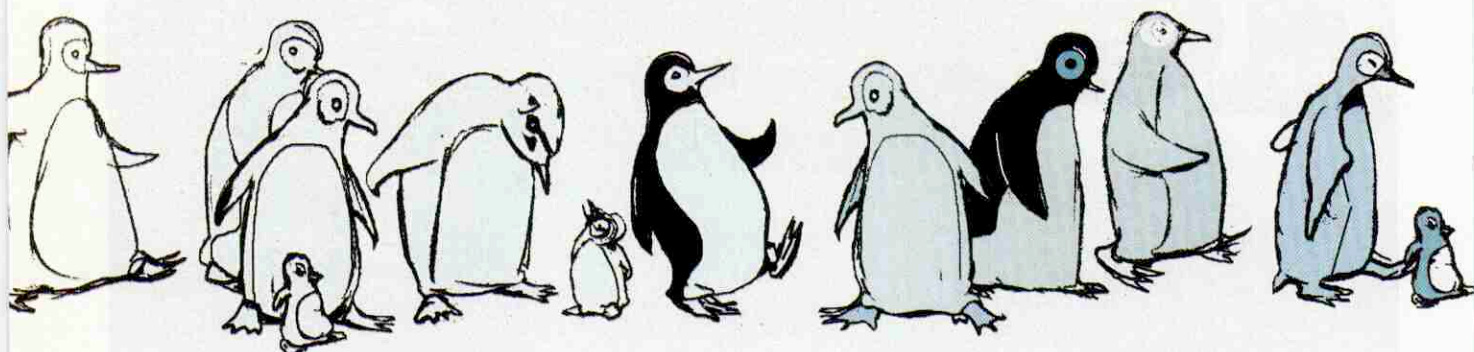


PHOTOGRAPHY IN THE AGE OF FALSIFICATION

by KENNETH BROWER

The wildlife photography we see in films, books, and periodicals is often stunning in its design, import, and aesthetics. It may also be fake, enhanced or manufactured by emerging digital technologies that have transformed—some say contaminated—the photography landscape



PRESTIDIGITATION

THIRTY years ago, in the age before the cruise ships came, I spent four months in the Galápagos Islands with the photographer Eliot Porter. The Galápagos were wilder, less-visited islands then. They had yet to become the most photographed archipelago on earth. Porter was making the pictures, and I was gathering notes, for the first volume in what would become a vast library, that ponderous collection of large-format Galápagos books now decorating coffee tables everywhere. Porter, our first great master of nature photography in color, was then sixty-four, the grand old man of his art. I was twenty-one,

just beginning a career that was to be spent in large part outdoors in the company of nature photographers. Among my duties in the Galápagos were helping to lug Porter's 4X5 camera and tripod up volcanoes, rowing dories in through surf, and hunting meat, like Robinson Crusoe, on various islands with our guide's old bolt-action .22. It was one of the best times of my life.

Accompanying our expedition was Tad Nichols, a former Disney cameraman, and in the islands we crossed paths with the British nature photographer Alan Root, then just beginning his own remarkable career. In the Galápagos I had my first opportunity to study the habits of cameramen in the wild.

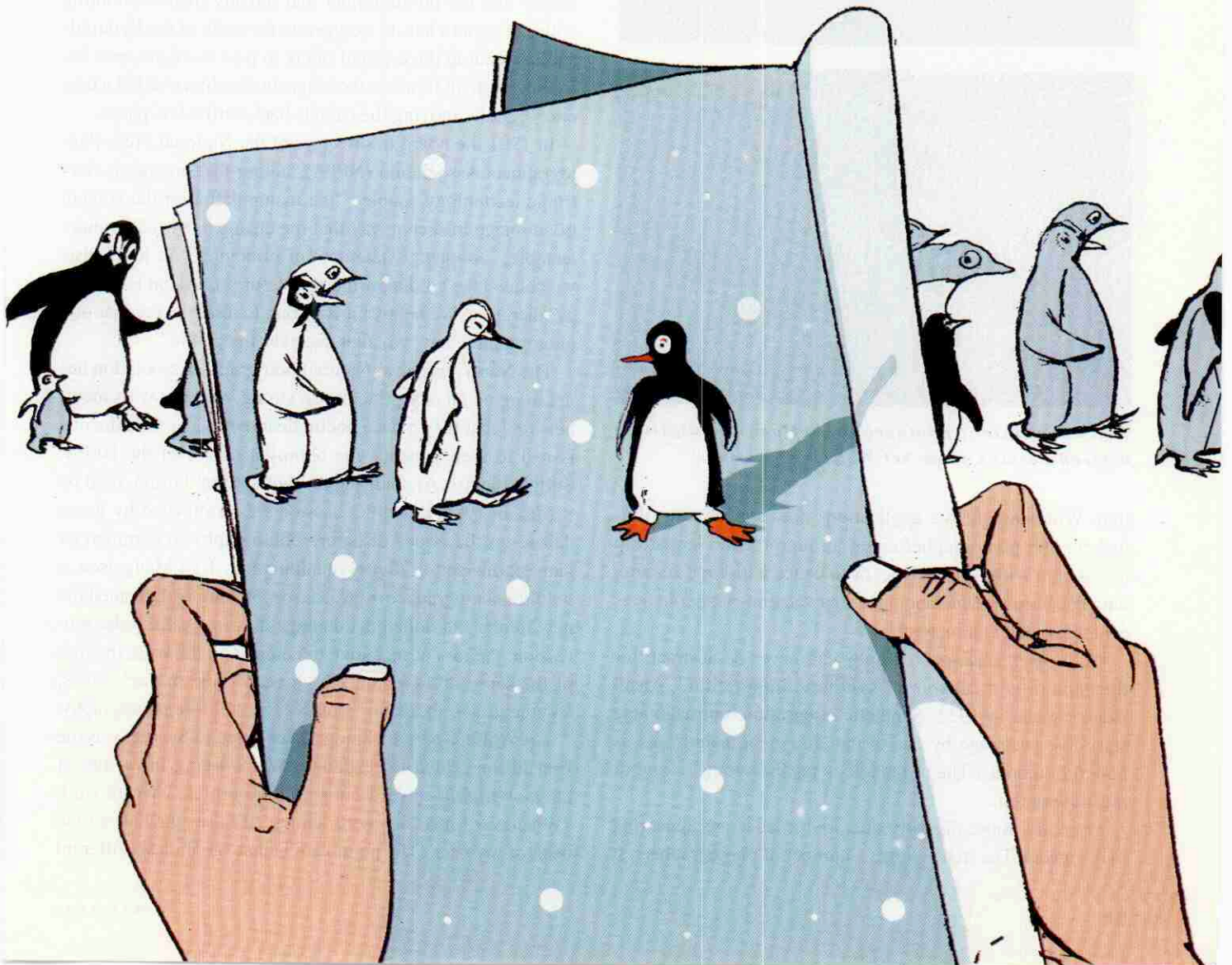
Anchored off Santiago Island one evening, over a dinner of

feral goat, the photographers grew expansive and the talk turned to nature fakery. Porter was a purist. He believed in shooting straight. He admitted to having occasionally moved a stone or feather or piece of driftwood to improve one of his compositions, but he was generally opposed to this sort of manipulation, and he grew uneasy talking about it. Root and Nichols came from a more pragmatic, rough-and-tumble school of commercial nature photography. Root told us the story of a *Life* cover a colleague had done. The image had begun in the mind of one of the magazine's editors. By a kind of redactional clairvoyance this editor, seated comfortably at his desk in Manhattan, had seen it all clearly: leopard and its kill in thorn tree, branches framing a setting sun. The photographer set off in quest of this vision, traveling the East African savanna for weeks with a captive leopard, killing antelopes, draping the carcasses in the branches of various thorn trees, and cajoling the leopard to lie proudly on the "kill," a tableau that the photographer shot against a succession of setting suns. Tad Nichols laughed ruefully yet appreciatively. He told the story of his own work on Disney's *The Living Desert*, most of which was filmed on ersatz dunes

built on a vast sound-stage table. Root countered with a story of some clever photoduplicity, the details of which I have since forgotten. Nichols came back with a tale of how Disney's minions bulldozed lemmings off cliffs for the famous lemming-suicide sequence.

And so it went, confession piling on confession. Both Root and Nichols affected a sad cynicism about the unseemly things they were called upon to do, but underneath, clearly, was a grifter's glee at various con jobs well executed—and under *that*, if I am not mistaken, was a soupçon of genuine shame. At twenty-one, I was scarcely weaned from the Disney nature documentaries. I particularly remember one revelation of how Uncle Walt's men had fabricated the hawk-kills-flying-squirrel episode. (Assistant grip stands on tall stepladder with pouch of flying squirrels. Grip tosses squirrels—unpaid rodent extras—skyward one by one, as in skeet shoot, until trained hawk, after dozens of misses, finally gets it right.)

Photofakery, then, is nothing new. The first attempts at it no doubt followed shortly upon Daguerre's initial success with his camera obscura. But photography of late has en-



tered a brave new epoch. No photographer today would bother cruising the bush with trained leopards to fake a sunset shot. Anyone with Adobe Photoshop (\$589 when I last checked; \$599 with a scanner thrown in) could find a perfectly adequate leopard in the zoo, digitally edit out the bars of the cage, tree the cat with subtle movements of mouse, bloodlessly procure a dead antelope (if his computer held any in files), and then set the whole collage against a virtual setting sun. Indeed, he could tree his leopard against the rings of Saturn if he was so inclined. A leopard can't change his spots, but the modern photographer can easily do it for



Top, the original photograph; bottom, the digitally altered version from Art Wolfe's *Migrations*

him. With some of the applications now available to filmmakers, the photographer could arrange for the leopard to lose a fight with John Wayne, or to dance with Fred Astaire, who has been shown dancing with a vacuum cleaner in a recent television commercial.

"In a strict sense photography can never be abstract, for the camera is incapable of synthetic integration," Ansel Adams wrote in 1932. Synthetic integration, unimaginable sixty-five years ago by one of the art's great technicians, is now full upon us. The old magic is fast becoming a kind of prestidigitation.

More and more digitally doctored images are appearing in the media. The trend alarms a number of photographers. It

worries certain editors, and it worries me. I am troubled not only as a colleague—a nonfiction writer whose text often runs alongside photographs of wild lands and wildlife—but also as a casual student of the history of nature photography, an admirer of the art, and a friend of many who practice it. I have shared tents and blinds and small boats and even the mouthpieces of scuba regulators with these people. I love them for their hardiness, their courage, and their constant griping about the weather, sticky shutters, leaky housings, bad strobes, native customs, the myopia of photo editors, and the intransigence of wild animals. I am always impressed by their skill at improvisation in the field. I admire—to a certain extent—their ingenuity. But it is clear to me that the photographer's work philosophy is not always congruent with the expectations of those of us who view the work. Too few photographers, I think, appreciate how directly the new technology aims at the heart of the credibility that distinguishes this art form from others.

The controversy over digital manipulation has been simmering for some time. It first surfaced in 1982, when *National Geographic* ran a computer-altered photo of the Pyramids at Giza on its cover. To the traditional adjustments of reality that the photographer had already made—shooting with a telephoto lens to exaggerate the scale of the Pyramids and persuading three camel riders to pass a second time before those great tombs—the magazine's editors added a new one: digitally moving the camels backward a few paces.

In 1991 the board of directors of the National Press Photographers Association (NPPA), noting that emerging electronic technology enabled "the manipulation of the content of an image in such a way that the change is virtually undetectable," adopted a statement of principle: "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."

The North American Nature Photography Association has yet to agree on any principle so strong. Many NANPA members feel that they have a poetic license broader than the one issued to their cousins, the photojournalists of the NPPA. Still, at the first Annual Nature Photography Forum, held by NANPA in 1994, the ethics session was dominated by fierce debate on the issues of nature photography in commercial game farms and of digital manipulation. Tom Mangelsen, a wildlife photographer from Jackson, Wyoming, lamented the new trends and tallied the damage they had caused the profession: the loss of incentive to compete in the wild, the loss of the sense of adventure, the loss of pride in one's work, and the loss of the public's respect for wildlife photography.

Art Wolfe, a nature photographer based in Seattle, was the first in the crowd to respond. "We're living in an age of back-swinging toward conservative ethics," Wolfe said. "Whenever I hear the word 'ethics,' it raises the hair on the back of my neck. The point here is that we all have different

standards. I certainly don't want to be told by somebody else what I should be doing."

The debate intensified in 1996, when exposés in *The Denver Post* and the *Seattle Post-Intelligencer* revealed how Wolfe's 1994 book *Migrations* had been fabricated. In about a third of the book's images the wildlife—caribou, zebra, geese, greater sandhill cranes—had been digitally enhanced, and some had been digitally cloned and multiplied.

"Nature photographs are generally accepted as and trusted to be straightforward records of what the photographer witnessed and recorded on film in a single instant," the photographer Gary Braasch wrote in a letter to the NANPA ethics committee in June of 1996, as the debate over *Migrations* flared in the camera magazines. "This is an acceptance hallowed by years of communication among photographers, editors, publishers, and viewers."

The fact is that this acceptance has often been "hallowed" in the breach. As the advocates of digital doctoring like to point out, the old boys faked it too.

Recently I checked my recollections of Eliot Porter with John Rohrbach, the associate curator of photographs at the Amon Carter Museum, in Fort Worth, and the custodian of the Eliot Porter collection there. Rohrbach confirmed my impression that Porter did not believe in setups but was sometimes tempted. He corroborated my sense that Porter was uneasy discussing the matter. "We actually have a picture of him hacking away at a cactus to get a picture of a roadrunner nest," Rohrbach said. "Paul Strand was even more adamant that no retouching at all should occur. But there are prints where Strand drew in manholes or etched out people to balance his compositions."

In his first years of printing his most famous photograph, *Moonrise, Hernandez, New Mexico, 1941*, Ansel Adams, in his words, "allowed some random clouds in the upper sky area to show." They always annoyed him, and in the 1970s he arranged in the darkroom for those clouds to evaporate. In his celebrated *Winter Sunrise, The Sierra Nevada From Lone Pine, California*, Adams deleted from the dark foothills of the middle ground the big "LP" that the little town's high school students had laid out in whitewashed stones.

This image of the Sierra at sunrise—distant horse grazing beneath a horizon of bare aspens in sunlight; dark, unblemished foothills in shadow; and finally the bright, jagged cordillera of the Sierra in sunlight—opens *This Is the American Earth*, the first volume of the "exhibit-format series" that my father, David Brower, began in 1960 at the Sierra Club. Under my father's editorship the series eventually grew to thirty volumes, thirteen of which I wrote or edited. As a fourteen-year-old, well before my father thought to press me into service, I watched *This Is the American Earth* come together at Adams's house in San Francisco. The creative excitement among the three principal contributors—Adams, my father, and Nancy Newhall, the author of the

text—was a wonderful thing to behold until the martinis kicked in, always derailing Newhall first. I remember the print of *Lone Pine* on Adams's table. I have a vague recollection that the photographer was less than proud of having excised the "LP." My father recalls otherwise—that Adams simply thought the town's initials messed up his picture and he wanted them out of there.

In 1964, taking a kind of sabbatical after my freshman year at Berkeley, I assembled my first exhibit-format book, a photo essay on California's Big Sur coast. Early in the editing I worked for two weeks out of Adams's new house in Carmel Highlands. By day I collected the work of the several photographic geniuses resident along that shore. By night, back at Adams's house, I watched the maestro "dodge and burn" in his darkroom. To dodge—to withhold light from an area of the print for a timed period in the developing process—was once considered, as the term suggests, somewhat underhanded, but it had long since become accepted practice. The same was true of burning, or concentrating light on an area of the print. Adams's darkroom, then just two years old, was state-of-the-art. He had designed it to produce mural-size prints. The enlarging camera was huge, like a Brownie from Brobdingnag. The bellows on the thing would have worked for Vulcan at his forge.

Mounted on rails, the camera faced a rail-mounted easel holding the print paper. Adams wore a blue apron that protected everything but the turquoise-and-silver clasp of his string tie. Working over the nascent print, Adams would aim his great deviant beak at it appraisingly. (He had broken his nose when he was four years old, in the San Francisco quake of 1906, which had thrown him against a garden wall. In crushing his septum, the great earthquake was also responsible, I have always assumed, for the strange adenoidal quality of his voice.) His fingers, gnarled by arthritis, would hold the dodging wand. Making little incantatory circles with the wand over the area he wanted lightened, he would laugh his crazy, nasal, Mephistophelian laugh.

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It was all white magic, I can't help thinking. The small adjustments to reality that occurred in Ansel Adams's darkroom, if crimes at all, were misdemeanors. That photographs should be "straightforward records of what the photographer witnessed and recorded on film in a single instant" still seems a worthy ideal, despite the fact that some of our greatest have stretched and jiggered it. Many fine principles are hallowed in the breach. This does not mean that they exert no influence, or that we should dispense with them entirely.

SHEPHERD

MOST of my commerce with photographers has been in the field, not in the darkroom. Digitalization overtook photography some time ago, but I have been a Rip Van Winkle in this matter—if not exactly asleep for twenty years, then inattentive for about that period. To bring myself up to speed, I called at the photography studio of Joseph Holmes, in Kensington, California. Holmes is an old friend whose heroes are my heroes. "Ansel Adams, Eliot Porter, Edward Weston," he says. "A little Brett Weston. Monet. Van Gogh. O'Keeffe. Thomas Moran." Holmes is a consummate and obsessive printmaker, in the tradition of Adams, and he has a Porterlike eye for composition. He has published several books of photographs, among them the exquisite *Natural Light* (a promising title, in view of my prejudices),

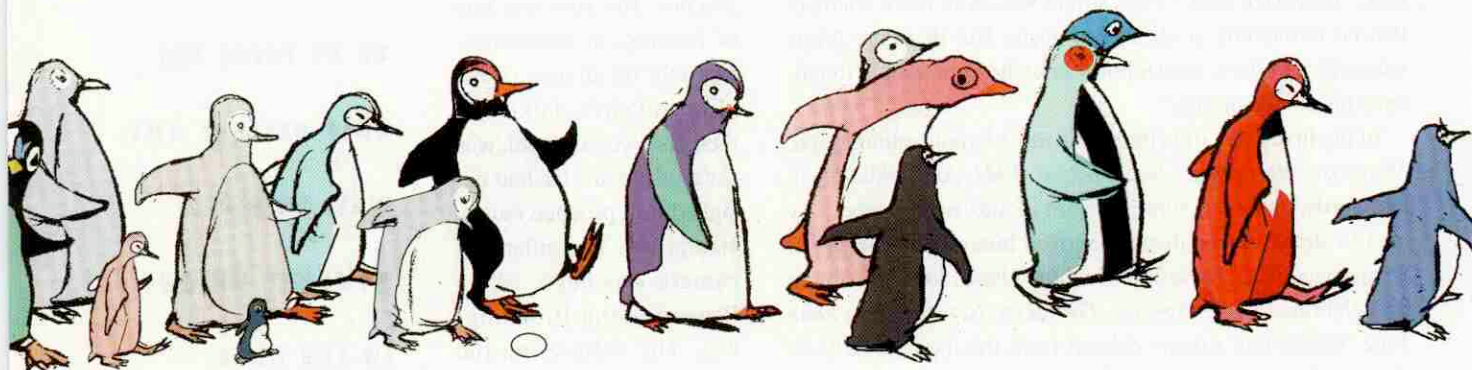
through the pages. "Engineering manuals for hard drives. It's ridiculous." Opening to a diagram, he thrust it at me. "Here's how you should cool the hard drive. I like to read about stuff like this when my hard drives die from overheating. It's horrible when your hard drive dies on you."

Closing the curtain on the window above his computer monitor, Holmes sat at the keyboard. I offered to close the side door as well, which stood half open to the sunlit yard outside. For a moment Holmes seemed baffled by this suggestion. No need, he said, after an awkward pause. The color out there—the warm light on the concrete—was hardly the sort that would interfere with the fidelity of the colors on the screen.

With a stylus on a Wacom ArtZ tablet in his lap, Holmes summoned an image: *Lily pads, Reelfoot Lake, Tennessee, 1979*.

If these lilies had begun as homage to Monet, Holmes had managed to put his own stamp on them. In Monet's Giverny lilies, on canvas after canvas, the life is in the colors of sky and vegetation reflected on the water. In Holmes's Tennessee lilies the reflected sky is colorless—a luminous gray—and all the life is in the verdant topography of the pads and in the gems of dew on them. If the eye stops anywhere in the Holmes picture, it is on a great, glittering Hope Diamond of dew cupped in the green tureen of the largest pad.

"In this special format there are two hundred and eighty-five megabytes in the image of lilies," Holmes said. "There



yet he has thrown himself completely into digitalization.

Holmes's downstairs workroom did not look like any darkroom I remembered. It held no red light, no developing trays. A scanner and ink-jet printers of various sorts lay atop a large table in the middle of the room. Stacks of books, manuals, and papers overspilled the table and completely covered the floor, except where Holmes had cleared a narrow corridor to his computer. "My curse is perfectionism," he had once admitted to me. As we picked our way through the room, I realized that this curse was confined to his printmaking. It has not yet afflicted his housekeeping. He lifted a book to clear a chair for me.

"I wind up reading stuff like this," he said, flipping

were two ten in the original format. A two-ten-meg file—that's seventy million image pixels. A very large number of little squares." Here, too, Holmes diverged from the master. Claude Monet was no pointillist. He liked to load up his brush. In the most detailed of Monet's lily ponds the number of brushstrokes falls well short of 70 million.

Holmes proceeded to deconstruct his lilies. With light touches of stylus on pad he instructed the computer to open an image with lots of edit layers and then to peel away layers. As he removed each layer, a kind of shiver traveled through the image. It was ominous, somehow, as if a gust of ill wind had blown across Reelfoot Lake. The lilies would darken or lighten imperceptibly. The edges of the pads

would shift and refocus in subtle, indescribable ways. These tiny metamorphoses caused me to consider the great mystery of how the world—its shapes and colors—looks to others. The computer, it seemed, was trying to solve the mystery—to educate the solipsist in me. This was like gazing at Reelfoot Lake through a succession of different corneas.

"I'm turning off the upper layers so we can move quickly into the picture, just to give you an idea how many pixels there are in this image," Holmes said. "This is one magnification factor of two."

The computer enlarged a section of the image that Holmes had selected. Like a detail from a painting, the fragment—a single lily pad, and the pad's dark shadow on the water, and the bright water beneath the shadow's curving edge—became more interesting than the totality of the canvas.

"Here's a second factor of two."

We were plummeting headlong into the lily pad, it seemed, but Holmes apologized for the slowness of our journey. He explained that the computer was reading the compressed image, decompressing it on the fly, and displaying it on the screen.

"A third factor of two," he said.

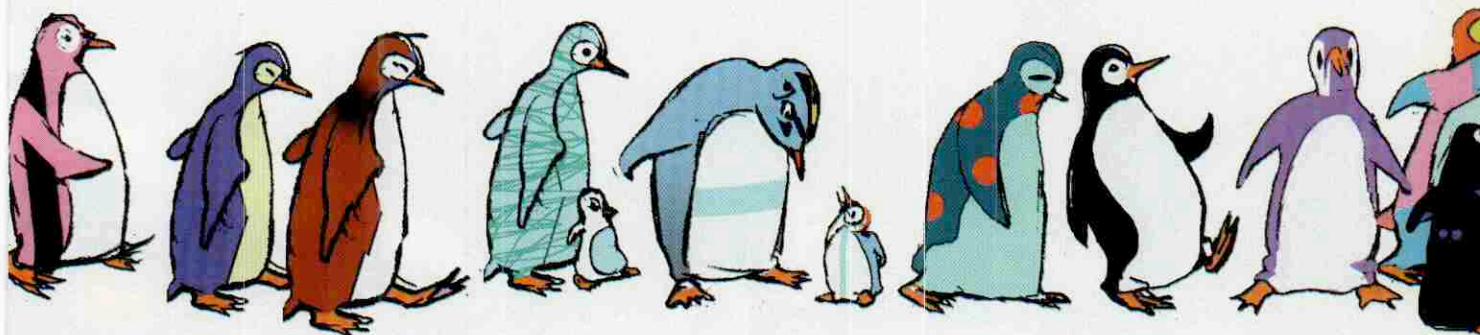
We were plunging now into the darkness of the lily's shadow, and I found myself, contrary to all expectation, very excited. I had come prepared to dislike everything about digitalization, but I loved this sensation of being pulled into the

"A fifth factor of two."

"Oh, my goodness," I heard myself say. It sounded awfully prim, like something Dorothy would cry on her departure from Kansas. I was pixilated and pixelated. Another few factors of two, I calculated, and we would be probing the atomic structure of Reelfoot Lake. The darkness of the lily-shadowed water would soon flicker with the dance of electrons and quarks.

"I could change one pixel in the image," Holmes said. "I have infinite control. This is a small part of the picture, and you still don't see any little squares. The trick in digital imaging is always to have more than enough pixels to not see them." He added that if necessary he could build something called a ramp within an individual pixel. "You can dodge and burn the tiniest thing. When you have access to complete digital control, then you can get total tonal control."

He gave me a sidelong glance and then delivered an apostasy. "I don't know if you've ever gone back and looked at Ansel's stuff. At the Ansel Adams Center, in San Francisco, they have a collection of his prints on permanent display, all dated from the early seventies. I looked at them recently, and I was shocked. They're miserable compared with recent reproductions, because the reproductions were done on a drum scanner that gave tonal control sufficient to add separation to the highlights and to the shadows. Photography has a terrible problem with highlights and shadows. It's one of the big rea-



microcosm. The fascination at the core of Antonioni's movie *Blow-Up* was all here in Reelfoot Lake.

"A fourth factor of two."

Each time we lurched deeper into the picture, the image on the screen, though it could only be accidental now, continued to look composed. The arrangement looked intentional. What is the magic in the frame? In any frame? The simple act of framing with the hands, or a viewfinder, or a computer screen, causes a scene to jump out at us. Throw a frame around almost anything, and the elements within try to harmonize. Composition resides more in nature, maybe, and in the effort of the viewer, than it does in the sensibilities of photographers and artists.

sons why photographs look like photographs. Highlights are washed out, usually, and shadows are black—the soot and the chalk that Ansel used to rail against. That's not the way the world really looks."

Holmes's favorite piece of two-dimensional art is not a photograph but an oil on canvas, a Van Gogh painting of olive orchards. The richness of the Van Gogh, which Holmes first saw on loan at the National Gallery, stunned and overwhelmed him. Renoir's *The Luncheon of the Boating Party* drives him insane, he says. Renoir's ability to explore details in his shadows far exceeds anything a photographer could do.

"Most people are oblivious of the way their eyes work,"

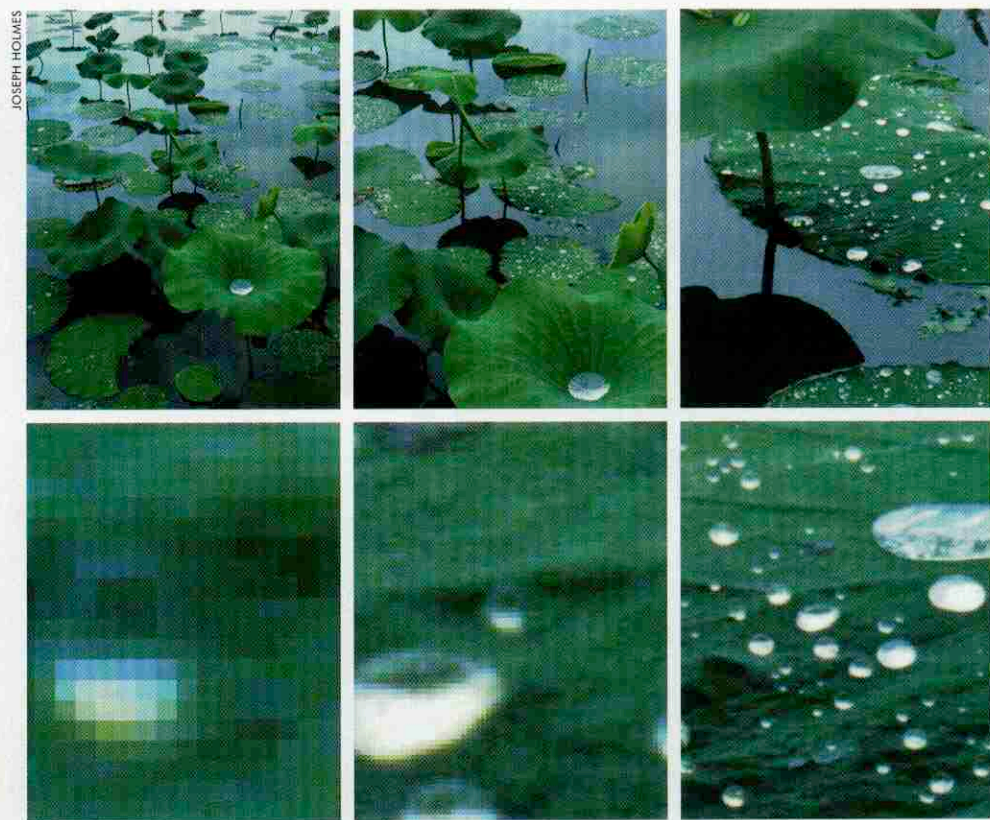
Holmes said. "They just see. They take it in, they extract the particular fact they need to deal with, and they entirely miss the mechanisms of seeing. It never occurs to them that they have a vast dynamic range in their eyes, and that they can adjust through vast light-level changes, from sunlight on snow at high altitude to starlight at night—an incredible ten-million-to-one range. Photography is this miserable, weak little thing that can show you a print with a hundred-to-one brightness range. Or a two-hundred-to-one brightness range, tops."

Joseph Holmes's quest for the perfect print—a crusade he

on digital imaging. But it's unavoidable. I have no choice."

The rewards of his latest five-year project—which is now actually in its eighth year—would soon be enormous, he predicted. His average labor time on a Cibachrome print had been four hours. With digital imaging the time is reduced radically. "I could make only a few hundred Cibachrome prints a year, maximum," he said. "Ansel made, what, twenty-five thousand prints in his lifetime, of about eighteen hundred different subjects. So far I've printed a hundred subjects. I need to print several hundred subjects to have what I think is a reasonable life's work."

I could understand the allure of any process that reduced the hours of printmaking and freed the photographer to roam. I remembered Ansel Adams's old lament about the prison of his darkroom. Beside his house in Carmel Highlands, overlooking the Pacific, beneath a hill covered in chaparral and floodlit beautifully at night, was the fireproof bunker in which Adams stored his negatives. He would complain often that several lifetimes' worth of work lay there underground. It really made no sense, he said, to take a single new photograph. He laughed at the irony, but I believe that it truly depressed him. I think it diminished his thrill in spreading the legs of the tripod and disappearing under the black



Clockwise from top left: Joseph Holmes's photograph Lily pads, Reelfoot Lake, Tennessee, 1979, with two hundred and eighty-five megabytes in the image. With each successive frame the magnification increases by a factor of four

does not seem to find at all quixotic—has occupied the past twenty-three years. Ansel Adams, who shared this almost religious dedication to the print, turned to music for his metaphor and mantra. "The negative is the score," Adams would recite. "The print is the performance." Holmes spends most of his time directing the performance. His servitude to the print requires him to spend his life in the studio; his time in the field toting a camera has been reduced to three or four weeks a year. He does not like this imbalance but sees no way around it.

"Every time I try to print by a new method, it's another five-year project to get it going," he said. "It took five years to get going on dye transfer, it took five years to get going on Cibachrome, and it's taken five years again to get going

cloth. The backlog of negatives meant that most of the images he had seen through the viewfinder, and visualized as prints, and captured with his camera, would never grow past the embryonic stage represented by the negative. Much of his lifework would never be seen by others.

Joseph Holmes, after eight years of work with digital imaging, has become an expert in the new science of color management. Much of his income now comes from consulting for fine-art printmaking companies, lithographers, publishers, museums—anyone with imaging problems. "It's sort of like herding an infinite number of sheep over rough terrain," he says. "All the sheep are individual colors, they're all trying to get away, and you're trying to keep them in or-

der. It's the science of device-independent color, where the color characteristics of every device in your system—the scanner and the way the scanner sees film, the monitor, the printer and the way the printer prints on a given substrate—are all described in device-independent terms. Their colors are described in absolute color numbers that become a common language of color. When it all works right, the colors you see on your monitor are the colors in the print, but there are a vast number of ways for it not to turn out right."

Digital-imaging technology is evolving by leaps and bounds, Holmes said. A number of companies are racing to develop the best printers, and each year's ink-jet machines are twice as good as those of the year before. "It's endless," he said. Hearing the weariness in his voice, I asked if he worried that his labors might be Sisyphean, given the way the technology keeps changing. He denied it. He was familiar now with computer systems. Once digital printmaking really started to work, he said, it would only get better and easier.

I hoped he was right. I hoped that the grail would not keep receding—that digital imaging would free him to take his good eye out under the sky more often. It will be terrible if he winds up an old shepherd, hunched at the screen, driving his obstreperous, bleating, multicolored flock through ever more mountainous Himalayas, stretched out range on range through cyberspace.

When I asked Holmes his opinion on the controversy over digital manipulation, he shrugged. The issue did not interest him much. "It's obvious that Art Wolfe should have mentioned in his book that he was adding extra animals," he said. "That's a substantial distortion of reality. One of the things that nature photographs do, inevitably, is to report on nature. But they don't necessarily do it in literal ways. It's not easy to define how much of a given landscape photograph consists of reportage and how much is an artistic interpretation."

"If Wolfe had acknowledged a little more clearly what he had done, it would have been okay?" I asked.

"Well, certainly. Why not? People paint things all the time. We don't think they're criminals for making paintings."

A FLOCK OF GOLDEN RETRIEVERS

AMONG photographers, opinion on digital manipulation seems to fall into either of two schools, the principal spokesmen for which are Galen Rowell and Art Wolfe, who have both been collaborators of mine. These men are energetic in a force-of-nature way, tireless travelers, prodigiously productive. Neither is a photographer so much as a little but prolific photographic industry, producing books, prints, postcards, and advertising images.

Mountain Light Photography, Galen and Barbara Rowell's shop, is a converted warehouse in Emeryville, Califor-

nia, not far from the shore of San Francisco Bay. When I visited recently, I was greeted at the door by Khumbu, the Rowells' fifteen-year-old golden retriever. Khumbu wore a bandanna around his neck—a memento of a recent grooming visit to Dogs by Diane. The hair on his head and face had gone completely gray since I had seen him last. The bandanna and the salon pampering it symbolized seemed an indignity to an old outdoorsman like Khumbu, but he bore it cheerfully enough.

Mountain Light is bright and spacious inside, the white walls of the first-floor lobby museum-lit and hung with an ever changing gallery of Rowell's prints. Waiting for the photographer to appear, I made a circuit of his walls: *Sunset Over Machu Picchu*. *Last Light on Horsetail Falls*. *Polar Bear Resting Against Its Mother*. I lingered before Rowell's most famous photograph, *Rainbow Over the Potala Palace, Lhasa*. The rainbow strikes the palace dead center. This would put the pot of gold in the throne room or the pantry of the palace, formerly owned by Rowell's friend the Dalai Lama. On the evidence of this photo, Tibetan Buddhism is the answer. The rainbow seemed much brighter than in other prints of it I had seen. I gave it a hard look and then the benefit of the doubt. I moved on. At *Cuernos del Paine at Dawn, Lago Pehoe, Patagonia*, I paused again. For

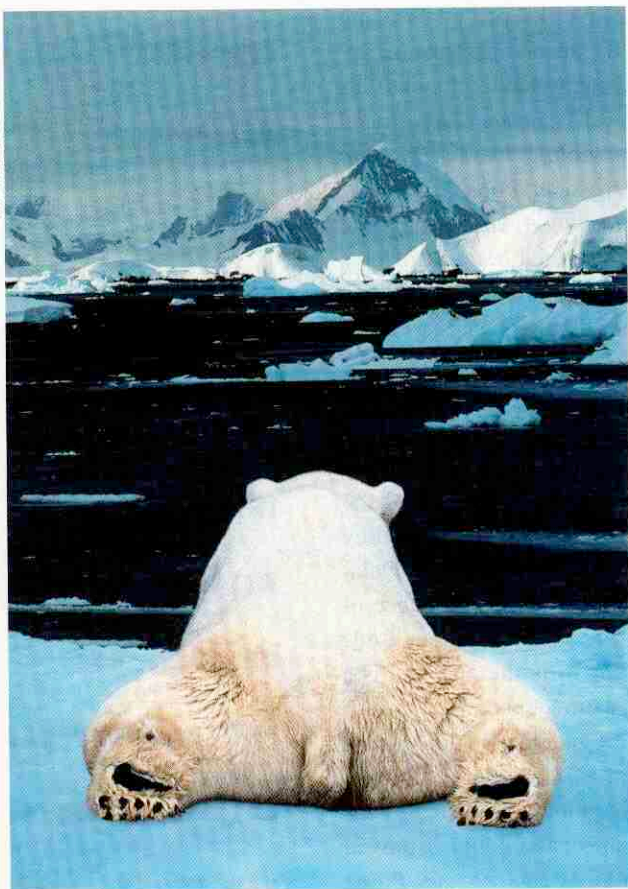
years I never quite believed this picture—the febrile radiance of the yellow-flowering shrubs in the foreground, the improbable aquamarine of the glacial lake in the middle distance, the sheer, phantasmagoric granite towers of the "Horns" of Paine in the sky. Then, last February, on an assignment to southern Chile, I found myself at dawn on the shore of this very lake, and I saw that it was all true. I crossed the room to *Alaska Brown Bear, Katmai National Park*. The bear is standing in the white torrent of a cascade, a salmon poised in mid-leap just inches from its open jaws. The shutter had arrested the fish forever in the instant before its demise.

Another brown bear was once on this wall, rearing to its

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full height and roaring directly into the camera. This bear was an actor named Bart, a grizzly everyman, the brown bear you see in all the movies and commercials requiring brown bears. When Bart was mounted here, roaring his signature roar, Mountain Light's visitors all gravitated to him. How in God's name, everyone asked Rowell, had he managed to take this photograph and survive? When Rowell explained that the bear was an acquaintance and a thespian, he saw a little light of admiration die in their eyes. It seemed to him that they now looked differently at all his pictures. He retired Bart from the wall.

ART WOLFE/TONY STONE IMAGES



Ohio polar bear in Antarctica, a land without bears

Rowell, appearing at the head of the stairway, invited me up to his projection room. Khumbu followed at my heels. Khumbu was named for the Everest region of Nepal, one of his master's favorite hangouts. The dog was a climber once, but now his ascent of the stairway was labored and slow.

In the photography workshops Rowell teaches, he must, he believes, do more than impart technique. These days he needs to impart ethics as well. Even as images grow sharper with digital enhancement, the honest path grows murkier, and Rowell feels that students need guidance. Today's class was just Khumbu and me. Rowell loaded the carousel of his ethics lesson on the projector, closed the curtain at the door, and pressed the button. The first slide showed an Eadweard

Muybridge sequence of running horses from 1872. This particular series had settled a \$25,000 bet over whether all four hooves are ever off the ground at the same time. (They are.) The Muybridge was a relic of the day when the photograph was incontrovertible, prima facie evidence. The second slide showed a photograph doctored by Senator Joe McCarthy to juxtapose one of his targets with some Communist or fellow traveler. Guilt by association is a dubious proposition to begin with. This was *fake* guilt by association. The McCarthy represented the photograph as hoax. Rowell pressed the button again.

Elephants. A herd on the move, its subgroups tinted in several colors.

"This picture is from Art Wolfe's book *Migrations*," Rowell said. "This is how it appeared in a story on digital manipulation in *The Denver Post*. They've color-coded the animals to show groups that are identical and have been cloned." He walked to the screen and began pointing. "This whole group of seven is this group of seven. Three of *these* seven, up here, are these three down here—which have been cloned yet again, right here. This one is this one is this one. This pair is this pair, and this pair is this pair. Fifty-four elephants in a picture that originally had fifteen."

The Pyramids at Giza in the smoky light of evening. Three camels and their riders in the foreground.

"The famous *National Geographic* cover," Rowell said. "The Pyramids were moved in relation to the camel riders to make room for the logo. Originally the cover was to be a picture of mine of a Tibetan boy. They kicked it off because the Chinese Embassy objected. The Chinese said they wouldn't let *National Geographic* writers and photographers into Tibet again if they ran that picture on the cover. It was already at the printer's. When they decided to yank mine out, they needed an instant replacement. They chose this picture, which was a horizontal. In making it a vertical they reset the riders."

Zebras. A tapestry of stripes, the herd standing so close together that not a speck of ground or wildebeest or anything else non-zebraic shows in the frame.

"This is a close-up of the cover of *Migrations*," Rowell said. He pointed to the face of a zebra just above the *t* in the book's title. Then he pointed to another zebra face just below the *e* in Art Wolfe's name. "Zebras have a 'fingerprint' in their patterns," he said. "These are different frames of the same zebra."

Cleft rock in silhouette against pale evening sky, with pink, ethereal cirrus above.

I recognized this photo as Rowell's own, one I had always admired: blackness versus brightness, earth versus sky, near versus far. Solidity of stone versus ethereality of vapor. "This picture was digitally altered on the cover of my book *Mountain Light*," Rowell said. "In order to make it fit the

cover, they did two things—with my permission. They ‘chopped and channeled’ it, like an old hot-rod. They took a section of sky out, which moved the cloud down so they wouldn’t have to crop it so much. I felt there was a very good rationale for doing it, and that it preserved the original image I had in mind.”

Negative space has positive virtues in art. Whole essays have been written on the dynamic interval—the electric synapse—between God’s outstretched finger and Adam’s on the Sistine Chapel ceiling. I asked Rowell which he preferred of the intervals between the heaven and earth of his own picture. Without hesitation he answered that he liked his original cleft rock and cloud. “That’s why I took it that way. But if I had just stepped back and bent down, I would have gotten a picture with the cloud a little lower. I thought that the alteration was a little bit on the edge, but okay.”

Cheetahs. A mother cat reclining on grass, six cubs piled upon her.

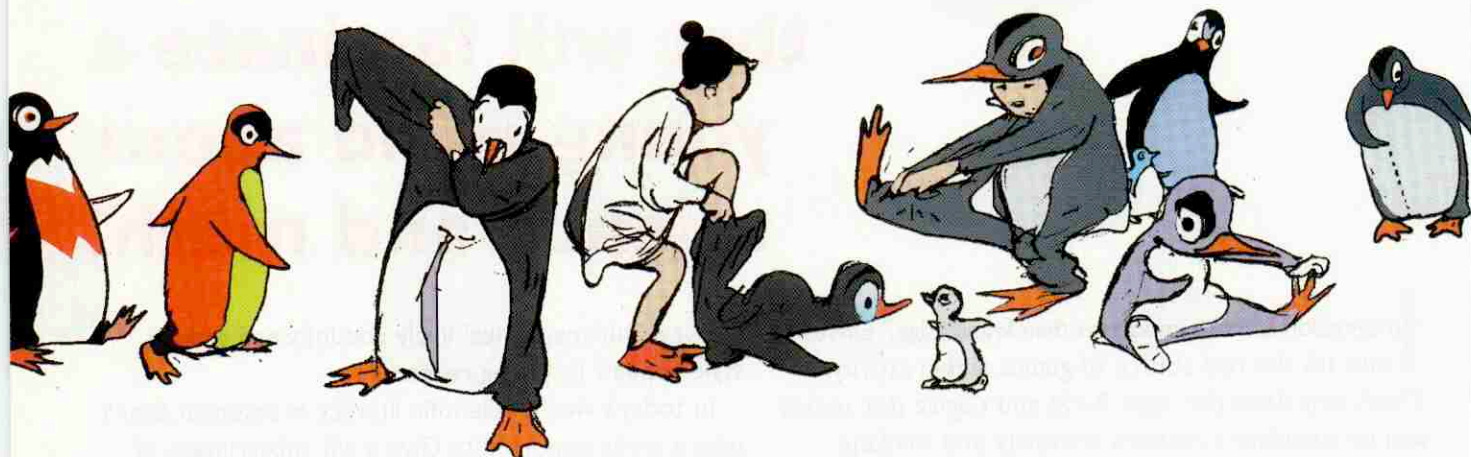
This cheetah family portrait, according to Rowell, was an Art Wolfe composite of two zoo photographs, one of a mother and single cub, the other of five cubs. Wolfe had digitally removed a zoo fence from the background and reseeded the area with virtual grass. The image had drawn fire at a conference of the North American Nature Photography Association, where an editor from the World

like a cheetah inundated by six cubs. She had the relaxed eyes of a mother of one—which was what she was. The more I looked at the picture, the more artificial it appeared.

“In summary,” Rowell said, and he pushed the button to advance the carousel. *Bald eagle. “Totally wild photo, no problem.” Bust of bald eagle, filling frame. “Totally captive photo. No problem for a lot of markets. Federal Express. Post Office. That’s my photo, but it’s a captive eagle, and I wouldn’t sell it for a story on wild eagles without putting ‘captive’ on my slide mount. Some people would.” Eagle soaring against snowy ridge. “Here’s a photo that I manipulated years ago. That was an eagle on a gray sky that I superimposed against a ridge of Mount McKinley—a ‘sandwich.’ I did it for a slide show about twenty years ago, set to music. I never put it out for publication. Now I wouldn’t even create it. I feel it would compromise my work.”*

Polar bear. A rear view, the bear relaxing on its belly, facing away across a channel of open water and small icebergs.

“This photo, advertised here in an ad for Tony Stone Images, became very controversial. National Geographic Online, representing the Discovery Channel and the Explorer TV series, bought this image from Tony Stone without passing it by the editorial side of the magazine. It appeared in a full-page ad in *National Geographic*. As soon as it was dis-



Wildlife Fund had objected to it. “The complaint,” Rowell said, “was that cheetahs can’t have six cubs. Art’s defense is that the zoologists who declared this were wrong. Apparently the literature says they can have as many as eight. So Art says, ‘Yep, it’s good natural history. They can have up to eight.’”

Whether or not six or eight cubs made sense, something was wrong with the photograph. I could not quite put my finger on it. It might have been in the attention of the cats, which seemed divided in an unnatural way. (Two things of considerable and absolutely equal interest seemed to be approaching the group of felines from different directions.) It might have been in the calm of the mother. She did not look

covered, *National Geographic* pulled the ad. This is a bear in a zoo in Ohio, superimposed digitally against the Lemaire Channel, in Antarctica, where there are no polar bears.”

The Arctic is named for its *arctos*, its bear. Its antipodes have never had one. The photograph had reversed the polarity of the planet. I laughed at the boldness, or perhaps it was the oversight, that allowed the photographer to fill this empty Antarctic niche. The bear was a hoax and an oxymoron, but it was funny. The setting, Lemaire Channel, could have fooled me—its icebergs looked Arctic enough. But again I was nagged by something wrong in the picture. The longer I looked at it, the more it seemed to fall apart.

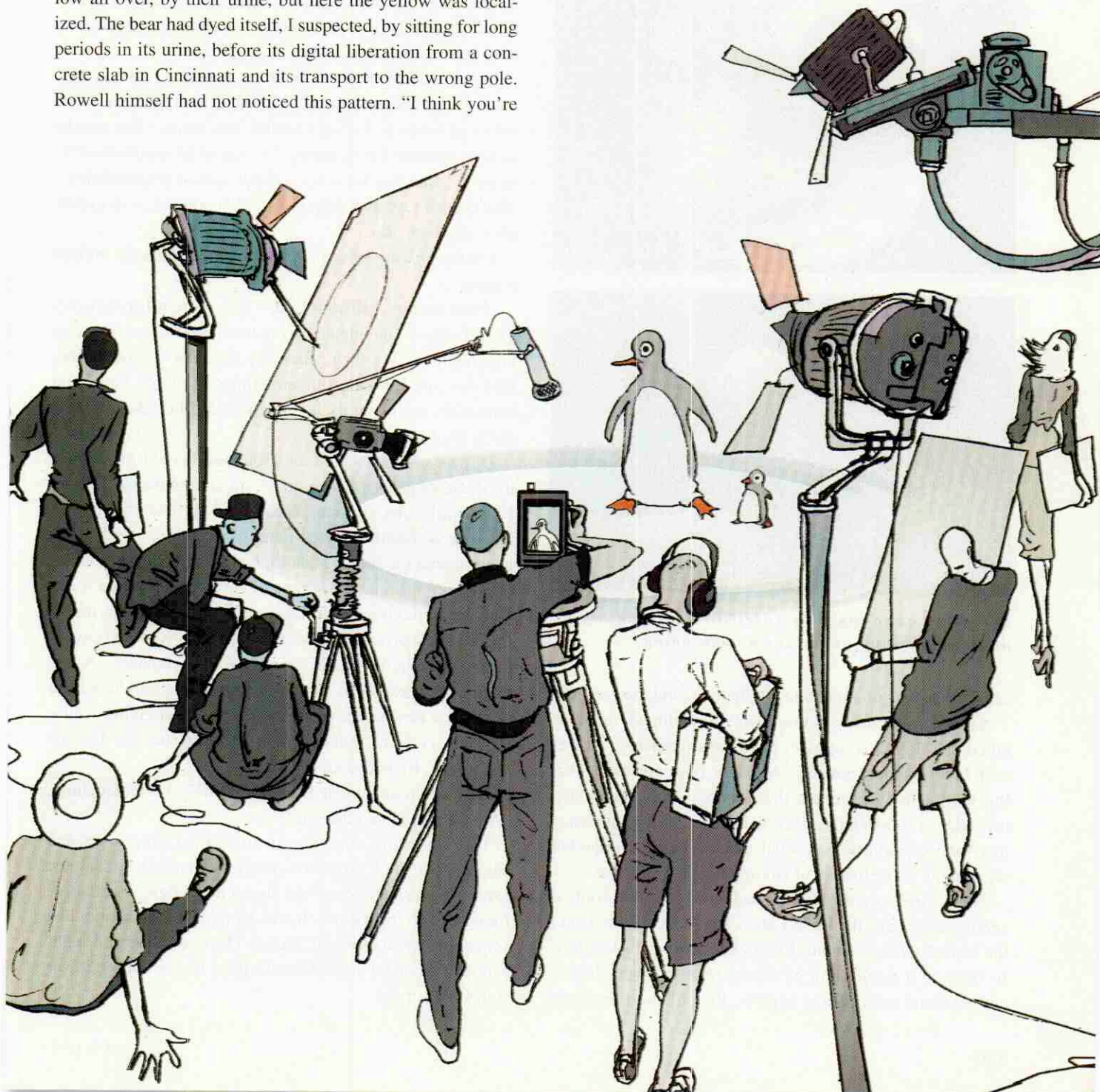
The bear’s stubby tail and the dark pads of its rear paws

faced the camera. It lay completely oblivious of the cameraman behind. Polar bears are far-ranging predators with wonderful sensory equipment. They inhabit vast solitudes and always know when they have company. In all the photographs of wild polar bears that I have seen (save those taken at Churchill, a town in Manitoba, where the bears are semi-habituated to human beings), the bear's nose is elevated as he tries to get a whiff of the cameraman, or he is moving off uneasily. This supposed Antarctic bear was indifferent to the human being behind it, and that was not natural. The bear's backside and the hams of its legs were matted and stained yellow. The pattern looked peculiar. In sedentary periods wild polar bears are often tinted an attractive old-ivory yellow all over, by their urine, but here the yellow was localized. The bear had dyed itself, I suspected, by sitting for long periods in its urine, before its digital liberation from a concrete slab in Cincinnati and its transport to the wrong pole. Rowell himself had not noticed this pattern. "I think you're

right," he said, staring at his screen. "You wouldn't see it like that by open water."

Earthrise. Whiteness of moon in foreground. Across the barren lunar terrain a message scrawled in longhand: "To Tony, I hope you can see this someday. Bill Anders, Apollo 8."

"This was taken by Colonel William Anders in 1968," Rowell said. "He held his Hasselblad up to the window and fired away." Rowell, an acquaintance of Anders's, had begged a copy for his son Tony, and the print had arrived with its dedication in longhand, along with a cover note: "Here's a picture your dad asked me to send you that I took on my last vacation."



Earth levitated for a while in the darkened room, against the blackness of eternal space. Khumbu, the golden retriever gone gray, had no interest in earthrise. For dogs, compelling terrestrial images are much closer under the nose. Khumbu put his chin on my thigh and looked soulfully into my eyes for attention. He was highly redolent of old dog, not a bad smell, and I scratched him behind the ear. Khumbu's master, for his part, seemed hypnotized by the image. "This is all about lifting the camera and taking a picture of what you see," he said finally. "It's different from a remote picture that you don't quite believe in the same way be-

COURTESY OF NASA



WILLIAM ANDERS



The earth as snapped by satellite (top) and as photographed by an actual human being

cause there was no human being there behind the camera."

Snapped robotically, NASA photos of earthrise, more detailed and tightly composed, have been published, Rowell said. In his opinion, none has the poetic power or has evoked the sentiment and acclaim that this one has—the shutter tripped by a human finger. Rowell believes, along with many, that Anders's earthrise is epochal, that it is the most important photograph in the history of environmental awareness.

The colonel's earthrise reminded Rowell of the words of another colleague, the Dalai Lama. The two collaborated on the book *My Tibet*—photos by Rowell, text by His Holiness. In 1987, at a symposium of neuroscientists, psychologists, and artificial-intelligence experts, Rowell said, the Dalai

Lama was asked how Buddhists validate their perceptions. The scientists wondered, among other things, whether Buddhists accept the existence of external phenomena apart from concepts already in place in their minds. The answer, the Dalai Lama said, was in the Buddhist concept called Extremely Hidden Phenomena. "I know the earth to be a round bluish globe," he explained, "although I have never seen it and have not done any conclusive reasoning about it. I know the earth is round by relying on the words of someone who has seen it and proved it with photographs. First you must prove that the person is reliable by various reasonings—that there is no reason he should tell lies with false photos. After this you understand that the earth is round, although you haven't seen it. This is called inference based upon belief. You have to rely on a person who has already had this kind of experience and has no reason to tell lies."

Rowell glanced at me to see if the aptness of this had sunk in. Then he quoted another astronaut, Rusty Schweickart, who had followed Colonel Anders into space. "You are the sensing element for humanity," Schweickart reported on returning. "And that becomes a rather special responsibility." That special responsibility, in Rowell's opinion, is shared by photographers, too.

Cranes taking wing in Africa. Above them an impala leaping.

"Final picture," Rowell said. "This is from Ernst Haas's *The Creation*. The impala was in the middle of one of those high bounds. Back then, when *The Creation* was published, this was just a wonderful serendipity. Now the first thing somebody would think is 'Ah, how did he fake it?' And that's what we've lost."

Downstairs, as Rowell and Khumbu herded me toward the door, we paused at a computer monitor in the stockroom. Rowell asked an assistant to call up a particular image for me. The assistant searched rank upon rank of icons. Each icon marked the file of a photograph. The assistant double-clicked on one, and the computer chattered faintly to itself, making its thousands of binary decisions. Then the image formed and clarified. It was a photograph of Khumbu cloned many times, in the manner of Art Wolfe's elephants. A formation of dozens of identical leaping Khumbus filled the sky, and a few Khumbus in the lead were alighting with a splash in a marsh. "This is called *Golden Retrievers Migrating South*," Rowell said, grinning.

"He was more athletic then, wasn't he?" I said, laughing. "And he was more numerous."

This fabrication was a riposte to Wolfe, I understood, and yet, as a friend of Khumbu's, and as someone who had just lost his own sixteen-year-old dog to the indignities of age, I found I liked the picture. It was winningly surrealistic, like something by Magritte or Escher. The apotheosis and replication of Khumbu made Rowell's point nicely, and yet it was somehow stirring.

PACK OF WOLFES

IN an average year, according to the jacket copy for *Migrations*, Art Wolfe visits all seven continents and shoots more than 2,000 rolls of film. Indeed, *Migrations* might have served as a fine title for Wolfe's autobiography, had he not used it already for his work on the movements of animals. Like Galen Rowell, Wolfe is at home anywhere on earth—in the cold of either pole or in African heat, in jungle or desert, taiga or tundra, under water or above. Whereas Rowell works in higher regions (he began as a climber, and mountain light still illuminates the core of his work), Wolfe has more experience down on the savannas and steppes. Like his predator namesake, Wolfe derives his bread and butter from following the herds. In his ubiquity with a camera, he seems almost to have cloned himself. He has become a whole pack of Wolfes. By his reckoning, he has taken a million photographs, and his files now amount to a Noah's ark of images. It is odd—or perhaps not odd at all—that Rowell and Wolfe, in many ways so similar, should find themselves champions of opposing views. When I caught up with Wolfe recently, between expeditions, we had not spoken for a couple of years, since comparing notes on a magazine story we did together on the island of Mauritius. I asked him about the digital imbroglio.

"Certainly I've been in the heart of the controversy," he told me. "But I can't really, honestly think it's been bad for my career. It certainly brought a lot of attention to the work I was doing. I think any artist or photographer—or writer, for that matter—would want that. A lot of people have noticed *Migrations*. A lot of people gave it a lot of praise. It also, as you know, got up the ire of some of my colleagues. But not most of them. I think a lot of people understood what I was trying to do with that book.

"*Migrations* is historically an old book now. It was published four years ago, and that's ancient history in the world of photography. We formulated a very clear policy as a result of that book. Since then we've published another book, *In the Presence of Wolves*, with five digital illustrations that were labeled as such, and no one objected. So we figured out that people were upset less because we used the technology than because we did not always say we had. We are using the technology now in developing stock photography—photos or illustrations fed directly into the advertising market. We've completely backed away from doing digital illustrations that can look real, simply because once it's out of our hands, we lose our control of where it's used."

Last September, Wolfe attended an ethics conference hosted by the National Museum of Wildlife Art, in Jackson Hole, Wyoming. He and a number of other nature photographers—including Frans Lanting, Jim Blaylock, Nick Nichols, Chris Johns, and Tom Mangelsen—discussed the problems of digital manipulation and photography of cap-

tive animals. "We talked about where we thought photography was going," Wolfe said. "We came to a pretty clear understanding of where we felt it should go, and how it should go. We felt that whatever we agreed upon would probably become the standard in the industry in the years to come.

"About three years ago I led the industry in demanding from my agencies that they start labeling digital illustrations as such. They concurred and started labeling. Now most stock agencies around the world are following suit. I think the rest of the photographers at Jackson Hole thought that that was the most appropriate way of presenting the work. They also felt that digital enhancement—darkening of sky, say, and other things that had been done in the past by printing techniques in the darkroom—need not be labeled."

Wolfe laughed. "Out of the million photos I've done, less than two hundred have digital components. I'm still not using the technology all that often."

"Has the controversy spoiled your fun in using digital?" I asked.

"No, not at all. I remain unbowed. I was clear on where I was going to use it from the very, very beginning. I knew it was going to be controversial before we even had the book printed. But also, to this day I would be in a quandary as to how to identify the digital work in *Migrations*. It really ran the spectrum from very radical combinations of photos

to very minuscule fixes, where maybe a single head in a flock of two hundred birds would be changed just to complete a pattern. I know of no symbols that show that great a range."

AGE OF MENDACITY

MANKIND has lived through ages of stone, iron, bronze, exploration, enlightenment, the atom, space. Our own time is, as much as anything else, the Age of Falsification. The nip, the tuck, the face-lift, the silicone implant. The fascination with virtual reality in a world teeming with real realities. The vogue of the magical realists and their pale, nervous whimsy in a world absolute-

"WHENEVER

I HEAR THE WORD

'ETHICS,' IT RAISES

THE HAIR ON THE

BACK OF MY

NECK," SAYS THE

NATURE PHOTOGRA-

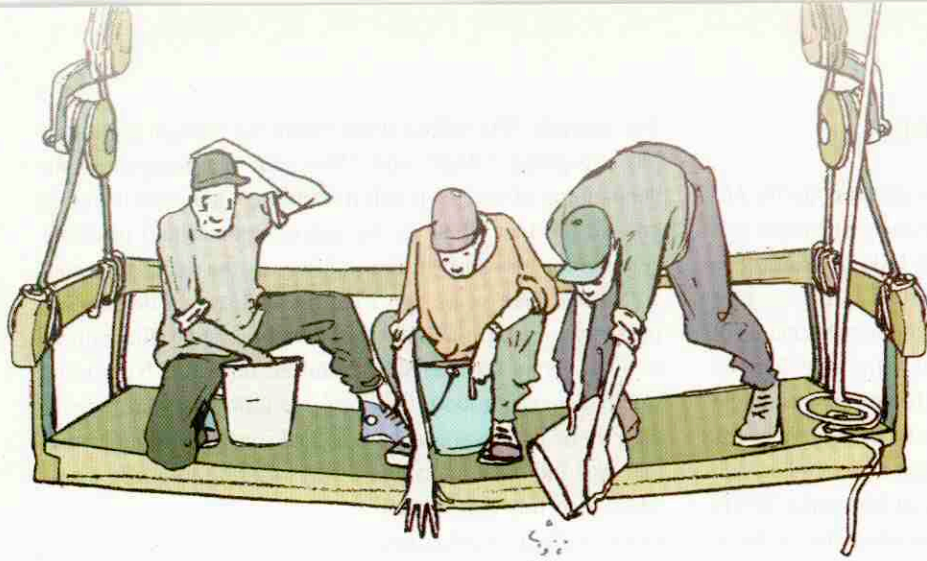
PHER ART WOLFE.

"THE POINT HERE

IS THAT WE ALL

HAVE DIFFERENT

STANDARDS."



ly ashimmer with real magic. The Michael Jordan shoe. The sound bite and the injury it can do not only to content but also to honesty in our political discourse. (Lincoln required three hours of oration just to warm up.) The blockbuster movie in which story line and plausibility are sacrificed to digital effects and Dolby Sound. (At the present rate of entropy, all

cinema will soon be one continuous explosion.) Those "Do people care?" Chevron ads, which have now suckled a whole generation. White female blues singers singing on National Public Radio in exactly the style of old black men from the Mississippi Delta.

Nature, in contrast, is always true. Throughout most of its history photography has been a chronicle of real moments. That is what is so disheartening about Art Wolfe's computer-generated flocks and herds. Nature photography is one part of our culture where authenticity might make a stand. It is dispiriting to see its practitioners turn and go with the flow.

Photofakery is pernicious to natural history. Lemmings do not commit suicide, either individually or en masse from cliffs—Darwin and common sense forbid it. Yet thanks to Disney, several generations of Americans believe that lemmings do. Only elephants can pull off an authentic migration of elephants. A photographer may have spent his life observing elephants, and may believe that he knows their habits well, but when he begins cloning his own herds, error and falseness will inevitably creep in.

"Over the years, as I reviewed the material," Art Wolfe writes in the introduction to *Migrations*, "I often had to pass over photographs because in a picture of masses of animals



invariably one would be wandering in the wrong direction, thereby disrupting the pattern I was trying to achieve. Today the ability to digitally alter this disruption is at hand."

Wandering in the wrong direction according to whom? Whose patterns is the nature photographer supposed to celebrate—nature's or his own? In the human herd that animal wandering in the wrong direction would be the Buddha, or Luther, or Einstein. We generally regard these rogues and erratics as among the more interesting features of the big picture, and human history cannot be related without reference to them. Animals turned in the wrong direction are a truth of nature. If anything, they *validate* the pattern, as exceptions that prove the rule. The accidental and the unpredictable are vital to art. Without those elements art becomes boring. Reversing the contrary animal is wrongheaded, not only journalistically but also artistically.

Photofakery is pernicious to conservation. Photographers—along with poets, painters, astronauts, reporters—are a sensing element for humanity. The public increasingly depends for much of its environmental awareness on photographic images from around the world. These images need to be true. Zoo cheetahs, when subjected to digital fertility treatments and freed on a virtual savanna, can spawn huge litters, but real African cheetahs are in desperate reproductive trouble, their populations reduced to the point that inbreeding and its genetic consequences threaten their survival.

Digital photofakery creates problems for photographers who choose to shoot straight. Manufactured serendipity is so much quicker and easier than the genuine kind.

Digital photofakery is likely to be pernicious also, in the long run, to the continued good will of photography's audience. Photography and the public have an unusual compact. "The camera does not lie" is a proposition that most of us know to be false yet we half believe anyway. This is a dynamic unique in the arts. The "willing suspension of disbelief" that Coleridge detected at the heart of poetic faith becomes in photographic faith a nearly automatic suspension. Once betrayed, this sort of uncomplicated belief goes quickly past willing to unwilling. Art Wolfe's *Migrations* is the perfect example. The book is briefly entertaining as a "Where's Waldo?" exercise. Finding the reduplicated zebras on the book's cover requires a close attention to stripes, forcing one to appreciate as never before the wonderful painting on zebras. But soon one is just searching for Waldo and ceases to see wildlife. Interest evaporates as the pages are turned. Halfway through I found I did

not want to look at the pictures anymore. Wolfe's defense—that the book is not natural history but art—does not wash. The title is *Migrations*, the subject is wild animals on the march, the text is natural history. The point of the book is not the artful composition of the images but the multitudes in them. Those multitudes are inflated and fake.

In *Biographia Literaria*, along with his famous observation on the willing suspension of disbelief, Coleridge listed "the two cardinal points of poetry, the power of exciting the sympathy of the reader by a faithful adherence to the truth of nature, and the power of giving the interest of novelty by modifying colors of imagination." In the digital doctoring of photographs these two cardinal points have come into conflict.

THE SNOWS OF CHO OYU

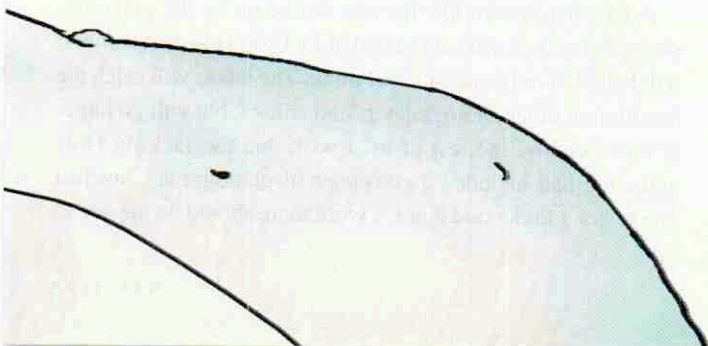
ON my living-room wall is a Galen Rowell print, *Evening on the Tingri Plain Below Cho Oyu* (26,750 feet), 1988. A Tibetan woman leads a gray horse across a vast gravel plain, under icy peaks at the roof of the world. Bringing up the rear, in the long evening shadow cast by woman and horse, walks a small Tibetan boy. I know that this is a reduplicated moment, because years ago I asked Rowell about it. Rowell saw the woman lead her horse under Cho Oyu, but his camera was not ready. His local companion casually suggested that he could ask the woman to pass under Cho Oyu again—it was the companion's wife on her way home. This minimal degree of setup hardly amounts to deception, and I still love the photograph, but for me a few lumens of brightness have faded from the picture. Rowell does not notice any such dimming. He sees only the triumph of one of his more wonderful pictures. The hard work of making a photograph is not like the easy work of looking at one, and a little crevasse will probably always lie between maker and viewer. Photography's task in the digital age will be to ensure that the crevasse does not erode into a chasm.

When one is not obliged to make photographs, one can easily take a position purer than the snows of Cho Oyu. On the matter of digital manipulation I have arrived at a view more pristine than that held by any of the photographers I have interviewed.

Galen Rowell, champion of the anti-digitalists, showed me a photo book called *Brother Wolf*, on the cover of which the titular wolf peeks out from behind a tree trunk. This wolf art was not by Art Wolfe but by the wildlife photographer Jim Brandenburg. "Brandenburg freely admits that this image has been altered," Rowell said. "He softened out the left side of the picture, where the title would go, and he intensified the eye. He brought out the color and whiteness to make that eye stand out more. I think that's okay."

But is it okay? Is it honest photography? How is it different from airbrushing?

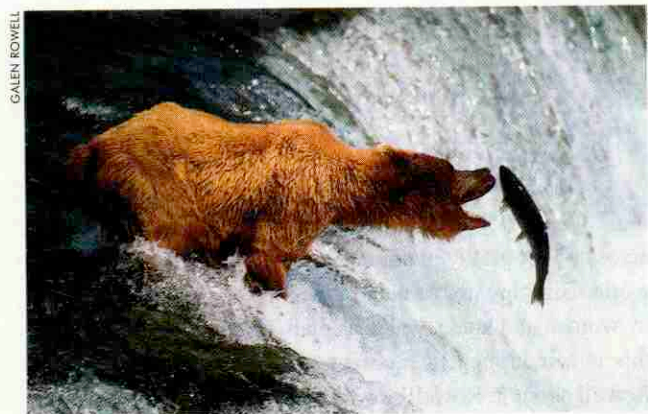
Rowell opened the book to a photo of a running wolf. "In



an image like this he edge-sharpened the nose. And I don't have a problem with that. I think that if you're tuning in an image with digital technique to look more like what you saw, to do what the camera couldn't quite do, to make something sharper so you could see it better, something that was really there in front of the camera, then all that's fine."

I suggested to Rowell that "tuning in an image to look more like what you saw" allowed abundant room for the photographer to fool himself, and us, about what he had really seen. Rowell agreed.

"But these are things you technically could have gotten,"



Top, Galen Rowell's unaltered Alaska Brown Bear; bottom, his digitally cloned dog

he said, "if you used faster film or owned a faster lens, and your technique was better."

I can sympathize. But shouldn't the photographer's solution be to select that faster film, buy that faster lens, improve that technique?

"It was something that was in front of the camera," Rowell went on, "rather than something that was added. That's a big difference. As a general rule, but not absolute, things that are added are a red flag, where things that are subtracted may not be."

This, too, seems a suspect principle. The reasoning strikes me as flawed in an almost mathematical way. If addition should be forbidden, why not subtraction? In their

aesthetic tastes Rowell may be a reductionist and Art Wolfe a productionist, but no general rule of ethics can be abstracted from this.

In my talk with the printmaker Joseph Holmes I mentioned Ansel Adams's *Winter Sunrise, The Sierra Nevada From Lone Pine, California*, and Adams's excision of the "LP" from the picture. Holmes laughed. "He usually wasn't able to delete it all that effectively," he said. "You can still see it in the image. But he was right. It was a gross scar on the scene. It's like you can have the scene back in at least one reality. There was no point in spoiling it twice—first by spoiling this great landscape, and then spoiling the great picture of it, too."

When I asked Holmes if he had ever done digital manipulation that left him uncomfortable, he considered for a moment.

"The hardest decision I've had on a retouching job was whether to remove a really obvious road from a picture—a road that I always thought spoiled the way the scene looked. Taking out a less obvious road I don't have the slightest qualms about, but in the case of something really obvious, something recognizable—that's a problem. It's obvious to me, for example, that no recognizable landscape should be 'flopped.' Yosemite Valley you shouldn't flop. But if you have a picture of detailed vegetation, and it looks better backwards, you should reverse it. Because it doesn't make any difference to the natural history of the place. There's no left-rightness about the way the plants grow that would be misleading to a botanist. There's absolutely no reportage element in there of any value."

A one-lane road may be ripe for digital erasure, but a two-lane road is not? Logging road yes, interstate no? The rationale for the prohibition against flopping a famous landscape, I gather, is that if you flop it, the viewer might catch on. Is this the kind of relationship we want between photographer and audience? And who says that "left-rightness" has nothing to do with the way plants grow? Handedness is one of the enduring mysteries of life. If it manifests itself in molecules, perhaps it also manifests itself in trees.

"If I should pick up litter in a national park and thereby alter the landscape," Holmes said, "I would be just as happy to pick up litter in the virtual national park for the same reason exactly. If I don't want the national park to have litter in it, I'll pick it up."

He can pick it up if he wants, of course, but then what of the Buddhist doctrine of Extremely Hidden Phenomena? What of the photographer as sensing element for humanity?

A labeling system like the one settled on by the photographers and editors who convened at Jackson Hole last summer will help, but only marginally, I think. The labels will catch the attention of other photographers and editors, but will go largely unnoticed by the rest of us. I wish that the Jackson Hole gathering had included a *consumer* of photographs, not just producers. I find it odd that I, a word man, should be the one to

point this out, but in photography the image is the thing—a photograph's essential existence is entirely separate from words and explanations. Art Wolfe published a disclaimer in *Migrations*, but nobody reads the text of photo books, particularly the introductions—as the author of many of them, I can testify to this. Bart, the brown bear who once roared on Galen Rowell's gallery wall, was identified in the caption as a trained bear, but few of the gallery visitors read the caption.

The photographer can insist till he's blue in the face that a given image is art, but the rest of us expect at least a measure of reportage there—and we are half the equation.

GROUP *f* / 64

EARLY in its history photography was dismissed as a lesser art, or as no art at all. A photograph, critics said, was just a record of the external moment—a critique that the medium has never entirely escaped. Well into this century photographers found themselves apologetic about their work, and many were drawn to the abnegation of pictorialism. The Pictorialists produced blurred, symbolic, “poetic” prints in an effort to be painterly. The style was in vogue until the 1930s, with intermittent reinventions afterward. In 1932 a group of seven West Coast photographers, among them Ansel Adams, Imogen Cunningham, and Edward Weston, found themselves united in their distaste for the vapid ethic and misty look of pictorialism. One evening in Berkeley, at the house of a member of the group, Willard Van Dyke, the seven debated what they should call themselves. An eighth photographer, a visiting neophyte named Preston Holder, suggested “US 256,” which was then a designation for one of the smaller lens stops—a constricted aperture allowing for the clarity and depth of field favored by the group. Adams worried that as US 256 they might be mistaken for a federal highway, but he liked Holder's drift; he picked up a pencil and sketched out “*f* / 64.” The aperture *f* / 64 corresponded to US 256 in a new marking system just introduced. The seven photographers liked the graphic elegance of the name—the flourish of the long descender on the *f* Adams drew. They became Group *f* / 64. The members believed in straight photography, in “pure” photography—in what Adams called “clear images, smooth honest papers, and . . . the complete absence of affected imitation of other art forms.” They held their first shows, and the public quickly saw, with *f* / 64 clarity, that the group of seven had found a better path. Pictorialism withered, and straight photography flourished.

History is circular, and we have come, it seems, to a similar crossroads. Digital technology now allows photographers complete freedom to rearrange reality according to their whims. This is what painters do. The computer has provided the new Pictorialists with capabilities the old Pictorialists never dreamed of, and in so doing has presented all photography, nature photography in particular, with both a

wonderful new toy and a crisis. I believe we need a new Group *f* / 64. It could start small, as before—just a cell of believers committed to clarity and depth of field in images and ethics. The original Group *f* / 64 believed that photography should encourage and celebrate its differences from painting, and so would the new. The members would just say no to prestidigitation. The Group *f* / 64 of the 1930s was burdened, in Ansel Adams's words, with none of “the formal rituals of procedure, incorporations, or any of the limiting restrictions of artistic secret societies.” He wrote, “We have issued no stony manifesto (such as the Surrealists did some years ago); we have stated in works and words what we consider straight photography to be, and we expect and welcome any fresh point of view.” The new group would be similarly flexible. If I were a photographer, that is the bunch I would join.

One of the seven founders of Group *f* / 64, John Paul Edwards, had been a prominent Pictorialist before going over to the other side. “The greatest aesthetic beauty, the fullest power of expression, the real worth of the medium, lies in its pure form,” he wrote in *Camera Craft*, a magazine of the time, explaining his defection. “Witness the vogues which have in turn intrigued the worker: the soft-focus lens, carbon, carbro, gum, bromoil transfer, faint gray monotone printing, or its counterpoint, stygian blackness . . . they seemed so important at the time, and are now almost forgotten.”

If the revolution goes as I've imagined it, to this list of forgotten vogues we will soon add digital duplicity. The decisive moment celebrated in Henri Cartier-Bresson's epochal photo book *The Decisive Moment* will compress again to a very brief period of time, not the decisive hours and days spent at the computer screen by the prestidigitators. The eye, and not artifice, will have to solve the intimidating problem at the core of photographic art—the creation of an image that no one has seen before. Photographers will wander the world more like the Zen archers we imagine them to be, with just thirty-six chances per roll. ☘

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