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## To control our image: photojournalists and new technology

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Facing the impact of new electronic and computer technologies, photojournalists are reconsidering the nature of the photograph as document, the ethical guidelines of their work and their roles and responsibilities within news organizations. An analysis of the National Press Photographers' Association official publication, *News Photographer*, 1980-8, found that US photojournalists interpret four areas of innovation as challenges to the boundaries of their work: colour photography in the daily press, the digitization of the photographic image, the still video camera and new technologies of image transmission.

The magazine's treatment of each innovation is examined, and strategies are then identified that the field uses to reassert its members' sense of control over innovation. These include modifying news photography contests, testing innovations during major news events and using language that asserts photojournalists' power in the news organization and refers to accepted practice and values. Control becomes an ethical issue, needed to preserve photojournalism's status and to safeguard the credibility of the photograph as a document of reality.

The new technology has the potential of undermining our faith in photography as a reflection of reality. (Edward Klein, Editor of the *New York Times Magazine*, 1985)

### Photography and news in the new media age — a framework

Because the photograph both imitates and reconstructs the world, we treat it simultaneously as 'natural' and 'cultural'. Our belief in the photograph as

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a picture of the world as it existed for one moment in front of the camera's lens remains deeply imbedded in the cultural history of photography. At the same time, the 'truth' we construct from the camera's image is continually qualified, modified and challenged by our various understandings of the cultural and political work the photograph is being asked to perform.

Photography's development and spread during the second half of the nineteenth century occurred at a time when the value of the fact was on the rise. The notion of the photograph as record, evidence and proof resonated profoundly with new institutions of science, government and industry in many western lands (Fagg, 1988). William Ivins, in his ground-breaking work on the development of pictorial communication, traces the adoption of the photographic image as the norm of representation: 'The nineteenth century began by believing what was reasonable was true and it would end up by believing that what it saw in a photograph was true' (Ivins, 1953: 94).

Journalism was among the first institutions to identify itself with photography, exploiting the belief in the photograph as an accurate, credible representation of reality. Several decades before photographs were printed in newspapers, the reputorial convention of objectivity took root, and it was common in the British and American press to find references to the reporter as a 'mere machine' recording the 'exact truth', and to the camera as a metaphor for the reporter's activities (Schiller, 1977). Illustration remained tied to cumbersome engraving techniques until the invention of the halftone process in the 1880s, but in the meantime, a drawing's veracity was often authenticated by the credit line, 'from a photograph'. Today the ideal of objective journalism, its roots intertwined with nineteenth-century beliefs about photographic realism, lives on as an occupational ideology. Although the camera is no longer the journalist's guiding metaphor, the news form continues to be shaped by professional attitudes that closely correspond to assumptions about photography's ability to 'tell the truth' in unbiased, accurate accounts of world events.

Photojournalism is the one branch of the profession where the explicit link persists between the ideology of objective news reporting and the camera as the tool ideally suited to the task. Photography has always been dependent on technical, optical and chemical procedures. Photojournalists — those journalists who report the news through the medium of photography — combine these procedures with strategies that are intended to uphold the culturally negotiated standards of the journalism profession. Within this framework, technology at times broadens and at other times restricts their access to news. For example, in the late 1920s, 35mm cameras with faster film and lenses enabled German photojournalists to work more unobtrusively using only available light. They soon developed strategies for going 'behind the scenes' to make candid photographs of

subjects that previously had only been reported in words (Becker, 1985). Yet, in a counter example, the camera's presence in US courtrooms has been severely restricted, based on the presumably disruptive effect of the technology, and the publicity that photography was thought to bring to trial participants. While reporters with notebooks and sketchpads were admitted, the photojournalist's work was seen as violating conditions for a free trial.<sup>1</sup>

Technological innovation is persistent and continuous within photojournalism. No other journalists face the same degree of change in the tools they use for gathering, processing, selecting, editing and distributing news. Historically this has meant that photojournalists are repeatedly challenged to adjust their work strategies to technological change, while remaining true to existing standards of journalistic practice. Conflict frequently arises, and a process of renegotiation begins, resulting in change both in the work strategies and the stated journalistic standards.

The past decade provides a fruitful framework for examining how this group of journalists accommodates technological change. Facing the impact of new electronic and computer technologies, photojournalists today are reconsidering the nature of the photograph as a document, their ethical guidelines and their roles and responsibilities within the structure of news organizations. Such discussions suggest that photojournalists are constructing new boundaries to define and defend the status of their work in the new media age.

### The photojournalists' discourse

One important site of these discussions is in the pages of *News Photographer (NP)*, the official monthly publication of the National Press Photographers' Association (NPPA). There is no union for US press photographers; NPPA has served as their primary source of information and support since its founding in 1946.<sup>2</sup> *News Photographer* is the photography magazine most frequently read by US photojournalists, including many who are not members of NPPA (Bethune, 1983). Written and edited by press photographers, picture editors and managers and directors of photography at US newspapers and news magazines, it is a forum for information and issues that affect both day-to-day work and the broader goals of news photography.

The present study is based on the text of the magazine from 1980 through 1988, and fieldwork conducted between 1979 and 1983 among the photography staff of four metropolitan daily newspapers in the United States.<sup>3</sup> The questions guiding the analysis are: first, what issues become important for discussion among photojournalists facing new technologies, and in what terms are these discussed? Then, how do the issues become

resolved: do the discussions result in a redefinition of their work? And equally important, are there issues that are *not* raised for discussion, but remain in the background as unquestioned assumptions regarding the nature of the field?

The emphasis here is not on the effects of technology on some journalistic product, nor on the receivers of that product. Instead, the focus is on the occupational group most affected by the technology. Any broader 'effect' within the public sphere is mediated by the understandings and applications photojournalists create for the new media. Analysing photojournalists' discussions, one learns how they interpret the technology's impact on their work and on the broader sphere of photography's role in public life.

Technological innovation becomes an explicit topic in *News Photographer* when it is regarded as affecting the quality of photojournalistic coverage or the boundaries and definitions of photojournalists' work. Innovations vary, of course, in the degree and nature of their perceived impact. How they are identified and discussed in the magazine — the terms used, the professional issues that are identified and, in the case of a conflict, where the conflict is located and how it is framed — indicate how the innovation is expected to affect photojournalism. In cases where the photojournalistic discourse treats technological innovation as a challenge to its principles, one finds the assumptions that support photojournalism as a profession and that in turn shape photography in today's press.

Four areas of innovation emerged from the *News Photographer's* discourse as issues affecting the definitions and boundaries of the field: colour photography in the daily press; the digitization of the photographic image; the still video camera; and new technologies of image transmission. Each of these areas of innovation is presented and analysed in turn, examining how it has been used, argued and defined within this photojournalistic discourse. As the meanings of each innovation emerge, certain patterns also appear, strategies of control common to the photojournalists' negotiation of all four areas of innovation. Photojournalists appear to use these strategies to resolve ambivalence about innovation and thereby reassert a sense of control over the parameters of their work. Both the strategies used in this renegotiation and the resulting boundaries — whether redrawn or simply reasserted — are central to understanding the changing relationships between photography and news in the new media age.

### The credibility of colour

The expansion of colour photography in the 1980s initially did not appear to cause any substantive shift in photojournalism. Events previously

photographed in black and white were now covered in colour, while the topics and news values they reflected remained unchanged. Embedded in the move to colour, however, were some serious consequences for photographic reporting.

The expansion of colour first became evident on newspapers' daily and Sunday section-fronts, simultaneously with increased sales of colour advertisement pages (*NP*, October 1981: 4). *News Photographer* reported research on the public's preference for colour (*NP*, November 1982: 2), and published articles about newspapers increasing colour coverage. A 1984 survey revealed that daily newspapers across a broad circulation range regularly published colour news photographs (*NP*, March 1984: 16–18). However, the position of paid colour ads and the edition's size usually determined the use of colour, not editorial decisions about when and where it served the best journalistic purpose (*NP*, October 1982: 12).

Photojournalists were often required to cover assignments with both black and white and colour film (*NP*, March 1984: 14), and complained of missing shots while switching cameras and of having good colour photographs on days their papers could not use them (*NP*, December 1983: 14). The narrower latitude and greater expense of colour also demanded different shooting techniques, including more carefully planned lighting and exposures.

Production capabilities were also influencing colour photojournalism. When the best photographs by journalistic standards were technically difficult to reproduce, conflict arose between photojournalists and production personnel. This phenomenon had long been routinized for black and white photographs; photojournalists knew how to accommodate both news values and production standards, and production staff could reproduce their work satisfactorily. While not conflict free, negotiations between photojournalists and the 'back shop' generally followed an established pattern. Colour, with its narrower latitude for error, disrupted the pattern; decisions previously made in the newsroom were being made by production personnel, and photojournalists were concerned over the loss of editorial control.

By the mid-1980s, the shift from colour transparencies to colour negative film had solved some production problems; when necessary, black and white prints could be made from colour negatives (*NP*, November 1984: 46; February 1984: 11). Automatic printmakers had also speeded up production (*NP*, February 1984: 10), and portable colour transmitters were in use, essential developments for colour coverage of major national and international news events. The 1984 Summer Olympic Games in Los Angeles became the first major test of colour photojournalism. Improvements in both quality and speed had increased the demand for colour projects, and no news event had ever been covered so extensively in colour: close to 40 per cent of the Associated Press film of the games was colour, and the Orange County (California) *Register* (which won a Pulitzer

Prize in photography for its Olympic coverage) shot 2500 rolls of colour film alone (*NP*, November 1984: 35-9).

In the meantime, news organizations were learning to adapt colour into their routines for covering late-breaking local news. Spot news — a bridge collapse in Hartford, Connecticut, and firestorms in Orange County, California, for example — pushed newspapers to find space and print colour on deadline (*NP*, October 1982: 8; December 1983: 6-8; January 1984: 6-7). Coverage of major news, both planned events and spot news, was giving photojournalists experience that enabled them to 'routinize the unexpected' (Fuchman, 1973) and integrate colour into their work strategies.

Colour's technical constraints also fuelled photojournalists' ongoing debate over the ethics of arranging photographs. Colour demands more attention to both the quantity and quality of light (*NP*, August 1984: 32), and it is difficult to control lighting without also asserting more control over the subject. Tighter production schedules and the related planning for colour section-fronts and other special projects, plus the additional cost of producing colour, all put pressure on photojournalists to arrange photographs. As they become more skilled and it became more difficult to recognize the 'set up' photograph (with lighting so 'natural', for example, the subject looks 'unlit', *NP*, January 1987: 38), some photojournalists became concerned. As one picture editor expressed it, 'We're *making* more pictures than we're *taking*', developing habits that threatened the credibility of the photograph as a news document.

Credibility was protected, however, if the arranged photograph clearly looked *constructed*, to distinguish it from photographs taken from 'real life' (*NP*, January 1987: 40). 'Photo illustration', a major development of the 1980s, was based on this distinction, stimulated by colour section-fronts featuring fashion, food and editorial topics difficult to illustrate with an imposed photograph. These were often elaborate studio arrangements, requiring several days of the photographers' time. Many photojournalists took great pride in these photographs they 'created', as distinct from the 'snapshot' which depended primarily on 'luck' (*NP*, January 1982: 43-4). They were also frequently winning the NPPA's contests, where creative illustrations formed a growing part of the 'feature' category.

Others saw illustration as a threat to photojournalism. Photojournalists from smaller newspapers lacking sophisticated colour facilities found themselves at a disadvantage when they entered contests with their spontaneous black and white feature photographs (*NP*, January 1985: 39-40; June 1986: 43, 45; August 1986: 58). The so-called 'enterprise' photograph, the result of a photographer's own ingenuity and luck, had long been the staple of the feature category. Contest judges, themselves newspaper photojournalists, expressed doubts about their selections, concerned that 'slick' colour illustrations overshadowed the merits of black

and white enterprise photographs (*NP*, March 1985: 33; February 1986: 42). After several years of discussion, NPPA created a new category for illustration 'to provide separate competition for images derived from life as it is observed (feature) and images contrived by the photographer (illustration). The degree of influence the photographer has on the subject and setting determined which category was appropriate (*NP*, April 1987: 6; September 1986: 16). This formalized the boundary which had been forming between illustration and feature photography, and reinforced the status of photographs 'from life as it is observed' as worthy photojournalism.

The new contest rules did not, however, resolve the status of illustration, or as one photographer put it, 'the squabble between real pictures and fake ones' (*NP*, September 1986: 38). One judge criticized newspapers' demands for 'more illustration, more color, and slicker images. . . . [I]t takes away from fundamental photojournalism' (*NP*, June 1987: 28-9). Others affirmed her view that news and feature photographs, unlike illustration, are 'products of real events', and 'the fundamental purpose of photojournalism' (*NP*, June 1986: 45; Reaves, 1987: 23). New colour technology, and the concomitant changes in styles and work routines had brought about a reassertion of the traditional value of the 'real picture', the unmanipulated photograph of an actual event: these are 'our top priority', the 'fundamental photojournalism', while illustration is 'just MTV on a news page' (*NP*, September 1986: 39; June 1986: 45).

#### Dilemmas of the digitized image

The introduction of digital retouching further complicated the issue of photo illustration because it made it possible to retouch and synthesize new images with 'life-like realism' (Reaves, 1987: 23). In the industry this new computer technology has different names: electronic retouching, computer imagery, electronic colour imagery or just ECI. The process is based on a laser technology which screens the continuous tone photograph, translates it into digital data, then feeds it into the computer. The photograph then can be displayed on a gridded video monitor that divides the image into minute picture elements, or 'pixels'. Any area of the screen can be enlarged for retouching, pixel by pixel. Possible manipulations include removing, cloning, deleting or combining parts of the image with other objects, and changing their colour and brightness (Reaves, 1987: 24). Digital retouching is usually much faster than reshooting a studio illustration, although the computer's time to produce the image can add several hours. Related technology soon made it possible to feed the retouched image directly into production or to transmitters for wire service distribution.

Digital retouching has the potential to shift even greater control to the

production department, and stories of editorial blunders and unethical practices began to circulate among photojournalists. At the Orange County Register, a photograph of a swimming pool that had been dyed red by vandals was 'corrected' in production so that the blue was restored in the paper's first edition (*NP*, January 1987: 34). The ethics of 'dialling in' a clear blue sky over the Register's Olympic coverage was also strongly criticized (*NP*, April 1986: 39; January 1987: 40). These problems were avoidable, it was argued, if the technology were in the hands of journalists. At the Providence (Rhode Island) *Journal-Bulletin*, the managing editor for graphics pointed out that his was one of only two papers in the US 'where editorial people are running the electronic page assembly and color equipment . . . people with editorial values and ethics' (*NP*, January 1987: 29). Elsewhere, strict limits were set on electronically 'improving' photographs and procedures were established for conveying editorial decisions to production personnel (Reaves, 1987: 30). Photojournalists were also urged to become involved in management: 'The introduction of electronic scanners and digital retouching is another reason for "strong photo management involved in the highest levels of decision-making at newspapers"' (*NP*, January 1987: 30).

No one asserted that photojournalists should be creating only 'straight' or unmanipulated prints. Instead the photographer's autonomy and authority to alter the image was stressed — within the established conventions of photojournalism. Accepted darkroom practices for black and white photographs were referred to when drawing limits for digital retouching. *The Chicago Tribune* would not use the computer to reverse a photograph or to drop out a background, but would 'burn and dodge', 'like you do a black and white print'. The director of photography at *USA Today* said, 'We do no more with our color than we do with black and white . . . that's color correction and making it printable' (Reaves, 1987: 27). Technological innovation at the Associated Press required no change of their standing policy: 'We don't tamper with pictures' (*NP*, January 1987: 33-4). The traditional rules were still in place; the new technology enabled photojournalists to do what they had always done, only better and faster.

Yet photojournalists were making distinctions between the kinds of photographs to which the rules applied. While 'news' photographs should never be altered (beyond burning and dodging or cropping to give the subject greater emphasis), many saw 'feature' photographs as permitting greater latitude, including digital retouching. Some drew the line at photo illustration, the obviously arranged studio photograph. Others went further, to include removing 'clutter' from the background of a 'real' scene in a feature photograph. Still others thought the key factor was the location of the published photograph: digital retouching may be appropriate on art and entertainment pages (Reaves, 1987: 28), or for a

cover photograph. Rick Smolan, who organized several photojournalism projects covering 'A Day in the Life of . . . various countries, argued that a cover, unlike the inside photographs, serves as an advertisement for a book. Digital alteration is a legitimate way to make the cover 'more dramatic and more impressive' (*NP*, January 1987: 25-6). At *National Geographic*, a pyramid was digitally moved for a cover story on the Egyptian desert in February 1982. Rich Clarkson, director of photography at the magazine, argued that no falsification had occurred since the photographer could have altered the scene in several acceptable ways when taking the picture, like 'moving' the pyramid by changing his position (Reaves, 1987: 31-2).

Such cases have raised controversy, and photojournalists are far from a consensus on how the digitized image may be altered, if at all. Those who would allow it draw parallels with previous practice and/or construct boundaries around specific cases — features, photo illustrations, covers — where it may be used. Others would exclude it entirely from their work. All agree, however, that the invisible manipulations of digital retouching can impair the status of photojournalism and potentially destroy the credibility of the photograph as a document.

#### Still video vs the photojournalist's craft

The electronic non-film still camera made its debut at an engineering conference in 1982 (*NP*, November 1982: 12, 14, 16). Four years later at the Photokina conference in Cologne, ten manufacturers displayed versions of the still video camera. Most were interested in the mass market, but photojournalists saw the camera as 'an important key in the electronic puzzle' they were piecing together (*NP*, January 1987: 35).

Designed to operate much like a conventional 35mm camera, still video uses a charge-coupled device (CCD) as the imaging sensor, and records onto a disk which holds twenty-five to fifty images, depending on whether the camera is operating in 'frame' or 'field' mode. A frame image, which takes up two fields, gives better resolution — more than 250,000 pixels. At 350 lines per inch, the quality was still low by newspaper standards; 750-800 lines would have been 'pretty good' (*NP*, January 1987: 35). The appeal of the new medium lies in its immediacy; the image is projected and edited directly on a video screen, eliminating all the time-consuming chemistry of the darkroom.

The electronic image blurred the line between television and newspaper photography. Photojournalists were already uncomfortable with the practice of publishing stills from television, even when television coverage was better or all that was available (*NP*, November 1982: 15, 17-19, 40). In a compelling exception, the 1983 Pulitzer Prize in photojournalism was

nearly awarded to a television cameraman. The jury of five still photographers recommended unanimously that a still from Charles Panzer's videotape of a dramatic rescue from a plane crash in the Potomac River should receive the award. The image had been transmitted by the Associated Press and published in many newspapers. Any arguments against giving Panzer the award were defeated, a juror explained, when one recognized that future photojournalists would be using still video (NP, November 1983: 10). The Pulitzer Prize Board made a different selection, however, and the following year clarified its policy: stills from television were eligible for the competition, but 'in all cases, preference will be given to work appearing first in newspapers' (NP, January 1984: 5).

Photojournalists continued to echo this ambivalence toward electronic images. A significant part of the photographer's craft takes place in the darkroom, and many were reluctant to give up 'the magic of watching an image slowly appear' and 'the satisfaction of hand burning and dodging a special picture' (NP, November 1988: 24; May 1988: 43). Yet, freed from the darkroom, photojournalists could 'spend more time and energy in our jobs as journalists' (NP, November 1988: 24), 'more time being news people, news gathering, and less time as lab technicians' (NP, May 1988: 43). This meant 'time to research and think through what they're trying to do and prepare for the assignment' (NP, April 1984: 14). Time in the darkroom, in other words, is time away from journalism.

Eliminating the darkroom, however, would also decrease the photographer's control as more decisions over image selection and editing would occur in the newsroom. Some saw this shift of responsibility as positive, because 'the picture desk person will need to be more of a photographer, and photographers will have to think more like an editor' (NP, April 1984: 14). Predictions varied on how soon such effects would be felt and when, if ever, film-based technologies would be eliminated from photojournalism (NP, June 1988: 19-20; November 1988: 24). The deciding factor would not be the photojournalist's responsibilities, however. Instead it was the balance between the immediacy of the technology and its low image quality which determined the 'special situations' for still video's use (NP, June 1988: 19-20).

Those special situations have been spot news stories of national interest occurring on deadline. Still video images from a World Series baseball night game in October 1987 were transmitted over telephone lines for *USA Today's* front page the next day. Although 'the quality wasn't terrific', film would never have made the newspaper's deadline (NP, January 1988: 43; June 1988: 20). The 1988 Democratic Party conventions gave the Associated Press its first opportunity to transmit an all-electronic photograph. When the convention hall was closed by fire officers during a key session, no photographers could get their film out for processing. The AP used a still video camera connected by cable to their 'electronic darkroom'

to photograph Jesse Jackson introducing Rosa Parks, heroine of the Montgomery bus boycott. The photograph was ready for transmission twelve minutes after the camera's shutter was released. The image was weak — 600,000 pixels compared to 2.7 million for a conventional wire photo — but it demonstrated the technology's utility (NP, November 1988: 22). Still video had become 'a second "spot news camera", a partner to film-based technology' (NP, November 1987: 27), when transmitting photographs quickly was more important than image quality.

#### Transmitting from 'the walking tripod'

The still video camera became a tool for gathering news only when its images could be moved rapidly to the newsroom and transmitted quickly for publication. As long as press photographs continued to be made on film, the immediacy of a camera-to-newsroom cable connection was impossible. In the meantime, however, electronic technology had been simplifying the movement of images, both film-based and electronic.

Transmitters which scanned negatives for sending over telephone lines eliminated the need for prints. And briefcase-sized portable transmitters were introduced at sixty Associated Press newspapers early in 1988 (NP, June 1988: 20). The new transmitters enabled photojournalists to format, caption and transmit 35mm black and white or colour film directly to computers or output printers. They saved time, produced sharper images than conventional transmitters, allowed for some colour correction in the field, and enabled photojournalists to travel with less equipment (NP, June 1988: 44; May 1988: 45). The portable units had obvious advantages for out-of-town assignments and for major news events where the volume of photographs was high.

The next link in the process was the electronic darkroom, or electronic picture desk as it was variously called, where the photograph could be stored or recalled for further editing. Generally its capabilities included changing contrast, enhancing and cropping images on a video screen. The electronic units that the Associated Press introduced in 1987 could digitally correct colour separations, produce positive prints, or be used as front-end systems for page layout and pagination (NP, November 1984: 39; November 1982: 44; February 1988: 10). There were disadvantages, too; editors found that storage capacity was often inadequate, especially on weekends or when major events generated lots of photographs. Because of the amount of space required to store digitized images, recalling and editing the images could also be slow.

Several major events of 1988 provided opportunities for crucial tests of the electronic transmitters. The Associated Press covered the Democratic and Republican Parties' national conventions and the Summer Olympic

Games from Seoul without producing a single photographic print for transmission (*NP*, November 1988: 23).

Although the technologies for electronically editing, transmitting and storing images are not fully developed, photojournalists think the implications are clear. Increasingly, transmission systems will become digital, vastly increasing their speed. The new systems will also shift responsibilities of selecting and editing photographs away from the photographer (*NP*, March 1984: 18). Two factors are considered critical in this vision of photojournalism's future: one is the difference between the electronic and the film-based image; the other is the responsibility for photographs within the news organization.

The electronic image, unlike film, leaves no trace of the changes performed on it. This presents a challenge to the standards of photojournalistic practice that include fidelity to the image the photographer took and guidelines for altering that image. 'Now we have an acetate base — we have the original to judge from', said one director of photography. But the electronic image eliminates the possibility of catching any changes that violate the guidelines because the original image, the standard of 'reality', is gone (*NP*, January 1987: 32).

Within the news organization, the new technology may eventually have greater impact on the picture editor's job than on the photographer. Many photojournalists think that the photographer will continue to take, or make, photographs, while the person at the picture desk will make far more of the decisions regarding which photographs will be used and what they will look like. This will require the picture editor 'to be more of a photographer, able to judge the moment' (*NP*, April 1984: 14).

Historically the most common route to an editor's job has been through the 'word side' of the newspaper, and many of the people sitting at picture desks have had little prior experience in photojournalism. Photographers fear that, with the added power electronic technology brings to the picture desk, photojournalism will be shaped increasingly by people who are 'visually illiterate' (*NP*, October 1982: 43-4). They believe that many editors 'just don't consider *visuals* as potent as written words' and 'can't recognize a visual ethical problem' (Reaves, 1987: 32). Against this background, electronic technology implies more than a loss of power for the photojournalist. At stake is also the credibility of the photograph as a news document, even 'the public's trust in all photography' (Reaves, 1987: 32).

Those who welcome the future of electronic image transmission see it as integrating the photojournalist's work more closely with the rest of the journalistic enterprise. The integration will be complete if, or when, the images the photographer takes with the camera are seen simultaneously in the newsroom. At that point, the photojournalist becomes comparable to the reporter, who already has the electronic means to transmit stories back

to the newspaper (*NP*, April 1984: 14). And, freed of the darkroom, the photojournalist can spend more time researching and gathering news.

In the alternative view, the technology will reduce the photojournalist to a mere technician, blindly following instructions from an editor who looks at the image on the monitor and guides the camera — 'pan a little to the right, a little lower, there!' — to take the picture that will be published. This is the photographer as the 'walking tripod', whose journalistic skills and experience have been completely bypassed by the electronically transmitted image (*NP*, September 1986: 18).

### Controlling change

Ambivalence permeates photojournalists' discourse on these technological innovations. An innovation is seen either as a liberating opportunity or a threat to the photojournalist's status, depending primarily on photojournalists' sense of control over the technology. Implementing an innovation thus includes procedures for negotiating its control. To this end, the photojournalism profession has developed strategies for situating and naming change that serve to resolve ambivalence by defining an innovation's place within a framework accepted by members of the field.

Contests are an important way that this occupational group names its leaders and identifies trends. The NPPA's carefully monitored system of monthly, annual, regional and national competitions is also a significant site of challenge and debate between established conventions of photographic reporting and path-breaking innovation. The outcome of these struggles — the contest winners, new rules and procedures — control the direction and meaning of the change. We saw, for example, how the conflict between colour illustration and traditional concepts of black and white photojournalism was negotiated through NPPA's 'Monthly News Clip Contest'. The Pictures of the Year contest changed its entry requirements from prints to slides in 1986, in part to accommodate the large number of colour entries and the cost of colour printing (NPPA, 1987b). The 1983 Pulitzer Prize competition was the site of discussion about accepting television images of photojournalism, and a reassertion of the primacy of the newspaper photograph. Drawing such parameters serves to 'rein in' a technological innovation and define its meaning for the field.

Events reported as major news stories are also occasions for testing and defining new technologies. These events can be divided into two types, requiring different strategies of coverage. One is the scheduled national or international event, which is planned and co-ordinated long in advance. The second type is unscheduled and unexpected, a disaster or accident that may also have national or international consequences.

The scheduled event allows, even requires, advanced planning for

coverage, including the technology to be used. Because of its visibility and significance, the event also provides a stage for demonstrating new technologies. At the 1984 Summer Olympics, for example, 'the big thing was color' (NP, November 1984: 38-9); the volume of colour film shot by news media was said to have surpassed all previous events, the Associated Press used portable colour print transmitters for the first time on a big story, and a local newspaper used its new colour facility to win the Pulitzer Prize. Canon chose the 1986 Pan American games to test, successfully, its still video camera (NP, November 1987: 28; January 1988: 43). The Associated Press used the major events of 1988 to break ground for electronic coverage, and boasted that 'the Democratic National Convention represented the first time a story of this magnitude had been handled electronically without the installation of a chemical-optical darkroom'. The Republican Party convention and the Summer Olympics in Seoul provided repeat performances for their 'electronic darkroom' and portable transmitters. The wire service immediately announced that in 1992, the 'next round of political conventions and Olympics' would be dominated by the electronic camera and the transmission of digitized images (NP, November 1988: 21-2). News organizations have high demands for coverage of such major events. If a new technology proves able to provide rapid and comprehensive coverage better than competing technologies, its place in photojournalism has been secured.

The major accident or disaster occurs without warning. Competition for immediate on-the-spot coverage is extremely high and advance planning for coverage is usually impossible. Getting photographs from these classic spot news events usually requires ingenuity under extreme time pressure. News organizations cast a wide net to find photographs, and if none come in from the usual sources, they look elsewhere. Thus still frames from television have become major news photographs when no film of an event was available. The demand for immediacy can, as in these cases, contribute to a technology's acceptance.

More commonly, however, the spot news event presents a sudden challenge for testing a new technology. A newspaper with new colour capability may push aside a strict production schedule to get front page colour coverage of a late-breaking story. The new portable colour transmitters gave same-day coverage to newspapers faced with the logistics of transporting film out of Yellowstone National Park during the forest fires of 1988 — as long as their photographers could get a telephone installed for transmissions (NP, November 1988: 45). In spot news the new technology meets a major test, often requiring radical adjustment of previous routines. Time pressure and competition highlight problems, and ways are then found to solve them. If a technological innovation proves successful, it will be used again, with greater confidence and finesse. The

spot news event thus helps establish new routines that include the innovation in future coverage.

Once a new technology is integrated into the routines of covering both planned and spot news events, its continued development and use is seen as unavoidable; the competitive demands of the field prevent turning back. This acceptance and control of the technology at the practical level of day-to-day work routines does not always resolve photojournalists' ambivalence, however.

Because technological innovation affects the structure of decision-making at many newspapers, photojournalists are concerned about how such changes affect their control over their work. Job security *per se* is rarely mentioned; photojournalism's status is the more common way of framing the issue. Moving out of the darkroom and into the newsroom' is advocated as one way to reassert editorial control over photojournalism. As electronic technology eliminates the darkroom, photographers can devote more time to the journalistic aspects of their work, which will also make them better photojournalists. Moving up in the hierarchy of the newsroom is also implied, into positions of greater control over assignments, editing, selection and production.

The language that defines a higher status for photojournalists within the news organization may in itself be a strategy to enhance their sense of control over technological innovation. It is not clear that changes in organizational structure have taken place. Photojournalistic training for picture editors is stressed, and scholarships and workshops in picture editing have been offered. Yet the directors of photography and managing editors who are frequently quoted in *News Photographer* usually have long held positions of relative power. Conferences and workshops on topics related to new technology are frequent and well attended, but staff photographers often feel the political realities of their positions go unaddressed. Newspapers that have adopted new technology report establishing 'guidelines' for the technology's implementation that protect photojournalism's status, but rarely mention major staff reorganization or new lines of authority.

The language photojournalists employ to discuss new technology is also reassuring in its emphasis on accepted tools and techniques. The computers are called 'electronic picture desks' and 'electronic darkrooms', recalling familiar functions. Techniques of digital retouching are legitimized by referring to traditional ways of arranging and altering news photographs: 'changing camera angle', 'burning and dodging', 'using a filter'. Change is made familiar through language that reasserts accepted practice and refers to basic values. Thus ambivalence is resolved in favour of an innovation when photojournalists can interpret it as helping them to work as they have always done, only faster and with better results.

### Conclusions

Photojournalists see themselves as responsible for establishing and maintaining the standards of photography in the press, and without their photographs, press representation of the news would be incomplete. We have seen how photojournalists have responded to technological innovations of the 1980s by reasserting the importance of their place in the journalistic enterprise and the significance of the photograph as news document. These reassertions arise from a process of negotiating the meaning the technology has at different levels of photojournalism: the day-to-day work routines, the status of the work within the news organization and within journalism as a whole, and the continued credibility of the photograph.

Photojournalists assert that the public's belief in their work is essential, and that their credibility depends on the public's ability to trust in their photographs as unconstructed 'pictures of reality'. New technologies threaten to undermine this trust by blurring the visible distinction between the manipulated and the 'real' image. Ethical guidelines are drawn up in order to clarify once again this distinction and to apply it to the production of the news photograph. Photojournalists' control over the technology thus also becomes an ethical issue, not only to preserve their status within journalism, but to protect the integrity of the photograph itself.

In response to technologies that appear to alter the very base of the photographic medium, photojournalists have reasserted their belief in the value of the photograph as a document of reality. In so doing, they have revealed that the concept of photographic truth remains deeply embedded in the professional culture of photojournalism.

### Notes

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1. For a review of the National Press Photographers' Association's role in this long and complex negotiation, see Cookman (1985: 149-73), 'The Fight Against Canon 35'. For a thorough recent review of the courts' limitations to electronic (including camera) coverage, see Dyer and Hauserman (1987).
2. A 1983 national survey found that 69 per cent of photographers employed by daily newspapers in the United States belonged to NPPA (Bethune, 1983). A majority of its 8000 members participate in no other professional organization (NPPA, 1987a).
3. A report of this fieldwork appears in Ohrn, 1983.

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