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> The goal in computer-generated graphics is to create a parentless entity that no one can lay claim to—a photographic orphan for which there are no monetary claims.[1]

INTRODUCTION

Imagine a person's surprise when he discovers that photographs he has always admired—shots of game fish leaping arched from a stream at the end of a taut fishing line—are in fact faked. The fish had been purchased, bent, and placed in a freezer so that on the day of shooting it could be tossed into the air repeatedly until the photographer has taken the perfect photo.[2] Imagine further that person's surprise if he were to discover a photographer had not actually taken such a picture at all. Instead, an editor had taken separate photographs of curled fish and scenic streams from a file, entered them into a computer, and used the computer to combine the photographs in a dramatic way.[3] Then imagine the surprise and perhaps the anger of the photographers who had taken the photographs from which the image was produced. Photos they had sold in the expectation that they would be used as submitted, in fact, had been altered almost beyond recognition.

Similar scenarios need not be the product of one's imagination. Publishers use modern computer technology to capture, store, and manipulate the still visual images that are presented to us as photographs every day.[4] While the possibility of creating new and potentially deceptive visual works from old

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1. Schneider, *Crisis in Contemporary Photography,* POPULAR PHOTOGRAPHY, June, 1990, at 52, 55 (quoting photographer Joe Marvullo).

2. *See* Katz, *Why Pictures Lie,* ESQUIRE, June, 1990, at 93.

3. *See* Salisbury, *Computer Age Poses Ethical Questions for Photography,* Chicago Tribune, Jan. 5, 1990, at 57 (the cover of the October, 1988, *Conde Nast's Traveler* magazine was created by combining three separate photographs to create one image of a jet plane skywriting the words *New York* above the Chrysler Building in New York City).

4. *See infra* note 41. In this Note, the word *image* will generally be used to refer to a visual work that can be produced by computer technology. This approach is aimed at distinguishing a computer-generated work from a photograph, which is the product of mechanical and chemical processes.

ones has always existed,[5] the new technology now allows a greater number of persons to do so because the equipment makes manipulation easy and its cost is such that a greater number of persons can afford to use it.[6] Not only does the technology provide more opportunities to create new images, it also provides the means to do so with less chance that the copying and manipulation will be detected.[7]

Digital technology's ability to alter visual works raises a number of interesting issues. Most recent discussion has focused on the ethics of altering photos, particularly news and documentary photos.[8] The technology also raises legal questions about such matters as its effect on the use of photos as evidence, its potential to create defamatory situations, and its bearing on transactions that rely on printed records, such as fund transfers. A matter of particular concern to photographers and others with interests in visual works is the question of whether federal copyright law is fully capable of protecting those interests. This Note will examine that question by exploring where digitally processed images fit within the framework of the Copyright Act of 1976.[9] Part I explains how the technology works, how the photography market operates, and how the technology affects the market.[10] Part II places digitally processed images in the context of copyright

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5. *See* F. RITCHIN, IN OUR OWN IMAGE: THE COMING REVOLUTION IN PHOTOGRAPHY 13 (1990).

6. *See infra* notes 11-15, 30 and accompanying text.

7. *See infra* note 15 and accompanying text.

8. *See, e.g.*, F. RITCHIN, *supra* note 5; Alter, *When Photographs Lie,* NEWSWEEK, July 30, 1990, at 44; Katz, *supra* note 2; Kramer, *The Case of the Missing Coke Can: Electronically Altered Photo Creates a Stir,* EDITOR & PUBLISHER, Apr. 29, 1989, at 18; Rosenberg, *Computers, Photographs and Ethics,* EDITOR & PUBLISHER, Mar. 25, 1989, at 40; Rosenberg, *Visual Enhancement of Photos,* EDITOR & PUBLISHER, Mar. 25, 1989, at 46; Salisbury, *supra* note 3; *New Picture Technologies Push Seeing Still Further from Believing,* N.Y. Times, July 3, 1989, at 42, col. 1.

9. The frequently discussed European concept of moral rights is an appealing alternative means of protecting the rights to photographs in relation to digital imagery. However, the present congressional posture toward the concept, problems in applying existing doctrines and the statutes in a few states in order to enforce moral rights, and the relative weakness of common law authority are all factors that point to federal copyright law as the first place to look when considering ownership of and infringement by digital imagery. *See* Gilliam v. American Broadcasting Cos., 538 F.2d 14, 24 (2d Cir. 1976); 17 U.S.C. § 301(a) (1988); The Berne Convention for the Protection of Literary and Artistic Works, June 24, 1971, art. 6*bis*, *reprinted in* WORLD INTELLECTUAL PROPERTY ORGANIZATION, GUIDE TO THE BERNE CONVENTION FOR THE PROTECTION OF LITERARY AND ARTISTIC WORKS (PARIS ACT, 1971), 183 (1978); H.R. REP. No. 609, 100th Cong., 2d Sess. 34, 38 (1988); 2 P. GOLDSTEIN, COPYRIGHT: PRINCIPLES, LAW AND PRACTICE § 15.23 (1989); Damich, *The Right of Personality: A Common-Law Basis for the Protection of the Moral Rights of Authors,* 23 GA. L. REV. 1, 35-75 (1988); Kwall, *Copyright and the Moral Right: Is an American Marriage Possible?,* 38 VAND. L. REV. 1, 17-38 (1985); Sarraute, *Current Theory on the Moral Right of Authors and Artists Under French Law,* 16 AM. J. COMP. L. 465 (1968).

10. Still pictures of all types as well as moving pictures can be processed digitally. *See* Kauffman, *The Agency Producer on Digital: Is It Worth It?,* BACK STAGE, Dec. 8, 1989, at 42B. However, this Note will focus on still photography only. This approach simplifies analysis

law by examining why and how they qualify for copyright protection and who is likely to benefit from that protection. Part III analyzes how producing digitally processed images could violate the rights granted to photographers under the Copyright Act. Part IV recommends legal measures that would aid photographers. The Note concludes by arguing why photography requires the law's consideration.

I. DIGITAL PROCESSING TECHNOLOGY AND ITS IMPACT ON PHOTOGRAPHY

A. The Technology and Its Applications

Digital processing begins when an operator "captures" an image by "scanning" it into a computer from a printed photograph, a photographic negative, a videotape frame, a television transmission, or a piece of paper.[11] The scanning device divides the picture into thousands of small square geographic areas called pixels and assigns each pixel a numerical value that acts as a descriptor of the color or other visual characteristics of that area.[12] The values form an array that is the digitized image, which the scanner transmits to the computer, where it may be stored for processing on a medium such as a hard or floppy disk. The computer acts on the numerical value of each pixel in order to modify the image. "Every pixel . . . can be changed individually or all at once to another brightness and color (there may be as many as 16 million choices). The image can also be altered in larger ways: by adding or subtracting elements, increasing apparent focus, modifying lighting, or extending the image's borders."[13] When processing is complete, the operator can use the computer to store the altered numerical array, transmit it to another site, or reconvert it into a humanly perceptible form such as a "hard" paper copy or a video image.[14] Once a photograph

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of ownership because generally fewer parties are involved in creating still photos than in producing motion pictures. Since still photography frequently occurs in a commercial setting, it is also a more useful subject for discussing both the economic and creative concerns of copyright law than other visual arts such as drawings or paintings.

11. *See* Lunin, *An Overview of Electronic Image Information,* OPTICAL INFO. SYS., May, 1990, at 114, 114. Highly technical and thorough explanations of digital imaging technology are found in R. GONZALEZ & P. WINTZ, DIGITAL IMAGE PROCESSING (2d ed. 1987); W. NIBLACK, AN INTRODUCTION TO DIGITAL IMAGE PROCESSING (1986); and R. SCHALKOFF, DIGITAL IMAGE PROCESSING AND COMPUTER VISION (1989). Somewhat less technical general discussions may be found in Dawson, *Changing Perceptions of Reality,* BYTE, Dec. 1989, at 293, and Penney, *Images,* BYTE, Dec. 1989, at 248. Martinez, *A Retouching Story,* MACUSER, Nov. 1988, at 237, describes in step-by-step fashion how a digitally processed image can be created from several previously existing photographs.

12. Lunin, *supra* note 11, at 114.

13. F. RITCHIN, *supra* note 5, at 13.

14. *See* Fitzgerald, *Electronic Imaging Lab,* EDITOR & PUBLISHER, Feb. 24, 1990, at 50P; Penney, *supra* note 11, at 250, 254.

has been digitally processed, the changes in the resulting image are "virtually undetectable."[15]

Although relatively new,[16] image processing technology already enjoys wide application in a number of areas. Businesses and governments employ image processing to manage records, distribute information, and prepare and store manufacturing and engineering drawings.[17] Financial institutions use the technology to process checks and track credit card transactions.[18] Although they are currently somewhat limited as an application, databases consisting of digitally processed images are being used by museums, law enforcement agencies, and personnel departments.[19] Law enforcement agencies are also beginning to use processed images in investigations.[20] Digitally processed and enhanced images have valuable uses in cartography, geography, and medicine, as well.[21]

As one might expect, newspapers and magazines, businesses that produce and display still photography every day, have put digital technology to its widest use. The Associated Press (AP), a nationwide news service that distributes photographs daily to 950 member newspapers, began installing "electronic darkrooms" at each newspaper in 1990.[22] The darkrooms are not rooms at all but computer workstations that editors use to receive and edit AP's transmission of digital images.[23] *Time* magazine has installed similar equipment.[24] Newspapers in Texas and Missouri have experimented with incorporating still video cameras into their image processing systems.[25] These cameras allow an operator to make images on videotape disks and transmit them to computers for immediate processing; no traditional

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15. F. RITCHIN, *supra* note 5, at 13; *see id.* at 16, 27-30 (examples of a digital composite of previously existing photographs and a digital alteration of a previously existing photograph).

16. *See* Lunin, *supra* note 11, at 114 (modern digital image processing began in the early 1960s when a mainframe computer was used to correct distortion in a picture of the moon from the Ranger 7 satellite).

17. *See, e.g., id.* at 13-14; Jones, *Image Technology Spawns Some Legal Concerns,* NAT'L UNDERWRITER, June 26, 1989, at 22 (uses of image processing technology in insurance industry).

18. *See* Violano, *Bankers' Courtship with Integrated Image Processing,* BANKERS MONTHLY, July, 1990, at 3A; *Amex: A Leader in Imaging,* in BANKERS MONTHLY, *supra,* at 14A.

19. *See* Lunin, *supra* note 11, at 119-20; O'Leary, *Smile—You're on Corporate Camera,* PC WEEK, Mar. 29, 1988, at 47, 47; Rosenberg, *Electronic Photo Libraries,* EDITOR & PUBLISHER, Feb. 24, 1990, at 34P, 36P.

20. *See* Cowley, *Faces from the Future: Adding Years to Photos,* NEWSWEEK, Feb. 13, 1989, at 62 (photos of missing children digitally enhanced to show how they would appear years after their disappearance).

21. *See* Lunin, *supra* note 11, at 121, 122-23.

22. *See* Rosenberg, *AP Hastens Move to All-Digital Photo System,* EDITOR & PUBLISHER, Feb. 10, 1990, at 34, 34.

23. *Id.*

24. Horton, *Have Scanner, Will Travel,* FOLIO, May, 1990, at 87.

25. Fitzgerald, *supra* note 14, at 50P; Lallier, *PAGES to Roll Off Times Herald's Presses,* DALLAS BUS. J., Mar. 27, 1989, at 14 (LEXIS, Nexis library, Omni file).

chemical processing of negatives or printing of paper copies is required first.[26]

Although there are currently some limitations on what digital imaging technology can do,[27] use of the technology is expected to mushroom. Overall, the image processing industry market is expected to be $4.8 to $12 billion before 1995.[28] Seven hundred companies, including 25 newspapers, were using sophisticated equipment to alter photographs in 1990, and the figure is expected to double by 1995.[29] With the availability of reasonably low-cost software and hardware, modest image processing capability is within the reach of individuals as well.[30]

B. The Market for Photography

Even with the emergence of home video cameras, still photography remains a popular amateur activity.[31] In contrast, the number of persons who make their living selling photographs is relatively small, and their incomes are moderate. In 1988, the United States Department of Labor estimated that photographers and camera operators held 105,000 jobs, and those with experience earned between $24,600 and $33,800 a year.[32]

Professional photographers sell rights for the use of their photos to advertising and public relations firms; companies that develop audiovisual products; book publishers; businesses and organizations; galleries; newspapers and newsletters; companies that make paper products; recording companies; stock photo agencies; and corporation, consumer, and trade publications.[33] Photographers commonly sell rights that range from one-time rights, for which the purchaser pays one fee in order to use a photo

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26. Lallier, *supra* note 25, at 14. For additional discussion of still video, see F. RITCHIN, *supra* note 5, at 64-66; Chithelin, *Is It Real or Is it Scitex?,* FORBES, Sept. 7, 1987, at 110.

27. *See* Lunin, *supra* note 11, at 115, 116, 123-24 (the main limitations on the technology are resolution, storage, and the lack of standards among hardware and software).

28. *See* Lunin, *supra* note 11, at 124.

29. F. RITCHIN, *supra* note 5, at 14.

30. A complete system similar to that used by newspapers could cost $1 million. *See New Picture Technologies Push Seeing Still Further From Believing,* N.Y. Times, July 3, 1989, at 42, col. 1. However, a system that was capable of image capture and editing, as well as database management, could be purchased for just over $6000 in 1987. *See* Raskin & Stone, *Picture Databases: Coming into Focus,* PC MAGAZINE, Aug., 1987, at 341, 364. Software that will digitize black-and-white photos and provide limited editing functions is available for Macintosh computers for as little as $250. *See* Loeb & Lent, *Low-Cost Digitizing on the Mac,* BYTE, June, 1989, at 98, 100.

31. *See Snapshots Succour Silver,* MINING J., June 1, 1990, at 441 (sales of cameras are projected to increase from 48.6 million in 1988 to 73 million in 1995; sales of rolls of film are expected to increase to 2500 million in the same period).

32. BUREAU OF LABOR STATISTICS, U.S. DEP'T OF LABOR, BULLETIN 2350, OCCUPATIONAL OUTLOOK HANDBOOK 1990-91 EDITION, at 178, 179 (Apr., 1990). Camera operators include persons who shoot moving images on videotape and film. *Id.* at 177.

33. *See* 1990 PHOTOGRAPHER'S MARKET, table of contents (S. Marshall ed. 1989).

one time, to all rights, an agreement by which the purchaser owns the entire rights in the work.[34]

The method for buying and selling these rights frequently creates tension and the potential for legal conflict between photographers and their clients. A New York City advertising agency or public relations firm may pay a photographer $35-$2,000 per photo, $150-$3,500 per day, or $100-$5,000 per job; but most agencies expect to buy all rights to the photographs produced.[35] Stock photo companies, which archive and broker photos, market their stock for a commission of fifty percent, but they usually sell only limited rights so that they can resell photos repeatedly.[36] Because a variety of contractual arrangements are available and opportunities for resale exist, photographers are advised to retain as many of the rights in their photos as they can in order to maximize the photographs' value to the photographers.[37] However, many photographers are not in a position to bargain on an equal basis with their clients. Many of the corporations that buy photographs are so large that they can determine demand and price in significant portions of the market for photographs.[38] Competition among photographers also tends to be fierce, and the buyer of photographs can usually go to another freelancer if one will not accept the offered terms.[39] Furthermore, even when the publisher and the photographer come

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34. *Id.* at 17-18. Other common arrangements include first-time rights, which are the same as one-time rights except that the buyer pays an additional fee for the right to publish the photo before anyone else; serial rights, which allow use of a photo in a periodical with the understanding that it will not appear in a competing periodical; exclusive rights, which grant the buyer the right to use the photo exclusively in his or her market but reserves to the photographer the right to sell the photo in noncompeting markets; and promotional rights, under which the purchaser pays not only to use the photo in a publication, but also in material that promotes the publication. *Id.*

35. *See id.* at 74-79.

36. *See id.* at 550-55.

37. *See id.* at 17-18. For a practical application of the principle, see Steve Altman Photography v. United States, 18 Cl. Ct. 267, 269 (1989) (photographer agreed to lower daily rate from $500 to $325 in order to retain ownership of slides taken for a government agency and later sell them in stock photo market).

38. *See, e.g.*, Donaton, *Magazines Turn to Buddy System,* ADVERTISING AGE, Nov. 26, 1990, at 4S (cross-title and cross-media advertising deals become more common); Rothenberg, *Time Warner's Merger Payoff,* N.Y. Times, Dec. 31, 1990, at 21, col. 3 (media conglomerate Time Warner entered into a marketing arrangement with Chrysler Corporation involving advertising and promotions using Time Warner's magazines, movies, books, and direct-marketing operations).

39. *See* Brown, *Adherence to the Berne Copyright Convention: The Moral Rights Issue,* 35 J. COPYRIGHT SOC'Y OF U.S.A. 196, 208 (1988) ("Except for the highly sought-after few at the top who can largely make their own terms, most writers and artists have to come to terms with the hard realities of the market. The users of works of authorship tend to be large entities; the producers atomistic."); Goldsmith, *Reinventing the Image,* POPULAR PHOTOGRAPHY, Mar., 1990, at 48, 48-49 ("The competition for jobs and assignments remains intense."); Scherer, *Graphic Issue: Artists Say Copyright Laws Hurt Them,* Christian Science Monitor, Oct. 7, 1982, at 11, col. 1 (reporting one artist's experience bargaining as a free-lance illustrator).

to mutually acceptable terms, the photographer has limited, if any, voice in how her work will appear.[40]

C. *The Effects of Digital Technology on the Market for Photography*

Instances when publishers have digitally altered photographs have been widely documented in recent years.[41] As a result, photographers are discussing how the technology will affect them professionally.[42] This discussion comes at a time when photographers are also talking about the changing roles of photography, particularly photojournalism.[43]

Photographers have always been able to manipulate the appearance of their photos with camera angles, film choices, focus, lighting, cropping, and a variety of darkroom techniques.[44] At the same time, viewers perceive photographs through filters of their cultural and personal experiences.[45] This combination of expression and perception causes photographs to be much more subjective, personal statements of reality than is popularly believed. However, the extent to which physics and chemistry are required for photography—the bending of light through a lens, the mechanized opening and closing of the shutter, the light's effect on silver halide film, and the process of "souping" the film to bring up negatives from which positive copies can be printed—makes the medium at least more objective than other

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40. *See Berne Convention Implementation Act of 1987: Hearings Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the House Comm. on the Judiciary*, 100th Cong., 1st & 2d Sess. 386 (1988) [hereinafter *Berne Hearings*] (statement of John Mack Carter, representing Magazine Publishers Association) ("In [the magazine] industry, photographers are not given approval over how their photographs may be cropped or where they will appear in the magazine.").

41. *See* F. RITCHIN, *supra* note 5, at 14-17 (in earliest reported instance, *National Geographic* magazine "moved" two of the pyramids of Giza closer together so that a horizontal photo would fit in a cover's vertical space); *id.* at 8 (*Newsweek* magazine digitally combined separately taken photos of the actors Dustin Hoffman and Tom Cruise to make it appear that they had been photographed together); *id.* at 17 (*Rolling Stone* magazine editors "removed" shoulder holster and pistol from the cover photo of actor Don Johnson); Kramer, *supra* note 8, at 18 (a soft drink can was removed from the foreground of front-page newspaper photo of photographer who had won a Pulitzer Prize); Rosenberg, *Visual Enhancement of Photos, supra* note 8, at 46 (the heads of "scores" of white persons were "replaced" with the heads of nonwhites in a photo that purported to show the employees of a brewer that had been questioned about minority hiring practices); Salisbury, *supra* note 3, at 57 (newspaper technicians mistakenly changed to blue the color of water in a photograph of a swimming pool that had been polluted with red dye).

42. *See, e.g.*, F. RITCHIN, *supra* note 5; Goldsmith, *supra* note 39; Rosenberg, *Visual Enhancement of Photos, supra* note 8.

43. *See* F. RITCHIN, *supra* note 5, at 31-63; Schneider, *supra* note 1, at 52.

44. *See* F. RITCHIN, *supra* note 5, at 85-87 (The *Washington Star* newspaper cropped a single photo of Sen. Edward Kennedy three different ways in as many editions to suggest that at a social event he was alone, with a priest, and with an unidentified woman).

45. *See id.* at 81-109.

forms of visual representation such as drawing, painting, or sculpting. Even if a photographer darkened the sky and cropped out a utility wire running across one corner of the frame, the viewer could still reasonably believe from a photo showing a person in the foreground that that person (the one in front of the camera) as well as the photographer (the person behind the camera) were at a particular place at the time the photo was taken. As a result of its potential for objectivity, photography has been accepted as a valuable tool for exploring the world and expressing human experience.[46]

However, since the 1970s, a number of influences have converged to alter the market for photographs. Large, general-interest magazines, such as *Life,* have been replaced as a major market for photography by more specialized publications that aim to deliver a particular audience to advertisers.[47] As a result, editors tend to be less interested in portraying reality as found by the photographers they hire and more concerned with illustrating their preconceptions.[48] In that way, most photography comes closer to fulfilling the function it serves in advertising.[49]

With this shift in editorial emphasis from exploration to illustration, digital technology is likely to have two effects. First, because editors want a particular style or appearance and because it is easy and efficient to achieve that look with digital processing, photos are more likely to be digitally altered.[50] Second, because of the economic demands of specialty publishing and the narrowing of editorial purpose, editors or buyers of

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46. When Henry R. Luce wrote the prospectus for *Life* magazine in 1936, he said in characteristically grandiose fashion that the magazine's purpose would be:

> To see life; to see the world; to eyewitness great events; to watch the faces of the poor and the gestures of the proud; to see strange things—machines, armies, multitudes, shadows in the jungle and on the moon; to see man's work—his paintings, towers and discoveries; to see things thousands of miles away, things hidden behind walls and within rooms, things dangerous to come to; the women that men love and many children; to see and to take pleasure in seeing; to see and be amazed; to see and be instructed.

THE BEST OF LIFE 2 (1973).

47. *See* F. RITCHIN, *supra* note 5, at 42. The number of general-interest magazines in the United States increased from 40 to 60 between 1963 and 1988 while the number of specialty magazines increased from 400 to 1,200 in the same period. Kobak, *25 Years of Change: What's Been Happening in the Consumer Magazine Industry? Emerging Trends May Come as a Surprise,* FOLIO, Mar., 1990, at 82, 84. The average circulation of general-interest magazines declined from 1.9 million to 1.2 million and the average number of issues per year decreased from 22.5 to 14.2. *Id.* at 84.

48. *See* F. RITCHIN, *supra* note 5, at 44 ("The photographs, as always, were being molded to the personality of the publication, but this time the editors were placing greater emphasis on what one might call the prerequisites of the publication's self over the requisites of outside life.").

49. *Id.* at 46.

50. *See id.* at 44 ("[T]oday's pictures, particularly those in magazines, tend to overpower human vision rather than resemble it. They are more theatrical, better lit, sharper, and more highly colored than seeing itself—qualities well suited to the capabilities of electronic retouching systems.").

photographs will seek to exert even greater influence over the photographer both in terms of bargaining power and control of appearance.[51] Digital technology gives those buyers and editors another means of doing so because, in a sense, the technology becomes another player against whom the human photographer must compete in a tight market.

Recognizing these possibilities, some photographers have predicted that the day may come when the editor will assume the role of the photographer and the photographer will become unnecessary.[52] Those who have not yet reached the same conclusion are at least asking questions about who the author of digitally enhanced photos will be and, more specifically in a legal vein, who the owner of such images will be.[53]

II. OWNERSHIP OF DIGITAL IMAGES UNDER COPYRIGHT LAW

One professional photographer framed issues for analysis succinctly when he distinguished between images that are composites of photos and images that are altered or enhanced versions of photos:

> Example: Combine a tree from photo A with a sunset from photo B and a girl from photo C and, presto, a new "original" appears: photo D, owned by the designer at a computer. Another example: Your photo of a red car is copied with the computer and is then used as a blue car. The computer manufacturers and designers maintain that since the car is now blue, it is no longer your photograph.[54]

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51. *See id.* at 110, 111 ("Right now the photojournalist is in large measure considered to be someone who provides a multiplicity of imagery for the publication's personnel to select from. . . . It is like handing editors lists of phrases, and letting them put the phrases together in whatever order they prefer.").

52. Photographer Stewart Brand was one of the first to frame the question over five years ago. "The advice to photographers from the [*National*] *Geographic* is: 'f/8 and be there.' (The standard middle aperture setting on cameras is f/8.) If content in photos can be electronically and subliminally added and removed, why bother to 'be there'?" Brand, Kelly & Kinney, *Digital Retouching: The End of Photography as Evidence of Anything,* WHOLE EARTH REV., July, 1985, at 42, 45.

Ritchin drew a more complete and perhaps a more dire picture:

> The day is coming when it will be unnecessary to hire still photographers for a variety of tasks. Editors will become surrogate photographers who can simply select images from a live video transmission while, in a sense, looking over a cameraperson's shoulder. Or, working more leisurely, an editor can later choose still images from videotape (unlike the photographer, who must make a selection as the event is happening). And with the recent move toward giant communications conglomerates, such as the union of Time Inc. and Warner, the photograph may more frequently be excerpted from the moving picture.

F. RITCHIN, *supra* note 5, at 67.

53. *Compare* Rosenberg, *Visual Enhancement of Photos, supra* note 8, at 46 (specialist in producing digital images for advertising states that she combines only images provided by their owners and never reuses them without authorization) *with* F. RITCHIN, *supra* note 5, at 68 (the world's largest stock photo agency will notify the photographer if digital changes to a photo will be "drastic").

54. Schneider, *supra* note 1, at 55 (quoting photographer Joe Marvullo).

The first steps in testing the validity of his statements are to determine whether digital images qualify for copyright protection and, if so, in what way they qualify and who owns them as a result.

A. Whether Digital Images Qualify for Copyright Protection

Photographs are specifically listed as subject matter that qualifies for protection under the Copyright Act of 1976.[55] Digital images are not. Their place within the scope of the Copyright Act must be construed either from the definition of "pictorial, graphic, and sculptural works," a specifically listed category of appropriate subject matter, or from the Act's general definition of appropriate subject matter. By either measure, digital images qualify.

The Act speaks of pictorial, graphic, and sculptural works broadly as "two-dimensional and three-dimensional works of fine, graphic, and applied art" before narrowing the definition by listing types of such works.[56] Such an expansive definition would seem to qualify digital images for copyright protection, but a formalistic argument could be made that they would not if the three listed types of art were defined conventionally: *fine art* as drawings, paintings, sculpture, or ceramics;[57] *graphic art* as products of printing processes;[58] and *applied art* as works embodied in useful, manufactured items.[59] In that case, since the seven categories of appropriate subject matter are not exclusive[60] and since the Act anticipates products of new technology,[61] the Act's general definition of protected works would apply. To qualify for copyright protection under the Act's general definition, a digital image would have to meet two criteria: It would have to be an original work of authorship, and it would have to be fixed in a tangible medium of expression.[62]

Congress deliberately left the phrase "original works of authorship" undefined so that the statute would not change the common law standard of originality.[63] That standard is low: The author must have made a

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55. 17 U.S.C. §§ 102(a), 101 (1988).

56. *Id.* § 101.

57. *See* WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE 852 (1981).

58. *See id.* at 990.

59. *See* H.R. REP. No. 1476, 94th Cong., 2d Sess., at 54 (1976) [hereinafter HOUSE REPORT], *reprinted in* 1976 U.S. CODE CONG. & ADMIN. NEWS 5659, 5667.

60. *See* 17 U.S.C. § 102(a) (works of authorship that fall within the scope of the Copyright Act "include" seven categories); *id.* § 101 ("The terms 'including' and 'such as' are illustrative and not limitative.").

61. *See id.* § 102(a) (the general definition of protected subject matter provides for media "now known or later developed"); *see also* HOUSE REPORT, *supra* note 59, at 51.

62. 17 U.S.C. § 102(a).

63. HOUSE REPORT, *supra* note 59, at 51.

contribution to the work and that contribution must not have been copied from another previously existing copyrightable work.[64] As Professor Paul Goldstein has noted, much of the standard has been delineated through cases involving visual arts.[65]

In the first major photography case, *Burrow-Giles Lithographic Co. v. Sarony,*[66] the Supreme Court considered whether for the purposes of maintaining an infringement action a photograph of the playwright Oscar Wilde qualified constitutionally for copyright protection. In deciding that larger question, the Court said that if a photograph were considered purely from the mechanical and chemical aspects of its creation the photographer's contribution might be insufficient to make it original and therefore eligible for protection.[67] However, the Court put aside that issue and found that in choosing Wilde's pose, in selecting other visual elements such as the background and costuming, in arranging the overall composition of the photo, and in lighting the photo the photographer had made a sufficiently original contribution to qualify the photo for copyright.[68]

In determining whether circus posters portraying actual groups of performers qualified for copyright so that an infringement suit could be maintained, the Court in *Bleistein v. Donaldson Lithographing Co.*[69] reiterated the principle that a visual work is no less original because it purports to be a factual representation.[70] However, the Court went on to dismiss arguments that originality encompassed intellectual or artistic merit or purpose.[71] In doing so, the Court explained that a low originality standard is necessary because judges are not qualified to determine merit and because determinations based on merit could inhibit dissemination of creative work,[72] one of the policies underlying copyright.[73] The Court thus found that for circus posters consisting of composite images "[t]here is no reason to doubt that these prints in their *ensemble* and in all their details, in their design

64. The classic statement of the standard is Judge Learned Hand's: "[I]f by some magic a man who had never known it were to compose anew Keats's Ode on a Grecian Urn, he would be an 'author,' and, if he copyrighted it, others might not copy that poem, though they might of course copy Keats's." Sheldon v. Metro-Goldwyn Pictures Corp., 81 F.2d 49, 54 (2d Cir.), *cert. denied,* 298 U.S. 669 (1936).

65. 1 P. GOLDSTEIN, *supra* note 9, § 2.2.1 n.11.

66. 111 U.S. 53 (1884).

67. *Id.* at 59.

68. *Id.* at 60.

69. 188 U.S. 239 (1903).

70. *Id.* at 249.

71. *Id.* at 251.

72. *Id.* at 251-52. *But cf.* Cohen, *Copyright Law and the Myth of Objectivity: The Idea-Expression Dichotomy and the Inevitability of Artistic Value Judgments,* 66 IND. L.J. 175 (1990) (arguing that courts depend on artistic value judgments when they decide copyright infringement cases).

73. *See infra* notes 219-22 and accompanying text.

and particular combinations of figures, lines and colors, are the original work of the plaintiffs' designer."[74]

Modern courts adhere to the principles articulated in *Bleistein* and *Burrow-Giles*. In *Time Inc. v. Bernard Geis Associates*,[75] for example, a federal district court found frames from a home movie of the assassination of President John F. Kennedy to be original even though they depicted a news event. Among what the court called "elements of creativity" that the photographer contributed to the work were his choice of equipment, his choice of where to shoot the film, and the time at which he made the movie.[76]

While the originality standard is low, it is not bottomless,[77] particularly when the standard is applied to derivative works, a category of copyrightable subject matter that includes digital images.[78] To be original, a derivative must vary from the work on which it was based in a "substantial" way.[79] However, *substantial* is defined only as being more than "merely trivial."[80] While that definition of originality is hardly useful in predicting the outcome of cases,[81] maintaining originality as a prerequisite for copyright protection is valuable in cases involving derivative works because doing so limits "overlapping" claims.[82]

In a case where two realistic derivatives have been based on the same previously existing unprotected work, a trier of fact would have to determine whether the allegedly infringing derivative was copied from the original or from the protected derivative. If the derivative at issue had been copied from the previously existing work, it would not infringe the copyright of the protected derivative.[83] The opposite result would occur if the derivative at issue were copied from the other derivative. However, if the first derivative were insufficiently original to qualify for copyright to begin with,

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74. *Bleistein*, 188 U.S. at 250.

75. 293 F. Supp. 130 (S.D.N.Y. 1968).

76. *Id.* at 143.

77. *See* John Muller & Co. v. New York Arrows Soccer Team, 802 F.2d 989 (8th Cir. 1986). The court of appeals affirmed a district court ruling that the Register of Copyright had not abused his discretion by denying copyright to a logo because it was not original. The logo consisted of four lines that angled to form an arrow and the word *Arrow*. But note that because the court decided the case on the basis of abuse of discretion, it may be argued that the court was concerned not so much with whether the logo was sufficiently original as with whether the Register of Copyright had authority to decide the question.

78. *See infra* notes 100-01 and accompanying text.

79. L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486, 490 (2d Cir. 1976), *cert. denied*, 429 U.S. 847 (1976).

80. *Id.*

81. *Compare Batlin*, 536 F.2d 486 (a plastic mechanical bank modeled on a cast iron bank in the public domain was insufficiently original to qualify for copyright protection) *with* Alva Studios, Inc. v. Winninger, 177 F. Supp. 265 (S.D.N.Y. 1959) (an exact scale reproduction of Rodin's statue "Hand of God" was sufficiently original).

82. Gracen v. Bradford Exch., 698 F.2d 300, 304 (7th Cir. 1983).

83. *Id.* at 305.

the trier of fact would never have to reach the question of whether the derivative at issue was copied from the derivative or the previously existing work.[84] No infringement could occur if no copyright existed.

In addition to giving courts room to maneuver in difficult cases, the flexible nature of originality for derivative works also advances the policies of copyright law. The Copyright Act protects expression of ideas but not ideas themselves.[85] This principle aims to "reconcile" the competing interests of copyright law by giving the creator a monopoly in his expression while at the same time leaving ideas free for use by other creators.[86] Originality is a means of implementing the principle because determining that a work is original, particularly in the context of a derivative work, is a legal way of saying that the work is sufficiently expressive to qualify for copyright.[87]

Given the threshold of originality generally and the *Bleistein* Court's finding of originality in composite images in particular, a digital image created from preexisting photos of a tree, a sunset, and a girl would likely be found sufficiently original to satisfy the first element of the Copyright Act's general definition of protected subject matter. Considering the uncertain nature of originality in derivative works, whether an image would be sufficiently original to qualify for protection would be a more unpredictable issue if the image differed from the original photo only in the color of the car it depicted. However, the low originality threshold and the law's interest in encouraging creativity and disseminating its results suggest a strong case

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84. *See id.* at 304-05. Thus, the *Gracen* court determined that a painting of the fictional character Dorothy, as portrayed by Judy Garland in the movie "The Wizard of Oz," was insufficiently original: "We do not consider a picture created by superimposing one copyrighted photographic image on another to be 'original' . . . ." *Id.* at 305. With that finding, the court of appeals simplified the task of the district court when the case was remanded for trial. The court of appeals affirmed summary judgment against plaintiff's claim of copyright infringement brought against the company that had originally sought her services to prepare a commemorative plate based on the movie. However, defendant's counterclaim that the artist had infringed the copyright in the movie by making an unauthorized painting was remanded for trial because there were questions of fact about the artist's implied authority to prepare the painting.

85. *See* 17 U.S.C. § 102.

86. Franklin Mint Corp. v. National Wildlife Art Exch., 575 F.2d 62, 64 (3d Cir. 1978), *cert. denied,* 439 U.S. 880 (1978). *Compare Franklin Mint,* 575 F.2d 62 (artist's realistic painting of cardinals did not infringe the copyright in an earlier realistic painting of cardinals by the same artist because, although the idea for each was the same, the expressions of those ideas differed) *with* Gross v. Seligman, 212 F. 930 (2d Cir. 1914) (photograph of a nude model infringed the copyright in an earlier photograph of the same model in the same pose taken by the same photographer).

See infra notes 219-23 and accompanying text for a discussion of the competing interests in copyright law.

87. *See Gracen,* 698 F.2d at 305 ("[I]f interpreted too liberally [originality] would paradoxically inhibit rather than promote the creation of such works by giving the first creator a considerable power to interfere with the creation of subsequent derivative works from the same underlying work.").

could be made for saying that such an image was original and therefore copyrightable.[88]

Either type of image easily would meet the Act's second requirement. A work is fixed in a tangible medium of expression when it is embodied in a copy that is "sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration."[89] A copy is a material object "in which a work is fixed . . . and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device."[90] Arguably, a digital image that an operator created by combining previously existing photographs but that existed only as it appeared on the computer screen before storage on a medium such as a hard or floppy disk would be excluded.[91] However, the practical commercial value of such an image to its creator would be nil since it would disappear as soon as the operator turned off the computer. As with computer software, which is copyrightable,[92] the more likely situation is that the image would be stored on a medium or printed. In either case, since the image would then be embodied in a material form from which it could be perceived, the image would be fixed according to the Act.

B. Classifying Digital Images Under the Copyright Act

How digital images are classified under the Copyright Act affects the ownership rights in those images. The Act offers four possibilities. As previously discussed,[93] an image becomes a "copy" for copyright purposes when embodied in a material object from which it can be perceived, reproduced, or communicated. The image may also be considered a "compilation" or a "derivative work" according to the language of the Act, and the Act's language arguably allows a digital composite to be considered a "collective work."[94]

The Act defines a compilation as "a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes

88. *See* Pantone, Inc. v. A.I. Friedman, Inc., 294 F. Supp. 545 (S.D.N.Y. 1968) (originality found in an arrangement of colors in a printer's swatch book).

89. 17 U.S.C. § 101.

90. *Id.*

91. *See* HOUSE REPORT, *supra* note 59, at 53. ("[T]he definition of 'fixation' would exclude from the concept purely evanescent or transient reproductions such as those projected briefly on a screen, shown electronically on a television or other cathode ray tube, or captured momentarily in the 'memory' of a computer.").

92. *See* Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983), *cert. dismissed,* 464 U.S. 1033 (1984).

93. *Supra* notes 89-90 and accompanying text.

94. 17 U.S.C. § 101.

an original work of authorship."[95] "A 'derivative work' is a work based upon one or more preexisting works . . . ."[96] That definition includes "any other form in which a work may be recast, transformed, or adapted" as well as "editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship."[97] The categories thus overlap because both aim to encompass works prepared from preexisting materials. However, they are distinguished on the basis of whether the preexisting materials were the subject of copyright. A derivative work assumes that the preexisting material was the subject of copyright, whether or not it was actually copyrighted; no similar conclusion is necessary for a work to be classified as a compilation.[98] Since facts may not be copyrighted, the distinction is necessary to protect collections of facts, such as directories and databases, which are copyrightable.[99]

By these definitions, a digital image would qualify as a derivative work. The image would have been created from photographs, which are the copyrightable subject matter;[100] it would have been created by transforming, adapting, or modifying those photographs either into digital form or into new visual arrangements; and it would be considered an original work of authorship.[101] The Act's inclusive language also suggests that a digital image could be considered a compilation, if for no other reason than it is an assembly of data about previously existing photographs[102] that is likely to constitute an original work of authorship. That conclusion is bolstered by the result in *Geshwind v. Garrick,*[103] where a district court found that a company that created a computer-animated film was the author for copyright purposes not only of the film, but also of the computer database from which the film was developed.

A digital image that is a composite of previously existing photographs may also be a collective work. Under the Copyright Act, a collective work is one "in which a number of contributions, constituting separate and independent works in themselves, are assembled into a collective whole."[104] If the tree, the sunset, and the girl from the hypothetical that began this Part each were considered a separate and independent work, a digital composite would seem, by the Act's language, to fall into the category of a collective work. The Act does not define "separate and independent

95. *Id.*
96. *Id.*
97. *Id.*
98. HOUSE REPORT, *supra* note 59, at 57.
99. *See* 1 P. GOLDSTEIN, *supra* note 9, § 2.16.1.
100. 17 U.S.C. §§ 102(a), 101.
101. *Supra* notes 88-93 and accompanying text.
102. *See supra* notes 11-12 and accompanying text.
103. 734 F. Supp. 644, 650 (S.D.N.Y. 1990).
104. 17 U.S.C. § 101.

works," but it does distinguish among works with the principle of originality.[105] If a work is sufficiently original to qualify for its own copyright, the work is distinct not only from works that are not copyrightable but also from other works that are. Such a work therefore could be considered separate and independent. Given that reasoning and the low standard of originality in copyright law, most photos—even most separately discernable elements of photos such as trees, sunsets, and girls—would qualify as separate and independent works.

The examples of collective works specified in the Act, including "a periodical issue, anthology, or encyclopedia,"[106] however, suggest that Congress conceived of collective works in a conventional fashion. *Blum v. Kline*[107] indicates that courts may entertain similar notions. In that case, the district court said that a plaintiff photographer's claim that his photograph of a designer's fashions was a contribution to a collective work did not "merit discussion."[108] Proceeding to discuss the matter anyway, the court read the Copyright Act to mean that to be separate and independent a contribution had to have its own "value."[109] "If one were to take the model wearing [the designer's] clothing out of the picture, plaintiff would have taken a photograph of an empty scene. The Court concludes that no one would find art and value in such a photograph . . . ."[110] In reaching that conclusion, however, the court had to ignore the doctrine of originality[111] as well as the long-established copyright principle that the law will not judge works by artistic or intellectual merit.[112] It also had to define value not in terms of ownership of rights in the photo, copyright law's direct and primary concern, but in speculative terms of the photograph's marketability. Such an approach went beyond both the scope of copyright law and the facts reported in the case.

C. *Ownership of Digital Images*

The copyright owner does not necessarily own a physical object.[113] Rather, the owner is granted a set of exclusive rights to use the work or control its

105. *See supra* notes 62-87 and accompanying text.
106. 17 U.S.C. § 101.
107. 8 U.S.P.Q.2d (BNA) 1080 (S.D.N.Y. 1988).
108. *Id.* at 1082.
109. *Id.*
110. *Id.*
111. *See* Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99, 105 (2d Cir. 1951) ("A copyist's bad eyesight or defective musculature, or a shock caused by a clap of thunder, may yield sufficiently distinguishable variations. Having hit upon such a variation unintentionally, the 'author' may adopt it as his and copyright it.").
112. *Bleistein*, 188 U.S. at 251.
113. *See* 17 U.S.C. § 202.

use.[114] She may copy the work, prepare derivative works from the copyrighted work, distribute copies of the copyrighted work, and display the work publicly.[115] Each right or any subdivision of a right may be transferred and owned separately.[116] Labeling a digital image under the Copyright Act thus determines who owns which rights in the image.

Copyright initially vests in the author of the work.[117] "As a general rule, the author is the party who actually creates the work, that is, the person who translates an idea into a fixed, tangible expression entitled to copyright protection."[118] Thus, assuming that the creator of a digital image owned all rights to the photos from which he created the image, the creator would be the author of the image and therefore the owner of the copyright in it.[119]

However, authorship and the ownership of rights in an image that results from authorship may not be confined merely to the person who created the image. Under the doctrine of work for hire, the Copyright Act considers persons who commission works to be authors of those works for copyright purposes, and it vests ownership of copyright in them, rather than in the persons who actually create the work.[120] A work for hire is either "a work prepared by an employee within the scope of his or her employment" or a work that is specially ordered or commissioned for use as or as part of several types of other materials when the parties agree to such an arrangement in writing.[121] Works for hire may be used in many of the major photography markets:[122] collective works, which, in turn, include periodicals and anthologies; audiovisual works; and instructional texts and their supplements.[123] As the Supreme Court has noted, "The contours of the work-for-hire doctrine therefore carry profound significance for freelance creators . . . and for the publishing, advertising, music, and other industries which commission their works."[124]

The Court defined the contours of the work-for-hire doctrine in *Community for Creative Non-Violence v. Reid* by formulating a two-step analytical framework to determine whether a work was made for hire.[125] "[A]

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114. 17 U.S.C. § 106.
115. *Id.* The right to perform a work is also included in the Act but is not pertinent to this discussion.
116. 17 U.S.C. § 201(d)(2).
117. 17 U.S.C. § 201.
118. Community for Creative Non-Violence v. Reid, 490 U.S. 730, 737 (1989).
119. *See Geshwind,* 734 F. Supp. 644.
120. 17 U.S.C. § 201(b).
121. *Id.* § 101(1), (2).
122. *See supra* note 33 and accompanying text.
123. 17 U.S.C. § 101. Other types of acceptable works for hire include works for inclusion in motion pictures, translations, compilations, tests, answers to tests, and atlases. *Id.*
124. *Reid,* 490 U.S. at 737.
125. *Id.* at 743.

court first should ascertain, using principles of general common law agency, whether the work was prepared by an employee or an independent contractor."[126] The Court provided a list of relevant factors that may be used in making that determination.[127] Once a creator is classified as an employee or an independent contractor, the second step of the analysis is to apply the appropriate provision of section 101 of the Copyright Act.[128] Thus, if a work is prepared by an employee, the next inquiry in determining ownership of rights in the work is whether the employee prepared the work within the scope of his employment.[129] If the creator is an independent contractor, the next questions would be whether the work is one of the nine types specified in the Copyright Act and whether the creator and the commissioner had agreed in writing that the work was made for hire.[130]

The Copyright Act also envisions the possibility that a copyright may be owned jointly. For example, the photographer who took photos used in creating a digital image and the creator of that image may be considered joint authors.[131] A joint work is one in which the authors intend that their contributions be "merged into inseparable or interdependent parts of a unitary whole."[132] "The touchstone here is the intention . . . that the parts be absorbed or combined into an integrated unit . . . ."[133] Once the parties' intent is established, they are considered tenants in common. Each owner is financially accountable to the other, but each has an independent right to use the copyright as she wishes.[134]

Following the principle of divisibility of copyright expressed elsewhere in the Act,[135] rights in a digital image may also be split among more than one person or entity, or they may not exist at all. For example, "copyright in a compilation or derivative work extends only to the material contributed by the author of such work."[136] The copyright in the compilation or derivative work does not affect the rights that may exist in the works from which it was compiled or derived.[137] Similar provision is made for collective works. The copyright in each separate contribution and the copyright in

126. *Id.* at 751.
127. *Id.* at 751-52.
128. *Id.* at 751.
129. *See* 17 U.S.C. § 101(1).
130. *See id.* § 101(2).
131. *See Geshwind,* 734 F. Supp. 644.
132. 17 U.S.C. § 101.
133. HOUSE REPORT, *supra* note 59, at 120.
134. Oddo v. Ries, 743 F.2d 630, 632-33 (9th Cir. 1984); *Geshwind,* 734 F. Supp. at 651; HOUSE REPORT, *supra* note 59, at 121.
135. *See supra* notes 114-16 and accompanying text.
136. 17 U.S.C. § 103(b).
137. *Id.; see also* Stewart v. Abend, 110 S. Ct. 1750, 1761-62 (1990) ("The aspects of a derivative work added by the derivative author are that author's property, but the element drawn from pre-existing work remains on grant from the owner of the pre-existing work.").

the collective work are independent of each other; the former may be held by the contributor and the latter by the person who collected the material.[138] Thus, if the digital image hypothesized at the beginning of this Part was classified as a compilation, a derivative work, or a collective work, four separate copyrights could exist: one each for the photos of the tree, the sunset, and the girl, and a fourth in the computer operator's arrangement of the elements taken from those photos.

Beyond general divisibility, the Act establishes a presumption in favor of the contributor to a collective work. In the absence of an express transfer of rights to the contrary, the holder of copyright in a collective work is limited to "reproducing and distributing the contribution as part of that particular collective work, any revision of that collective work, and any later collective work in the same series."[139] Thus, if it was established that a digital composite was a collective work and that a photographer had granted the creator of that image permission to use his photo as a basis for that image, the image creator could not lawfully use the photo in another digital image. Doing so would infringe the photographer's rights to control either the reproduction of his work or the preparation of derivative works from it.[140]

Copyright in a compilation, collective work, or derivative work will be denied to that part of the work that has been used unlawfully.[141] Thus, the person who used a copyrighted photograph without permission to create a digital image could maintain copyright in that image only to the extent that he could show that the elements from the photo were severable from the image as a whole.[142] Using again for example the hypothetical that opened this Part, the copyright might be maintained in the composite if use of the photo of the tree was unlawful, use of the sunset and the girl was lawful, and the tree could be cropped from the image. On the other hand, it is doubtful that copyright could be maintained where the derivative work was created by merely copying the photo digitally and altering the color of the primary visual element, as the example of the car suggests. In that case,

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138. 17 U.S.C. § 201(c).

139. *Id.*

140. *See* HOUSE REPORT, *supra* note 59, at 122-23 (a publisher could reprint a 1980 edition encyclopedia article in a 1990 edition of the encyclopedia but could not revise the article or print it in another type of work).

141. 17 U.S.C. § 103(a).

142. As interpreted in the House of Representatives report on the Copyright Act of 1976, the provision

> preserves protection for those parts of the work that do not employ the preexisting work. Thus, an unauthorized translation of a novel could not be copyrighted at all, but the owner of copyright in an anthology of poetry could sue someone who infringed the whole anthology, even though the infringer proves that publication of one of the poems was unauthorized.

HOUSE REPORT, *supra* note 59, at 57-58.

the altered element could not easily be severed from the work as a whole.

The principles of work for hire and alienability of copyright thus give rise to a wide array of possibilities in the ownership of digital images. Work-for-hire doctrine aside, the creator of the digital image may contract with a photographer to take photographs from which the image will be derived and to sell all rights in the photos to the creator. By purchasing all rights to the photos, the creator of the image may use the photos for any purpose including creation of the image.

The principle that the creator of a work may contract away all rights to the work is well established in American law generally[143] and law pertaining to photography particularly, although some policy considerations that underlie the photography cases are not necessarily applicable with digital technology. In *Avedon v. Exstein,*[144] for example, the photographer Richard Avedon sued an advertising agency that had bought all rights to some of his photography for copyright infringement, breach of contract, and declaratory judgment of ownership. Avedon conceded that "there is a long line of photography cases holding that all rights to a delivered picture are in the client who hired the photographer to take the picture."[145] The policy underlying that principle aims to benefit the client because, the court said, it allows the client to control the photograph so that a competitor cannot use it.[146] However, the deterrent value of the law seems less persuasive when one considers that digital technology allows a photograph to be stored indefinitely, altered beyond recognition, and resold.

Outside of explicit private agreement, a photographer may surrender all rights in a photograph if she took the photograph during the course of her duties as an employee of another.[147] For example, rights to photographs taken by a newspaper photographer in the course of gathering news generally would belong to the newspaper. If the newspaper digitally combined several photographs it owned in that manner, it would own all rights in the resulting image.

In between those extremes, ownership of the rights in the work will depend not only on whether the photographer expressly agreed that his work was made for hire, but also—and perhaps more importantly—on how the subsequent use is defined. A work for hire is a work that is specially ordered or commissioned for one of nine types of uses and that the parties

143. *See, e.g.,* Vargas v. Esquire, 164 F.2d 522 (7th Cir. 1947), *cert. denied,* 335 U.S. 813 (1948); Crimi v. Rutgers Presbyterian Church, 194 Misc. 570, 89 N.Y.S.2d 813 (N.Y. Sup. Ct. 1949).

144. 141 F. Supp. 278 (S.D.N.Y. 1956).

145. *Id.* at 279. Since Avedon conceded the point and the court refused to allow parol evidence of usage and custom of the trade to offset the legal rule, the court granted the defendant's motion for summary judgment.

146. *Id.* at 280.

147. *See supra* notes 125-29 and accompanying text.

have agreed will be considered a work for hire in a written instrument.[148] If creation of a digital image is considered the use for which a photograph has been specially ordered and the photographer has not entered a work-for-hire agreement, the commissioner of the photo could not legitimately assert rights in the photo, and its use would be unlawful absent any other agreement. The consequence would be that the creator would have rights in the digital image only to the extent that the unlawfully used photo could be severed from the image. A similar conclusion would be reached if the photographer had not entered a work-for-hire agreement and the photo's use was defined not as creation of a digital image but as the image's use in another manner not specified by the Copyright Act such as display in a gallery. However, if the photographer had agreed that his photograph was to be a work for hire and its specially ordered use is defined as being part of an image that is itself a collective work or that is, in turn, to be part of an authorized type of use, such as a periodical, the photographer probably will have no claim to any rights in the digital image.

The extent of a photographer's ownership interest in a digital image that was created lawfully thus remains very much subject to her ability to bargain with the creator of the image. In one of its few concessions to the possibility that a creator may not be able to bargain effectively with the ultimate owner of rights in a work, the Copyright Act provides for termination of the transfer of those rights.[149] Generally, an author of a work may terminate the rights he has transferred at any time during a five-year period beginning at the end of thirty-five years after the grant was executed or the work was published under the grant, whichever period ends first.[150] Since copyright exists for the life of the author plus fifty years after the author's death,[151] return of the rights to a work that have proven to be valuable can be a long-lasting and substantial benefit to authors or their families who survive them, even if they must wait thirty-five years. However, the length of the term makes the value of the termination right to photographers questionable. Innumerable digital uses of a photograph could be made in a period of thirty-five to forty years,[152] and the photograph may have no commercial value at the end of that period if it appears dated. Moreover, the termination right is limited. It is not available when rights are granted under a work-

148. *See supra* notes 120-22 and accompanying text.

149. 17 U.S.C. §§ 203, 304(c); Mills Music, Inc. v. Snyder, 469 U.S. 153, 172-73 (1985); *see also* HOUSE REPORT, *supra* note 59, at 124 ("A provision of this sort is needed because of the unequal bargaining position of authors, resulting in part from the impossibility of determining a work's value until it has been exploited.").

150. 17 U.S.C. § 203(a)(3).

151. *Id.* § 302(a).

152. *See* F. RITCHIN, *supra* note 5, at 67 ("[T]he same print quality can be obtained forever since digital information does not deteriorate over time.").

for-hire agreement,[153] a situation the photographer will frequently encounter. Nor may the creator of the work terminate rights to a derivative work prepared before all other rights were terminated.[154] As a result, whatever rights a photographer may have granted to the creator of a derivative digital image would remain with the creator even if the photographer were to terminate the transfer.

III. INFRINGEMENT IN DIGITAL IMAGES

Persons infringe copyright by reproducing, distributing, or displaying the protected work or by preparing a derivative work from it without the authority of the person who has the right to control those uses.[155] A plaintiff establishes infringement by proving not only that the defendant copied the work, but also that the copying constituted improper appropriation.[156] However, tests for copying and improper appropriation are applied to some degree according to the nature of the protected work.[157] For example, courts recognize that unlike a literary work, which may be separated into components of sentences, paragraphs, or chapters, "[a] graphic . . . work is created to be perceived as an entirety."[158] As this Part will explain, the integral nature of a work of visual art is both boon and bane to the plaintiff and, in any case, requires courts to be flexible in applying existing doctrine if they are to assure copyright holders the full measure of their protection.

A. Copying

Copying is demonstrated in one of two ways: the defendant may admit copying, or the plaintiff may provide evidence that the defendant had access to the protected work and that sufficient similarities exist between the original work and the infringing work so that the trier of fact may reasonably infer that copying occurred.[159] In theory, the elements of access and similarity act as variables in a logical formula by which the plaintiff may prove copying. "[I]f there are no similarities, no amount of evidence of access will suffice to prove copying."[160] Conversely, "[i]f evidence of access is absent, the similarities must be so striking as to preclude the possibility that plaintiff and defendant independently arrived at the same result."[161] When

153. 17 U.S.C. § 203(a).
154. *Mills Music,* 469 U.S. 153; 17 U.S.C. § 203(b).
155. *See* 17 U.S.C. §§ 501, 106 (1988).
156. Arnstein v. Porter, 154 F.2d 464, 468 (2d Cir. 1946).
157. 2 P. GOLDSTEIN, *supra* note 9, § 8.0.
158. Warner Bros. v. American Broadcasting Cos., 720 F.2d 231, 241 (2d Cir. 1983).
159. *Arnstein,* 154 F.2d at 468.
160. *Id.*
161. *Id.*

evidence of both access and similarity exist, the trier of fact must then consider whether the similarities are sufficient to reasonably infer that copying occurred. Part of that analysis involves "dissecting" the original and infringing works into elements and taking the testimony of expert witnesses.[162]

To establish access in a photography case, the plaintiff must usually make an affirmative showing. For example, plaintiffs have shown that the defendant photographer took both the original and the infringing photographs,[163] that the defendant had seen the plaintiff's photographic setup as well as the final photograph,[164] or that the defendant was engaged in a business relationship that gave the defendant access to the protected work.[165] One commentator has noted that in cases involving commercial art access is a lesser issue because the plaintiff's work is widely distributed,[166] and, indeed, in one commercial photography case, the defendant conceded access.[167] However, in at least one other photography case, proof of wide distribution of the protected work was insufficient when the plaintiff could provide no other direct or circumstantial evidence of access.[168]

In a case alleging infringement by a digital image, access would be a question of whether the defendant had the opportunity to "capture" a copyrighted work. However, the nature of digital technology at once multiplies those opportunities and makes them more private. For example, just as newspapers are now capable of "grabbing" frames from television broadcasts and digitally enhancing them to make them suitable for publication,[169] so too could an infringer digitize a published photo and use the computer to eliminate the screening necessary for printing and to sharpen the image's resolution. Digital technology's potential for eliminating any course of dealing between the plaintiff and the defendant would tend to put more of the testimonial evidence of access in the hands of the defendant. Similarly, defendants would probably hold physical evidence of access because digitizers allow computer operators to capture images for storage and later modification from a variety of sources.[170] Some of those captured images, such as those taken from television, might never have appeared on paper, film, or tape prior to capture or, if they had, could easily have been recorded over.[171] Moreover, once the image has been captured, there may

162. *Id.*
163. Gross v. Seligman, 212 F. 930 (2d Cir. 1914).
164. Alt v. Morello, 227 U.S.P.Q. (BNA) 49 (S.D.N.Y. 1985).
165. Time Inc. v. Bernard Geis Assocs., 293 F. Supp. 130 (S.D.N.Y. 1968).
166. 2 P. GOLDSTEIN, *supra* note 9, § 8.2, at 65.
167. Kisch v. Ammirati & Puris Inc., 657 F. Supp. 380, 381 (S.D.N.Y. 1987).
168. Edwards v. Ruffner, 623 F. Supp. 511 (S.D.N.Y. 1985).
169. *See* F. RITCHIN, *supra* note 5, at 67.
170. *See supra* note 11 and accompanying text.
171. *Id.*

be no physical evidence that it was altered if the computer operator generated no copies for comparison either on magnetic disk or on paper.[172]

The issue of substantial similarity will present its own problems because the mechanical and objective aspects of photography tend to make one think of visual elements in photographs as fully integrated and inseparable.[173] To vary the circumstances of a previous example, consider a girl, a tree, and a sunset as the primary elements of one photograph. Each element can be distinguished in two ways: intellectually because each can be named and physically because each can be cropped from the photograph. Nevertheless, one thinks of the elements as inseparable because the photograph depicts all three as existing together at one point in time. The result of thinking of visual works in this way is that it leads to reasoning that tends to undercut a plaintiff's case. "Significant dissimilarities between two works of this sort inevitably lessen the similarity that would otherwise exist between the total perceptions of the two works."[174] This is a particular risk in infringement cases involving derivative works, where "the more completely an unauthorized work distorts the original, the less substantially similar to the original it will be—and the less likely it will be to infringe."[175]

To overcome this problem and to aid in determining whether appropriation was improper, courts will "dissect" the original work to determine which of its elements are copyrightable and to compare them with similar elements from the allegedly infringing work.[176] Like the inquiry into originality that was necessary to determine whether a work qualified for copyright,[177] the determination of copyrightable elements aims to distinguish between ideas, which are not protected, and expressions of those ideas, which are.[178] Also like originality, the purpose of the inquiry is to "reconcile" the competing interests of rewarding individual creativity and encouraging public access to information.[179] Once the elements are identified, the court will weigh their similarities against differences that exist.[180] Because they assume that there will always be at least some differences between two

172. F. RITCHIN, *supra* note 5, at 65 (the nonarchival nature of disks used in still video cameras would make disputes hinge "more on the word of the photographer against that of the publication").

173. *See, e.g.*, Blum v. Kline, 8 U.S.P.Q.2d (BNA) 1080, 1082 (S.D.N.Y. 1988) (taking a model out of a photograph would leave an "empty scene" and a photograph without value).

174. *Warner Bros.*, 720 F.2d at 241.

175. P. GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES: CASES AND MATERIALS ON THE LAW OF INTELLECTUAL PROPERTY 756 (3d ed. 1990).

176. *See* 2 P. GOLDSTEIN, *supra* note 9, at § 8.0 n.3.

177. *See supra* notes 62-86 and accompanying text.

178. *See* 17 U.S.C. § 102(b).

179. *See* Steinberg v. Columbia Pictures Indus., 663 F. Supp. 706, 712 (S.D.N.Y. 1987); *see also Warner Bros.*, 720 F.2d at 240 (the idea-expression distinction allows courts to "adjust tensions" in copyright law).

180. *Alt*, 227 U.S.P.Q. (BNA) at 51.

similar works, courts will focus on the similarities;[181] however, in some cases, slight differences will be used as much as evidence of copying as similarities will.[182]

In photography, courts have found copyrightable elements not in the subjects of or models for the photo (the girl, the tree, or the sunset) but in manifestations of the photographer's contribution to the work, such as choices in lighting, positioning of the subjects, camera angle, timing, and equipment.[183] Thus, if a trier of fact compared a photograph of a red car with an unauthorized digital image in which the only change was the color of the car, the trier of fact could find a number of comparable characteristics from which to reasonably infer copying. A more difficult question, however, is presented by a digital composite because manifestations of the photographer's contributions to the underlying photographs of, again, a tree, a sunset, and a girl may be subsumed by the computer operator's alterations, particularly if those alterations affected such characteristics as lighting and composition. In situations such as that, expert witnesses would be beneficial to the plaintiff's case in order to explain the photographer's contributions to the photographs and the ability of digital technology to alter those contributions and to point out specific contributions of the photographer that remain in the digital image.

B. Improper Appropriation

Substantial similarity between the copyrightable elements of the protected work and the subsequent work is necessary to prove not only that the defendant copied the copyrighted work, but also that her use of the material was improper.[184] However, two factors make the outcome of the issue less predictable when it is considered in the context of improper appropriation. First, the nature of the inquiry changes in that the trier of fact is no longer concerned with a rational comparison of two works but with a more "impressionistic"[185] or "visceral"[186] response to the two works. This type of comparison is embodied in the "ordinary observer" or "audience" test, which aims to determine whether the ordinary lay observer would recognize

181. Novelty Textile Mills v. Joan Fabrics Corp., 558 F.2d 1090, 1093 n.4 (2d Cir. 1977).

182. *Id.; see Gross,* 212 F. at 931 ("[T]he identities are much greater than the differences, and it seems to us that the artist was careful to introduce only enough differences to argue about . . . ."); *Alt,* 227 U.S.P.Q. (BNA) at 51.

183. *Kisch,* 657 F. Supp. at 382.

184. *Id.* at 382-83.

185. 2 P. GOLDSTEIN, *supra* note 9, § 8.2, at 64.

186. Cohen, *Masking Copyright Decisionmaking: The Meaninglessness of Substantial Similarity,* 20 U.C. DAVIS L. REV. 719, 732 (1987).

the allegedly infringing work as being copied from the protected work.[187] Second, courts are not always consistent in how they apply the various tests. Given the integral nature of visual works, courts will sometimes collapse the determination of copyrightable elements with the audience test so that they can consider whether the plaintiff's and the defendant's works are similar in their "total concept and feel."[188] Courts may also combine the similarities inquiry for copying with that for improper appropriation.[189]

The "ad hoc"[190] nature of decisions about substantial similarity leads to widely divergent results in photography cases. In *Kisch v. Ammirati & Puris Inc.*,[191] the plaintiff had taken a black-and-white photo of an unknown woman holding a concertina, an instrument similar to an accordion; the defendant's work was a color photo of a known male musician holding a saxophone. However, the district court concluded there were sufficient similarities—the location of the subjects in the same corner of the same nightclub, the same large distinctive mural in the background, the fact that the subjects were both seated and holding musical instruments, the lighting, and the camera angle—to deny defendant's motion to dismiss the suit.[192] In *Edwards v. Ruffner*,[193] the plaintiff's and the defendant's photographs both portrayed a dancer's legs standing in the "fifth position" of ballet and wearing leg warmers, socks or stockings, and ballet shoes. However, the difference in the appearance of the clothing, the way the pose was shown, the camera angle, and the "overall portrayal, effect and presentation" combined with the plaintiff's failure to prove access to allow the court to deny the plaintiff's motion for preliminary injunction.[194]

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187. *See Kisch*, 657 F. Supp. at 383. Courts are not always consistent in how they refer to the test or what exactly they mean when they use a particular term to describe it. Two interpretations have been set forth. In a case involving drawings in posters decided three months after *Kisch* in the same district but by a different judge, the court first noted a modern "average lay observer" test, which asked "'whether an average lay observer would recognize the alleged copy as having been appropriated from the copyrighted work.'" *Steinberg*, 663 F. Supp. at 711 (quoting Ideal Toy Corp. v. Fab-Lu, Ltd., 360 F.2d 1021, 1022 (2d Cir. 1966); Silverman v. CBS, Inc., 632 F. Supp. 1344, 1351-52 (S.D.N.Y. 1986)). The court distinguished that test from an older, more severe "ordinary observer" test, which asked whether the "'ordinary observer, unless he set out to detect the disparities, would be disposed to overlook them, and regard their aesthetic appeal as the same.'" *Id.* (quoting Peter Pan Fabrics, Inc. v. Martin Weiner Corp., 274 F.2d 487, 489 (2d Cir. 1960)).

188. Roth Greeting Cards v. United Card Co., 429 F.2d 1106, 1110 (9th Cir. 1970).

189. *See Alt*, 227 U.S.P.Q. (BNA) at 51; *see also Arnstein*, 154 F.2d at 468-69 ("[T]he similarities between the plaintiff's and defendant's work [may be] so extensive and striking as, without more, both to justify an inference of copying and to prove improper appropriation.").

190. Judge Learned Hand used the term "ad hoc" to refer to decisions distinguishing between ideas and expression in copyright law. Peter Pan Fabrics v. Martin Weiner Corp., 274 F.2d 487, 489 (2d Cir. 1960). The term is equally applicable here.

191. 657 F. Supp. 380.

192. *Id.* at 384.

193. 623 F. Supp. 511.

194. *Id.* at 512.

This tendency to determine infringing similarity by an impressionistic comparison of pictures viewed in their entirety suggests that digital images will be treated differently according to whether they are composites of previously existing photos or merely alterations of them. An altered work, such as an image of a car in which only the car's color was changed, could more likely be found substantially similar than a composite image, such as one that combined a girl, a tree, and a sunset. However, given color's ability to change mood and style in visual imagery, even some cases involving mere alteration would be too close to call.

The flexible nature of the "substantial similarity" doctrine, particularly as it has been applied in photography cases, therefore holds as many risks for the plaintiff as it does rewards. In a situation involving a digital composite, the plaintiff may claim that the defendant misappropriated a substantial portion of the underlying photo, particularly if the resulting image used the main subject of the photo. The defendant may then counter that even if the underlying photo had been copied, the digital image did not infringe because altering the photo in the composite destroyed any similarity between the two works. The plaintiff thus has two choices: demonstrate similarity at a point before the photo was altered or focus the attention of the trier of fact on the similarities that exist in the protected elements of the common portions of plaintiff's and defendant's works.

The first alternative is possible because of the nature of computer technology. In loading the photograph into the computer system, the defendant may have infringed the reproduction right by creating an unauthorized copy.[195] The digitized photograph would be considered a copy because it would be fixed in a material object—either the computer or a magnetic storage medium—from which it could be perceived, reproduced, or communicated.[196] Comparing the two works for substantial similarity purposes at the time the photograph is digitized is valuable to the plaintiff's case because the works' appearance, whether perceived from the photograph's paper copy or its image on the computer screen, will be close to, if not actually, the same. The drawback is that this approach requires access to information in the defendant's computer. That information may have to be coerced from the defendant by discovery,[197] which may arouse privacy issues, or the information may no longer exist.

Focusing the attention of the trier of fact on the similarities that exist between the common protected portions of plaintiff's and defendant's works

195. *See* Bly v. Banbury Books, Inc., 638 F. Supp. 983 (E.D. Pa. 1986); Rand McNally & Co. v. Fleet Management Sys., 600 F. Supp. 933 (N.D. Ill. 1984), *reaffirmed,* 634 F. Supp. 604 (N.D. Ill. 1986); 2 M. NIMMER & D. NIMMER, NIMMER ON COPYRIGHT § 8.08 (1990) [hereinafter NIMMER].

196. 17 U.S.C. § 101.

197. *See* FED. R. CIV. P. 26.

is possible because "[t]he question in each case is whether the similarity relates to matter which constitutes a substantial portion of plaintiff's work—not whether such material constitutes a substantial portion of defendant's work."[198] It is also possible because in cases concerning other types of subject matter courts have frequently considered the inquiry in qualitative as well as quantitative terms,[199] particularly when the infringing work took that portion of the protected work that gave the protected work its artistic or economic value.[200]

That doctrinal foundation combined with the ad hoc nature of substantial similarity decisions allows plaintiffs to advance at least two arguments for substantial similarity between a digital composite and that portion of a photo from which the composite was created. The first runs along quantitative lines: If protected photos are to be considered in their entirety, taking any portion of them destroys the unity of the photo and therefore is substantial. The second is based on qualitative concerns: Taking a distinguishable portion of the plaintiff's photo (the girl, the sunset, or the tree) that manifested the photographer's contribution to the photo either destroys the artistic value of the integrated whole or demonstrates that that portion of the photo has economic value of its own. In either instance, the similarities that exist between the two works would therefore be substantial. As a result of either argument, similarities from which copying could reasonably be inferred should also be sufficient to demonstrate that the appropriation was improper.

C. *Defensive Considerations*

Defendants in a digital image case would have a number of doctrinal areas from which to draw. They include independent creation, contractual matters, fair use, and joint authorship.

Of the four, proof that the defendant independently created the image would be the most effective because it would belie the plaintiff's contention that the defendant copied the work.[201] Such proof may require establishing a "chain of creation," similar to the chain of custody for certain types of demonstrative evidence.[202] A chain of creation would track the development of the image from acquisition or creation of the underlying photographs through the preparation of the final image. Such a chain has been used in a photography case, although it worked to the plaintiff's benefit in that it

198. 3 NIMMER, *supra* note 195, § 13.03[A], at 13-41.
199. *Id.* at 13-43 n.99.
200. Cohen, *supra* note 186, at 724, 741-44.
201. *See* Bleistein v. Donald Lithographing Co., 188 U.S. 239, 249 (1903); *Novelty Textiles*, 558 F.2d at 1092 n.2; *Gross*, 212 F. at 931.
202. *See* MCCORMICK ON EVIDENCE § 212, at 668 (3d ed. 1984).

was necessary to establish clear title to rights in a photograph before a motion for summary judgment could be entertained.[203]

If the plaintiff prepared the work for the defendant as a work for hire, the plaintiff will not have a cause of action because copyright in a work for hire vests in the person who commissions the work.[204] Nor can the plaintiff expect to prevail if the defendant's work substantially differs from the protected work and no contract binding the defendant to turn over his or her rights in the altered work is in existence.[205] The more difficult question occurs when the plaintiff alleges that the defendant was granted an exclusive right but that he exceeded the authority of the grant. Only a relatively small number of cases have held that altering a work beyond the rights established in an agreement between the creator and the licensee constitutes infringement,[206] and the point at which it can be said that a defendant exceeded his or her authority is ill-defined.[207] One person's editing may be another's mutilation.

Fair use is an explicitly authorized exception to the exclusive rights granted by the Copyright Act.[208] Under that doctrine, portions of protected works may be used for beneficial social purposes such as criticism, comment, news reporting, teaching, scholarship, or research.[209] Whether the use is fair is determined by its purpose and character, particularly whether the work was used for a commercial or nonprofit educational purpose; the nature of the

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203. Sygma Photo News v. High Society Magazine, 596 F. Supp. 28, 31-32 (S.D.N.Y. 1984), *aff'd*, 778 F.2d 89 (2d Cir. 1985) (The rights to a photograph were established by an affidavit from a party who purchased the rights from the photographer and subsequently sold them to the subject of the photograph, who, in turn, had alleged infringement).

204. 17 U.S.C. § 201(b).

205. *See* Morita v. Omni Publications Int'l, 741 F. Supp. 1107 (S.D.N.Y. 1990).

206. Oddo v. Reis, 743 F.2d 630 (9th Cir. 1984) (an implied license to use a copyrighted magazine article in a manuscript did not give the defendant the right to use the article in a book); Midway Mfg. v. Artic Int'l, 704 F.2d 1009 (7th Cir. 1983) (a licensee infringed by speeding up the movement of a copyrighted video game); WGN Continental Broadcasting v. United Video, 693 F.2d 622 (7th Cir. 1982) (the licensee, a satellite common carrier, infringed by deleting material from a copyrighted television transmission); Gilliam v. American Broadcasting, 538 F.2d 14 (2d Cir. 1976) (editing of television program based on a copyrighted script infringed when the authors had reserved right to approve alterations to the script); National Bank of Commerce v. Shaklee Corp., 503 F. Supp. 533 (W.D. Tex. 1980) (the licensee infringed by inserting advertising material in a copyrighted book).

207. One commentator characterized the problem in the following way:

> The right to prepare derivative works would seem to protect any modification of the work, but the definition of "derivative work" in the Act suggests that it would only protect against modifications that are "original works of authorship" themselves, and not against mere mutilation, distortion, or destruction. Similarly, the Act does not protect against unfaithful copies because mere copies are not derivative works and the right to copy does not impose a duty of fidelity. Thus, even under a fairly generous reading of these rights, only the right to prevent modifications that represent original works of authorship is protected.

Damich, *supra* note 9, at 38-39.

208. 17 U.S.C. § 107.

209. *Id.*

copyrighted work; the amount and substantiality of the portion of the copyrighted work used; and the effect of the use upon the potential market for, or value of, the copyrighted work.[210] Courts have held that use of copyrighted photos was fair even in a commercial context.[211] However, the Supreme Court has said, "[E]very commercial use of copyrighted material is presumptively an unfair exploitation of the monopoly privilege that belongs to the owner of the copyright . . . ."[212] As a result, in situations where a digital image is likely to impair the market for an underlying photograph, the doctrine of fair use may have little to contribute to a defense.[213]

Joint authorship also is of limited value. When two or more persons create a work with the intention that their work be merged into an inseparable whole,[214] one joint author may not sue another for infringement. Rather, each has an independent right to use or license the copyright, although he or she must account to the other author for any profits earned from the use or license.[215] A defense of joint authorship may be available when a claim that the work was done for hire fails,[216] but since a finding of joint authorship depends on the parties' intent at the time the work was created, its usefulness as a defense will vary from case to case.[217] Its value is also questionable from a defendant's economic standpoint because the equitable principles that underlie the doctrine[218] would require the defendant to share profits from any improper appropriation that was found.

IV. What Can Be Done for Photographers

Contrary to what some photographers may think, digital images are not orphans. Under copyright law, some person or legal entity will always have a monetary claim on them. Whether the photographers who took the photos from which a digital image is created are among those with a claim will

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210. *Id.*

211. Triangle Publications v. Knight-Ridder Newspapers, 626 F.2d 1171 (5th Cir. 1980) (the defendant newspaper's use of a photo of plaintiff's magazine cover in competitive advertising deemed fair in absence of significant harm to the plaintiff); Haberman v. Hustler Magazine, 626 F. Supp. 201 (D. Mass. 1986) (defendant magazine's reproduction of copyrighted photographic postcards was fair because it did not impair marketability); *Time Inc.*, 293 F. Supp. 130 (charcoal drawings of the Kennedy assassination rendered from copyrighted film frames were fair use because of the public interest in information about a historical event).

212. Sony Corp. of Am. v. Universal City Studios, 464 U.S. 417, 451 (1984).

213. *See* Update Art, Inc. v. Maariv Israel Newspaper, 635 F. Supp. 228 (S.D.N.Y. 1986) (the defendant newspaper's copying of graphic art portraying President Ronald Reagan as the macho movie character Rambo was not fair use).

214. 17 U.S.C. §§ 201, 101.

215. *Oddo,* 743 F.2d at 630-32; *Morita,* 741 F. Supp. at 1113.

216. *See* Community for Creative Non-Violence v. Reid, 490 U.S. 730, 746 (1989).

217. *See Morita,* 741 F. Supp. at 1113.

218. *Oddo,* 743 F.2d at 633.

depend on how aggressive photographers, courts, and Congress are willing to be.

Copyright law favors private agreement by providing a framework for contract terms and a reactive approach to disputes. The Supreme Court has described the law as creating "a balance between the artist's right to control the work during the term of the copyright protection and the public's need for access to creative works."[219] How interests fall in that balance is determined by how the law defines ownership and the "marketplace" that results.[220] By awarding the creator a limited monopoly, the law aims to give the creator "the necessary bargaining capital to garner a fair price for the value of the works passing into public use."[221] However, while the Court acknowledges that the law may allow creators to improve their bargaining positions, it has said repeatedly that the law's concern is not with the creator's benefits but with the larger policy matters of encouraging creative activity and ensuring public access to the results of that activity.[222] The consequence of this attitude is that the law is not so much concerned with persons or their works as extensions of their personality. Rather, the law concerns itself with the works themselves as products of human endeavor. As a result, the law is willfully indiscriminate. It will call the employer of a creator an author and allow the employer to assume the rights of an author in place of the creator because the employer initiates creativity and disseminates its results.[223]

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219. Stewart v. Abend, 110 S. Ct. 1750, 1764 (1990).

220. The primary aim of the Copyright Act of 1976 was to enhance predictability and certainty of copyright ownership. Community Center for Non-Violence v. Reid, 490 U.S. 730, 749 (1989). "In a 'copyright marketplace,' the parties negotiate with an expectation that one of them will own the copyright in the completed work. With that expectation, the parties at the outset can settle on relevant contractual terms, such as the price for the work and the ownership of reproduction rights." *Id.* at 749-50 (citation omitted).

221. *Stewart,* 110 S. Ct. at 1764.

222. *E.g.,* United States v. Paramount Pictures, Inc., 334 U.S. 131, 158 (1948).

> The copyright law . . . makes reward to the owner a secondary consideration. . . . "The sole interest of the United States and the primary object in conferring the monopoly lie in the general benefits derived by the public from the labors of authors." It is said that reward to the author or artist serves to induce release to the public of the products of his creative genius.

Id. (citation omitted), *quoted in* Sony Corp. of Am. v. Universal City Studios, 464 U.S. 417, 429 (1984); *see also* Harper & Row, Publishers v. Nation Enters., 471 U.S. 539, 580 (1985) (Brennan, J., dissenting) ("Congress thus seeks to define the rights included in copyright so as to serve the public welfare and not necessarily so as to maximize an author's control over his or her product.").

223. 17 U.S.C. § 201(b) (1988).

> The need to reward those who bring innovations to the market has always been part of the realities of the intellectual property system, even if not part of the sentimental ideology that pervades public thinking about intellectual property. The commercial value of a book or a recording or a television program is only partially attributable to the merits of the work of the author. The actual reward system reflects this judgment, for the author of a work typically reaps only a

In this legal environment, photographers are obligated to protect themselves. Digital technology makes advice to photographers not to sell all of their rights in their works more applicable than ever. A photographer may sell rights to reproduce and distribute her work indefinitely, but she will protect herself against the use of her photo in a digital image by reserving the right to control preparations of derivative works.

When disputes do arise, courts may ensure that photographers receive the full benefit of the only law that is available to protect them by avoiding approaches that are unnecessarily formalistic and procedural. Because proof is likely to be in the defendant's hands in a case involving infringement by a digital image,[224] courts may grant plaintiffs latitude in proving access. One means of doing that would be to allow triers of fact to presume that the defendant had access to the plaintiff's photograph once the plaintiff proved that the photograph had been published. Courts may also recognize that the extent to which digital technology can alter photographs makes traditional methods of comparing visual works for substantial similarity inapplicable. If courts cannot adapt doctrines from other areas of copyright law,[225] they can at least refrain from too quickly drawing their own conclusions about substantial similarity and allow juries to decide the issue.

Congress may assist photographers by recognizing that digital technology exacerbates a problem that it once tried to solve—that of the creator being unable to accurately predict the uses to which his work will be put and to bargain effectively as a result. In order to make the Copyright Act responsive to the impact digital technology has on conventional business arrangements between photographers and their clients, Congress could shorten the period during which a photographer must wait before she could terminate a transfer of rights. Congress has already acted in a similar fashion for similar reasons with the Semiconductor Chip Protection Act.[226] That measure protects semiconductor chip designs for a period of only ten years,[227] rather than the seventeen years allowed by patent law[228] or the period of life of the author plus fifty years that the Copyright Act specifies.[229] A five-year waiting

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> small part of the commercial value that is derived from it. . . . It is the publishers, the recording studios and the networks who make the market for creative works. As the market-makers, they take the greatest risks and reap the greatest rewards from the distribution of intellectual property.

Samuelson, *Allocating Ownership Rights in Computer-Generated Works,* 47 U. PITT. L. REV. 1185, 1227 (1986).

224. *Supra* notes 169-72 and accompanying text.

225. *See* Cohen, *supra* note 186 (arguing that courts could make decisions on a more principled basis if they applied fair-use analysis to issues of substantial similarity); Damich, *supra* note 9 (arguing that to protect moral rights courts could extend a right of personality that underlies such doctrines as privacy).

226. 17 U.S.C. §§ 901-914.

227. *Id.* § 904(b).

228. 35 U.S.C. § 154 (1988).

229. 17 U.S.C. § 302(a).

period would be reasonable for photographs since their primary commercial value lies in relatively short-term uses such as magazines, books, and advertising.

CONCLUSION

Courts and Congress may act to foster the interests of photographers, but the final question that must be addressed is the same one that should be examined whenever old and new media confront each other and hybrid forms of communication emerge. In an inherently passive environment that favors market, rather than legal, determinations of what is valuable to society, to what extent, if any, should the law act on behalf of one medium over another?

The Constitution manifests the societal interest of the law by underscoring the value of expression to a democratic society in not one but two places: article one's direction to Congress to foster intellectual endeavors among citizens[230] and the first amendment's guarantee of free speech.[231] Expression is valuable because it adds to the "store" or "harvest" of knowledge from which citizens in a free society make reasonable choices or enrich their lives.[232] If expression is valued, it is in society's interest to maximize it, and one means of doing that is by encouraging diversity in expressive forms and outlets.[233] Thus, in order to foster diversity, the law should not favor one means of expression over another.

However, one medium may provide information of a type or in a form that is unavailable from another medium. If one means of expression is capable of providing information that another cannot, it should be encouraged at least to the extent that the information it provides is valued over the information that the other medium provides.

Yet copyright law declines to make artistic or intellectual value judgments; it leaves to the marketplace choices about whether the products of one means of expression have value and, if so, whether they are more valuable than the products of another medium. This reactive approach may be well suited to a capitalistic society that purports to favor individual effort and private agreement over governmental interference, but relying entirely on that approach ultimately puts at risk the diversity of expression that the law seeks to encourage. Apportionment of ownership of expression is ultimately apportionment of the outlets of expression. The more ownership

230. U.S. CONST. art. I, § 8, cl. 8.
231. U.S. CONST. amend. I.
232. *See* Harper & Row, Publishers v. Nation Enters., 471 U.S. 539, 545-46 (1985).
233. *See* Morris, *Expanding Proprietary Entitlements and the Public Interest in Dissemination of Art*, 7 CARDOZO ARTS & ENT. L.J. 269 (1989).

of expression is concentrated in those with not only the outlets for, but also the means of, expression, the less diversity there will be.

Copyright law's role in resolving disputes involving works in different media thus must be finely calibrated. If the law cannot affirmatively treat one medium better than another in order to foster diversity, the law must be prepared for the same reason to act affirmatively to ensure that one form of expression is not unintentionally disadvantaged. In photography's case, keeping the medium on an equal legal footing with digital processing ensures that those who remain interested in and willing to pay for the form of truth that photography is capable of conveying will have access to it.