1 Beyond Photography

A couple of years ago I visited a friend who was preparing a magazine ad for publication. The ad was for the U.S. Army and it showed a small group of young people in uniform under a happy slogan. Most of the people in the group were white males. There was one woman and one black male among them. My friend's job was to retouch the photo. Apart from removing the odd pimple or freckle he was asked to raise the rank of the woman and the black male to be higher than those of their colleagues. Not only are we easy to fool, photography has made it easy for us to fool ourselves in quite subtle ways.

It didn't take long for portrait photographers to discover that even if their sparkling conversation would fail to put the twinkle in the eyes of a model, a speck of white paint could do the job. And they could really please their customers by removing bags and wrinkles, typically by scraping off the offending areas straight from the negative (called *knifing* the negative). Of course, to retouch a photo invisibly does require skill. But there's so much more that you can do with photos in a darkroom. What amateur photographer hasn't experimented with multiple exposures or solarization, if only by accident? There is in fact a rich tradition for this type of image manipulation. It is interesting to see how far back this history of tampering with photographs really goes.

How to Photograph a Ghost

Photography dates from the beginning of the nineteenth century. The oldest surviving photograph was taken by the Frenchman Joseph Nièpce in 1827. Nièpce died in 1833. His coworker Louis Daguerre continued the work, and together with Nièpce's son Isidore sold the invention to the French government on 19 August 1837.

The true ancestor of today's photography, however, is not the *daguerrotype* but something called a *kalotype*. This method, the first to use photographic negatives, was patented by the Englishman William Henry Fox Talbot in 1841.

What must have been the first exhibition of photographic portraits was organized in August 1840 by a Swiss painter named Johann Isenring. The portraits were hand colored, and, says a French history book[*] to our satisfaction, Isenring showed the photos

> *après avoir gratté la pupille des yeux sur la plaque pour donner vie à ses personnages. — after having scratched the pupils of the eyes on the photographic plate to bring the images to life.*
>
> *Histoire de la photographie (p. 24)*

So, not much time was lost in the attempt to perfect perfection. And it was not an exception either. Dawn Ades, for instance, writes:

> *It was common practice in the nineteenth century to add figures to a landscape photograph, and to print in a different sky. The latter type of 'combination printing' was to compensate for the defects in early cameras, because it was almost impossible [...] to obtain in one exposure both sharp foreground detail and impressive meteorological effects.*
>
> *Photomontage (p. 89)*

Combination Print

By 1859 the now familiar technique of double exposure had been described in detail by the English photographer Henry Peach Robinson, in a booklet with the revealing title *"On printing photographic pictures from several negatives."* Double exposure proved to be a convincing way to demonstrate the existence of ghosts in the late nineteenth century. The procedure was as follows. A photographic plate was pre-exposed with the desired image of a forefather. Then, in the presence of an objective audience, the real picture was taken (on the same plate) and developed. Out came a photo of the scene that had just

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[*] Complete references can be found at the end of this chapter.

been photographed with the image of the ghost in the background.

Not everybody was happy with this photographic trickery. In 1856 a series of angry letters appeared in the *Journal of the London Photographic Society*, protesting the doctoring of photographs. In particular, these writers wanted retouched photographs banned from all exhibitions of the society. Aaron Scharf writes:

> *...retouching had reached such proportions, it seems, that it became difficult to find photographs which had not been embellished by hand.*
>
> *Creative Photography (p. 14)*

The protests were, of course, to no avail. Distorting or enhancing photographs remained a popular pastime, as illustrated by the following selection of books from that period:

> **1861** – Alfred Wall, *"A manual of artistic colouring as applied to photographs."* – A first description of the still popular method of hand coloring black-and-white photographs.

> **1866** – Antoine Claudet, *"A new means of creating harmony and artistic effect in photographic portraits."* – The method consisted of changing the focus of the lens during an exposure. After all, exposure times were still long enough.

> **1869** – Henry Peach Robinson, *"Pictorial effect in photography."* – A detailed description of combination printing methods, for instance by using special cloud negatives.

> **1889** – Jacques Ducos du Hauron, *"Photographie transformiste."* – A most entertaining booklet on photographic distortion techniques. It describes methods to make photographic caricatures, using cylindrical mirrors, conically shaped negatives, tilted printing paper, or by using special lenses that change the image during exposures. It even includes a discussion of a sophisticated technique for separating the emulsion from a photographic plate and reshaping it to achieve special effects.

> **1893** – Bergeret & Drouin, *"Les recreations photographiques."* – An encyclopedia of techniques for photographic image manipulations.

> **1896** – Walter Woodbury, *"Photographic amusements."* – A book that featured, for instance, a technique called *multiphotography*. The method was simply to use mirrors to photograph someone from several angles at the same time. The book was printed in no fewer than 11 editions between 1896 and 1937.

Composite portraits have also been popular for quite some time. The simple composite of the Mona Lisa and a self-portrait of Leonardo da Vinci shown on the first page of this chapter is a recent example. It was used by artist Lillian Schwartz to support a theory that the Mona Lisa could be another self-portrait of da Vinci. Ewing and McDermott wrote in the introduction to an entertaining book on photo composites by Nancy Burson:

> *Francis Galton, a biologist, founder of eugenics, and cousin of Charles Darwin, probably made the first composite photographs in 1877. Caught up in the nineteenth century's passion for the classification of types, he hoped to*

make pictures of the average criminal, the consumptive patient, the military officer, and so on.

Composites (p. 12)

John Heartfield (1931)

Jerry Uelsmann (1970)

Around 1920, John Heartfield and George Grosz of the Berlin *Dada* group were among the first to use photocollage and photomontage artistically. Heartfield became famous for his fierce photomontages directed against the rise of Hitler in Germany. Today, of course, image manipulation is as popular as ever, though much less debated. In Germany, artist Klaus Staeck follows in Heartfield's footsteps by using photomontage as a political weapon in his work. In America, photographer Jerry Uelsmann has perfected combination printing with modern darkroom techniques. He makes impressive works using up to six enlargers for a single print.

From Isenring in 1840 to Uelsmann today, photomontage has made quite a history. If anything, it shows that almost anything can be done and has been done to change a photographic image.

Why Bother with Computers?

If almost everything can and has been done in conventional darkrooms, why should we even bother trying to use computers? There are two main reasons. First of all, everything one can do to a digitized picture with a computer is reversible, which makes it much easier to play around with a picture, trying different transformations. Second, not only can the computer mimic everything a skilled professional can do with chemicals and enlargers in a darkroom, it can indeed also do things that are almost impossible to do any other way. How would you smoothly fade a picture from a negative to a positive version in a darkroom? In a darkroom you can correct perspective by tilting the enlarger lens or the printing paper, but how do you hold the paper to twist a picture into a spiral? Believe it or not, to a certain extent you can even restore the focus

in a fuzzy picture or remove motion blur with a computer. Less than half of the image transformations shown in Chapter **4** can be done in a conventional darkroom, and only with considerably more effort.

So, there's a lot to be said for using the computer as a digital darkroom. Besides, there are a few other and perhaps even more convincing reasons for using a computer darkroom: you never get your hands wet, you *can* but do not *have* to turn off the light, and it can be very entertaining.

An Overview

In the next few chapters we will explore the new world of digital photography and the type of image manipulation it makes possible.

In Chapter **2** we will see what type of hardware you would need to equip a computer as a darkroom. You need some way to get the picture into the computer, with a digitizer or a frame-grabber. And you need some way to print it back on film or paper with a printer. Once the image is in the computer, nothing stops you from turning it inside out. Beware, you will soon find out what this means. For this you need software, and this is where it gets really interesting.

Chapter **3** explains in detail how we can build a language for defining image transformations. The picture processing language serves as an example of the new types of digital darkroom tools that the photographer of the future may use. It shows how you can filter, enhance, and transform images without having to worry much about the theory that is behind it all.

Chapter **4** presents an array of maltreated pictures that illustrate the new possibilities. Each picture is accompanied by a brief explanation of how the effect was achieved.

Chapter **5** gives complete details on how to build a digital darkroom on your own personal computer and reproduce almost everything discussed in this book.

The book concludes with a catalogue of useful transformations that is presented in Chapter **6**.

Books Mentioned

Some of the books mentioned in the text are listed below. Not all books, however, are still in print.

Composites, Nancy Burson, Richard Carling, and David Kramlich, Beech Tree Books, New York, 1986, ISBN-0-688-02601-X.

Creative Photography, Aaron Scharf, Reinhold Publishing, New York, 1965, Library of Congress #65-13370.

Die Kunst findet nicht im Saale statt, Klaus Staeck, Rowohlt Verlag, Hamburg, 1976, ISBN 3-498-06114-3.

Fantastic Photographs, Attilio Colombo, Random House, New York, 1979,

ISBN 0-860-92017-8.

John Heartfield Leben und Werk, Wieland Herzfelde, VEB Verlag der Kunst, Dresden, 3rd printing 1986, LSV-8116.

Histoire de la photographie, Jean A. Keim, Presses Universitaires de France, Paris, 1970.

Photomontage, Dawn Ades, Thames and Hudson, London, 1976, ISBN 0-500-27080-5.

Silver Meditations, Jerry N. Uelsmann, Morgan & Morgan Publishing, Dobbs Ferry, N.Y., 1975, ISBN 0-871-00087-3.