PHOTOGRAPHIC DECEPTION AND MANIPULATION

BOOK REVIEW

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Photo Fakery:
The History and Techniques of Photographic Deception and Manipulation,
Dino A. Brugioni; Brassey's Publishers, Dulles, Virginia, 1999; 227 pages

In the 1990s, several books were published that reveled in the photographic manipulations of the more totalitarian regimes of the century. Most typically, officials whom had been removed from office, or worse, were cropped out of group photographs as if to alter history. While interesting to a point, the books did not cover the wide array of other common techniques of photographic deception, nor the means of detecting such manipulation.

In *Photo Fakery*, Dino Brugioni draws on a long career in image interpretation to broadly survey the history and techniques of photographic deception. Most effects currently associated with digital technology have long been available for film, albeit at a comparatively exorbitant cost in expertise and time. Not only are the methods of deception elaborated, but the means of detecting such manipulation are reviewed in a highly informative chapter. Intriguing historical anecdotes accompany many of the examples.

Ethics of Photographic Manipulation

A marvelously composed image of the pyramids of Cheops and Mycerinus appeared on the cover of National Geographic for February 1992. The image brought immediate protests from Egyptian authorities. To fit the photograph to the cover, technicians at National Geographic had digitally altered the image, moving the pyramids closer together. The magazine was embarrassed at the outcry and committed itself to refrain from such adjustments in the future. Other major publications have been through the same. Newsweek was criticized for publishing a photograph of the mother of septuplets that showed her with straight teeth when in fact she had crooked teeth. The motivation for these examples of manipulation is aesthetics, which many would accept in fine-art photography, but not for images commonly assumed to portray reality.

Aside from aesthetics, manipulation can be downright devious in intent. In news media and other public outlets, the public expects that images will indeed reflect reality, and it is this type of photography to which Brugioni devotes most attention. In Maryland in 1950, a wholly fabricated photograph was widely published showing Senatorial candidate Millard Tydings talking congenially with Earl Browder, formerly head of the US Communist Party. The image was a composite of two separate photographs, the

meeting never having occurred. Distributed just before the election, the forgery is reported to have cost Tydings the vote. As this review was being prepared, doubts were expressed in the media about the validity of two images purportedly taken in the early 1970s showing US Presidential candidate John Kerry at anti-war protests with Jane Fonda.

In this context, *photographic deception and manipulation* refer to changing an image to misrepresent the reality originally depicted, for the purpose of influencing the viewing public or intelligence analysts.

Despite the near-universal acceptance in democratic societies that the media should not modify news images, important exceptions in practice include photographs of accidents or wartime scenes from which gruesome details are omitted, and military objects removed or manipulated for disinformation purposes. In these situations, editors may find themselves in the position of having to decide if it is preferable to publish a less shocking or misleading image, or no image at all.

Types of Photographic Fakery

Photographic manipulation is classified in four basic categories, often applied in combination:

(1) deletion of details;
(2) insertion of details;
(3) photomontage (combining separate images);
(4) false captioning.

False captioning refers to mislabeling or inaccurately dating a photograph without necessarily modifying the image itself. Governments have distributed images intentionally mislabeled and/or misdated for a variety of purposes, ranging from military deception to making their leader appear more vigorous.

Photo fakery has cruelly affected families of soldiers missing in action, a number of which cases followed the Vietnam war. American authorities were intent on following all possible leads to locate US soldiers and civilians whose whereabouts were unknown. In 1991, a photograph emerged from Cambodia showing three Caucasian males who were identified as captured Americans and individually named. The subjects bore some resemblance to the missing soldiers, some of whose family members appeared utterly convinced that their loved ones had been located. Extensive research by defense analysts indicated beyond any doubt, however, that the photograph was a doctored image of three Soviet farmers originally taken in 1923 and which appeared in a Cambodian magazine in 1989. That a number of relatives had no doubt their husbands or sons were in the photograph was a tragic effect of wishful thinking in a nearly hopeless situation.

Outlandish Fakery

The chapter titled, "Communists, Ghosts, Monsters and Aliens" is intriguing. (Note: I object, as a long-time admirer of famous monsters, to the lumping of these noble creatures with the other three categories of alleged rogues in the title!) Brugioni explains interesting photo frauds including "spirit photography." Popular a century ago, freshly developed images of newly posed subjects would amazingly include hazy portraits of their ancestors in the background.

Over the years, my hopeful belief in the Loch Ness monster was sustained by a plausible-appearing photograph of "Nessie," together with numerous eyewitness accounts. I was therefore saddened to read in this book that the image in question, to which I had accorded as much faith as I could possibly muster, was exposed as a forgery. In 1994, one of the seven men involved in the hoax confessed on his deathbed that the photo of the monster was produced by attaching a toy serpent head to a child's bathtub submarine. Technically the photograph itself had not been manipulated after being taken, but was "falsely captioned" to the extreme!

Techniques of Identifying Fraudulent Photographs

Many manipulated images or false captions can be revealed by painstaking analysis and research, and occasionally by basic common sense.

1) ***Photogrammetry*** is the scientific analysis of angles, orientation and scale in photography. By carefully measuring the distances, perspectives and any shadows among objects in an image, analysts can frequently identify inconsistencies indicative of forgery. Also, the appearance of definite shadows in a photograph offers the possibility of roughly dating the image if the location is known, or to situate the image if the date and time are known. Sometimes an elementary discrepancy is obvious to a novice. A surprisingly large number of historical family photographs of European royalty appear to have had people added, according to the inconsistent direction of shadows appearing on various faces. Equally obvious have been montages released by news agencies intended to boast of military might that show jet fighters screaming barely 50 feet above crowds that appear totally unaware of the aircraft.

2) ***Substantive analysis and search for similar images***: Not infrequently during the Cold War, "leaked" images purporting to show production lines for technology or military hardware were demonstrated through rigorous research to be doctored images originally produced and published in another country. Similarly, the forged image of American prisoners of war noted above was exposed as a fake through the exhaustive effort of locating an original photograph from which it was obviously derived. Such endeavors require tremendous effort and organization of image collection, record-

keeping, photo-identification databases, and inter-agency coordination. Computer technology has been progressively improved to refine and speed such analysis.

3) **Microscopic analysis**: Manipulation of many film and digital images can be clearly detected by examination for differences or interruption in the granular pattern left by silver halide on film, or in arrays of pixels of digital images.

4) **Density analysis**: A *microdensitometer* analyzes the relative amounts of light reflected off various sections of an image. Minute but measurable differences among areas that would normally be expected to reflect light uniformly can be an indication of manipulation.

5) **Paper analysis**: Older images can be roughly dated and the area of origin sometimes discerned through chemical and radiocarbon analysis of the paper.

A Process of Elimination

Detection of sophisticated forgeries entails subjecting the questioned image to a full array of the above techniques as applicable. If there are no ascertainable inconsistencies, nor technical issues or duplicates identified, the image is tentatively cleared, but cannot be positively verified as authentic absent definite verification. Among the most famous images of photojournalism is a chilling photograph by Robert Capa of a soldier at the moment of death in battle in the Spanish Civil War. Many critics suspected this image of having been forged until rigorous analysis and research demonstrated it was authentic. Not only was the image shown to be technically consistent, but Capa's whereabouts on the battlefield on the day in question were confirmed; finally, the soldier appearing in the photograph was identified by his family.

Dino Brugioni's *Photo Fakery: The History and Techniques of Photographic Deception and Manipulation* makes for absorbing study. There is much to learn, and the historical nuggets will absorb even the reader not enthralled by photography. The style of writing is nevertheless clear-cut and straightforward, which provides professional clarity appropriate to specialized technical writing.