for vision lies within the brain. The brain is used to formulate the final image that a person sees, regardless of the information their eyes gather. Throughout history, philosophies have been developed to explain how vision works, but none can fully explain why blind artists like Eckert and Butler can create photographs capturing the world of the sighted so vividly. Artists who have affected vision depend on other senses to determine space and direction, creating visual art they cannot see. Barbara Stafford's theory that the image exists between the mind and reality further validates the true value of blind artists in contemporary art by

further explaining that an image is formed by a combination of the senses and the brain and not purely through the eyes alone.

## Bibliography

- Art by the Blind*. The New York Times, 2011. Web. 13 Feb. 2011.
- Barbara Maria Stafford*. The University of Chicago Department of Art History, 2010. Web. 23 March 2011.
- Brownlee, Peter John. "Ophthalmology, Popular Physiology, and the Market Revoltuion in Vision, 1800-1850." *Journal of the Early Republic* 28.4 (Winter 2008): 597-626.
- Butler, Henry. *Eye of the Beholder*. The Digital Journalist, 2005. Web. 23 March 2011.
- Causes of Blindness and Visual Impairment*. World Health Organization, 2011. Web. 23 March 2011.
- Eckert, Pete. *Pete Eckert*. <http://www.peteeckert.com/>, n.d. Web. 23 March 2011.
- Harris, Craig. *Henry Butler Biography*. henrybutler.com, n.d. Web. 23 March 2011.
- How Blindness is Caused*. Eynet, n.d. Web. 13 March 2011.
- Immel, Andrea. "Curious Perspectives." *Eighteenth-Century Studies* 36.4 (Summer 2003): 589-592.
- IRIS Nights Lecture Series*. The Annenberg Space for Photography, 2011. Web. 13 March 2011.
- Land, Michael F. and Benjamin W. Tatler. *Looking and Acting: Vision and Eye Movements in Natural Behaviour*. New York: Oxford University Press, 2009.
- Miall, R.C. and John Tchalenko. "A Painter's Eye Movements: A Study of Eye and Hand Movement during Portrait Drawing." *Leonardo* 34.1 (2001): 35-40.
- Stein, Claudia. "Insights on Sight." *History Workshop Journal* 69 (Spring 2010): 245-253.
- Weldon, Susan. "Direct Realism and Visual Distortion: A Development of Arguments from Thomas Reid." *Journal of the History of Philosophy* 20.4 (1982): 355-369.
- White, Tracie. *Eye diseases changed great painters' vision of their work later in their lives*. Stanford University, 2007. Web. 09 March 2011.



# Art and Blindness

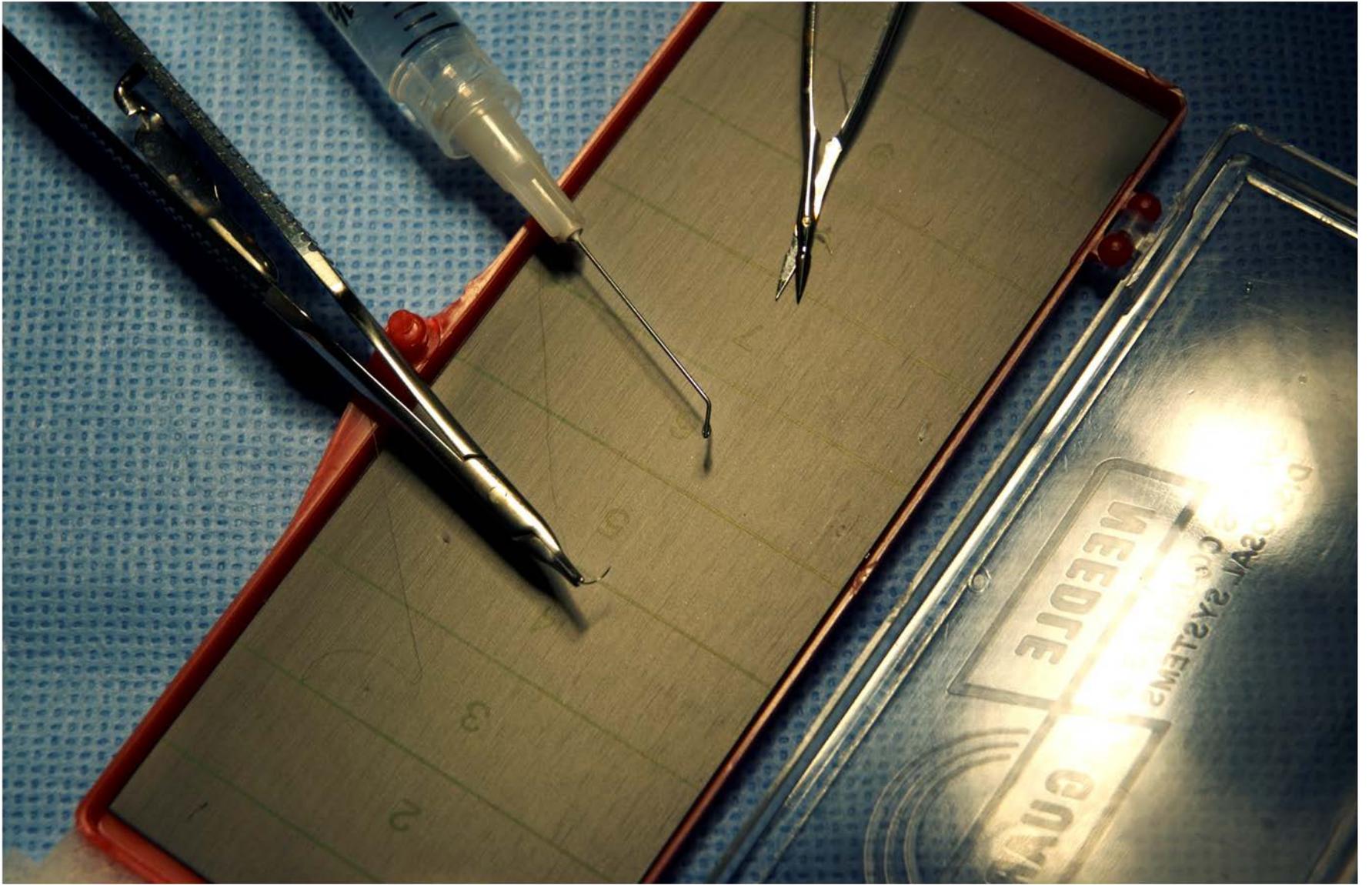














# Causes of Blindness

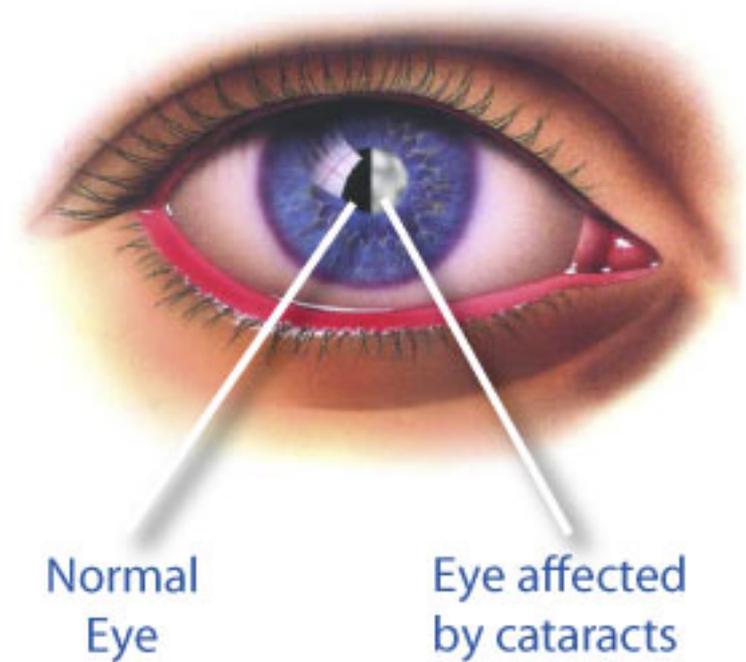
- Accidents
- Cataracts
- Macular Degeneration
- Retinitis Pigmentosa
- Diabetic Retinopathy
- Glaucoma

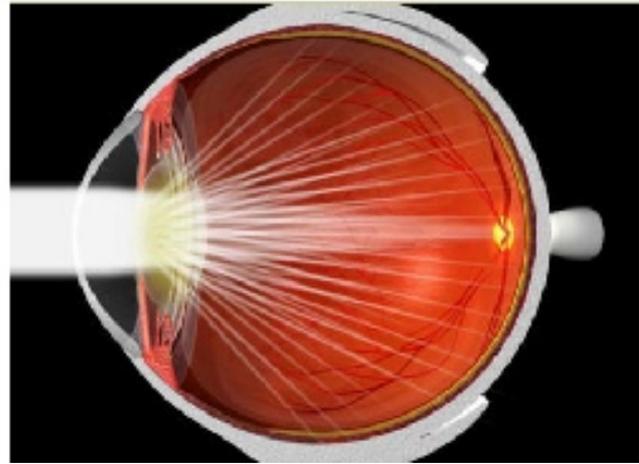
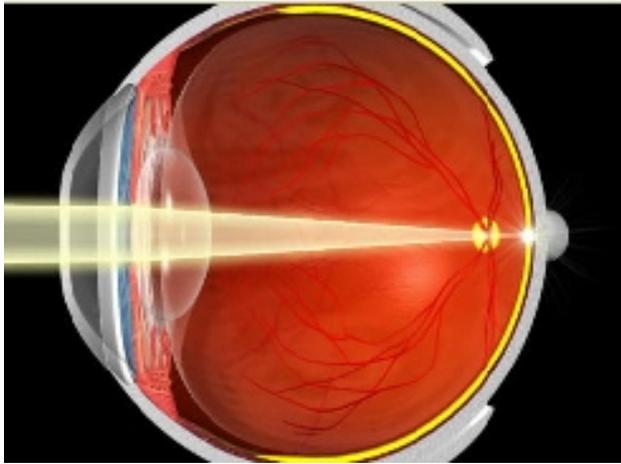


photo by Henry Butler

# Cataracts

- World Health Organization – Number 1 cause of blindness in 2002
- 47.9% of blind people
- Forms in the Lens
- Fogging
- Mostly in older people
- Can be fixed with surgery





# Glaucoma

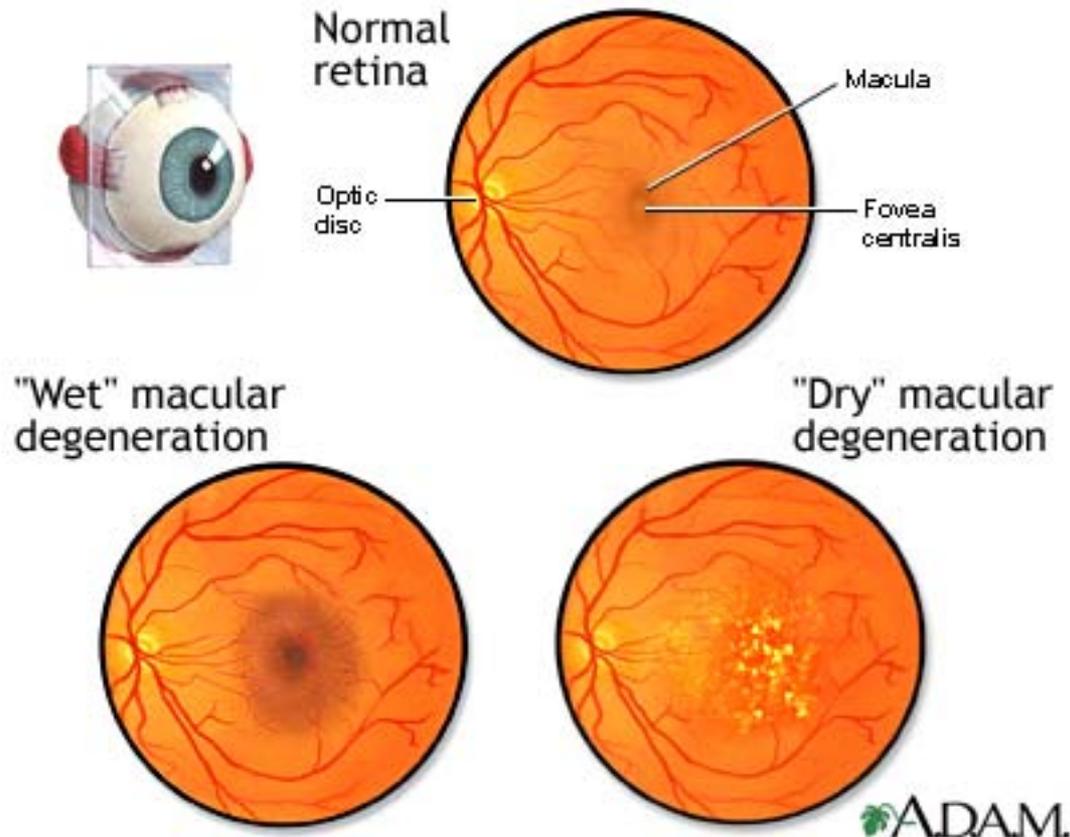
- World Health Organization – Number 2 cause of blindness in 2002
- 12.3% of blind people
- Blind spots develop starting in peripheral vision
- Pressure from fluids causes damage to nerves
- Rarely found in children, mostly in adults
- Can be Prevented

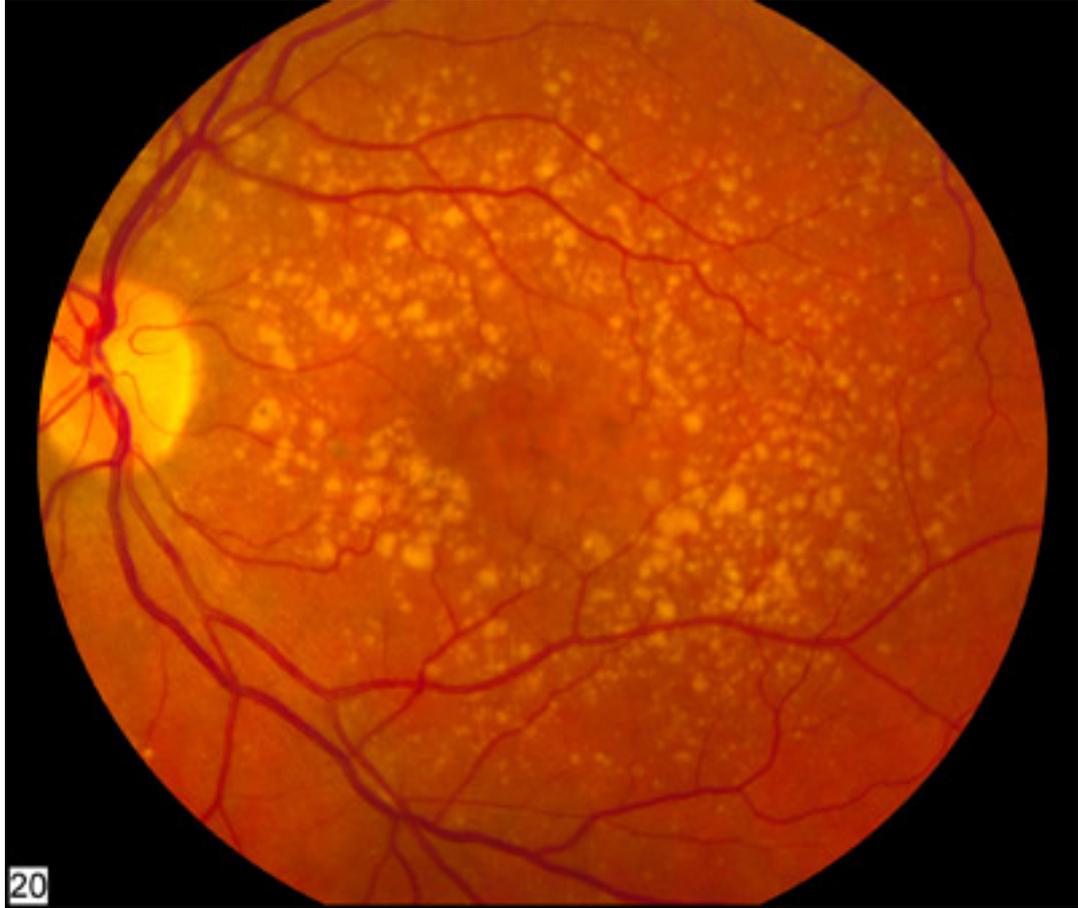




# Macular Degeneration

- World Health Organization – Number 3 cause of blindness in 2002
- 8.7% of blind people
- Forms in the Macula
- Loss of small detail and the center of the vision field
- Mostly in older people
- No Cure

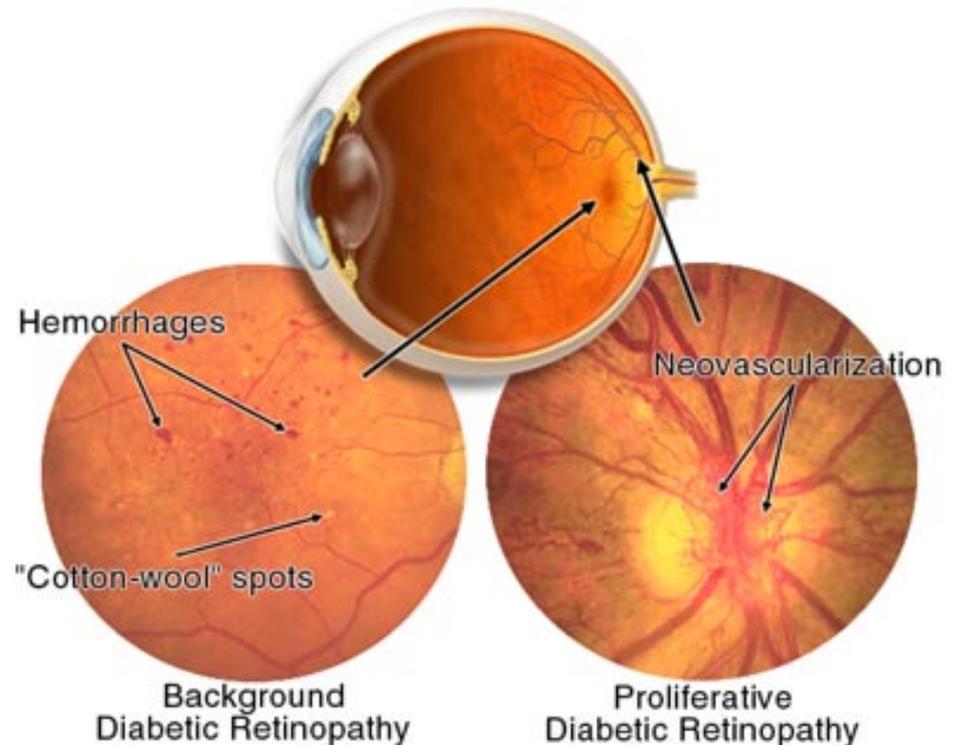






# Diabetic Retinopathy

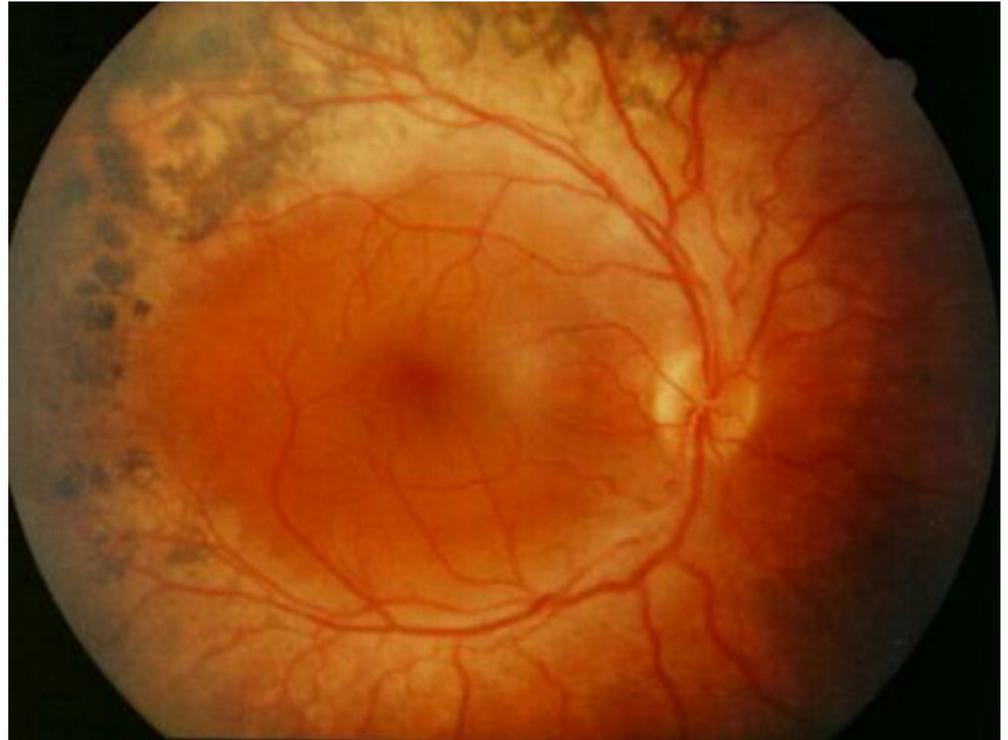
- World Health Organization – Number 5 cause of blindness in 2002
- 4.8% of blind people
- Forms in the Retina
- Blood vessels break cause blood to flood parts of the eye
- Both children and adults
- Medicines and Surgery can help





# Retinitis Pigmentosa

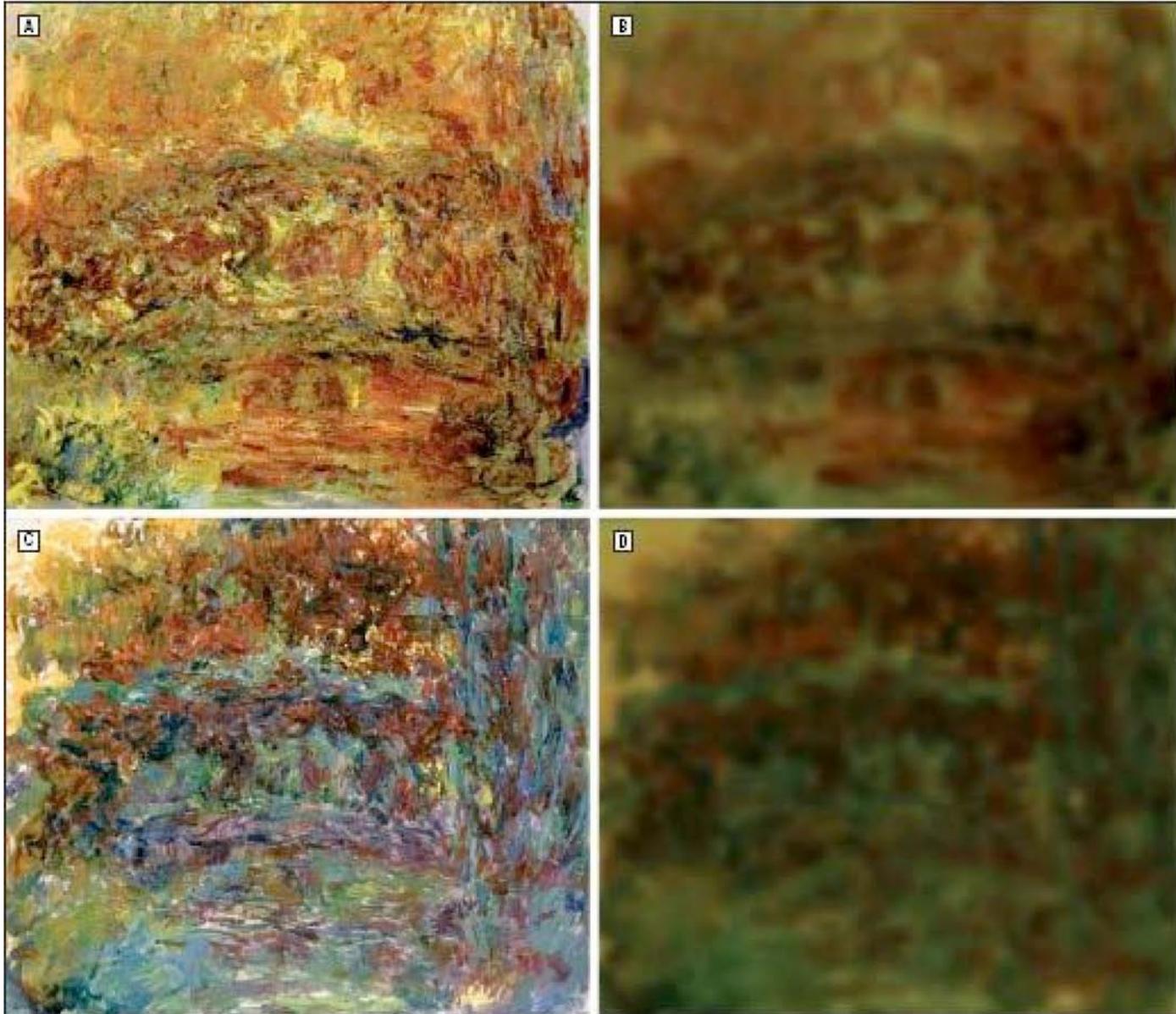
- Degeneration of rod photoreceptors
- Loss of peripheral and night vision
- Starts at an early age and gets worse over time
- No Cure



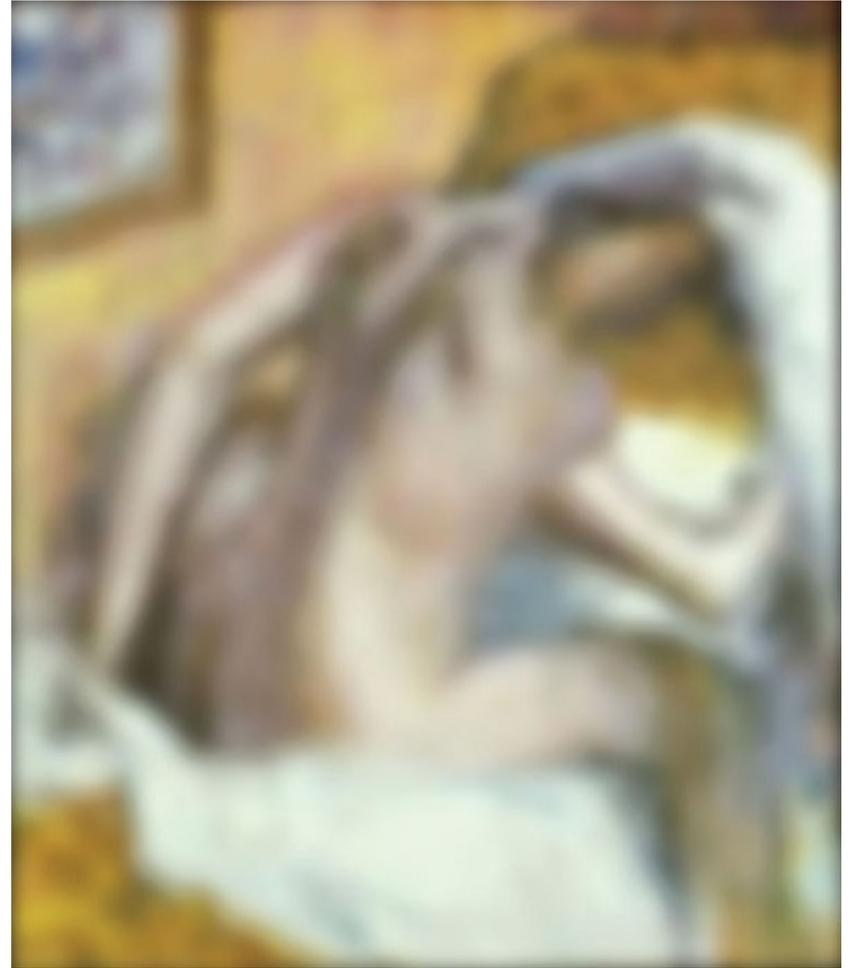
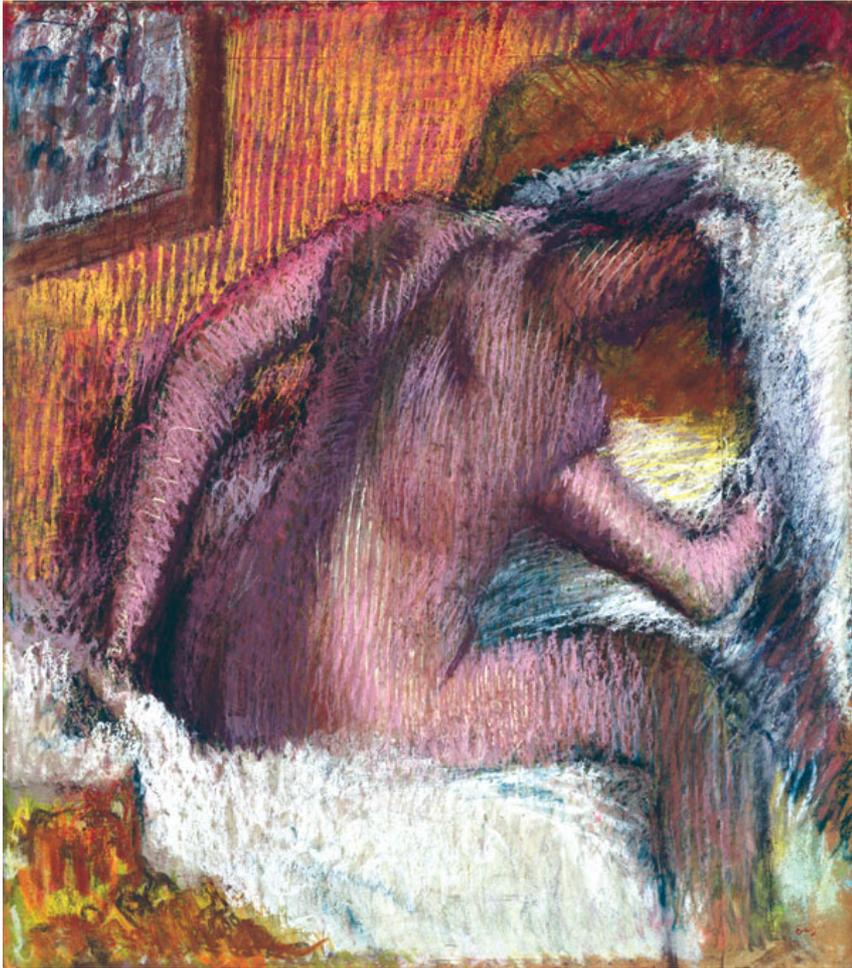


# Michael Marmor M.D.

The Study of what the Artist Sees



*The Japanese Bridge at Giverny*, Claude Monet, 1918-1924



*Woman Drying Her Hair*, Edgar Degas, 1905

# Using Sound to See

<http://www.youtube.com/watch?v=qLziFMF4DHA&feature=related>

# Blind Artists

# Pete Eckert





*Coffee*



*Cathedral*



*Looking Out*



*Electro Man*



*Night Dream*

[http://www.annenbergspaceforphotography.org/events/iris\\_nights\\_past\\_sport\\_hall.asp](http://www.annenbergspaceforphotography.org/events/iris_nights_past_sport_hall.asp)

Bruce Hall





From the series *Underwater*



From the series *Autism*



From the series *Autism*

# James Thurber



**"All Right, Have It Your Way--You Heard A Seal Bark."**



*Birds of a Feather*  
By Bobbie Gray

# Charles Blackwell





*Zoom Into Inspiration Drum*



*Abstract Bassist*

# *Dark Light: The Art of Blind Photographers*

[http://www.annenbergspaceforphotography.org/events/iris\\_nights\\_past\\_sport\\_hall.asp](http://www.annenbergspaceforphotography.org/events/iris_nights_past_sport_hall.asp)