

**VISION AND EVIDENCE PHOTOGRAPHY**

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Vision is one of the tools the human mind uses to find out about the world around it. Light rays are focused on the surfaces of the retinas, and then the images produced in the eyes are transmitted to the appropriate parts of the brain by means of the optic nerves. It is pertinent that physiologists think what happens to the optical stimuli in the brain has less to do with the nervous system and more to do with the experience of the viewer.

Vision is influenced by the current activities of the mind including, at its best, its immediate analysis of the image and things learned in the past under similar circumstances. There are as well, always other factors on the mind of the observer to affect human imaging capabilities. For example, getting home on time for dinner, the weather, and possibly emotional reactions to the pain of others at an accident. The mind applies, to the extent of which it is capable, what it sees to a standard and analyzes whether the sight fits into a past pattern. Each person has his or her own experience database to use to form his or her personal standard. In this way, the more experienced the observer, the more accurate the analysis of a scene. The experienced investigator, who may not be as accomplished in photography as the experienced photographer, still maintains a broader-based level of experience in investigations. For this reason, the investigator will have a better idea of WHAT to take while possibly lacking some competence in HOW to take it. How to take good evidence photographs is a far easier, but no less critical skill-set to gain, than knowing what features of evidence might be key.

Photography, “a mechanical process of collecting data for visual purposes<sup>1</sup>”, is often used for the documentation of evidence. Evidence photography concentrates on transportation; the transportation of collected images from a place or of a thing that most accurately represent that place or thing at another place and/or time. “To nineteenth-century enthusiasts of this new art, the making of a photograph, which fixed forever a moment of time, resembled an act of magic.”<sup>2</sup> Evidence photography is less art and more discipline because it can be said that content in the

photograph is more important than how it is arranged.

Two recent books, *Camera Clues, A Handbook for Photographic Investigation*<sup>3</sup>, and *Scientific Evidence In Criminal Cases*,<sup>4</sup> state, “Photography’s capacity for documenting evidence and its potential in actually uncovering some types of evidence make it an indispensable tool for any detective,” an obviously true statement. They also say, “police (evidence) photography is not a branch of photography which requires extensive training; any skilled professional photographer or advanced amateur can do police photography work once he has been instructed in its special requirements.”<sup>5</sup> This statement could possibly be true if the special requirements include a requisite background in the difficulties involved in documenting photographically what the eye can see.

Some investigators spend their careers documenting their work photographically and never utilize the full capabilities of the medium. Not only do they leave evidence undocumented or impossible to analyze, but “it is common knowledge that as to such matters, either through want of skill on the part of the artist (investigator), or inadequate instruments or materials, or through intentional and skillful manipulation, a photograph may not only be inaccurate but dangerously misleading.”<sup>6</sup>

The when and where of evidence photography is mostly governed by chance and beyond the control of the photographer. The why, is usually obvious. The trained photographer will be familiar with the subject of human vision and know where and how to look for the right evidence to document. They will also expose sufficient photographs to tell the whole story without the necessity of notes and sketches. Auxiliary documentation is not discouraged; it should be helpful, but not necessary. The photos must be able to stand-alone in case the photographer and/or the auxiliary documentation are ever separated from the photographs. The inadequacies of the untrained observer and under-trained photographer should not limit the documentation of evidence beyond the limitations of the medium. The informed photographer also stands a better chance of creating images to represent reality in a way less prone to be challenged, and if challenged, is more likely to be able to properly explain what was done.

There are several elements in human vision, difficult or impossible to duplicate and thus impediments to reality in photographic reproduction. Of these elements, dimensionality, contrast, color reproduction and proper perspective are the most prevalent. There is also a difference between the instantaneous sensitivity of the human eye and the cumulative sensitivity of the photographic light receptor. In other words, the photograph can show less than, similar to, or more than, the detail the eye might have seen in the same circumstances depending upon the lighting and the length of the exposure.

“All (2D) photographs are an abstraction in one way or another. Even if the picture reveals a completely realistic and recognizable subject, it is only a two-dimensional representation of a three-dimensional scene.”<sup>7</sup> Reproduction of the visible subject brightness range, referred to as the contrast (analog)/dynamic range (digital) of an image, is a difficult aspect of photography. Healthy, young people with normal color vision can discriminate about one million distinct colors. Photo reproduction, either on print or electronic media does not come close to recreating that range. To maintain proper perspective, the camera must use a lens of a focal length to approximate the perspective of binocular vision. There is also a correct size to make a print or projection, that when viewed at a proper distance, become a more accurate representation of the original scene.

There is no room for ingenious technical tricks in this field; the mere fact that photographs are being used to illustrate points of evidence implies that the camera cannot lie. The photographic image serves as the closest thing we have to truth and is the best way we have to prove the occurrence of real phenomena.<sup>8</sup> So all work should be as straightforward as possible. And the photographer should always assume that while the members of the Court may know everything about the law, they know little or nothing about the technicalities of photography.<sup>9</sup>

The photographer should look at things as though he or she has never seen them or heard about them. For what is photographed is, strictly speaking, never the object itself but certain visual properties of the object. It is these visual properties the photographer

must strengthen and sharpen by the choice of the right moment, the control of camera angle, distance, lighting, etc. Nothing in this world is anything but the totality of its properties.<sup>10</sup>

#### (Endnotes)

- <sup>1</sup> Changing Photography, Photographic Vision and the Digital Revolution, School of Photography and Film, Göteborg University, Göteborg, Sweden, page 9
- <sup>2</sup> Weber, Eva, Pioneers of Photography, Smithmark, 1995, p. 6.
- <sup>3</sup> Nickell, Joe, A Handbook for Photographic Investigation, The University Press of Kentucky, 1994, pp. 98-99.
- <sup>4</sup> Moenssens, Andre A. and Inbau, Fred E., Scientific Evidence in Criminal Cases, The Foundation Press, 1986, p. 605
- <sup>5</sup> Nickell, Joe and Moenssens, Andre A. and Inbau, Fred E.
- <sup>6</sup> Cunningham vs. Fair Haven & Westville R. Co. (1899) 72 Conn. 244 at 250, 43 A. 1047 at 1049
- <sup>7</sup> Hedgecoe, John, Complete Guide to Black & White Photography, Sterling Publishing, 1996, p 6.
- <sup>8</sup> Changing Photography, page 12
- <sup>9</sup> The Focal Encyclopedia of Photography, Focal Press Limited, 1957, Evidence by Photographs, page 410
- <sup>10</sup> The Focal Encyclopedia of Photography, p. 935