SOME LESSONS FROM HISTORY

BY ED WESLY

ED WESLY OFFERS A CHRONOLOGY OF PHOTOGRAPHIC PATENT CONFLICTS AS A KIND OF PARALLEL TO THE CURRENT PROBLEMS IN HOLOGRAPHY. WHILE ONE CANNOT DRAW A ONE-TO-ONE RELATIONSHIP BETWEEN PHOTOGRAPHIC HISTORY AND HOLOGRAPHY, SIMILARITIES BETWEEN THE TWO (IN TERMS OF THEIR INFANCY AND GROWING PAINS) ARE UNMISTAKEABLE. PERHAPS HISTORY HAS SOME LESSONS TO OFFER FOR THOSE CURRENTLY EMBROILED IN A CONFLICT TO CONTROL THE FUTURE OF HOLOGRAPHY.

Only in post-revolution France could an invention be given "free to all the world" and its inventor rewarded with a lifelong pension from the government.

That invention was the Daguerreotype process, the world's first truly practical photographic method, invented by Louis Jacques Mandé Daguerre in the mid-1830s.

Apparently, the French did not consider England part of the planet as the process was patented there just days before the official French announcement. Licenses were required to practise the art of daguerreotyping and were enforced by Miles Berry, agent for Daguerre.

Photo-historians Helmut and Allison Gernsheim speculate that the French government let Daguerre patent his invention in England as balm for wounded national pride, since a subject of the Crown claimed to have preceded Daguerre in using the "Pencil of Nature". If the English were to use the superior French process, they would have to pay for it.

In 1841, Miles Berry sold the patents to Richard Beard, a coal merchant turned daguerreotypist licensee, for 150 pounds annually. A trifling 800 pounds for the daguerreotype monopoly netted him 25 to 35 thousand pounds in 1842! The sole exception to his jurisdiction was the rooftop studios of a Frenchman, Antoine Claudet, who bought a license directly from Daguerre before the Berry patent was issued.

Many people challenged Beard's patents. A 5 1/2-year lawsuit resulted in Beard's bankruptcy in 1850, three years before the patents expired. Although his patents were upheld, no damages were awarded and that, coupled with the high legal costs, proved his ruination.

The English had a native son who also invented his own process of photography, one William Henry Fox Talbot. In his process, a negative image was formed by exposure in the camera. It had to be contact printed onto another piece of sensitized paper to re-reverse tones. There was a definite advantage to

this last fact, since many copies could be produced from a master negative. But the texture of the paper base printed through, causing a loss in sharpness.

Because the image was printed out directly in the camera, Talbot's "photogenic drawing" needed more exposure than Daguerre's. Once Talbot added a development step after exposure to increase sensitivity (and rechristened his process the Calotype, herein referred to as the Talbotype) he began to get nutty about patents too.

At first, everyone had to have a license. In August, 1852, Talbot relaxed his stranglehold, allowing amateurs and landscape artists to practise freely, while he pursued the lucrative portrait market.

But since most portraitists were practising a technically superior (although patented) French process, Talbot actually hindered the adoption of his own invention with his rigorous licensing.

Talbotypes and Daguerreotypes were almost immediately abandoned when the wetplate, or collodion process, was introduced. It was more sensitive, less expensive, and its variants produced a positive in one step directly or could be replicated through positive-negative printing.

It was this last point that threw Talbot out of control. Since he was the father of the negative-positive scheme, he felt the collodion process infringed on his turf. After a fiery, 10-year court battle, with lawyers from both sides providing as much misleading information as they could muster, a decision was reached, but not in Talbot's favor. Photographers were free to practise the wet collodion process. Or were they? In America, James Cutting patented a variation of the wetplate process called the "ambrotype". His patent also covered the inclusion of silver bromide in the collodion emulsion, essential to speed up the material for portraiture.

This "bromide patent" meant anyone practising wetplate photography was infringing on his patent, and a good many photographers ended up paying Cutting and his heirs, netting them a considerable revenue. Litigation was even attempted to make the U.S. government pay for their use of photography during the Civil War!

When the patent came up for renewal in 1869, it was denied in a classic case of "never mind". The patent office itself stated that it had erred in ever issuing the patent. The silver bromide was not Cutting's original idea, as it had been used in both Daguerreotype and Talbotype processes.

All these early processes relied on metal or glass substrates as vehicles for the light-sensitive coatings. The race was on to find a flexible, lightweight, transparent support for the photographic emulsions. The winner was the Reverend Hannibal Goodwin of Newark, New Jersey, who received the patent for this product on Sept. 13, 1898, 11 years after his initial filing.

Henry Reichenback, a chemist working for Eastman Dry Plate Co., was also granted a patent for a similar item, after revising his application sufficiently to get a patent on Dec. 10, 1889. It specifically stated how to make a "photographic" pellicle as opposed to the general nature of Goodwin's patent, and Kodak began manufacturing their film under this patent.

Goodwin planned to manufacture the film himself, but died in 1900 before production could start in a small plant he was building. The Goodwin film and camera company was sold to the firm of Anthony and Scovill, which started making the film and sued the Eastman Kodak Co. for infringement of their patent.

Fourteen years and 5500 pages of testimony later, Goodwin's wife and the Ansco company, holders of the patent and formerly Anthony and Scovill, finally received a $5,000,000 settlement. Maybe this suit was on George Eastman's mind when he blew his brains out in 1932.

The photographic patents have been a blessing for some and a bane for others and have even caused fortunes to crumble. It seems that photography as a process could not be patented, and the same may be true of holography. Consider the words of Minister Arago in a plea to the French government to reward Daguerre: "Unhappily for the fortune of this talented artist, the method cannot become the object of a patent. As soon as it is known, everyone will be able to apply it."

And is it possible that once one knows the secret of holography – of comparing an object's light to a reference source, that secret cannot be patented?

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