DIGITAL PHOTO MANIPULATION: A DESCRIPTIVE ANALYSIS OF CODES OF ETHICS AND ETHICAL DECISIONS OF PHOTO EDITORS

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DIGITAL PHOTO MANIPULATION: A DESCRIPTIVE ANALYSIS OF CODES OF 
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by

Stephen Edwin Coleman

A Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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December 2007
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ABSTRACT

DIGITAL PHOTO MANIPULATION: A DESCRIPTIVE ANALYSIS OF CODES OF ETHICS AND ETHICAL DECISIONS OF PHOTO EDITORS

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December 2007

“Photography gave the world a lifelike memory. It is especially well suited for journalism, but serves other areas exceptionally well also. Legions of photojournalists have used the medium with great energy; many also have used it with great thoughtfulness and ethical integrity. The heirs of earlier photojournalists continue in their footsteps, taking advantage of the significant improvements in technology to better communicate to readers and with heightened ethical awareness.”

Fred Parrish, 2002

This study examined the decision and thought process photo editors make on handling manipulated images through digital photography. The findings found the practice of editing has not changed, but the way in which editors examine photographs has changed. Computer screens replaced light tables, and computer software replaced photographic loupes.

This study examined the code of ethics from various publications, both domestic and foreign locations, finding out if code of ethics for newspapers has been updated to incorporate digital technology. Fifty percent of newspapers examined had a written code of ethics specifically dealing with digital photography. Domestic newspapers exceeded the foreign newspapers on addressing the issue of digital photography usage.
The research indicated digital technology allows altered images to be produced and published without the photo editor detecting any manipulation. The credibility of the publication may be lost if readers stop believing what is published.

Digital technology has created a paradigm shift in photography. The essence of photographing images remains the same, but digital photography technology changed the medium in which images are produced. The study showed technology was the main factor in a paradigm shift. The advancement in technology helped speed the process in getting photographs published in publications. Through printed versions or internet publications digital photograph has allowed for more images reproduced.
ACKNOWLEDGMENTS

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A debt of gratitude is owed to Ed Wheeler, retired photojournalism professor at Southern Miss, for instilling in me the important values of photography. Photojournalism has no boundaries, no finality, and surprises every day. Photography allows me to have fun each and every time I see a scene through a viewfinder. A special thanks go to friends, family, and Southern Miss colleagues for allowing me to pursue my degree and freedom to finish my dissertation. Each one offered valuable information and insightful support.

Finally I wish to express my deepest love to my wife Dianne for keeping me on track with my degree when times became tough. Without her drive I would have decided to pursue other avenues. Faith in my ability to finish, and faith in God allowed me to see that education is boundless. To embrace new ideas and thoughts I am able to go anywhere.
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CHAPTER I
INTRODUCTION

William Saroyan introduced the phrase “One picture is worth a thousand words” (Lester, 2006) – but is the story told by the picture the whole truth, a little white lie, or a big fat lie? In the case of published photographs, who makes the decision of what story is told – the photographer who first captures the image, the editor who decides how the image will be used, or the reader who interprets the image?

The photographer’s initial decision on how to photograph an assignment includes determining what visual information is needed to tell the story. The limitations of the camera’s lens can determine what is captured and what is excluded in the frame. The inclusion or exclusion of visual information, whether a conscious decision at the time or determined by the limitations of the equipment, becomes the first step in manipulation of the story. When the editor sees the photograph, a decision on color enhancement, re-cropping or size reduction can change the visual information in the photo again. The reader who views the photograph in a printed publication forms a story by interpreting the limited visual information provided by the image. Is this visual story the whole truth or is it what someone else leads the reader to see?

This study investigates if digital photography has changed the editing process or changed the purpose for which images are used in publications. The study also investigates the photo editor’s perception of how a code of ethics, either written or oral, influence how the photojournalist’s role in the process of producing the final image from the initial exposure. And, is it ethics, marketability, sales, or credibility that influences photo editors’ decision-making process?
An investigation into these questions would lead us to consider the role each of these people play in the printed visual communication process and how much control they are able to exercise in the process. A strong contributing factor which must also be considered is the continuing rapid advancement in technology.

The technology, which enables the whole visual communication process from production to distribution to take place in a matter of minutes, also produces increased demands on those who have a role in the process. Photographers now must produce an increased number of quality images, unique in composition, on shorter deadlines. Editors continue to face the decision of how to position the image to best serve the communication process while now balancing technology-induced ethical dilemmas with the real-world economics of the printed news business. The readers have the relatively new role of contemplating the believability of the technology-produced printed image.

Ethical issues are the topic of much discussion among the professional photography market. Even large circulation magazines with strong reputations are being questioned about photographs being altered.

Editorial publications with sophisticated technology provide indispensable and influential means of presenting news and related stories. The routine of producing images begins with the thought process and proceeds through assigning, photographing, selecting, and presenting.
CHAPTER II

LITERATURE REVIEW

When it began

In 1953 William Ivins, wrote:

"Never in the history of men has there been a more complete revolution than that which has taken place since the middle of the nineteenth century in seeing and visual recording. Photographs give us visual evidence about things that no man has ever seen or ever will see directly. A photograph is today accepted as proof of the existence of things and shapes that never would have been believed on the evidence of a hand-made picture. Photography brought a catastrophic revolution, the extent of which is not even today fully recognized" (Caslon Analytics, 2005, ¶11).

The Printing Revolution

After Johannes Gutenberg introduced the movable type press in 1436, the advancement in printing technology began to branch out in new directions of communication. In 1842, Herbert Ingram created the Illustrated London News with engravings produced by Henry Carter. Included in the first 16-page edition were thirty-two woodcut pictures of the war in Afghanistan, a train crash in France, a steamboat explosion in Canada, and a ball at Buckingham Palace (Spartacus Educational, n.d.). It was discovered that sales of newspapers increased when illustrations were used. Carter changed his name to Frank Leslie, left his family business and traveled to the United States to begin a new career. His newspaper, Frank Leslie's Illustrated Newspaper, used hand carved woodblocks for printing. Leslie's career paralleled the rise in photography
and the Civil War. Covering events of the war, he was able to reproduce over 3,000 images throughout the war, most of them less than a week old (Leonard, n.d.). Images were becoming more common in newspapers. The images were still interpretations of an event and not actual recorded photographs. The woodcarver still had the ability to control content until the invention of halftone imaging changed the quality and content of photographs.

The process of halftone imaging, designed by Stephen Horgan in 1873 for the New York Daily Graphic, enabled the printing press to transfer tiny gray-toned dots onto a plate allowing ink to print onto newsprint. The first halftone photograph, a picture of a building, was reproduced on the back page of the newspaper. It was listed on another page, announcing:

"On the last page will be found a picture of Steinway Hall ... it is worthy of inspection, too, as being the first picture ever printed in a newspaper directly from a photograph. There has been here no intervention of artist or engraver, but the picture is transferred directly from a negative by means of our own patented process of 'granulated photography'" (Lewis, 1995, p. 278).

This process set the stage for modern editorial publications to transfer images onto newsprint or coated paper for magazines. This technological advancement in printing gave newspapers an edge on photographic communication. Newspaper circulation began to reach higher readership and higher levels. Readers were able to relate information easier through photographs because the literacy rate was lower during the early stages of newspaper production. The affects of photography reached further into the population. Newspapers began to spread throughout smaller cities and towns offering more publications to read.
The Beginning of Photography

Images represented as optical elements of photography and the evolution of photographic images projected on a wall without the use of film or paper elements created an unusual perspective on visual imaging called the Camera Obscura. Derived from the Greek words, photo, for light, and graph, for drawing, drawing with light is one way of describing photography (Wills, 2006).

Known as the forerunner of the modern camera, the camera obscura, meaning darkened room, would emerge from a room concealed without light and only a small hole in one wall to project an inverted image on the opposite wall. The 10th century Arabian scholar Alhazen used the camera obscura to observe an eclipse of the sun by projecting the image against a white object (London, Upton, Kobre, & Brill, 2002). Artists who gained knowledge from the camera would use the device as a drawing aid by tracing the image reflected onto a sheet of drawing paper. The image, reversed, upside down, and going right to left, was projected onto the opposite wall with high detail for artists to trace. The camera was reduced to a small box with a 45-degree angled mirror to project the image upward and making it easier to view (Wills, 2006).

In 1835 a French inventor, Joseph Niepce, first discovered that silver nitrate and silver chloride would turn black when exposed to light. In bad health and with little money, Niepce came up short on producing the first permanent image. Within the same year, William Henry Fox Talbot invented the process of the negative for multiple printing. Talbot would spend several years researching and experimenting with silver nitrate and silver chloride (Wills, 2006). Many hours in a darkroom produced a new generation of printing photographs. Photography began to take shape in the communication process.
The Daguerreotype

The advanced process would lead an apprentice of Niepce, Louis Daguerre, to invent the first true photographs exposed on metal in 1837. He found mercury vapor, exposed to a silver coated copper plate, would affix the image to the plate (Bellis, 2005). This process, announced before the French Academy of Sciences in 1839, was heralded by a French newspaper: "What fineness in the strokes! What knowledge of chiaroscuro! What delicacy! What exquisite finish! ... How admirably are the foreshortenings given: this is Nature itself!" (London, Upton, Kobre, & Brill, 2002, p. 369).

Although the process was not meant for multiple printing, the Daguerreotype was a direct positive image on a polished coat of silver plated onto a copper sheet sensitized by placing the image over iodine crystals inside a box. As the Daguerreotype was becoming popular among the population, Talbot continued his experimentation with a permanent solution to images. In June of 1840, Talbot introduced the technique of putting his images on paper. This sensitized paper would become the basis for modern photography, and through refinement the process is still in use today (London, Upton, Kobre, & Brill, 2002).

Exposures, taking up to 20 minutes in full sun, were dwindled down to several minutes. This was made possible by the Collodian process invented by Englishman F.S. Archer. By incorporating glass as the base, the exposure was shortened because the glass and chemicals were more sensitive to light. By the 1860s there were millions of photographic images being made.

In 1871, R.L. Maddox, an English amateur photographer, produced a dry film plate which retained light-sensitivity after drying. This new way of faster emulsions would be a turning point in photography, and lead to quicker exposures and truer images.
Photographers found new, smaller, faster, and more portable cameras being marketed throughout Europe. Photographs were being taken in larger quantities by enthusiasts. Among those who experimented with the faster shutter speed was Eadweard Muybridge, who was a pioneer in the field of motion-picture projection. His photographs showing a sequence of photos of human and animal subjects secured the notion that continuous motion could be fixed onto chemically coated paper.

**The Kodak Moment**

George Eastman studied and experimented at home, inventing a formula based on a gelatin emulsion known as the dry-plate. In 1878, after filing for a patent for a machine to coat dry photographic plates, Eastman began the new style of processing photographs (Eythorsson, Geyer, Iosif, & Trullas. 2004). “You press the button, we do the rest,” was George Eastman’s plan to put the first simple camera in the hands of consumers in 1888. His camera, a simple light-tight box with a simple lens, would be loaded at the factory with film, developed by Kodak, and sent back reloaded with fresh film (Bellis, 2005, ¶5). Reducing a camera, once complicated and awkward, into a simple and accessible commodity for everyone to use made Kodak a household name. The camera contained a new gelatin emulsion in which light sensitive silver salts were suspended. The jelly-like substance was processed from cattle bones and hides (London, Upton, Kobre, & Brill, 2002).

Over the next 100 years the camera went through several changes, but did not change drastically from the original. In 1900, the first mass-marketed camera, the Kodak Brownie, was introduced. The first 35mm still camera was introduced in 1913 using black-and-white film. Kodak did not introduce Kodachrome, the first color slide film, until 1935. Cameras went through refinements with the addition of faster shutter speeds,
variable film speeds, motor-driven cameras, and compact 35mm versions (Bellis, 2006). These changes helped photographers do their job more efficiently. Moreover, photographers spent more time shooting rather than processing film.

The Digital Era

Digital imaging refers to information in binary or two-digit code controlling binary pulses of electricity stored on a magnetic hard drive (Hirsch, 1990). All computer operations are based on binary codes, a series of varied combinations of 1s and 0s, controlled by a computer motherboard. Digital photographs are images read, captured, and interpreted through various cameras and lenses (Tillman & Hollstein, 1999).

Compared to film cameras, digital imaging is in its infancy. Cameras with storage disks will become the next generation of image capturing and rendering equipment. Light impulses recorded as electronic changes are stored on a computer hard drive or memory disk (Cookman, 2003). The digital imaging process was used by the National Aeronautics Space Administration (NASA) when spacecrafts were unable to return to earth with non-digital images stored on the spacecrafts’ internal computers.

Digital computer techniques in image restoration and enhancement were developed by the Jet Propulsion Laboratory of the California Institute of Technology. Using this digital information, NASA launched an unmanned spacecraft which transmitted back to earth images of the moon’s surface and soil testing for later manned landings. Unfortunately, the limitations on weight and power supply made it impossible to launch a perfect TV camera system on the unmanned craft. Consequently, the Jet Propulsion Laboratory measured the degradation properties of the camera’s images before they were launched. The operation used computer processing to remove the degradations from the received moon images (Andrews & Hunt, 1977).
Today, photographers are switching from analog-based film cameras to new compact digital cameras with accelerated capabilities. In 1988, only 4% of cameras sold in the United States (excluding one-time-use cameras) were digital; in 2000, that figure leaped to 30% (Halstead, 2003b). In 2003, for the first time, digital cameras outsold analog cameras (Friedman, 2004). On January 12, 2006, Nikon Corporation announced it will soon cease production of film cameras and put its resources into digital cameras. Nikon’s United Kingdom division sold 95% of its brand model cameras in the digital line (NPPA, 2006). The emergence of powerful computers, photo manipulation software, and graphic technology photography has entered the multi-media realm. Yet, no photograph can faithfully record what can be seen with the eye. It is a representation of an event or location (Clark, 2001).

The Shift in Shooting

What was manually done in a wet darkroom has been modified electronically into stored bits. Manipulation of printed darkroom photographs has been replaced by filtered software programs. Camera chips have replaced negatives. Computers have replaced enlargers. Electronic printers have replaced chemically coated photographic paper. All manual tasks on an enlarger have been replaced by equipment requiring software knowledge and electricity. Batteries run cameras; alternating current (AC) powers computers and printers.

Single-lens reflex 35mm film cameras can be used without batteries or computer chips to determine how photographs should be shot. The photographer chooses the aperture, shutter speed, and lens. Digital cameras can be used with full priority exposure, meaning all the settings are determined by the camera and not the photographer. When digital format was first introduced, the quality was acceptable for printed publications,
but not acceptable for large formatted printing. Now, cameras and computers give photographers a variety of situations to create more improved photographs (Horton, 2001).

The Filmless Image

The publications industry has changed to the filmless image. Digital cameras have changed the way professional photographers think and shoot. The cognitive thinking of digital has overlapped onto the shooting habits of amateur photographers. Cameras which once cost thousands of dollars can now be purchased for a few hundred dollars. The quality of exposures varies within the range of camera bodies. Images are not developed with chemicals or grain, but with pixels and layers. A comparison of the image is thought of as lines per square inch, much like those associated with television sets.

In 2003, for the first time in history, the digital camera market outsold film cameras in both amateur and professional markets. Newspapers replaced their entire camera supply with digital bodies, computers, and card readers. Darkrooms were converted into offices or paper morgues. The aroma of Dektol and fixer no longer permeated the darkroom.

Photographic images account for an estimated 97% of visual communication among viewers (Brugioni, 1999). The photograph has become a popular medium of believability in communication, thus the representation of events should be true.

Historically, credible newspapers and magazines are derived from the reader’s acceptance of published images and words as true and believable. The content of early publications was rarely doubted, with the acceptances of tabloid publications or supermarket tabloids with long-standing reputations of non-credibility. Now that digital
images are the standard, readers are more likely to question the legitimacy of a photograph and wonder if the image is documentation or the photographer’s interpretation of an event.

Technology assists in speeding the process of selecting and producing the printed images. Digital cameras allow the photojournalist to spend more time on actual events and not in editing photos after shooting. The development and ease of using photo-editing software has increased the photojournalist’s responsibility in reporting events as accurately as possible. The recording of information with this new technology enables photographers to manipulate the image content. The final image is being advanced by a new technology never used before in publications. Photographers and editors have a new responsibility and role to produce news quickly and efficiently (Seelig, 2002). The camera’s viewfinder depicts a particular scene every time the photographer looks through the eyepiece.

Digital photography, a convergence from chemical emulsions and grain into bytes and pixels, has exploded into a new paradigm of photography. The knowledge and information from film photography has evolved into a new thinking process for media organizations. Digital imaging is faster, cheaper, and easier to comprehend than its predecessor. A new era for photojournalists has emerged requiring skills far beyond their predecessors.

A digital photograph is considered raw in imaging reproduction. A raw photograph means there has been no manipulation of the image. Photo-related published works have created an electronic debate about the legitimacy of manipulated photos (Slattery & Ugland, 2005). The photograph is a pure perspective, a documentation of the event as it happened. Raw photographs produced from low megapixel camera systems

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require more alterations to produce improved printing. In the high megapixel camera systems little or no alteration for quality printing is needed.

Every photograph is shot in raw form. Once the photograph gets beyond the accepted range of manipulation, it may appear improved, but the end product is distorted from the true nature of the photo. Photos routinely go through acceptable levels of manipulation to adjust brightness, contrast, burning, dodging, color correction, cropping, and removing of scratches or dust spots. What is not generally accepted is adding, moving or removing objects for composition purposes, color changes, cropping to alter the meaning, flipping the photograph, or printing other than the true intent of the meaning. Publication editors strive for unaltered photos, but can encounter images which have distorted information. Once a photo is altered with photo-editing software, the image is no longer pure or raw. The altered image may go through several metamorphoses before reaching the final produced image.

Often, altered photos will include repetition of objects, jagged edges along a background, and shadow areas going in conflicting directions. These signs of manipulation allows for easy detection.

In all photographs, scenes are altered once the shutter is pressed. The scene is not captured in its entirety, but a section is recorded and archived. The photographer deems the importance of composition, angle, and framing. An ethical judgment in photojournalism lies in the lengths a photographer will go to for capturing the best photo. The path in ethics never follows a straight line. It also never goes in a narrow path (Beckman, 1999).

Digital photography will remain in the workforce and images will continue to be altered. The extent of altering depends on the photographer and the editor. The
employing agency also may determine the acceptable level of manipulation. Magazines routinely alter cover photos to compensate for vertical formatting or interference with text. Manipulation takes place in weekly tabloid magazines and in highly respected periodicals. The acceptance of this practice has filtered into newspapers where manipulation was formerly taboo. Ethical standards may continue to keep abuse of this practice in check, but photographers are under pressure to produce the best photograph and sometimes poor choices are made when presenting the image. Is the viewer’s interpretation of the photo changed by manipulation? Is the photograph an artistic version of the truth or is it a truthful documentation?

While the digital era of photography has been heralded as the future of news media by some, others consider the cost factor too expensive. The quality of photos also depends on the camera purchased for use in photographing news events, and small circulation newspapers with limited budgets look for reasons to save funds on equipment.

Photographers were overjoyed when digital gave them the ability to reproduce far more images in a day than ever before. Time spent on cameras with different International Organization for Standardization (ISO) film speeds, changing film after 24 or 36 exposures, and determining lighting conditions were factors in how photographers shot assignments. Photojournalists using film carried between two and four cameras with different lens selections, motor drives, and films of various ISO speeds to ensure that photographs could be taken at different lighting conditions. Up to 80% of photojournalists said their lives changed for the better when they transferred from film to digital cameras (Halstead, 2003b).

The camera became a new tool in capturing the essence of a moment; it produced an instantaneous masterpiece from shapes and forms rather than from a pen. The
interpretation of an image changes depending on the reaction of the viewer. A photograph reproduced in different publications creates a variety of reactions. It will not have the same intensity and impact as photographs appearing in a museum display (Neri, n.d.). The digital camera comes equipped with a Liquid Crystal Display (LCD), allowing instant viewing of the photo and editing capabilities in the camera. No longer does the photographer need to rush back to the darkroom to develop and see the negative.

Photojournalistic Usage

A new wave of cameras would soon change the style of photojournalists. The digital era was soon altering the photography assignments and shooting styles. A version modeled after the Nikon 35mm film camera, the N90, used the initials NC (for News Camera) and was produced by Kodak and funded by The Associated Press. The camera was marketed and sold by AP for $17,950 (Hickey, 2005). The NC camera contained a 1.3 megapixel charge-coupled device (CCD) and a removable storage media. A CCD is a small rectangular piece of silicon that replaces film by receiving incoming light through the camera lens (Wikopedia, 2006). A pixel, short for picture element, refers to the single point in a photographic image. Pixels replace the grain structure of film. The higher the pixel range, or megapixels, the better the quality of the photograph (Webopedia, 2006).

Since the N90-NC camera was low resolution, bulky, and produced bad image quality, the camera went through several modifications. As experimentation of cameras progressed in usage, the Kodak DCS, later named DCS 100, was used by the Associated Press. Photographers at the 1992 Democratic National Convention were able to use the DCS to document the proceedings. Attached to an Apple Macintosh computer placed underneath the photographer’s platform, the DCS could be used in certain parameters.
around the platform. Photographs of Bill Clinton’s acceptance speech were handled by a photo editor and transmitted by a computer to newsrooms across the nation within five minutes. A month later more image transmissions were conducted at the Republican National Convention under the same situations. Jim Gerberich, Associated Press editorial imaging product manager, said that digital “was now just a matter of when, not if” (Hickey, 2005). A camera designed specifically for photojournalists was the Associated Press/Kodak NC 2000. Launched in February, 1994, just prior to the Winter Olympics in Lillehammer, the camera had no LCD (Liquid Crystal Display) for playback, no spinning rewind knob, and no way to open the camera back (Hickey, 2005).

The push to turn newspapers using film cameras toward digital cameras was credited to the Associated Press and United Press International. The wire services were using digital cameras and announced in March 1990 they would soon equip members and subscribers with digital imaging computers and within two years all photographic transmissions would be digital. By June 1992 all subscribers had electronic darkrooms (Kelly, 1996).

The photographic process has remained constant with little refinement over the past century. Rudolph, (2003, ¶7) said: “Photography itself hasn’t changed; only how we do business has changed.” Photographers still compose, engage subjects, and have a creative eye, but the computer has taken the person and wet chemicals out of the darkroom. The computer has become an unparalleled figure in how the technology of photography has changed. Nature photographer Art Wolfe said in 1997 that “digital photography was like making watercolor…it’s not a painting or photo. It created something new” (Wheeler, 2002, p. 29). Photographic imaging became something new
to photographers with a whole new set of directions to which digital photography can take them.

**A History of Manipulation and Ethical Dilemmas**

There is a long documented history of photo manipulation beginning with the first production of the chemical plate. Photographic software has replaced the tedious negative touch-up or print airbrushing. Clearly there is a distinction between editorial photography and fashion or commercial photography. In the latter, digital images are transformed by more radical alterations and recreated into a new reality (Tillman & Hollstein, 1999).

Photo manipulation was common long before digital images were the standard in the profession, but was usually connected to magazine or tabloid publications. Photos were once considered a snapshot of time. Viewers believed what they saw were accurate representations of events which occurred at certain moments in history (Stanleigh, 1995). Before digital technology, the public had no reason to question the photos published in newspapers, but the admission of purposefully altered images could change the public’s mind. When readers realize they have been deceived by the manipulation of an image, the credibility of the publication and the journalist is jeopardized.

When photographers recreated a scene, manipulation became a staple for interpretation. Throughout the years, news media practitioners had considerable concerns about what is the interpretation of objectivity and whether it is achievable. The focus ought to be on accuracy, reality, truth and fairness (Gordon & Kittross, 1999). Artists would alter elements from a scene to create a mood or convey their own feelings. Photographers, on the other hand, should create a more accurate representation of a subject or scene, but they cannot do this alone. It requires the help of a machine. Either a
camera or a computer has to be used in order to render an image. For that reason, paintings have traditionally been more respected than photography (Elliott & Lester, 2003, August).

Media publications represent the news values of current events. Photographs give a documented moment during an event, and give an account at a precise time frame for future retrieval. Large newspapers and wire services have policies about manipulating the content of photographs. Brugioni (1999, p 4) said: “Because the photograph is an instrument of such powerful believability, the faking of a photograph for the purpose of deceit or deception is repugnant to most people; such photography defames and falsifies our understanding of the truth.”

New technology brings special ethical quagmires. Speed of technological information allows earlier deadlines along with quicker editorial decisions. “Journalists must be cautious about their media being co-opted and used for selfish advantage by those who are ostensibly the subjects of coverage” (Seib & Fitzpatrick 1997, p. 169). In other words, the photographer must know the limitations of photo manipulation based on their knowledge and ethical standards. Publications routinely offer advice on what is acceptable for publication.

Replacing Airbrushing

Finding ways to remove or alter images in the negative itself requires a technique using subtle strokes of a pen. Negative retouching can soften or remove information such as blemishes, facial lines, negative scratches, and unwanted information in the negative. Mostly done in the medium-to-large format negatives, retouching can repair and change the original negative. Often used to help the image with imperfections, the technique was used later used to change the meaning of the image.
The computer became a highly sophisticated photo-editing tool (Irby, 2003a). Burning and dodging from an enlarger (often called the Hand of God method) was replaced by cloning of pixels. Photo manipulation by an operator and image enhancement replaced photo airbrushing methods once done on the negative or print.

Image modification before digital cameras was done by photographers, retouch artists, and prepress technicians who adjusted tonal range, contrast, and color saturation through darkroom techniques (Irby, 2003a). Images can be changed by tonal ranges to emphasize a mood just as writers can change the wording of a sentence to express a mood.

Digital editing opens many doors for creating and changing images. Photographers capture images and store them on a compact disk. Adobe Photoshop can change the tonal ranges, and has the ability to digitally enhance and even create a non-existent image. Seamless pixel changes can fool the audience into believing a scene without questioning the validity. Ethical choices by the photographer and internal pressure from editors for the perfect image offer the temptation to alter and manipulate.

Imaging manipulation initially occurs in the camera when the photographer decides what subject area is important. Camera settings such as shutter speed, aperture openings, and flash usage can alter how the true scene occurs in both film and digital cameras. The information stored on a digital disk remains there at the discretion of the photographer, who can view each image and delete any unwanted images. Film cameras do not have the capability for editing prior to developing the film.

The extent of color correction, cropping, and tonal burning and dodging, and the purpose of this manipulation are areas of concern. Through photography software, images can be color balanced to represent the true color saturation of a scene. Altering
the color through artificial manipulation in images, and the acceptance of the creation, is a balancing act during and after the photo shoot (Quinn, 2004).

The photographer makes choices when photographing events for news organizations, free-lance jobs, or commercial jobs. What is important or superfluous information in the image must be decided at the moment the photographer focuses on the subject matter. Reduction of the scene to focus tightly on visual information can direct the viewers' attention. Composing the image to focus on relevant information causes photographers to decide what included or excluded from the frame. Cropping is a widely accepted form of image manipulation. Certain cropping can increase the impact needed for the image to render the desired effect on the reader. For instance, by isolating victims and disregarding a scene of widespread destruction to the left and right of the victims, the photographer has changed the overall scene into a tightly cropped portion of the destruction. This isolation does not tell the entire story.

Dodging and burning is another darkroom technique transformed to digital photography. When creating an artificial lightening or darkening of an image, the situation brings a false attitude of a photograph (Quinn, 2004). Burning portions of the image with light longer than the over-all image directs the viewers' attention to a specific area of the photo the photographer deemed important. Dodging infers the opposite by not allowing as much information in a section of the image for more detail to show through. The effect is usually conducted in the shadow areas of a scene or subject, allowing more of the image to show. “Although technology has not brought wholesale change to photojournalism manipulation, as similar manipulation existed 100 years ago, it has made manipulation easier and more pervasive” (Quinn, 2004, ¶30). Each technique creates an
altering effect acceptable to the photographer. Most photographers agree burning and
dodging a print is not considered an ethical problem.

Photographic Fakery

According to Elliott & Lester (2003, August), photography has had infamous
miscues over the years. Photography inventor Hippolyte Bayard made an early fake
picture and caption combination in 1840 of himself posed as a corpse to protest all the
attention and money Louis Daguerre received with his daguerreotype process introduced
a year earlier. For dramatic effect, one of the first photojournalists, Roger Fenton, added
cannon balls to his 1855 image “The Valley of the Shadow of Death.”

In 1857, Oscar Rejander produced a picture titled, “Street urchins tossing
chestnuts,” by hanging chestnuts with a fine thread. In that same year, Rejlander
produced his famous “Two Ways of Life” by combining 30 separate images into one.
The next year, Henry Peach Robinson used the same cut and paste technique in “Fading
Away.” Alexander Gardner moved the body of 18-year-old soldier Andrew Hoge, killed
during the battle at Gettysburg, for two different pictures while shooting during the Civil
War (Figure 1).

Photographers re-enacted famous battle scenes of the Spanish-American War in
New Jersey backyards. Robert Capa’s “Death of a Loyalist Soldier” and H.S. Wong’s
image of a baby crying at the Shanghai train station was published in *LIFE Magazine*,
with many believing they were too unusual to be real (the former was, the latter not). Joe
Rosenthal of *The Associated Press* captured a re-created raising of a larger flag over Iwo
Jima in 1945 and won a Pulitzer Prize. Rosenthal was later cleared of any manipulation in
the flag raising.
In 1936, Arthur Rothstein almost short-circuited his career when it was discovered he traveled around the country with a steer skull that he placed within different scenes for dramatic effect. That same year, one of the most famous photographic portraits ever produced, “The Migrant Mother,” was a study in stage management by Dorothea Lange. Critics thought Lange set the photograph up instead of documenting the scene. The March 6, 2005, issue of Newsweek Magazine showed Martha Stewart peering through drapes before her release from prison, but the image of her head was placed on a model’s body. Newsweek acknowledged in a credit line on page three that the cover was a photo illustration (Figure 2).

The 1980s saw National Geographic enter the manipulation hall of fame with its 1982 cover stories on Egypt and Poland (Figure 3). The manipulated Day in the Life book covers were altered to make a more dramatic effect. In 1989, an editor for the St. Louis Post-Dispatch removed a Diet Coke and cropped a television set from a portrait of Pulitzer Prize winner Ron Olshwanger and his wife. A photo of O.J. Simpson was manipulated to make him appear more sinister on the cover of the June 27, 1994 issue of Time Magazine. Newsweek ran the same photo without manipulation (Figure 4). New York Newsday’s February 14, 1994, edition showed Tonya Harding and Nancy Kerrigan skating on the ice at the same time when in fact, they were never on the skating rink at the same time (Figure 8). The December 1997 cover of Newsweek showed the perfect smile of septuplet mother Bobbi McCaughey with straighter teeth. (Figure 18). In the original photograph McCaughey’s teeth were not perfectly aligned.

Another incident of a photograph which had been manipulated included a photo of Kate Winslet on the cover of GQ Magazine which made her legs look slimmer. Excessive manipulation was made to create this effect (Figure 7).
The Calgary Herald January 3, 2005, edition published an image of a tsunami overcoming a group of people in Asia. The image was not from that day but from a tidal surge from the Qiantangjiang River in China taken in 2002 (Figures 9 & 10).

A photo surfaced in 2004 of John Kerry and Jane Fonda taken at a rally to protest the Vietnam War. The photograph was two photos spliced together (Figure 11). The September 16, 2002, edition of Time Magazine cropped the cover photograph of President Clinton and George Stephanopoulos to remove Dee Dee Meyers from the background (Figure 12). Mirabella Magazine created its cover with an artificial model on the September 2004 edition. The entire photograph was a creation by computer software (Figure 13).

Esquire Magazine chose Michelle Pfeiffer for a cover in 1990 titled “What Michelle Pfeiffer Needs...Is Absolutely Nothing.” In actuality, she needed $1,525 in complexion touch-ups, softened eye lines, softened smile line, added color to lips, trimmed chin, removed neck lines, adjusted color and other content altering features (Figure 14). The USA Today October 19, 2005, edition showed Condoleeza Rice on the front page with adjusted brightness and sharpness giving her eyes an eerie appearance (Figure 15). Sports Illustrated altered the cover photo on the February 5, 2001, edition on the Super Bowl between the Baltimore Ravens and the New York Giants. The top of the frame was extended and a player’s uniform strap was removed to allow space for type and formatting (Figures 16 & 17).

Newsweek Magazine showed Donald Rumsfeld and Colin Powell together on the September 16, 2002, edition cover. The images were spliced together (Figure 19). The March 15, 2006, edition of the San Antonio Observer features a San Antonio police officer wearing a white hood of the Ku Klux Klan and a holding a pistol. The hood and
gun were digitally added to the photo of a police officer (Figure 20). The March 15, 2006, cover of the *New York Times Magazine* shows former Virginia Governor Mark Warner with altered color enhancement. The jacket was changed to maroon from charcoal; the shirt was changed from light blue to pink; the tie was changed to maroon with stripes from dark blue with stripes (Figure 21). In July 2006, *The Charlotte Observer* fired staff photographer Patrick Schneider for altering the color in an image of a firefighter silhouetted against the sky (Figure 22).

Dodging, burning, cropping, lens selection and image enhancement are forms of manipulation. Though possibly unintentional, these manipulations are considered acceptable ranges of perception shown to the viewer. Cropping out unwanted or unnecessary elements creates a focal point for the viewer. Readers or viewers see only a portion of an image when context is removed by the photographer. Photographers may decide to visually point out a particular moment of a scene rather than show the entire area. By choosing deceptive angles or focal points of a moment the photographer alters the perception of an incident. For instance, a rally occurs in front of a university administration building protesting the dismissal of individuals. A key moment of the rally is the students’ demonstrated displeasure over the decision of the administration. The photographer however focuses the camera on a small faction of supporters agreeing with administration, thus showing only one side of the rally. Deceptive elimination or inclusion of elements in a photograph for composition purposes creates a sense of manipulation. Once the photograph gets sent via the Internet to the newspaper or wire services, the element of change has begun.

Ethical editing dilemmas increased in the early 1990s with high speed photo transmission. Photos edited on computers started a new era of decision making, but the
solutions came from past values. The computer became a highly sophisticated photo editing tool (Irby, 2003). Adobe Photoshop has the ability to change tonal ranges, and digitally enhance and create a non-existent image. Seamless pixel changes can fool the viewer into believing an image without questioning its validity. Ethical choices by the photographer and internal pressure from editors for the perfect image offer the temptation to alter and manipulate. However, adding, removing, or changing elements into a new photo are not tolerated by most news organizations. Photojournalist Dirk Halstead (2003) suggests if a photographer is found to have manipulated images the individual should be terminated, and the photographer would have a difficult time finding employment in the industry.

Newspapers and Controlling the Scene

The emphasis photojournalists place on factual events in newspapers tend to divide what is viewed in newspapers as hard or soft news, based on criteria in gathering photo information for certain news categories (Seelig, 2002). Spot news, sports action, and some general news fall into the higher priority category based on the timeliness of the event. Spot news is considered events happening on a moment’s notice. For instance, natural and man-made disasters (e.g. floods, hurricanes, wars, and terrorism) are good sources for visual imagery. These spontaneous events are the core of visual imagery and evoke some of the most emotional responses in readers.

Lower category photographs associated with news tend to be more local information and may include features, environmental portraits, business, and sports feature events. The emphasis on feature style photographs is usually placed on composition and presented for the reader’s pleasure. These images are often light-hearted in approach and are used to produce different emotional responses.
Photojournalists have the ability to evoke a cognitive response with the viewer through an emotion-filled image. Photographs even have the power to change the views of society through visual stimuli (Long, 1999).

The system of interaction between readership and publications targets the context of reality and truth in visual images as an integral part of the behavior of routines in everyday life. Journalists have an important role in addressing the visual communication of events which shape the views of readers while constructing the publication into a viable information center. People will accept what is reproduced in the paper because of a history of trusting the press.

Controlling a scenario in newspapers often depends on the individual photographer’s perspective of the situation. Farm Securities Administration photographer Walker Evans was asked if the camera could lie. He replied “Always,” and explained further the camera is “the instrument of symbolic actuality,” not of actuality itself (Grundberg, 1990, p. 9).

Photographs should be evaluated on the merits of reproducing a scene. The ideology of the photograph is evaluated once the shutter is pressed. Photojournalists routinely decide what areas are not needed to tell the story, which angle shows the best light, which lens selection best shows the scene, and how the image is to be perceived by the public. A photograph is a mere representation of an event or place, but no photograph can faithfully record what can be seen with the eye (Clark, 2001).

Our eyes have large ranges of focusing on a subject with degrees of sharpness of the entire scene. We can isolate an area by focusing our eyes to a particular area and eliminating the noise of the background or side views. Film and digital images, on the
other hand, do not have the capabilities of this dynamic range. Photographers make the decision of lens selection, framing, composition and scenery.

Technology provides the opportunity to change or alter photographs. One recent case of altering a photograph in the field was by Brian Walski, former photographer for the *Los Angeles Times* (Figures 5 & 6). According to Cheryl Johnston (2004), Walski considered March 30, 2004, his best day of shooting the war in Iraq, but it was his last assignment for the *Los Angeles Times*. After waiting in Kuwait for nine weeks, he finally had the chance to shoot in Iraq. He was able to photograph the distribution of food near Basra. He captured 150 digital images of British troops battling Iraq paramilitaries, and later in the day he took another 150 images of panicked civilians escaping the fighting.

As he progressed in shooting, he never quite had the perfect moment so he did something he had never done before. He photographed two British soldiers in front of a large crowd of Iraqi civilians and composed two photos into one by using the left side of one image and the right side of another (Figure 5 & 6). In essence, he created a totally new image of a moment which never happened. He transmitted the manipulated image along with 12 other photos from the day. Several large newspapers in the United States unknowingly selected the altered image. An employee from one of the newspapers noticed duplication of civilians crouching in the background.

After being contacted by editors, Walski admitted the reworked image. The newspaper had to notify the public of the manipulated image via their internet pages and a correction in the following daily edition. Walski's image caused an unprecedented set of circumstances. Kenny Irby of the Poynter Institute said, “This was a new breach of ethics.” To his knowledge there had not been a case where a photographer changed the image in the field in a time-defensive deadline situation (Johnston, 2003, p. 7).
In these days of digital movies, web TV, and computer special effects, it is hard to distinguish between realistic scenes and computer-based technology. The real challenge is keeping photojournalism ethics as high as possible (Reksten, 2003). Reality and enhanced images have intertwined into believable photos on the movie screen, television, and printed material. The public can be made to believe what is presented in movies, television, and printed forms of communication. The concept of altering an image is easily conceived without the public knowing what the truth is. A concern in photographic image-based technology research is the recognition of photographic objectivity. The image is never a complete representation, or a palpable and impersonal record of realistic fact (Snyder, 1997).

Many photo editors believe journalism ethics should be explained to photographers and reporters upon employment. Photojournalists in the field have the duty of being photographers as well as editors. Making decisions on deadline creates a situation of numerous ethical dilemmas. For Walski, the pressure to present the perfect photo influenced his decision to transmit altered photos. Great photos are sent from events around the world at a fast pace. Acceptance of a photograph and the interpretation it represents creates a possibility for photojournalists to decide if a photograph can be changed and accepted as real. These variable choices are made, and create subtle manipulations effecting perception (Hantz & Diefenbach, 2002).

Understanding which deliberate manipulations are allowed or accepted and which manipulations are created for the perfection of the image is a question which depends on (1) reasonable assumption; (2) the impact of the manipulation on significant elements of the record; and (3) the contract with the audience (Hantz & Diefenbach, 2002). The problem of manipulated images is not in the interpretation, but the skepticism of the
audience to which the image is targeted. Audience involvement in readership is important if the image supports the truth and not the fixation of photographers grabbing the perfect shot. If the audience is not involved in seeing the photo for what it is, the portrayal is less believable and less acceptable. A broad understanding of image manipulation has provided an easy out for the viewer seeking to resolve cognitive dissonance (Hantz & Diefenbach, 2003).

Magazine Thoughts on Imaging

Magazines tend to take the approach of artistic value rather than a newspaper style of absolute truths. However, magazines do limit the amount of manipulation on photographs. Most concentrate on covers where the public first sees them on display. First contact leaves the most impression.

Magazines live by another standard for cover images which are routinely altered to compensate for vertical formatting and banner placement. Basic composition does not allow for landscape formats. Editors look at how photos fit the format for each issue and decide which photo best illustrates the main story. Kenneth Irby (2003b), examining manipulation, asked four questions based on magazine covers:

- How often are cover images manipulated or altered - based on your experience and opinions?
- Why has this trend become the norm?
- What standard does your magazine follow vis-à-vis altering photographs?
- Are there different standards for the cover than for the inside presentation of the magazine, and what is the basis for these standards?

Most editors agreed the photograph chosen for the cover is always scrutinized for alteration. Lynne Staley, Assistant Managing Editor/Design, Newsweek, points out
news magazines have always had to straddle the gulf between commercial and journalistic considerations in ways other magazines have not (Irby, 2003b). Correcting backgrounds, disguising blemishes and color balancing is needed to ensure the cover has all the necessary elements for presentation.

Robert Newman, Art Director of *Inside.com*, explained that covers are manipulated all the time for aesthetic reasons. Men’s magazines, fashion magazines and women’s magazines alter images on a routine basis in order to get the best designed cover. The trick in such covers is passing off images as reality instead of surrealistic imagination. The thinking of editors in fashion or celebrity magazines is that actors and actresses have already undergone alterations, enhancing themselves by plastic surgeons. Their image has become another element on the page just like the typography, color, or graphic concept (Irby, 2003c).

Twenty five years ago, *National Geographic* (Figure 3) decided to change the location of the Great Pyramids to fit its cover. Since then magazine image manipulation has become the norm. Newspapers and editorial publications have adopted rules on manipulation, but fashion and entertainment magazines have few constraints on photo altering. Rita Sylvan, editor of the Canadian edition of *Elle*, said “The retouching of photographs is part of the entertainment value of a magazine but must be evaluated as only part of its content” (Cobb, 2003, ¶19). The perfect body has become an obsession by consumers, leading magazines to deal with fashion or celebrity profiles and giving them the look they want. Fantasy has overtaken the reality of images being played out in the real world because the hyperimage has gone unchecked for decades (Kahn, 2003). Images can be changed by altering pixels and thus making them virtually undetectable. To confuse matters even more, negatives
can be produced from manipulated images making the photograph more realistic, therefore hiding the altered image’s true negative (Kortner & Gottieb, 1999).

How much manipulation is too much? Visual artists believe it is all in interpretation. Translating the information from the photographer’s eye into an image of aesthetic experience requires a cognitive knowledge of seeing. Representation of images often comes with motivation of the visual artist. Alterations of an object come from making a visually interesting outcome. They simply try to make a better picture. Lodriguss (2004, ¶ 23) says "Tools don’t have ethics, people do. And what you do with these tools can create ethical problems."

Photographs create an immediate emotional response. In a world of visualization, pictures have deep meaning, impact, and visual power. Photos can offend, shock, mislead, stereotype, and confuse the reader (Lester, 1995).

When considering examples of images misleading the audience, the O.J. Simpson police photo on the covers of Time and Newsweek presents a good case (Figure 4). Arrested for murder, Simpson’s photo was made available by the Los Angeles Police Department. Newsweek ran the photo without alteration with photo credit going to the Los Angeles Police Department. They took a different approach by darkening the image, creating an illusion of a menacing criminal and adding the credit line “photo illustration for Time by Matt Mahurin.” Time had three options for the cover; (a) run the photo as is, (b) a painting of Simpson, or (c) a photo illustration.

The computer retouched photo of Simpson produced a backlash of complaints from consumers as well as photographers. The manipulation changed the readers’ perception because his face was altered to look dark and menacing. Had Time not been sitting on the shelves beside the same untouched photo on the cover of Newsweek, would
the reader have known of the change? Many considered the image manipulated, misleading, racist, or legally prejudicial to make him look guilty or sinister (Wheeler & Gleason, 1994).

Two weeks after the event, *Time’s* managing editor issued a statement without totally apologizing for the alteration, saying the cover was not wrong though it was not apparent from the beginning that it was the original photo (Seib & Fitzpatrick, 1997, p. 175).

Mahurin, who changed the police photo, said he wanted to make it more artful, more compelling (Meltzer, 1997). Mahurin did not consider the visual communication of the image in the photo would be either misinterpreted or understood. Sieb and Fitzpatrick, (1997, p 163) asks “Does the public have a right to expect a photograph (or what it believes to be a photograph) to be a mirror image of the real person, place or event?” Advocates believe photographs are an art form and can be adjusted for beneficial interpretation. Groups who proclaim no manipulation argue the image should never be changed and should tell the complete truth. Supporters claim the photo never tells a complete truth of a subject matter (Chrzanowski, 2000).

The parallel structure of modern photography and historical photographic techniques in magazines is not different. Each format allows for some style of manipulation. Either altering the negative or cloning out unwanted material from a digital image both rely on knowledgeable techniques. Taylor (2000, p. 131) explains “Accepting photojournalism as evidence is a convention rather than an absolute guarantee of truth because even when photography is use in one of its most realistic styles it still does not provide absolute or even substantial proof.”
Photo alteration is not limited to magazines and newspapers. The University of Idaho and the University of Wisconsin deceived viewers by manipulating publicity photos to meet the demands of diversity. The University of Wisconsin added the face of a black student to its 2002-03 undergraduate application. The University of Idaho superimposed the face of an Asian student on the school’s web site, making the university appear more diverse (Karp, 2001). The ethical line had been crossed by making the universities look diverse and pleasing for recruiting students. Consideration for the photographers’ conception and the reputation of the institutions was ignored by the marketing departments. If the universities acknowledged the photograph as an illustration of the diversity of their campuses, then the photographs would have presented more truthful representations. By excluding this information, the realism of these particular photographs was compromised when full disclosure was omitted from the brochure.

**Code of Ethics**

The news media have codes of ethics they attempt to follow. There are both written versions by media organizations and unwritten codes set up by individual media professionals. Though the codes have been criticized as being of little help, the values are obvious. Organizations list various codes addressing the intent of journalists, some examples include APME (Associated Press of Managing Editors): Even the appearance of obligation or conflict of interest should be avoided; SPJ/SDX (Society of Professional Journalists/Sigma Delta Chi): Journalists and their employees should conduct their personal lives in a manner which protects them from conflict of interest, real or apparent; ASNE (American Society of Newspaper Editors): Journalists must avoid impropriety and the appearance of impropriety as well as any conflict of interest or
the appearance of conflict (Meyer, 1987). The unwritten rule is based on the individual performance of the journalist. Each must decide how he is going to conduct himself in the real or apparent settings. Photojournalists face dilemmas on whether altering photos changes the format from real to manipulated interpretation.

The National Press Photographers Association (NPPA) issued a Digital Manipulation Code of Ethics, incorporated into the NPPA Bylaws, in June 1995:

As journalists we believe the guiding principle of our profession is accuracy; therefore, we believe it is wrong to alter the content of a photograph in any way that deceives the public. As photojournalists, we have the responsibility to document society and to preserve its images as a matter of historical record. It is clear that the emerging electronic technologies provide new challenges to the integrity of photographic images… in light of this, we the National Press Photographers Association, reaffirm the basis of our ethics: Accurate representation in the benchmark of our profession. We believe photojournalistic guidelines for fair and accurate reporting should be the criteria for judging what may be done electronically to a photograph. Altering the editorial content… is a breach of the ethical standards recognized by the NPPA (National Press Photographers Association, n. d. ¶1).

Codes of ethics can be found, both domestically and foreign, at individual newspapers and magazines. Of the twenty-nine domestic newspapers, seven foreign country agencies and five publishing groups examined in this study all had some form of
policy addressing manipulated photos. The majority of the policies mandated photo content should never be changed or manipulated. The standard norms of photo methods allowed by publications permit altering an image by established guidelines set up by publications. Removal of normal scratches and dust spots were allowable, but not beyond the normal range. Removals of power lines or distracting lines in the background are not permitted.

The National Union of Journalists London Freelance Branch proposed a motion in February 1998, stating: "No journalist shall cause or allow the publication of a photograph which has been manipulated, unless that photograph been clearly labeled" (National Union of Journalists, 1998, ¶4). This means unless the image is marked as an illustration when manipulated then the image should not be altered in any way to deceive the reader. Most newspapers, organizations and publishing groups emphasize editorial photos should never mislead the reader.

The American Society of Newspaper Editors (ASNE) website contains a specific site for ethics and various newspaper codes of ethics. The Los Angeles Times code requires photographs to be used to inform, not mislead. Digital photographs are not to confuse the reader. Minor adjustments on color and those photos falling into the artistic category are labeled as photo illustrations. The Denver Post code reads, in part, that all news photographs are to be genuine. Photos must not be altered, and any basic adjustments to dodging, burning, contrast and saturation must fall into the range deemed acceptable established by the paper. The Dallas Morning News reiterates the position that photographs should not mislead the reader and those photos falling into the manipulated side must be labeled as photo illustrations. The San Jose Mercury News Code of Ethics was revised in 2004 to emphasize its staff's commitment to the highest

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ethical standards. In general, photographers are not allowed to reconstruct scenes or events to make them found moments (American Society of Newspaper Editors, 2006).

Codes addressed the specific use of Adobe Photoshop for altering or correcting photographs. Each case centered on not manipulating images and correctly identifying of altered photographs. Changing contrast and color saturation can be accomplished with Adobe Photoshop as done by a Charlotte Observer's photographer who changed the color of the sky (Figure 22), Photoshop also allows for adding or removing objects from a photograph as the San Antonio Observer did (Figure 20), changing the entire meaning of the content of the photo. Jane Fonda and John Kerry were merged together at a protest rally in a published image in the early seventies, and later resurfaced in 2004 (Figure 11). Both of them were never together at the same place, but digital splicing gave the appearance of them on stage.

In many foreign countries printed code of ethics from the Internet were found to have universal codes for all publications in that country. Germany, Sweden, Norway, Lithuania, Ireland, Serbia and Canada have similar codes concerning photographs. Ireland's Code of Conduct requires all journalists to gather news information only by straightforward means and not alter the news content. Webster University, a worldwide academic institution, offers a policy on photographic usage.

The Webster University Journal lists its Policy for the Ethical Use of Photographs:

Photograph alterations allowed:

• Brightness/contrast control

• Burning and dodging to control tonal range

• Color correction
- Cropping a frame to fit the layout
- Retouching of dust and scratches

Photograph alterations never allowed:

- Adding, moving, or removing objects within the frame
- Color change other than to restore what the subject looked like
- Cropping a frame in order to alter its meaning
- Flopping a photograph (left/right reversal)
- Printing a photograph in other than true orientation

(Webster University, n.d.)

Ethical standards are the prime structure, through institutional and individual implementation, which determine the moralistic editorial activity among journalists. Estimating the impact a photo has on the public determines the acceptability of the information (Parrish, 2002).

People understand paintings are interpretations and manipulation is expected to happen when an artist conveys an image on canvas. Paintings are understood as interpretations of the artist's rendition of a scene. The artist paints mood, education and favoritism into every stroke of the brush. Unless cameras were available when artists were working, the public only sees what an interpretation of a scene was. Works transferred to the canvas are works from artist's sketches and thoughts, whereas photographs are reflected images onto chemicals or digital pixels. Photographic manipulation is not a conception in the public mind. As manipulation surfaces in photographic settings, senses of staging and scene faking creep into the public perception.
A photograph of Princess Diana and Dodi Al Fayed in a romantic moment riding on a boat was published in the London tabloid *Mirror*. The photo showed the couple leaning toward one another appearing to kiss. The kiss never happened on the boat, but the scene made a nice moment for the viewer. An experienced technician with a computer digitally altered the photo to satisfy the clientele. Adobe Photoshop computer software enabled the technician to create a different scene by editing the original image, thus changing reality. Editors can easily decide that Diana could be painting scenes on Dodi's chest while Boris Yeltsin stood right behind them doing something to Diana (Shenk, 1997).

One has to wonder if the public is loosing faith with the photographic society. With the digital phenomenon created in movies, it's difficult for the audience to get a sense of reality. The photographic society is experiencing a paradigm shift in how photographs are perceived and defined. Photographs can no longer be seen as a fixed image; it has become a watery mix of moveable pixels and the perception of what a photograph is (Long, 1999).

From the very first opening of the lens iris, photographers embarked on a new way to communicate. Since photo pioneers Joseph Niepce, Louis Daguerre, Eadweard Muybridge, and George Eastman, the photography field has had many modifications. Photographers carried bulky cameras from place-to-place to capture scenes and events. As cameras became compact and portable, and printing became more prevalent, the change in how photographs were taken emerged. Photographs were taken for specific events. The need for telling a story became a competition.

Photo manipulation begins as soon as the photographer makes a decision while looking through the viewfinder. Digital photography started a new generation of
shooting, storage and printing. With computers, photo technology shifted the way photographers handled photographs. Computers made altering a photo easier through pixel changes. Taking out a person, eliminating unwanted information, and changing tonal ranges creates a new photograph from the original photo, deceiving the viewer. Manipulated photos raise questions about the ethical decisions of the photographer and editor. When a decision is made to alter an image, does this constitute a better form of communication or an illustration of the photographer's or editor's rendition of an event?

Research Questions

As the literature review showed, information on digital manipulation and ethical decisions by both newspapers and magazines on how photos are chosen to be manipulated and the credibility defined within the context of publications is lacking in research.

This study explores photo editors' decisions on digital photographs, from cover photographs, to general style photographs used in newspapers. Are these manipulations causing a credibility gap between newspapers and their readers? With the introduction of digital photography, the standard code of ethics most newspapers use have had to be updated to focus on these new methods of delivering photographs.

The study also looks into the written code of ethics since the implementation of digital cameras into the newsroom by analyzing codes of ethics from various newspapers and professional journalistic organizations to see if any changes were made. The research questions were designated to determine the following:

RQ1: Has there been a change in the written standard codes of ethics for photojournalists since the mid-1990s when digital photography emerged as the standard for publications?
RQ2: Are newspaper photo editors and staff photographers following the publication written code of ethics established for newsrooms?

RQ3: How are digital photographs currently being used in newspapers (i.e., hard news or illustration)? Does the use of digital technology itself change the way photographers shoot?

RQ4: Based on the assumptions of photo editors, is the credibility of an image less questioned in newspapers because of the publications’ past history or credibility?

RQ5: Has digital photography created a paradigm shift in photojournalism?
CHAPTER III

METHODOLOGY

This research investigated the ethical decision-making process of digital news photographs. Newspapers used to have limited amounts of space for publishing photographs, whereas the Internet has opened more avenues for photographs published. What is seldom discussed is how this new media innovation and the capabilities of new technology can benefit or harm publications.

Qualitative Research

Through qualitative research, this study used a questionnaire created from existing questionnaires from previous research designed to investigate photo editors’ ideas of how their publication handles manipulated photos. Various codes of ethics were investigated to find if these codes are administered through verbal or written information.

Qualitative research allows for interpretation of people or events in a society. In a qualitative study one has to become interactive with the subjects as the research evolves. Relying on reasoning qualitative research attempts to investigate the why and how a personal decision process is done. The research focuses on smaller and more precise samples. Investigators rely on information from participants’ opinions rather than concrete statistical data. The goal of any research is to explain differences in events and provide a possible outcome by studying opinionated variables from individuals.

Research attempts to inform and interpret the decision-making process. Information obtained by qualitative research helps researchers find out if opinions and thought process could influence a decision. Qualitative research can investigate complex and deep thought process on a variety of issues while generating information which is very detailed for analysis (Trochim, 2006).
The research sought to find if newspapers have changed their codes of ethics since the introduction of digital photography. The code of ethics were examined from both domestic and foreign news publications to see if photographic standards are set, and whether any new standards are found with digital manipulation. *The American Society of Newspaper Editors* publishes various newspaper codes on the Internet allowing viewers to see what standards publications follow.

Previous studies found digital photography has become the dominant form of usage among newspapers and magazines. With the rapid development of technology, the increased usage of computer software has allowed photo manipulated images to become more prevalent in publications. This has become an increasing challenge to produce the best visual communication.

**Subjects**

Personal communication with selected photo editors from various newspapers ranging in publication size from a publication database was conducted to learn about the use of digital photography and if these code of ethics are implemented in their assignments and editorial decisions. Lists of questions were asked during the interview process mainly thru email. Four phone conversations were conducted for the pilot study.

The questions asked editors about their views on publishing photographic images, codes of ethics at their newspaper, and how digital technology has changed their way of editing, transmitting, and publishing images.

Several questionnaires have been used with online surveys relating to the subject of usage of photographs and how they are manipulated in both newspapers and magazines. Brad Thompson, Linfield College in McMinniville, OR, conducted the Photojournalism Ethics Survey 4.0 with the help of the National Press Photographers Association (NPPA,
The Preservation Conservation Information Technology group conducted a survey on digital storage and education, management, and continuing education with employees. The *Kansas State Collegian* conducted an online Photojournalism Ethics Survey showing three photographs as examples. The survey asks whether the third photograph, which is a combination of the first two, is ethical or unethical use of digital photographic editing. Dennis Dunleavy, assistant professor at Southern Oregon University, examined use of the digital camera on visual routines in photojournalism. This allowed Dunleavy to examine how photo journalists utilize the digital technology, and the advantages or disadvantages this technology has on the industry.

*Criteria for Data Collection*

The criteria for selecting newspapers to sample were based on the circulation of the publication. A contact list was formulated with newspapers having a 20,000 or greater circulation and based on the 2005 Bacon’s Newspaper and Magazine Directory, cross referencing the list with the National Press Photographers Association’s Members Database, and at NewsVoyager, an online web site (http://www.newsvoyager.com/voyager.cfm). A total of 232 newspapers were selected with the smallest circulation of 22,464 (*Las Cruces Sun-News*), and the largest circulation of 2,280,761 (*USA Today*). An average of five newspapers was chosen from each state from various locations throughout the region. When a state did not have enough newspaper circulation, other states were used to cover the shortage of newspapers.

The magazine selection was based on editorial style publications with 23 selections. The list consisted of publications with a minimum of 50,000 circulation. The smallest circulation was 61,109 (*Advertising Age*), and the largest circulation was 5,458,471 (*National Geographic*). Questions asked of photo editors were based on...
questions from Dennis Dunleavy’s questionnaire, Brad Thompson’s ethics survey and from the Preservation Conservation Information Technology questionnaire.

Participants in the study were assured their participation was voluntary, and the requirement by The University of Southern Mississippi’s Human Subjects Committee was disclosed (Appendix E).
CHAPTER IV
ANALYSIS OF DATA

Pilot Study

The questionnaire for the pilot study was sent over a two-week period by email to five staff photographers in various states and four phone interviews with photo editors were conducted who had experience in photo editing. The respondents’ answers were recorded for analysis and correlation. If a respondent did not understand a question, the question was reviewed and edited for clarity.

Main Study

The pilot study respondents had concerns with Question 12 allowing alterations in images dealing with the credibility of the newspaper. The group had concerns over the removal of scratches from images. Since digital cameras do not have scratches, but dust spots, the phrase was changed from removing scratches to removing dust. After the adjustment to the question, an introductory note and the questionnaire (Appendix D) were formatted to send via email to photo editors throughout the United States.

An email was sent to 232 daily newspapers in the United States with a minimum circulation of 20,000; the questionnaire was approved by the University of Southern Mississippi Human Subjects Review Committee (Appendix E). There were 541 newspapers with a circulation of 20,000 and above in the United States listed by Bacon’s Newspaper Directory. This represents 42% of the newspapers nationwide. If an email was returned because of an invalid email address, a replacement publication was chosen.

Approximately two weeks after the initial email, a second email (Appendix B) was sent as a reminder to those who had not responded. Two weeks after that, a third and final email (Appendix C) was sent, allowing photo editors another chance to respond.
Over the six-week period, a total of 78 responses representing 34% of those sent emails were returned. Publications from every region of the country responded. The average circulation of responding publications was 98,414. Of the 78 respondents, 86% were male and 14% were female.

Demographics of publications were divided into six regions: southeast, southwest, northeast, northwest, midwest, and west. The southeastern region had a 40% return. The midwest region had a 29% return. The northeast region had a 17% return. The west and northwest regions had a 4% return. The southwest region had a 4% return.

Of the photo editors who responded, 70% had an undergraduate degree, 13% had some college, and 12% had attended graduate school or a graduate degree. The respondents ranged from 40 to two years of experience as a photojournalist, with an average of 23.14 years of experience. The respondents ranged from 27 years to three years of experience as a photo editor, with an average of 11.67 years.

Analysis of Research Questions

This qualitative study researched five main areas of digital manipulation and photo editors' opinions on digital photography standards and codes of ethics. Each question stemmed from a growing concern on the believability of published editorial style images. Previous studies and questionnaires helped prepare a list of questions that photo editors were asked to answer. The photo editors responded with their own interpretations and the expectations of their publication's staff photographers in reference to printing true non-manipulated images.

Written Code of Ethics

The first research question addressed the change in written codes of ethics implemented at a publication since the mid-1990s when digital photography became the
standard usage for publications. This section focused on responses from photo editor's survey answers, as well as written code of ethics found on the Internet.

While codes of ethics have been in existence for a long period of time for newspapers, recent updates in photo technology have editors and staff personnel looking at ethics more seriously at this area. Decisions based on ethical principles better serve the readers. Editorial publications strive to achieve values through honesty, fairness, balance, credibility, and diversity (Steele & Black, 1999).

Newspapers use these values to inform the public on current events. Credibility becomes the main obligation. A newspaper could create mistrust with the readers. Information gathered by newspapers is both helpful and informative (Steele & Black, 1999).

The Society of News Design adopted a code of ethics in 2006. One of the codes' priorities was accuracy, in which values in journalism must not be compromised. Newspapers should strive for error-free content. The system of creating accurate information should fall along the lines of the colleagues journalists work for and the audiences they seek (Society for News Design, 2006).

Society members strive to ensure their work is free of fraudulent and deceptive reporting. This includes images produced by photojournalists. Part of the statement suggests newspapers should create and embrace the value of thinking on how decisions are made by reporters and photographers. Content of newspapers should be free of plagiarism and fabricated information (Society for News Design, 2006).

Being fair in the work presented for publication helps the public understand and creates respect among newspapers and the community. A newspaper’s responsibility is
to inform and educate the community's need for information concerning news oriented information (Society for News Design, 2006).

The most common area of the codes examined centered on conflict of interest. The area includes the acceptance of gifts, political involvement, and community activity.

*The Arizona Republic* tells employees they should not seek political office, work as a paid or volunteer for any political campaign, and avoid taking political stands on partisan issues. The *Republic* also forbids employees from using their position at the newspaper to gain leverage in any private situation. At *The Washington Post*, employees are to avoid any conflict of interest with private business (American Society of Newspaper Editors, 2006). The second most common item among the codes involved the relationship between the community and the newspaper. Reporting the news via word or image in an honest and trustworthy manner creates a timeless guideline for keeping a newspaper credible with its readers. Keeping information credible helps maintain loyal readers. *The Tampa Tribune* has an online ethics policy stating "people ought to trust us. It irks us when they don’t.” Credibility is a beginning with the words and ideas published by the newspaper. At *The Dallas Morning News*, employees are told the reputation of the newspaper lies solely on its credibility and the readers’ perception of the newspaper (American Society of Newspaper Editors, 2006).

Photojournalists create images which are expected to report an event as accurate as possible. The public has become increasingly aware of digital lies. Entertainment style magazines had a reputation of using manipulated images on a regular basis, and the public had an idea the practice was happening. Photographic print manipulation was harder to achieve and more obvious to the reader that alterations had occurred. Air-brushing an image was a common practice to achieve manipulated photos.
Respondents noted most of the publications from question one of the questionnaire have some form of standards for staff photographers to ensure accuracy in reporting the news.

![Digital Manipulation Standard]

Figure 23. Digital manipulation standards which staff photographers must follow.

The guidelines for digital manipulation are known to photographers working for newspaper publications. The standards are posted on the internal website for all staff photographers to view and understand. When other publications print an altered image photographers are reminded of the guidelines.

One newspaper publisher asked the photo editor if any of the staff photographers were practicing any image deception. The photo editor and staff members became involved in writing the code for their publication. They worked closely with the NPPA and their state press association so photographers would better understand the codes. As a result of the written codes, their photographers are required to retain the raw images. If a question is asked about a published image, the editors can compare the two images (Coleman, 2007).

Editors of publications without a written code of ethics reported they discuss with staff their expectations of ethical behavior. The acceptable levels of digital manipulation are explained to newly hired photographers and the repercussion of acting outside these
levels is unemployment. When a problem occurs, in an attempt to avoid further abuse, publications review the policy and certain publications have the photographer sign a statement on the accepted standards. Photographers were conscientious of the standards which they were expected to follow. Editors felt the integrity of the publication is vital to maintaining the credibility the publication has established with its readers (Coleman, 2007).

Discussion among staff photographers and photo editors happens on a regular basis at some newspapers. The staff discusses the ethical guidelines and legalities of what is expected of them. If the photo has been manipulated beyond the original content and reporting an entirely new view of an event, the newspaper could face legal ramifications.

The respondents reported 89% of the editors agree that image alteration is limited to the standards put in place by the newspaper. The written standards are in place to insure the credibility of the newspaper. Some editors stressed photojournalists are trained in believing in a code of ethics and should strive to keep from compromising journalistic integrity. Images are part of the whole package a daily newspaper produces. If an image has to be manipulated, the standard code of ethics outlined by the newspaper is followed (Coleman, 2007).

Codes of ethics from 60 publications were examined, including those from 30 domestic publications, 16 foreign publications, and ten corporations or news organizations. The codes were either located on Internet Web sites or received with the responses to the questionnaires. Most codes included photography but, as Figure 24, Figure 25, and Figure 26 show, 50% of U.S. publications specifically include the new digital technology.
Part of the investigation included sampling foreign newspapers' codes of ethics to find a similarity between U.S. and foreign markets. Foreign newspapers lagged far behind at only 13% in changing the structure of the code to include digital technology. Even though the foreign newspapers were not polled, the correlation of codes published allows a comparison of similar style newspapers. Foreign newspapers cover the same style of news events as the domestic newspapers.

The 20% of news organizations with written codes have updated their standards for digital technology. The National Press Photographers Association recently completed an extensive revision of its code to ensure publications address the convergence of new digital technology. They have made available a code which aspires to the highest standards in photojournalism. They also maintain that photojournalists should strengthen public confidence in the profession (National Press Photographers Association, n.d.).

Many newspapers adopted the information from this code for use by staff photographers.

The graph below illustrates the code of ethics in written, oral, or no codes given for domestic newspapers, foreign newspapers, and news organizations.
At a photojournalism summit in Portland, OR, on June 1, 2007, John Long, chairman of the NPPA Ethics & Standards Committee, said ethical problems arising in photojournalism could jeopardize the future of photojournalism. Long polled the audience in attendance at the conference to determine how many people they currently work with, or have worked with, routinely crossed ethical boundaries. “The show of hands was a scary thing to see” (Winslow, 2007b ¶2).

Following the Code of Ethics

The second research question addressed photographer’s and photo editor’s compliance with the code of ethics. Where written codes exist, staff photographers and photo editors know what is expected of them. They are restricted to staying within acceptable, defined boundaries. Where newspapers exercise these codes, some photo editors say codes are being followed, but lapses have occurred. Veteran photojournalists have worked at newspapers during the time period when film cameras were used and the
merging of digital cameras started. During the early stages of digital photography there were frequent discussions concerning digital imaging. Editors from the questionnaire agreed where no written policy is in place, the effects of digital imaging manipulation can occur, but no manipulation was discussed at length by some newspapers.

Many photographers who were working for newspapers during the transition had to rethink the way they crop and tone images. Color saturation, tonal range differentials, and cropping took longer in the wet darkroom versus the digital darkroom. Written codes where issues of photo manipulation were mentioned had to address what was acceptable and unacceptable in changing a photograph. Based on answers from the questionnaire the acceptable range of manipulation varied at newspapers. Photo departments were able to establish a policy on how far a photo can be altered to achieve a true represented image.

Where written codes did not exist, the publication relied on the personal ethics of its staff. If the photographer decided to go beyond the accepted ethical boundaries, then it is the photo editor's responsibility to the publication to carefully weigh the decision on using the image. Question four of the questionnaire addressed if photographers given a written code of ethics.

![Code of Ethics](image)

*Figure 27. 54% of publications have a written code of ethics policy for staff photographers.*
A code of ethics is established by some individual publications to ensure the reading public trusts what is printed. Many of the photo editors surveyed noted the reputation of the publication is essential to survival in a growing communication market. A 1999 study by the American Society of Newspaper Editors found 73% of adults have become more skeptical about news accuracy. The study noted that as age increased, skepticism increased as well (ASNE, 2007).

Many organizations enforce codes by a stepped method of discipline and education, but rely on the individual publications to handle situations. The photo editors who responded said that in certain situations, the first occurrence of non-compliance would lead to disciplinary action. Most agreed that the photographer would be trained again in the codes implemented at the newspaper. If further abuse occurred, the offender would be terminated (Coleman, 2007).

Publications don’t create codes for staff members to ignore. Sometimes efforts of a corporation to ensure its staff complies with the code of ethics fail. In June 1998, the Cincinnati Enquirer had to run a banner headline apologizing to Chiquita Brands International on a story about the company. The Enquirer also had to pay Chiquita $14 million in an out-of-court settlement when it was discovered the Enquirer’s lead reporter had illegally hacked in Chiquita’s voicemail system.

The Cincinnati Enquirer, owned by Gannett Corporation, follows two sets of codes of ethics. The newsroom established an internal code of ethics, but Gannett has a corporate code of ethics which every employee has to read and sign annually. The Principles of Ethical Conduct in Newsrooms was created in 1999 because of the Chiquita incident. The Ethical Conduct for Newsrooms was initiated by a desire to support strong
but honorable investigative reporting, a deep concern over public distrust of the media, a need to address the increase in lawsuits focusing on news-gathering methods and not on the truth of stories, and the desire to alleviate reader concerns about fairness and accuracy of content (Gannett Corporation, 1999).

Because of the incident in Cincinnati and incidents involving non-\textit{Gannett}\ publications, officials within the corporation decided it was time to re-examine the practices of newspapers within their organization. The corporate officials offered a clearer guideline to be used in all newsrooms. Newsroom training began after the guidelines were adopted by editors, reporters, corporate officials, and outside experts (Seglin, 2001). Even though this incident did not involve the photography department directly, the ramifications filter down to every department within the \textit{Gannett} organization. The Cincinnati fiasco hurt the company monetarily. A staff photographer could have easily made the same violation with manipulated photos as the writer did with his practices of using unethical standards.

Phil Currie, senior vice president/News and Newspaper Division, and President Gary L. Watson, issued a joint statement on the ethics guidelines; “These principles and accompanying guidelines on how to protect them are an important statement of what the \textit{Gannett Newspaper Division} and our newsrooms stand for. In recent years, the credibility of the media has declined – in part because of questionable news-gathering conduct. Although the vast majority of journalists operate ethically and in a sincere effort to serve the public interest, a rededication at this time to our fundamental values is an important statement to our readers that they can trust and believe their local newspapers” (Gannett Corporation, 1999, ¶9-10).
Gannett prepared this code for 98 daily newspapers it owns. The code covers all employees; employees are aware of the consequences, yet ethical lapse in judgment by employees happen. Each staff member has to sign a written code of ethics form. All guidelines are included in the form (Gannett Corporation, 1999).

Gannett concentrated on key areas for newsroom staffs to follow. The company will seek and report the truth. This includes the dedication of reporting news accurately through the news and context. The whole story should be explored and be persistent in finding out information on the story. The newspapers should get an understanding of the community they serve and relay information on the activities of the community (Gannett Corporation, 1999).

Gannett stressed that all newspapers should serve the public interest by applying the principles of the First Amendment. All news groups are public informers of the governmental and private entities which affect the public. They should express the views of diverse people and understand the diverse segments of the community. All editorial leadership should be provided to promote an understanding of specific and complex issues (Gannett Corporation, 1999).

Another issue involves newspapers maintaining independence from entities who attempt to influence the decision-making process of newspapers. The integrity of dealing with sources and working with the public on issues helps define a newspaper. By creating a standard of decency, newspapers can avoid possible consequences. The best practice of journalists should be to make careful judgments and use common sense before decisions are made, and before acting unilaterally (Gannett Corporation, 1999).

When Gannett drew up these guidelines they did not start from the beginning. Ethical guidelines were already in place; Gannett merely re-defined the principles and
made them clearer for journalists to understand. Newspaper staff members were re-educated on the ethical guidelines.

*Changes in Digital Photography Methods*

The third question asked how digital photographs are currently being used in newspapers and if the method of digital technology changes the way photographers shoot. How photographs are being entered into the composition of layout centers on the technological advances introduced into the newspaper. Question number two from the questionnaire asks photo editors on the changing methodology of photography.

![Pie chart showing Methodology used in Digital Photography.](image)

*Figure 28. How much of the methodology of the photo image has changed since digital photography became the mainstream?*

Figure 28 illustrates that 48% of photo editors agreed the method of how the photographic image has changed a lot or considerably at their publications. 26% of the editors said some of the method has changed. Photographers can continue to utilize the darkroom techniques of removing spots (dust from the charge-coupled device), and darkening or lightening within acceptable standards established by the publication.

At some publications, editors suggest imagining a colleague standing behind the photographer watching the application of Adobe Photoshop techniques. Acceptable limitations of manipulation allow photographers to change only what was possible to...
change when photographs were printed from film negatives in the darkroom. Editors said photographers are expected to truthfully reproduce what they saw at an event. When manipulation does occur beyond the accepted limitations, the image should be clearly labeled a photo illustration (Coleman, 2007). The methodology has changed by allowing the photographer the ability to immediately review the image.

Workload has increased for photographers because of the speed of digital editing. Digital photography allows the image to be seen at once on the camera video screen or on a computer. Traditionally, photographers shooting with film were conscious of how many rolls of film they carried and mentally self-edited the frames they shot by selecting precise moments within the event, estimating when they thought they had the photo they sought. The time spent looking at developed film, and using a magnifying loupe to examine the negatives has been replaced by an LCD monitor. One example of a monitor used by Nikon has introduced a digital camera which incorporates a large 2.5-inch 230,000-dot high-resolution Liquid Crystal Display (LCD) monitor display with an ultra-wide 170-degree viewing angle for clearer viewing (Nikon, 2007). When photographers used film they had to scan each role of negative film to find which frames were in focus, and if the images captured the scene. Editing in the darkroom has moved to the news or sporting event the photographer is covering. Editing of images through the LCD monitor has allowed more coverage of an event.

Previously a photographer could shoot a sporting event, capturing up to 300 images on multiple rolls of a traditional 36-exposure 35mm film. Once developed, the photographer or the photo editor would quickly review the negatives with a magnifying loupe looking for images which fit the criteria of sharpness, composition, correct
exposure, and peak action. All of these methods have been changed because of digital imaging. Now a photographer can edit each sequence of images in-between plays.

Digital cameras allow for shooting and storage of hundreds of images on one disk, thus increasing the workload of editing. The computer monitor has replaced the darkroom sink. Now photographers have total control from cropping to color enhancement. The responsibility of complete editing control is in the hands of the photographer at the scene. Editing of images by the photographer starts at the viewscreen. Images can be deleted before the photo editor can look over the assigned images. Photographers can experiment with photo techniques and seeing different points of view before they leave a scene. Instant feedback allows for the safe shot. The safe shot is a photograph which can be used in a publication, but it is not the best shot. A photographer will have a safe shot as a backup in case he cannot find the best photograph from the assignment.

Digital cameras have more bells and whistles than the basic film camera. Photographers get immediate feedback, allowing for pre-editing in the field. When photographers see they do not have the photo desired, they can stay at the event longer to shoot more images. The digital imaging recorded on a memory disk allows for unique cropping ability of an image. Traditional film allowed an image to be printed at a limited size. Depending on the chemical grain structure, film had limits on how large a print can be made. With high megapixel digital cameras, the image can be enlarged with clearer detail than film. Digital imaging can utilize a small portion of the image and print a larger sized print than selecting the same portion of film. This has allowed more creative avenues for communicating information to readers.

Automatic settings have increased the ability for quicker shooting and spontaneous sequence shooting and lowered the skill level required of the photographer.
This allows for the grab, shoot, and run method instead of producing a more composed photograph. Automatic cameras have allowed images produced by non-photojournalists to achieve a higher level of visibility.

Photo editors mentioned significant changes in digital cameras from film cameras (Coleman, 2007). The ability to change the American Standards Association and International Standards Association (ASA/ISO) of the camera at any point of an assignment compared to film cameras only having one film speed at a time. If the photographer had one camera with ASA/ISO speed of 400 they had to shoot the entire roll or rewind the film and change the roll with different speed film. Since ASA/ISO deals with the sensitivity of the film relating to light hitting the film, the entire roll of film in the camera is one speed. With digital cameras, changing the ASA/ISO can happen at any point during an assignment. Since memory cards are not limited to the ASA/ISO each card can record a multitude of various speed images.

As technology advances, the method of getting images back to newspapers when photographers are out on assignment has changed. Along with their camera equipment, photographers can carry to assignments, a laptop computer, satellite phone, or a telephone. They can sit on a courtside, sideline, in a conference room, or their automobiles and begin editing their images. The images are downloaded, which replaced the developing tanks, for processing. Each image is scanned through imaging software, which replaces the photographic print. Information is encoded onto each image with the imaging software, which replaces the typewriter. The final images can be transmitted via email or FTP (file transfer protocol), which replaces the laser transmit drum or hand delivered image. This turning point in photojournalism can be attributed to The Associated Press which converted to electronic digital imaging transmission in 1991. AP
distributes digital images to its 1,000 newspaper and magazine clients. The elimination of the printed image allowed *Associated Press* to install computer-based receivers called electronic picture desks (Leslie, 1995).

Early stages of transmission included bulky drum machines or large boxes containing a laser light which is scanned over a print. A transmitting device called the AP Leafax allowed photojournalists to scan processed film and transmit over analog telephone lines. At that time it was hailed as a giant step in allowing the photographer to get away from the traditional print darkroom (Horton, 2001). As the print rotated on the drum a light scanned across the image sending digital information over a transmission wire or telephone system. The process could take from eight-to-ten minutes with a black & white photograph. Color images can take up to three times longer because of the RGB (red, green, blue) separations.

In August 1994, *Associated Press* photographer Stephan Savoia photographed President Clinton sailing off Martha's Vineyard with singer James Taylor. Savoia was positioned in another boat 130 yards away. Because of digital technology, he was able to finish shooting without developing a roll of film. Instead, he downloaded his memory card into a laptop computer, viewed 30 images he shot, color corrected, and using a cellular phone, transmitted an image and caption to *The Associated Press* headquarters in New York. Savoia had transmitted and the AP had distributed the photo via its electronic picture desks before Clinton and Taylor made it back to shore (Leslie, 1995).

Survey responses revealed photo editors now encounter new challenges, including devising methods for storing images and instructing photographers how to handle the new equipment. Editors reported a larger workflow of images received from their staff. Photo editors found computerized storage workstations could handle the volume of
images photographers shoot (Coleman, 2007). Previously film negatives were stored in binders or shoe boxes. They took up shelving space, not hard drive space.

Digital storing is new for archiving and preserving images by photojournalists. Photo editors also reported an ever-increasing amount of digital images produced by their staff (Coleman, 2007). A digital camera's capacity is determined by how the megapixel file allows. A 6MP digital camera can create a 2-3MB JPEG file or, if the image is saved in RAW form, the file size increases to 6-8MB. If a photographer only has a 512MB or 1 GB memory card, the storage capacity is around 56 to 170 photos per card. The other option is to store images on a larger hard drive where large files can be stored in one location (Atkins, 2007).

A majority of newspaper editors responded computer workstations with internal hard drives capable of handling volumes of images. With the increased resolution of digital cameras on the market, photo editors have to find larger capacity hard drives. The larger the resolution the higher the memory required to store the image. Desktop workstations have had to increase the amount of gigabytes needed for storing digital files. Although this is a temporary solution, hard drives are not made to be viable for long periods of time. Life expectancy of hard drives range from three to seven years.

The other solution to storing digital images is by recording the photographer's work onto a compact disc. A number of the editors reported they used this method (Coleman, 2007). Recordable discs have evolved in just a few years. Affordable discs with a capacity of up to 700 megabytes of information and 4.7 gigabytes on a recordable DVD allows editors to store assignments with less expense than the more expensive external hard drive. Since digital cameras have the capability to fill up a media memory card quickly, the recordable CD has limited storage. The DVD has emerged as an
alternative. Technology has allowed the industry to upgrade and produce higher storage capacity DVDs. Manufacturers have produced dual-layered DVDs with a capacity of 8.5 GB and there are future promises of more than 40 GB with Blu-ray and high definition (HD) drives (Perello, n.d.).

This solution has begun a new area of treating photographs. How can this new technology keep images in archival form? According to Jathan Edwards (2006), Senior Optical Physicist with Imation, the optical media can last as little as three years or last over 300 years. Temperature and humidity play an important role in determining the life expectancy of storage discs. Since CDs and DVDs have become less expensive over the years, the life cycle has been reduced by how images are burned onto the discs. Internal CD or DVD recordable burners are less effective for archival than the higher quality recordable burners used in burning digital media in volume.

Some editors reported this method produced another long-term problem: The CDs or DVD could last for a long period of time, but the process for retrieving the information might change (Coleman, 2007). In the early 1970s, computers were using eight inch read-only diskettes with less than 100 kilobytes of information. By 1976, a new floppy drive was introduced in the form of a 5.25 inch diskette with the same capacity of less than 100 kilobytes of information stored on a single side. The 5.25 inch diskette evolved into a double-sided format with 1.2 megabytes of data storage.

The diskette changed sizes again in 1980, when companies introduced the 3.5 inch floppy drive with expanded data capacity to 1.5 megabytes of data. Floppy drives changed with the market demand. As the consumer market changed the computer's storage devices changed with them. Computer companies started fazing out the internal floppy drives and replacing them with Zip Drives. Introduced in 1994 by Iomega, the
device was able to store up to 100 megabytes of data. Later models allowed for 250 and 750 megabytes of data on a single drive (Edwards, 2006).

With the introduction of the recordable and re-writable CD and DVD, the zip drive started disappearing from personal computers. Technology has changed the way data storage is being utilized. Devices have become smaller, but capacity has enlarged. Most computers allow external floppies, Zip drives, and CD/DVD machine hook-up by Universal Serial Bus connections.

The storage devices for the digital camera followed similar paths. Early 1990 digital cameras used the PC card. Photo editors from the survey cited using the Associated Press/Kodak NC2000 camera in the beginning of digital photography and a Type III PCMCIA (PC) card, a large formatted card with limited storage capacity. All images were shot in RAW form, not JPEG (Joint Photographic Experts Group). Later devices used CompactFlash, Memory Stick, and Secure Digital. Size again was reduced, and the storage capacity increased. As the technology has changed for the storage devices on the personal computer, editors from the survey expect the same method will likely occur on the digital camera (Coleman, 2007).

Apple, Inc. introduced software enabling photographers and editors to produce professional photo imaging management. The software Aperture allows management workflow for a variety of photographic files. Images can be managed by editors for post production file storage, category selection, and image output stored as JPEG (Joint Photographic Experts Group), TIFF (Tagged Image File Format), PICT (a graphic file format introduced by Apple), BMP (Bitmap file), PNG (Portable Networks Graphic), TGA (Tandy Graphics Adaptor), PSD (Photoshop Document) file format (Apple, 2007).
Due to new technology, steps involved in shooting have changed, but the process of getting the image has not. According to the survey, digital cameras have forced editors to stay current with developing digital technology. Editors reported photographers spend more time in the field so communication between staff photographers and photo editors is reduced. Photographers used to spend time around a darkroom sink asking advice or opinions about an image and would often seek a second opinion from fellow photographers before printing a final version. In the field, the opinions and advice from other photographers or editors is minimized (Coleman, 2007).

One photo editor respondent gave an example of photographers shooting a sporting event where several newspapers have laptops set up in a room for downloading and transmitting images. They have the opportunity to ask others to view several photos from a play where a sequence of photos is taken. The contents of the image remain the same, but the composition might be slightly different. Photographers are allowed to view the images side-by-side on the computer for comparison. This allows for tighter editing of images being transmitted back to the newspaper. Shooting with film was edited by looking at negative before scanning (Coleman, 2007).

As images materialize on a computer screen, part of the photo editor's job begins. It is much easier to enlarge the image on a computer screen to see detailed changes in facial expressions, in the foreground, or isolate an area in the background for viewing. Editors can save time by bringing multiple images onto the screen for comparison. In the wet darkroom era, several photographs had to be printed for a comparison.

An editor from the survey pointed out the photo editor can be third in line for editing images. The photographer out in the field performs the first edit inside the camera. The photographer can do a second edit on a portable computer, and then once
transmitted, the photo editor chooses from a selection of images. Photo editors look at the images from the assignment perspective rather than looking at film images to see if they were able to capture the right image (Coleman, 2007).

Photo enhancement can be reverted back to the raw image, allowing the editor to start over if needed. However, a photographic print cannot be returned to its original form once it has been submitted. Getting an extra set of eyes helps in the decision process. When more than one editor from the newsroom views images on a computer monitor, they can decide which image stands out among the entire selection. Editors can view and edit images from different locations instead of a light table. Photographs stored on a server can be viewed from any computer connected to the internal network. External drives can be transported to any computer and viewed via a Universal Serial Bus (USB) cable.

**Credibility of the Newspaper**

The fourth research question sought the photo editor’s opinions on the credibility of an image published based on the publication’s past history or reliability. Credibility and believability allows newspapers with reputable histories to be set apart from non-professional publications. More emphasis is now is being placed on being attentive to the purpose of the photographers’ objectivity. Photographs are used to convey a story and not to fill up space on paper.

Photo editors from the survey believe credibility becomes an issue when the readers know manipulation has occurred. The image may look great, but the reality of an image can be challenged. The newspaper could soon lose credibility with the readership, affecting circulation. The picture remains the same. Whether it is done in the darkroom or done in a computer, the imaging process remains constant. Editors stated it is the
vision of the photographer which decides the ultimate version of the scene. When the
photographer decides to go beyond the accepted boundaries, then the photo editor
carefully considers the image usage (Coleman, 2007).

Maintaining credibility has made photo editors stricter on what can and cannot be
done to images. Photographers are aware of what are acceptable practices in their field
through professional training, peer preview, and established codes of ethics. The ease
with which digital manipulation can be accomplished has forced photo editors to become
more focused on ethical issues. The publication with credible ethics is less concerned
about the staff and the efforts to produce a truly news-oriented publication than those
who do not police these issues.

Technology has changed the publics perception. Several incidences have
occurred where the public thought images were manipulated by using two different
photographs. In 1989, TV Guide ran on the cover an image of Oprah Winfrey which
obviously made her appear smaller then she really was. The public assumed they had
placed Winfrey’s head onto the body of actress Ann-Margret. In fact, the image was not
a photograph at all, but instead was a drawing TV Guide had used from a rendering of
Margret. The opposite effect happened when Texas Monthly ran the unaltered photo
which involved a Texas government official sitting on top of an oil derrick. Even though
it was unaltered the public did not believe the photograph. An earlier photograph was
published in Texas Monthly with an altered image of Ann Richards on a motorcycle. The
image with the government official was not composed in a normal style photograph, so
the public deemed the photo fake (Leslie, 1995).

Most editors from the survey agreed the level of credibility publications have with
its readership can indicate the publication’s vulnerability to suspicion and thus, a drop in
circulation (Coleman, 2007). When Brian Walski, formerly of the Los Angeles Times, manipulated a British soldier controlling a group of Iraqi civilians with a composite of two images, he admitted his actions crossed the ethical line (Figures 5 and 6). His altered image created a credibility problem for the newspaper and fellow photojournalists covering the war in Iraq. His actions brought on other credibility issues by other newspaper photo editors (Johnston, 2003).

Does color enhancement or slightly changing the color in Adobe Photoshop constitute a drastic change? The camera’s CCD does not pick up the same color hues as the human eye sees (Heller, 2007). Patrick Schneider was fired from The Charlotte Observer in 2006, for altering a fire photo (Figure 22). The paper had a code of ethics stating that no colors will be altered from the original scene.

Online discussions on the event were talked about at length. Both pro and cons on the image brought up several ideas on how newspapers maintain credibility. In incident, although minor, was a change in the original intent. Was Schneider merely compensating the color for what he saw that morning, or was he thinking of misleading the public by creating the image he wanted? Other discussion revolved around photos in general. A photo is not considered reality, but merely a perception of a scene. Both versions of what the person sees and what the camera records are mechanisms on how representation is viewed in a publication. The bottom line, bloggers said, is the fact he lied. He lied to the paper and to the readers who did not get the whole truth of the news event (Heller, 2007).

The majority of editors agree that standards are maintained at their publications. This corresponds with question one and nine of the questionnaire (See Figure 29).
Figure 29. Newspaper photo editors maintain high standards at the publications at which they work.

Lowering standards becomes a temptation to a whole range of manipulation. Keeping the staff aware of standards also allows for a smooth transition from raw images onto the printed page or the newspapers Internet site (Coleman, 2007).

Technology allows temptation to make images better than they really are. All photographers learn how to manipulate images for use in print or Internet sites. According to Heller (2007, ¶17), “The matter of photo editing does not lie in the act itself, but in the end result.” What was the photographer trying to achieve? “The credibility of a reporter or photographer, and of the news organization behind them, is established by their long-term reputations that can only be established over time and by broader industry recognition.” The extent of the manipulation comes from the training photo editors give to their staff, and by the company’s internal code of ethics. Credibility among established newspapers does not get lost over isolated incidents, but the tarnishing presented by an act can be re-established by correcting the problem. The Observer helped maintain its credibility by admitting to its readers the incident happened and appropriate measures were taken.
Heller explained the public is not going to think less of the newspaper because technology has allowed the generating of stories and photographs by computer-aided devices. The public knows newspapers use computers and digital cameras, because they use them also. Heller stressed newspapers should learn more about what an alteration is on a photograph, and what a lie is when a manipulated photo creates an entirely new meaning (Heller, 2007).

The general public has learned from its personal digital cameras and computer software how easy it is to manipulate photos, becoming more skeptical when viewing good photographs they see in publications. From believing a photograph is a true form of a scene, to a photograph which has been content-manipulated, affects every photograph and every news-oriented publication (Heller, 2007).

TrustImage (2007) places three criteria on taking photographs by using a simple principle for viewing photographs. Snapshots and news photos should not be combined, content-manipulated, and not misrepresented from the original scene. If one of the criteria is changed, then the viewer will not trust the images (TrustImage, 2007). The public now knows how photographs are made in greater detail than they did before digital technology was used. People have become digitally savvy. While most photographers understand the principles of photographic literacy, it is the public's understanding the principle which creates an important key to digital photography. Often photographers have to choose between optimizing the appearance of an image or the trustworthiness of the image.

Paradigm Shift in Photojournalism

The final research question asked if digital photography has in fact created a paradigm shift in photojournalism. A paradigm shift happens when there is a change in
transformation of fundamental views towards a different set of views. The shift creates a transformation of events, people, culture, and perspectives. According to the responses from the survey 51% stated there was not a paradigm shift on photography, but digital imaging technology has created a partial paradigm shift in the ways and techniques photographers use to create images (Coleman, 2007). Just as the classical film camera creates a single chemical process reacting with light on film emulsion, the digital camera creates an image from a computer algorithm of strings of figures captured on light sensitive cells (Puts, 2004).

The digital image is a file. It can be transported and opened on a variety of computers. The contents can be changed at any time because it has no fixed state. The image can be viewed by and distributed to millions of viewers. Digital images are not limited to the standard SLR camera. Photographs can now be taken with cellular telephones to point-and-shoot cameras. Images have infinite possibilities for alteration and manipulation. When the film-based method of photographing events switched to the digital technological arena of photography, anyone who has used a digital camera has stepped into a new world of imagery (Puts, 2004).

Most respondents from the survey indicated that not much has changed in the method, but in how the image is collected in the camera. More photographs shot at an event and more decisions on viewing, editing, and printing instant images have increased productivity. Production times have been shortened by the online Web page. With shorter editing time, photographers have more assignments and more transmissions from the field. The photographer, at times, has to be the shooter, editor, and technician, allowing for a reduction in the overall production time. The shift in technical procedures has allowed the photographer to focusing on what they think the reader wants to see.
Emphasis is placed on getting the right image for maximum exposure on telling the story. An editor from the survey indicated photographers have a better understanding of what photograph they have captured before heading back to the office (Coleman, 2007). The technological shift happens when photographers can see an image before deciding to move on to another assignment. The quick turnaround by photographers allows newspaper to compete with faster deadlines with other media outlets in the community. Breaking news events allow newspapers to reprint a newspaper or upload information to their Internet site. Internet sites can be changed within minutes after a news event.

The editors are split on how this new technology has created a paradigm shift when they answered question 8 from the questionnaire (See Figure 30).

![Paradigm Shift](image)

**Figure 30.** Photo editors have differences of how digital technology has created a paradigm shift.

As the technology progresses at publications, learning this new technology can create a new direction for editors, as well as staff photographers.

Respondents think the shift is as varied and individual as the photographers. It has become a product of the institution. Digital technology has changed the way images turned around on a faster pace and from remote locations. The area which sees the most abuse is the highly competitive field coverage in remote locations where accuracy cannot
be checked by other photojournalists or editors. The accuracy relies only on the photojournalists who photographed the image (Coleman, 2007).

Photographers are learning to be proactive in editing images. Working in the field has turned photographers into more independent staffers. All photos can be transmitted to the main office without needing to be present. Since film is no longer in the budget, digital has opened the door on shooting more assignments, more images, and better choices before returning to the newsroom.

The photo editors pointed out they feel the public has learned technology can cause discrepancies in how they perceive information. One photo editor at a newspaper reported that television and magazines have fewer standards than newspapers and the public tends to lump all of the media together when sending information out to the community (Coleman, 2007). Photographers tend to perceive an event and attempt to recreate the actual event instead of documenting what has transpired. If it is not what the photographer wants, it is possible to create the information on the computer.

The shift also occurs on the newsroom computer stations. Staff members not associated with the photo staff have access to photography software programs, allowing for changing the content after it leaves to photographer’s hands. In one newspaper, a photo editor reported photographic editing software is on every computer on the sports and copy desk. The potential for non-photo editing images is greater for changing the image into an unacceptable photograph (Coleman, 2007).

Editors also report managing images in photography departments has created a new shift in photo editors controlling the input and output of image (Coleman, 2007). Cameras and storage devices have created an influx of images. In turn, additional photographs have created a ripple effect on design and publishing. Newspapers have new
options available to them. The move from analog images toward the digital image has triggered shifts in competencies and the complex publishing workflows (Pfeiffer, 2005).

Pfeiffer Consulting (2005) says, “With the advent of the Internet, no single technology has evolved as spectacularly as digital imaging” (Pfeiffer Consulting, 2005, ¶10). Digital photography adoption from film or analog photography has grown faster than the accompanying technology. Patterns of image uses have emerged with an onslaught of images. The Internet has created an impact on both the personal, professional and business environments on the information driven society. With the addition of digital technology, the newspaper industry has provided the service-based, information-centered society with a way of getting information beyond print circulation (Pfeiffer Consulting, 2005).

Photography departments have the opportunity to use more photographs from an event. Space limitations in the printed version of the newspaper have now been opened up to include slideshows on the Internet. Limited to one or two images, newspapers can now feature a web photo package containing endless amounts of image. Depending on the event, viewers can look at a large number of web images unavailable on the printed version. Editors reported images routinely filter over to the Internet as picture packages (Coleman, 2007).

Photo editors, 51%, claim a complete paradigm shift has not occurred. The method of shooting has not changed since the beginning of photography. Photojournalism is still photojournalism, according to editors (Coleman, 2007). The way photographers compose, choose the correct shutter speed, aperture settings, and ASA/ISO range remains constant. The goal of any photographer is to capture the best image. Knowledge photographers gained through education has nothing to do with technology.
The tools used have changed, but the instinct and the eye for detail still remains with the photographer (Coleman, 2007).

The process is still in place. Whether a photo editor is looking at a photograph or sitting in front of a computer screen, all images are scrutinized the same way. Editors will always sit down with photographers and go over with them the best way to capture the image.

As the results from the questionnaire shows, the paradigm shift has only occurred in part of the photographic area. The entire technological process has improved greatly, but the root method of shooting remains constant. The main goal of any publication is to be read or viewed. Photographers now have the advantage of shooting and reviewing more images to choose the best one. Photo editors remain the last step before any photograph gets sent to the various desks for placement in the layout. The survey results showed photographers are the first step in getting the image, editing the image, sending the image, and collecting the right information. Technology has helped speed the process in allowing more information to be sent to publication.
CHAPTER V
CONCLUSION AND DISCUSSION

*Interpreting the Research Question Results*

The purpose of this study was to determine if newspaper publications changed their written code of ethics for photo departments when digital photography became the mainstay of photographing events. The study also examined the photo editor's ideas on how the new digital technology changed the method of gathering, editing, and presenting photographic images.

Each research question dealt with how photography was treated before and after digital imaging emerged as the new technology.

RQ₁: Has there been a change in the written standard codes of ethics for photojournalists since the mid-1990s when digital photography emerged as the standard for publications?

RQ₂: Are newspaper photo editors and staff photographers following a written code of ethics established for newsrooms?

RQ₃: How are digital photographs currently being used in newspapers (i.e., hard news or illustration)? Does the use of digital technology itself change the way photographers shoot?

RQ₄: Based on the assumptions of photo editors, is the credibility of an image less questioned in newspapers because of the publications' past history or credibility?

RQ₅: Has digital photography created a paradigm shift in photojournalism?
The research shows 54% of newspapers who responded have written codes of ethics. 42% of publications who responded don’t have a written code but some have discussions on what codes or guidelines photographers should follow. As digital imaging software improves, so will the quality of the manipulated image. Some publications still see manipulated photos getting published. Even highly regarded news agencies are vulnerable to manipulated photos getting by editors and being sent to wire services.

*Reuters News Agency* had to pull from its wire service a manipulated photo taken by freelance photographer Adnan Hajj in Beirut, Lebanon in August, 2006, showing smoke in the sky over the city. *Reuters* explained putting the image on the wire was the result of human error. The photos were sent by junior level editors after publishing over 2,000 photos that day. Also, *Reuters* explained the number of their photo editor stations was reduced—three locations were consolidated into one in Singapore (Rutten, 2006). In researching Hajj’s archive, another recent photo showed more manipulation. In all, *Reuters* removed 920 images photographed by Hajj from the archives (Rutten, 2006).

Several other incidences have recently been discovered where photographers at daily newspapers have manipulated photos. In early April, 2007, *Toledo Blade* photographer Allan Detrich submitted a photograph for the front page showing the Bluffton University baseball team praying before a game. Media coverage of Bluffton University was higher because the baseball team was involved in a bus crash March 2, 2007, in Atlanta, Georgia, and several team members were killed. The team prayed before the first game after the crash. Using Adobe Photoshop, Detrich cloned (removed) out a pair of legs showing beneath a sign hanging on a fence in the background. What got the attention of other newspapers (*The Cleveland Plain Dealer, Dayton Daily News*...
and the *Lima News*) was a similar image taken by their own photographers showing the legs beneath the banners hanging on the fence.

Detrich, a 1998 Pulitzer Prize finalist, admitted manipulating and sending the photographs, but said he transmitted the photo by accident and his manipulated photo was for personal use and not for publication. When Detrich resigned his position, editors of the *Blade* began looking into archived photos Detrich had submitted in 2007. The *Blade* found 947 photographs submitted for the newspaper or on its Web site. Editors found 79 of the photographs were digitally altered. Of those 79 altered photographs, editors found 27 of them published in the newspaper or online editions, and 31 of them were published on the Web (Winslow, 2007).

The National Press Photographers Association’s president issued a statement concerning the *Blade* incident: “Unfortunately, these images have caused great harm to the audience and the profession. The code also says NPPA’s mission is to promote the highest quality in all forms of photojournalism and to strengthen public confidence in the profession.” The National Press Photographers Association, founded more than 60 years ago, continues to educate news photographers on ethical issues and increase awareness on training to still, broadcast, and multimedia outlets (Overman, 2007, ¶5)

Within a week of the *Toledo Blade* incident, the *New York Times* published an editor’s note explaining a photograph in the April 16, 2007, edition showing a storm-damaged Connecticut antique shop being washed away in the Norwalk River. The image was digitally manipulated to remove a hot spot in the wood siding. The manipulation resulted in the siding appearing out of alignment with the area untouched on the right side of the building. The *Times* reported the photograph was altered by a staff member, but not a *Times* staff photographer. The editor’s note concluded by saying the *Times* policy
does not allow manipulation of any photographs. If the editors had discovered the manipulation earlier the newspaper would have published the photo with the blemish or not run the photograph at all (NPPA, 2007).

Even after the two previous incidents photo editors again were examining an image transmitted over the wire services. Photographs of the Virginia Tech massacre by Roanoke Times photographer Alan Kim ran in the Times and on The Associated Press wire. Both the Times and AP were questioned about the photo which showed law enforcement officers carrying a shooting victim out of Virginia Tech’s Norris Hall. The image included a portion of the victim’s torso with a questionable area of undefined items. Some editors thought the items were the victim’s genitals and questioned if the image should be considered for page one. Upon inspection, Kim decided that the area did not show genitals, but rather a bloody cloth the victim used as a tourniquet.

Once transmitted on the wire by the AP, The New York Post, The Sun in London, and People magazine examined the photo and believed the image did show the victim’s genitals. The three publications altered the image to change the area in question. Col Allan, executive editor of The New York Post said the image was altered to protect the dignity of the student without changing the impact of the photograph. The NPPA said it was a noble act of the newspapers to protect the victim’s embarrassment, but even though the manipulation was minor in detail, the alteration was still a visual lie (Winslow, 2007b).

When John Long saw the show of hands at the NPPA’s Photojournalism Summit in Portland, Oregon, the number was more than he predicted. In the answers by photo editors when questioned on their codes of ethics, the project found the majority explained they trust their staff. Most said staff photographers are aware of manipulation and don’t
suspect it is being done at their newspaper. The show of hands contradicts the editors’ responses in the questionnaire. What journalists are facing is the arrogance of journalism, according to Winslow. Ego among photojournalists becomes a factor in ethical education. Modern technology has allowed the public to know the ease in which an image can be manipulated (Winslow, 2007b).

If an image looks suspicious, then there is a chance something in the photo has been altered. In most cases the reviewer’s common sense will overtake the believability factor and raise questions to the validity of the image. As computer software becomes more technologically advanced, the manipulation becomes more difficult to detect.

Minute changes in photographs are the hardest to detect. Removing a power line, a tree limb or a pole can be accomplished without raising suspicion. Since the alteration changes the content, it is a manipulated photo. The image manipulates the viewer’s sense of truth and what is perceived to be truthful has become another way to pass on altered image as a real photographic image (Fiete, 2005).

When an altered image is manipulated the image can become as real as the original. The context change is the most difficult to detect because the identifying marks are hard to find. Finding the inconsistencies in an image is a way for identifying a manipulated image. Often, altered photos will include repetition of objects, jagged edges along a background, or shadow areas going in conflicting directions. Looking for illumination, sharpness of an object, resolution, tones, relative scale and digital noise are ways to detect if an image is changed (Fiete, 2005).

Whether shooting hard news or soft news, images are interpretations of a specific event at a specific moment. The images are visual icons or representations of these events. New technology helps photography become more efficient because the
technology itself has become easy to comprehend (Seelig, 2002). Digital cameras, computers and software have sped up the production of publications.

Photographs contributed from outside the newspaper create an additional challenge for editors. Indications of alteration are difficult to see in a well-manipulated photo and photo editors must decide if the photograph represents the true event. The decision newspapers make on how to use photographs is greatly influenced by how photo editors train their staff and converse with all contributing photographers.

Digital imaging has changed shooting patterns. A section of an image can be utilized more effectively with digital than film. A more creative outlet for communication is produced with digital cameras. Amateur photographers using digital cameras with automatic features are now achieving greater exposure of their work than ever before. By allowing the camera to make all the necessary adjustments, the quality of the images has improved. However, a market flooded with images makes close monitoring of images created outside of the publication prohibitive. This is a monumental problem for photo editors.

Responses to research question five indicate the form of digital photography has not created a paradigm shift. The photographer’s shooting methods have not changed since the inception of photojournalism. One photo editor indicated the information and knowledge is stored between the photographers’ ears, and not inside the metal framework of a camera (Coleman, 2007). The focus of a perceived paradigm shift is the technology associated with digital photography. Most agree this change has created a new way of getting an image from the initial stages to fruition. From shooting, storage, editing, and printing, all digital imaging techniques have created a new direction for photography.
The technology in digital imaging has affected the industry of photography. Mechanical components are being replaced by electronic elements. Consumers and photojournalists want more elements, which allows for customization of each camera. The current trend by manufacturers is to produce equipment based on wide market research. They create the product most in high demand, make it available to the consumer, and generate more demand for those models. Advancement in technology has created new products at an increasing pace. Several years ago a camera with a ten million pixel chip was pricey and few models on the market (Puts, 2004). Today they are commonplace. Leading photography manufacturers, such as Canon and Nikon, have 14 mega pixel cameras at the high end of camera technology. Cameras at this end of the pixel spectrum cost as much as $5,000 and the supply is plentiful. This is cheaper than the original Kodak NC2000, which cost $17,000.

Photo editors agreed their publications are regarded as highly credible with the readership. Editors have to look for the occasional lapses in judgment by a staff photographer and photographers must avoid the temptation to alter reality. Most photographers have considered altering images at some time and some have even been successful with publishing altered images. The ease of image altering makes it tempting, and Adobe Photoshop or other software manipulation programs make the image vulnerable.

Another way the credibility of a newspaper stays in good graces with the readership is the publication's promise that if a published photograph is discovered to have been manipulated, the photographer will be disciplined or fired. The fear of losing a job weighs heavily with photographers contemplating manipulating an image. The publication's ability to label a photograph as an illustration, and knowing the reader
understands an image as an illustration and not a true representation, is a proper way to publish a manipulated image.

Publications have set up standards, but what arrives from the wire services has recently come under scrutiny. *The Associated Press* strives to ensure the images are edited and transmitted by member services as true images. The recent incident with *Reuters* has left some doubt with photo editors on whether they are getting unmanipulated images. Newspapers which randomly sample raw images downloaded onto servers gives a publication a checks-and-balance system. By retaining all unedited images, an editor can check if any changes have been made. If something is wrong with the photograph, the editor can view the raw version and make correct changes. A checks-and-balance system utilized by photo editors ensures all images are checked before going to print. Occasionally an altered image does get through the gauntlet of editors’ eyes, but the margin of error is very low when compared to the number of photos published in newspapers.

Photographers could distinguish between what is a moral judgment of misleading or they can create an intentional deception. Intentional deception creates an unusual situation in photojournalism. Does the photographer hope to change the viewers’ mind on the situation? Does the photographer hope to gain personal recognition on an outstanding photograph? Does the photographer hope to earn praise from editors and colleagues? Only the photographer and the moral decisions he makes can answer any one of these questions.

Johannesen (1983, p. 105) outlines from Sissela Bok’s book (Bok, 1979) three levels of a lie are considered justifiable. First, we have to scrutinize our own conscience to consider if the decision is carefully weighed. Second, one has to seek advice from
friends, elders and colleagues to determine the ethics. Third, an opportunity for public debate should be considered. To understand some of the motivation behind moral decisions on whether to manipulate a photo, several factors should be included in the thought process. Fear of the editor on how to handle a photograph taken at the scene is a factor. Fear of losing a job is another. An editor might determine the photographer is not up to the standards of the publication. Could there be a reward if the photograph is of award-winning caliber? Could a salary increase by having better photographs lead to a photographer's decision to alter an image? Could the photographer think his colleagues will accept him as part of the group? In the journalism field, this can create an instinct to follow the lead of others in the profession. All decisions are based on individual morals (Fink, 1995).

Rationalizing ethical decisions is deep in human nature. Christians (2005, p 4) writes: “Popular culture gets caught up in the technological imperative, producing the visually interesting, creating programs at times of artistic wholeness, but driven by the conditions of aesthetic space rather than ethics.” Photographers who rationalize the decision to manipulate could look at the values placed upon them if they believe they are correct in the process.

The public trusts publications to provide true, unaltered photographs. As more and more people learn about manipulation, they have become more skeptical of impressive photographs they view. When a photograph looks too good, the viewer becomes more aware the photograph could be a manipulated image. There are plenty of images which have not been changed, but are perceived as altered. Skepticism has started to be more commonplace in society's culture.
Recently a story and photograph surfaced in newspapers and the Internet about an 11-year-old Alabama boy who shot and killed a wild hog. The hog weighed 1,051 pounds and measured 9-feet, 4 inches in length. When confirmed the hog outweighed the previous record holder, Hogzilla, by 51 pounds (Brumack, 2007). Once the photograph emerged, skeptics contended the image was manipulated. This is one incident in which the technology of photo manipulation has engrained skepticism in people. Comments from viewers said the image looked as though it was photoshopped or cheap camera tricks (Reddit, 2007).

Whether shooting hard news or soft news, images are interpretations of a specific event at a specific moment. They are visual icons or representations of these events. New technology helps photography become more efficient because the technology itself has become easy to comprehend (Seelig, 2002). Digital cameras, computers and software have sped up the production of publications.

Most photojournalists understand the public knows images are manipulated to some extent. They don’t have a problem with the viewer assuming some part of the image was changed by cropping, color correcting, and spot removal. What concerns photojournalists are viewers not believing a remarkable image as unaltered (Coleman, 2007). The shift in photo techniques has produced knowledgeable viewers.

Photographers used to have the upper hand on darkroom techniques, whether it was the wet darkroom or now the computer darkroom. Viewers used to know little about how photographs were changed unless they had knowledge of these darkroom techniques. The more knowledgeable the viewer became about digital technology, the more information they gained on manipulation.
Publications must work to retain and regain trust with its viewers. Convincing the viewer that images in newspapers remains unaltered will take time. As long as photographers get caught changing the content of an image, the longer it will take publications to have the true image accepted without skepticism.

Before digital, mainly in the 20th century, it was considered easy for photojournalists and publications to win viewers’ trust. Manipulation was harder to do in wet darkrooms without the public being able to detect manipulation. Since the digital era, it has become harder for photojournalists and publications to win viewers’ trust (TrustImage, 2007).

The Latest Advancements in Photography

The number of manipulated photographs printed is small in comparison to the overall number of photographs published in newspapers across the United States. As editors become more familiar with the nuances of digital manipulation, they will be able to more easily spot those photographs altered and submitted by a minority of photographers. The checks and balance system is in place, and its efficiency will continue to improve.

In early October 1998, the National Union of Journalists in London initiated a method to ensure all digitally manipulated photographs are clearly marked. A symbol appearing within the photograph indicates to readers that the photograph has been changed. The method helps define a non-manipulated photo from an illustration (Holderness, 2004).

Companies dealing with the digital market are using technology to help track manipulated photographs. Adobe will soon have an Adobe Photoshop plug-in which will allow the system to match a digital image to the camera which shot the photograph, and
to detect any manipulation which may have occurred. Adobe is working with a digital forger expertise, Dartmouth College professor Hany Farid, on detecting images with hopes of adding the plug-in to the Adobe Photoshop software in early 2008. Reuters is working with Adobe and Canon to create an audit trail revealing changes to an image (Galbraith, 2007).

Farid, along with a Dartmouth graduate student, has developed a mathematical technique enabling them to find differences between an unaltered image and one which has been altered. His algorithm looks into the statistical clues left behind when pixels have been altered. Farid’s model captures the mathematical regularities ingrained in natural images. When the statistics change in an image which has been altered, the model detects tampering (Guldvog, 2004).

Canon, Inc., introduced a kit in 2004 designed to validate images shot with digital cameras. The Canon Data Verification Kit DVK-E2 is geared toward news publications, insurance, law enforcement agencies, and other agencies to detect single bit discrepancy in modification of an image since it was taken (Digital Photography Review, 2004). The kit allows for detection of any single bit discrepancy. Image codes are verified with the software by comparing it with the attached code. If any manipulation occurs, the codes will not match up.

Another advancement in the computer chip of the digital camera involves a filter allowing better photographs in low light situations. Eastman Kodak announced it has developed a color-filter creating a crisp photo in low light situations. Images photographed in low light get improved by 2-to-4-times in light sensitivity. This technology almost doubles the sensitivity to light of the image sensor to every digital camera. The filter is expected to be utilized by next year. This will greatly improve
situations where a flash is not available. Eventually this filter will make its way into a cell phone with the ability to shoot images.

Once the button is pressed and the shutter opens, the image is projected onto the sensor. The light is converted into an electric charge. Since most sensors use the Bayer mask, the charge goes to half of the millions of cells on a checkerboard grid. The charge filters the half to collect green light and a quarter each are filtered to allow the red and blue light. The computer chip then reconstructs a full color signal for each pixel in the final image (Digital Photography Review, 2007).

The new filter, under development for the past five years, adds panchromatic cells which are sensitive to all wavelengths of visible light. By collecting larger amounts of light hitting the sensor the camera can shoot images at higher shutter speeds, reduce blurring and capture moving subjects (Dobbin, 2007).

The future at some publications has already begun. Video is now included as part of some staff photographers’ duties while shooting assignments. Besides the still photograph, photographers are carrying small video cameras to capture motion and sound for the publications’ Web page. The technology is expanding toward the possibility of an all-in-one camera from which a single frame can be selected from a video clip for use in the printed publication. The demand for more online information has allowed photographers to show more images from assignments through multi-media and slideshows. These methods have taken the place of photo spreads in printed publications. The slideshow expands the parameters of published images. Online photographs far exceed the printed publication’s ability to reproduce multiple images.

Macharia (1999, ¶12), said; “Technology should not be seen as merely an appendage to human society, but a deeply intertwined constitutive feature. A new
medium of communication gives rise to a new social epistemology." The Internet opens up a new wave of newspaper communication. The contents of the printed version and the web version will be intertwined to link different communities with a common goal. The world is changing at a fast pace and the human race has the ability to adapt to changing structures.

The current study found answers by photo editors to be informative on what newspapers expect to see with digital photography. How the staff photographer handles the digital technology begins with the editors, and it is the job of the photo editor to make sure the rules are followed.

Prospects for Future Studies of Digital Research

Since the digital photography portion of photojournalism is still in its infancy, research will continue. Future research can branch off in several directions with information gathered from readers. Several questionnaires already deal with digital manipulation, but studies could continue on the code of ethics involved with newspapers.

A second area of interest is learning more about the video aspect of manipulation. The same software generating digital images in still photography is also incorporated into the video side. With online newspapers, more publications are including multi-media into the Web pages. Is the video clip susceptible to manipulation with the same ease of still image?

Continuing research into the values of online reporting and imaging facing publications can be another avenue for refining journalism ethics. There is a new challenge for photographers in the digital media which has not been examined extensively. Since more and more newspapers are adding online editions to their
communication package, more information and faster updates changes how photographers handle events and deadlines.

Conclusion

This study focused on the technology used to create a digital image. The result from this study has added information to the body of information associated with digital technology. No qualitative study will ever answer all questions completely. The paradigm associated with this study indicates all ideas and decisions are up to the individual. If a person, or in this case a photojournalist, decides to manipulate the image, it will happen regardless of the publication.

As long as publications continue to monitor the way images are submitted for publication, manipulations should be kept to a minimal amount. Plans to monitor images with software in the future, photo editors who gain more knowledge on spotting altered images, and the possibility of more enforcement of code of ethics will help keep the credibility of publications high.

Digital photographic technology has allowed photographers to change their shooting styles. Photojournalists who merged technologies from manual film cameras to fully automatic functioning digital cameras found shooting images faster and easier. With manual cameras all decisions were made by the photographer. Digital photography helped advance the speed and accuracy of shooting. Fully automatic cameras allowed photographers to point and shoot. Digital cameras set in full automatic mode chose the appropriate aperture, shutter speed, ASA/ISO setting, and focusing. Analog cameras had the same technology, but digital technology has taken photography to the next level.

The same style of technology has filtered to computer systems. The metamorphosis of digital information has transformed information. All fundamental
information has gone toward the digital universe. Text, images, and sounds have gone
toward a code in a computer (Lanham, 1993). Computers can be set up to record the
same decisions of the photographer. A stroke of a keyboard key can be set up to control
all tonal, cropping, or sizing.

The decision process by the photographer can be aided by the technology installed
on a computer or camera. Photographers have to decide how they are going to perceive
this style of technology. This form of communication has gone from newspapers starting
with the printing press, desktop publishing creating a new avenue of production, and
dissemination of knowledge (Lanham, 1993), and digital technology has changed the way
information is created, and how the information is sent out. This form of communication
has gone toward the multimedia format. The decision process could be influenced by the
ease of information being transmitted to the reader.

But: digital photography, and how the information is received, still relies on the
photographer. Technology allows for more rational thought. Communication through
those means has expanded the knowledge of the reader. Technology will be needed to
keep information flowing. Photo editors will have more decisions to make on which
form of communication will show images. Instead of which image goes into what
section of the printed publication, the photo editor has choices on where the image is
published. Technology has helped influence the editor on which direction images can go:
the printed version or to the web version of a newspaper. Technology can play a part in
influencing the decision process of photo editors, as well as their staff.
APPENDIX A

First Email

Dear,

I am a photojournalist conducting doctoral dissertation research at the University of Southern Mississippi. Over the last 25 years an evolution has taken place in the process of photographing, editing and producing images for print. Would you please spend a few minutes and answer the questionnaire below.

My research seeks your opinion on digital photography and photo manipulation and to document if codes of ethics have been altered since the introduction of digital photographic equipment. This research is also an attempt to discover if digital photo manipulation is becoming more acceptable for use in editorial publications. Each respondent’s name was chosen from the Bacon’s Newspaper and Magazine Directory and cross referenced with the National Press Photographers Association’s Members Database.

Your input is very important to the success of this research project and I ask that you spend a few minutes to complete the questionnaire below and email your responses back to me as soon as you can. Neither your name nor the name of your publication will be used in this study. Although there is not a 100% guarantee your information will be kept confidential, every effort will be used to keep all answers confidential and will be used only for this research.

Your participation is completely voluntary and that participation might be discontinued at any time without penalty or prejudice to you.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, 601-266-6820. Thank you for your time and your assistance with this study.

Sincerely,

Steve Coleman
The University of Southern Mississippi
118 College Drive #5167
Hattiesburg, MS. 39406-0001
601-266-6332
Dear,

Recently I sent you an email concerning my doctoral dissertation research at the University of Southern Mississippi. Over the last 25 years an evolution has taken place in the process of photographing, editing and producing images for print. Would you please spend a few minutes and answer the questionnaire below.

My research seeks your opinion on digital photography and photo manipulation and to document if codes of ethics have been altered since the introduction of digital photographic equipment. This research is also an attempt to discover if digital photo manipulation is becoming more acceptable for use in editorial publications. Each respondent’s name was chosen from the Bacon’s Newspaper and Magazine Directory and cross referenced with the National Press Photographers Association’s Members Database.

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Thank you for your time and your assistance with this study.

Sincerely,

Steve Coleman
The University of Southern Mississippi
118 College Drive #5167
Hattiesburg, MS. 39406-0001
601-266-6332
Dear,

I know your schedule is very busy. I am close to my projected %age of responses for finishing my research. I need your help by taking a little time to fill out the questionnaire below which will give me enough research to conclude my dissertation.

My research seeks your opinion on digital photography and photo manipulation and to document if codes of ethics have been altered since the introduction of digital photographic equipment. This research is also an attempt to discover if digital photo manipulation is becoming more acceptable for use in editorial publications. Each respondent’s name was chosen from the Bacon’s Newspaper and Magazine Directory and cross referenced with the National Press Photographers Association’s Members Database.

Your input is very important to the success of this research project and I ask that you spend a few minutes to complete the questionnaire below and email your responses back to me as soon as you can. Neither your name nor the name of your publication will be used in this study. Although there is not a 100% guarantee your information will be kept confidential, every effort will be used to keep all answers confidential and will be used only for this research.

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Sincerely,

Steve Coleman
The University of Southern Mississippi
118 College Drive #5167
Hattiesburg, MS. 39406-0001
601-266-6332
APPENDIX D

Questions for Photo Editors

Please answer the following questions based on your opinions about digital photography at your publication.

1. At your publication, is there a digital manipulation standard which staff photographers must follow?
   
   If yes, do they follow these standards? If, no, why doesn’t your publication have a standard?

2. How much methodology of photo imaging has changed since digital photography became the mainstream?
   
   Scale (A lot considerable some very little none)

   If a lot or considerable, give examples of how this has changed. If very little or none, why hasn’t it changed your methodology?

3. What has been the toughest hurdles staff photographers have faced since digital photography started at your publication?

4. Are staff photographers given a written Code of Ethics? Yes No
   
   If yes, are they following these codes? If no, why are they not following these codes?

5. Has digital photography helped your editing techniques? Yes No
   
   If yes, how have they changed? If no, why have they not changed?

6. Has the technology of digital photography changed your methods of editing information? If yes, how has it changed your editing procedures? If no, why has it not changed?
7. Do you feel your mind has been changed on the acceptable range of manipulation which digital photography has introduced to the market?

If yes, how has your thinking on acceptable ranges been affected? If no, why has your acceptable range not changed?

8. In your opinion, has digital technology created a paradigm shift (a change in assumption or change in thinking from one to another type of thinking) in photojournalism?

9. Since photo manipulation has become easier with computer technology has your publication taken steps to keep news oriented photographs from being misrepresented? If yes, how have they taken these steps? If no, why have they not taken any steps in photography?

10. How long have you been a photographer? ____ years

11. How long have you been a photo editor? ____ years

12. Does the historical credibility of your publication help the legitimacy of images published?
   (a) a lot  (b) considerable  (c) some  (d) very little  (e) none

If yes, what are the general alterations allowed?

   (1) dodging
       (a) a lot  (b) considerable  (c) some  (d) very little  (e) none

   (2) burning
       (a) a lot  (b) considerable  (c) some  (d) very little  (e) none

   (3) color enhancement
       (a) a lot  (b) considerable  (c) some  (d) very little

   (4) remove scratches
       (a) a lot  (b) considerable
(c) some  (d) very little  (e) none

13. What is your gender?

(a) male  (b) female

14. What is your highest level of education?

(a) high school  (b) some college
(c) undergraduate college degree  (d) graduate school

15. What region of the country are you from?

(a) northeast  (b) southeast
(c) southwest  (d) midwest
(e) northwest  (f) west
APPENDIX E

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26.111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 27021204
PROJECT TITLE: Digital Photo Manipulation: A Descriptive Analysis of Ethical Decisions of Photo Editors and Codes of Ethics
PROPOSED PROJECT DATES: 02/12/07 to 02/11/08
PROJECT TYPE: Dissertation or Thesis
PRINCIPAL INVESTIGATORS: Stephen Coleman
COLLEGE/DIVISION: College of Arts & Letters
DEPARTMENT: Mass Communication and Journalism
FUNDING AGENCY: N/A
HSPRC COMMITTEE ACTION: Exempt Approval
PERIOD OF APPROVAL: 03/06/07 to 03/05/08

Lawrence A. Horoman, Ph.D.
HSPRC Chair

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Figure 1. Alexander Gardner arrived at the decisive scene of the war at Gettysburg two days after it had been fought in July 1863; he set about photographing "Home of a Rebel Sharpshooter." However, before taking the picture he dragged the body of a Confederate some thirty meters to where he lies in the picture, turning the head towards the camera.

(1) from Library of Congress, Prints and Photographs Division, Reproduction number: LC-B8171-7942. Adapted with permission of the author.
Figure 2. The March 6, 2005, issue of *Newsweek Magazine* uses Stewart's head and a model's body as she was leaving prison. *Newsweek Magazine* disclosed that the cover was a photo illustration – or composite – on page 3 of the magazine in a credit line.

Figure 3. The February 1982, edition of *National Geographic Magazine* had a horizontal photo of the Egyptian pyramids of Gaza narrowed to make a vertical cover from it. They put the photo in a computer and squeezed the pyramids together. They referred to it as the "retroactive repositioning of the photographer.

Figure 4. The photos of O.J. Simpson on the June 27, 1994, covers of *Time Magazine* and *Newsweek Magazine* have two different looks associated with them. *Time* magazine manipulated the photo to make Simpson look rougher.

March 2003, was considered photographer Brian Walski's best day of shooting in Iraq and the day he ruined his career with the Los Angeles Times. None of the photographs truly captured the day for Walski, so he did something he says he'd never done before. He took two photos of a British soldier in front of a crowd of Iraqi civilians and composed an image on his laptop, using the left side of one photo and the right side of the other.

Figure 6. Los Angeles photographer Brian Walski combined two photographs into this one composite.

Figure 7. A newly statuesque Kate Winslet towers on a pair of surprisingly slim line pins on the cover of January 2003, edition of the British GQ Magazine. Ms. Winslet herself, however, doesn't seem to share his opinion. "The retouching is excessive. I do not look like that and more importantly I don't desire to look like that," she said. "I actually have a Polaroid that the photographer gave me on the day of the shoot ... I can tell you they've reduced the size of my legs by about a third. For my money it looks pretty good the way it was taken."

Figure 8. In 1994, shortly before the much-anticipated women's figure skating competition at the Olympics, Tanya Harding and Nancy Karrigan appeared on the cover of New York *NEWSDAY*. The photo was a composite.

(#8) From “Digital Tampering in the Media, Politics and Law,” By Hany Farid, 2006,
Figure 9. The Indian Ocean tsunami published in the Calgary (Alb.) Herald on January 3, 2005, on the front page was given lots of play. The image dominates the page in the same way the massive, cresting wall of water appears poised to overwhelm the people scurrying in the path beneath it. As it turned out, though, the image Edison provided did not come from the tsunami. Instead, it shows a huge wave that resulted from a tidal surge in the Qiantangjiang River in China. The photo dates back to September 2002.

Figure 10. The image Edison provided did not come from the tsunami. Instead, it shows a huge wave that resulted from a tidal surge in the Qiantangjiang River in China. The photo dates back to September 2002.

Figure 11. John Kerry, left, and actress and activist Jane Fonda resurfaced in 2004 appearing to be speaking before a crowd as they protest the Vietnam War. The image was actually two photographs spliced together to make one photograph. Kerry’s photo was taken in June 1971 and Fonda’s was taken in August 1972.

September 16, 2005, edition of *Time Magazine* was criticized for its cropping and use of a photo on the cover illustrating a story on Whitewater. *Time* editors were criticized for darkening and cropping an out-of-date White House photo of President Clinton and George Stephanopoulos to remove Dee Dee Myers from view.

Figure 13. Mirabella Magazine created an artificial model, "an extraordinary image of great American beauty," for the cover of its September 1994 issue.

Figure 14. When Michelle Pfeiffer appeared on the cover of Esquire Magazine in 1990, in a low cut red dress, the caption beside the photo read "What Michelle Pfeiffer Needs . . . Is Absolutely Nothing." Yet, the magazine's editors must have forgotten to specify something to their readers. Adbusters Quarterly revealed the manipulation and claimed that what Pfeiffer actually needed was $1,525 in touch-ups. That's what Diane Scott Associates, Inc. charged Esquire for the following work, described in a purchase order obtained and reprinted by Adbusters "Clean up complexion, soften eye lines, soften smile line, add color to lips, trim chin, remove neck lines, soften line under ear lobe, remove stray hair, adjust color and add hair on top of head, and add to the dress on one side to create better line"

Figure 15. The photo of Condoleezza Rice that originally accompanied this story in the October 19, 2005, edition was altered in a manner that did not meet USA TODAY's editorial standards. The photo has been replaced by a properly adjusted copy. Photos published online are routinely cropped for size and adjusted for brightness and sharpness to optimize their appearance. In this case, after sharpening the photo for clarity, the editor brightened a portion of Rice's face, giving her eyes an unnatural appearance.

Figure 16. *Sports Illustrated Magazine* altered the cover of its February 5, 2001, edition covering Super Bowl XXXV between the Baltimore Ravens and the New York Giants. The top of the frame was extended and a strap was removed to allow type on the page.

Figure 17. *Sports Illustrated* Magazine altered the cover of its February 5, 2001, edition covering Super Bowl XXXV between the Baltimore Ravens and the New York Giants. The top of the frame was extended and a strap was removed to allow type on the page.

Figure 18. In a December 1997, edition, *Newsweek* editors altered the image on the cover of Kenny and Bobbi McCaughey soon after she gave birth to sextuplets. *Time* ran an unaltered image while *Newsweek Magazine* manipulated the photo by straightening Bobbi's teeth.

Figure 19. The September 16, 2002, edition of *Newsweek Magazine* had Donald Rumsfeld and Colin Powell on the cover. The Table of Contents labeled photographs several photographers indicating these were two photographs merged together.

Figure 20. In the March 15, 2006, edition of the San Antonio Observer features a San Antonio police officer wearing a white hood of the Ku Klux Klan and holding a pistol. The hood and gun were digitally added to the photo of a police officer.

Figure 21. The March 12, 2006, cover of the New York Times Magazine shows former Virginia Governor Mark Warner, a possible contender in the 2008 U.S. presidential race. The jacket was charcoal, not maroon; the shirt was light blue, not pink; the tie was dark blue with stripes, not maroon.

Figure 22. In July 2006, *The Charlotte Observer* fired Patrick Schneider, a staff photographer, for altering this image of a fire fighter. Following the incident, the paper released the following statement: "Photographer Patrick Schneider's photo depicted a Charlotte firefighter on a ladder, silhouetted by the light of the early morning sun. In the original photo, the sky in the photo was brownish-gray.

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