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Picture Research

The Work of Intermediation from Pre-Photography to Post-Digitization

By: Nina Lager Vestberg

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NOTES

PREFACE

1. Walter Benjamin, "Unpacking My Library," in *Illuminations* (London: Pimlico 1999), 63.

INTRODUCTION

1. W. J. T. Mitchell, *Picture Theory* (Chicago: University of Chicago Press, 1994), 6. Original emphasis.

2. Sean Cubitt, *The Practice of Light: A Genealogy of Visual Technologies from Prints to Pixels* (Cambridge, MA: MIT Press, 2014), 1.

3. Lisa Gitelman, *Paper Knowledge: Toward a Media History of Documents* (Durham, NC: Duke University Press, 2014), x. See also Michel de Certeau, *The Practice of Everyday Life* (Berkeley: University of California Press, 2011), 131–132.

4. Stephen Bann, "Photography, Printmaking, and the Visual Economy in Nineteenth-Century France," *History of Photography* 26, no. 1 (March 1, 2002): 16, <https://doi.org/10.1080/03087298.2002.10443249>. See also Stephen Bann, *Distinguished Images: Prints in the Visual Economy of Nineteenth-Century France* (New Haven, CT: Yale University Press, 2013).

5. Deborah Poole, *Vision, Race, and Modernity: A Visual Economy of the Andean Image World* (Princeton, NJ: Princeton University Press, 1997), 8.

6. A similar perspective appears to inform Diana Kamin's approach in a book published too recently for me to engage directly here. See Diana Kamin, *Picture-Work: How Libraries, Museums, and Stock Agencies Launched a New Image Economy* (Cambridge, MA: The MIT Press, 2023).

7. Friedrich Balke, Bernhard Siegert, and Joseph Vogl, eds., *Medien der Bürokratie*, Archiv für Mediengeschichte (Paderborn: Wilhelm Fink Verlag, 2016).

8. John Tagg, *The Disciplinary Frame: Photographic Truths and the Capture of Meaning* (Minneapolis: University of Minnesota Press, 2009), 3.
9. Tagg, 3.
10. Matthew Kirschenbaum, *Track Changes: A Literary History of Word Processing* (Cambridge, MA: Belknap Press, 2016), 16. See also Gitelman, *Paper Knowledge*, 21–52.
11. John Durham Peters, *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (Chicago: University of Chicago Press, 2015), 289.
12. Peters, 264.
13. Diana Kamin, among others, has noted “a linguistic shift over time” in favor of image over picture as a standard denotational term for visual representations, which in turn seems connected to discourses on the “dematerialization” of objects in the digital era (a topic to which we will return in chapter 5). See Diana Kamin, “Picture-Work: On the Circulating Image Collection” (PhD diss., New York University, 2018), 11.
14. W. J. T. Mitchell, *Image Science: Iconology, Visual Culture and Media Aesthetics* (Chicago: University of Chicago Press, 2015), 16.
15. Christine L. Borgman, *Big Data, Little Data, No Data: Scholarship in the Networked World* (Cambridge, MA: MIT Press, 2015), 18.
16. My concept of the picture industry diverges slightly from that proposed by Walead Beshty et al. in a volume that includes both scientific research and contemporary art under the umbrella of this term. See Walead Beshty, *Picture Industry: A Provisional History of the Technical Image, 1844–2018* (Zürich: JRP Ringier, 2018).
17. J. Abbott Miller, “Pictures for Rent: From Stereoscope to Stereotype,” in *Design Writing Research: Writing on Graphic Design*, ed. Ellen Lupton and J. Abbott Miller (London: Phaidon, 1999), 121–133. See also Helen Wilkinson, “‘The New Heraldry’: Stock Photography, Visual Literacy, and Advertising in 1930s Britain,” *Journal of Design History* 10 (1997): 23–38.
18. Paul Frosh, *The Image Factory: Consumer Culture, Photography and the Visual Content Industry* (Oxford: Berg, 2003); Matthias Bruhn, *Bildwirtschaft. Verwaltung und Verwertung der Sichtbarkeit* (Weimar: VDG, 2003).
19. Michelle Henning, *Photography: The Unfettered Image* (London: Routledge, 2018), 43.
20. Marshall McLuhan, “Address at Vision 65,” in *Essential McLuhan*, ed. Eric McLuhan and Frank Zingrone (London: Routledge, 1997), 220.
21. McLuhan, 221.

22. Joanna Sassoon, "Photographic Materiality in the Age of Digital Reproduction," in *Photographs, Objects, Histories*, ed. Elizabeth Edwards and Janice Hart (London: Routledge, 2004), 186.
23. As Sean Cubitt explains, the chip must be "drained" between each exposure, through a complex process of conversion from charge to voltage to a digital format that can be stored in the device's memory. See Sean Cubitt, *The Practice of Light: A Genealogy of Visual Technologies from Prints to Pixels* (Cambridge, MA: MIT Press, 2014), 100–102, 276n4.
24. Henning, *Photography: The Unfettered Image*, 42.
25. Frosh, *The Image Factory*, 176.
26. Elizabeth Edwards and Janice Hart, "Introduction," in *Photographs, Objects, Histories: On the Materiality of Images*, ed. Elizabeth Edwards and Janice Hart (London: Routledge, 2004), 1.
27. Edwards and Hart, 14.
28. Sassoon, "Photographic Materiality in the Age of Digital Reproduction," 189; Joan M. Schwartz, "Un beau souvenir du Canada: Object, Image, Symbolic Space," in *Photographs, Objects, Histories: On the Materiality of Images* (London: Routledge, 2004), 18.
29. Nina Lager Vestberg, "Archival Value: On Photography, Materiality and Indexicality," *Photographies* 1 (2008): 60.
30. Elizabeth Edwards and Janice Hart, "Mixed Box: The Cultural Biography of a Box of 'Ethnographic' Photographs," in *Photographs, Objects, Histories: On the Materiality of Images* (London: Routledge, 2004), 47–61.
31. Geoffrey Batchen, "Ere the Substance Fade: Photography and Hair Jewellery," in *Photographs, Objects, Histories*, ed. Elizabeth Edwards and Janice Hart (London: Routledge, 2004), 32.
32. Edwards and Hart, "Introduction," 2. See also Frosh, *The Image Factory*, 11–12.
33. Estelle Blaschke, *Banking on Images: The Bettmann Archive and Corbis* (Leipzig: Spector Books, 2016); Kamin, *Picture-Work*; Diana Kamin, "Cards, Cabinets, and Compression in Early Stock Photography," *Information & Culture* 56, no. 3 (November 2021): 229–250, <https://doi.org/10.7560/IC56301>.
34. Nadya Bair, *The Decisive Network: Magnum Photos and the Postwar Image Market* (Berkeley: University of California Press, 2020); Zeynep Devrim Gürsel, *Image Brokers: Visualizing World News in the Age of Digital Circulation* (Oakland: University of California Press, 2016), <http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1196937&site=ehost-live>.
35. Peters, *The Marvelous Clouds*, 21.

36. Daniel F. Spulber, "Market Microstructure and Intermediation," *Journal of Economic Perspectives* 10, no. 3 (1996): 150. I am grateful to Terje Gaustad for this reference and for giving me a crash course in intermediation and disintermediation from an economics perspective.

37. Jennifer Smith Maguire and Julian Matthews, eds., *The Cultural Intermediaries Reader* (London: Sage, 2014), 1.

38. The term "cultural intermediaries" was coined in the English translation of Pierre Bourdieu, *Distinction: A Social Critique of the Judgement of Taste*, trans. Richard Nice (Cambridge, MA: Harvard University Press, 1984), 91, 323–327. Aside from Frosh's brief use of the term to characterize the functions of "advertising art directors and picture editors" within the "hegemonic framework" of stock photography, I have been unable to find references to the specific work of picture research or picture editing in the literature I have surveyed on cultural intermediaries. See Frosh, *The Image Factory*, 5. See also Sean Nixon and Paul Du Gay, "Who Needs Cultural Intermediaries?," *Cultural Studies* 16, no. 4 (July 1, 2002): 495–500, <https://doi.org/10.1080/09502380210139070>; Keith Negus, "The Work of Cultural Intermediaries and the Enduring Distance between Production and Consumption," *Cultural Studies* 16, no. 4 (July 1, 2002): 501–515, <https://doi.org/10.1080/09502380210139089>; David Hesmondhalgh, "Bourdieu, the Media and Cultural Production," *Media, Culture & Society* 28, no. 2 (March 1, 2006): 211–231, <https://doi.org/10.1177/0163443706061682>; Jennifer Smith Maguire, "Bourdieu on Cultural Intermediaries," in *The Cultural Intermediaries Reader*, ed. Jennifer Smith Maguire and Julian Matthews (London: Sage, 2014), 15–24.

39. N. Katherine Hayles, "Intermediation: The Pursuit of a Vision," *New Literary History* 38, no. 1 (June 6, 2007): 104, <https://doi.org/10.1353/nlh.2007.0021>.

40. N. Katherine Hayles, *My Mother Was a Computer: Digital Subjects and Literary Texts* (Chicago: University of Chicago Press, 2005), 31, <http://ebookcentral.proquest.com/lib/ntnu/detail.action?docID=530439>.

41. Hayles, 31.

42. Alina M. Chircu and Robert J. Kauffman, "Strategies for Internet Middlemen in the Intermediation/Disintermediation/Reintermediation Cycle," *Electronic Markets* 9, nos. 1–2 (1999): 109–117.

43. Elihu Katz, "Disintermediation: Cutting Out the Middle Man," *Intermedia* 16, no. 2 (1988): 30–31. See also Daniel Dayan and Elihu Katz, *Media Events: The Live Broadcasting of History* (Cambridge, MA: Harvard University Press, 1992), 215–217, 229–230; Michael Strangelove, *Post-TV: Piracy, Cord-Cutting, and the Future of Television* (Toronto: University of Toronto Press, 2015).

44. Katz, "Disintermediation," 31.

45. Chircu and Kauffman, "Strategies for Internet Middlemen," 109.

46. See, for instance, Craig Standing and T. Vasudavan, "The Impact of the Internet on the Role of Travel Consultants," *Participation and Empowerment: An International Journal* 7, no. 8 (December 1, 1999): 213–226, <https://doi.org/10.1108/14634449910303595>; Alan Ching-biu Tse, "Disintermediation of Travel Agents in the Hotel Industry," *International Journal of Hospitality Management* 22, no. 4 (December 1, 2003): 453–460, [https://doi.org/10.1016/S0278-4319\(03\)00049-5](https://doi.org/10.1016/S0278-4319(03)00049-5); José I. Castillo-Manzano and Lourdes López-Valpuesta, "The Decline of the Traditional Travel Agent Model," *Transportation Research Part E: Logistics and Transportation Review* 46, no. 5 (September 1, 2010): 639–649, <https://doi.org/10.1016/j.tre.2009.12.009>.
47. Hayles, "Intermediation," 100.
48. Wolfgang Ernst, *Digital Memory and the Archive*, ed. Jussi Parikka, trans. Christopher Jenkin-Jones (Minneapolis: University of Minnesota Press, 2013), 60.
49. Wolfgang Ernst, "Let There Be Irony: Cultural History and Media Archaeology in Parallel Lines," *Art History* 28 (2005): 601.
50. Raymond Williams, *Television: Technology and Cultural Form*, 2nd ed., ed. Ederyn Williams (London: Routledge, 1990).
51. On photography as cultural form, see Peter Buse, "Polaroid into Digital: Technology, Cultural Form, and the Social Practices of Snapshot Photography," *Continuum* 24, no. 2 (2010): 215–230, <https://doi.org/10.1080/10304310903363864>; Peter Osborne, "Photography in an Expanding Field: Distributive Unity and Dominant Form," in *Where Is the Photograph?*, ed. David Green (Brighton: Photoforum and Photoworks, 2003), 63–70.
52. "Digitization, n.," in *OED Online* (Oxford University Press), accessed April 4, 2019, <http://www.oed.com/view/Entry/240886>.
53. J. Scott Brennen and Daniel Kreiss, "Digitalization," in *The International Encyclopedia of Communication Theory and Philosophy* (Hoboken: John Wiley & Sons, 2016), 1–11, <https://doi.org/10.1002/9781118766804.wbiect111>. For examples of "digitalization" used in this sense, see Mercedes Bunz, *The Silent Revolution: How Digitalization Transforms Knowledge, Work, Journalism and Politics without Making Too Much Noise* (Basingstoke: Palgrave Macmillan, 2013), <https://doi.org/10.1057/9781137373502>; Ingrid Hoelzl and Rémi Marie, *Softimage: Towards a New Theory of the Digital Image* (Bristol: Intellect, 2015).
54. Lisa Gitelman, *Always Already New: Media, History and the Data of Culture* (Cambridge, MA: MIT Press, 2006), 128.
55. Nanna Bonde Thylstrup, *The Politics of Mass Digitization* (Cambridge, MA: MIT Press, 2018), 3. See also Maurizio Borghi, "Knowledge, Information and Values in the Age of Mass Digitisation," in *Value: Sources and Readings on a Key Concept of the Globalized World*, ed. Ivo De Gennaro (Leiden: Brill, 2012), 415–434.

56. My translation from Andreas Budalen, “Skal digitalisere 50 kilometer med kulturarv” (“Digitizing Norway’s cultural heritage”), NRK, March 11, 2012, <https://www.nrk.no/nordland/digitaliserer-norges-kulturarv-1.8028452>.

57. Library and Archives Canada, “How We Serve Canadians: For the Record,” May 1, 2012, <https://www.bac-lac.gc.ca/eng/news/videos/Pages/for-record.aspx?=&wbdisable=true>; Joan M. Schwartz, “‘In the Archives, a Thousand Photos That Detail Our Questions’: Final Reflections on Photographs and Archives,” in *Photo-Objects: On the Materiality of Photographs and Photo Archives* (Berlin: Max-Planck-Gesellschaft zur Förderung der Wissenschaften, 2019), 318, <https://mprl-series.mpg.de/studies/12/19/index.html>.

58. The term “drafter” is used here as a gender-neutral replacement for “draftsman.”

CHAPTER 1

1. Stephen Bann, *Distinguished Images: Prints in the Visual Economy of Nineteenth-Century France* (New Haven, CT: Yale University Press, 2013), 18. See also Pascal Griener, *La république de l’oeil: L’expérience de l’art au siècle des lumières* (Paris: Odile Jacob, 2010), 83.

2. Griener, *La république de l’oeil*, 84.

3. Griener, 65.

4. *An Act for the Encouragement of the Arts of Designing, Engraving, and Etching Historical and Other Prints, by Vesting the Properties Thereof in the Inventors and Engravers, during the Time Therein Mentioned, 1735*, 8 Geo. II, c. 13, 1735, http://www.copyright-history.org/cam/tools/request/showRecord.php?id=record_uk_1735; *An Act for Effectually Securing the Property of Prints to Inventors and Engravers, by Enabling Them to Sue for and Recover Penalties in Certain Cases, 1777*, 17 Geo. III, c. 57, 1777, http://www.copyright-history.org/cam/tools/request/showRecord?id=record_uk_1777a. A comprehensive overview of sources for the emergence of copyright legislation in a number of countries can be found in the online resource *Primary Sources on Copyright (1450–1900)*, available at: <http://www.copyright-history.org> (accessed June 1, 2021).

5. A halftone process emulates the manual “pitting” produced by the engraver’s tool by opto-chemical means. It involves projecting a photographic negative through a gridded screen onto a printing plate covered in a photosensitized emulsion, to produce a picture made up of dots of various sizes that, when viewed at the appropriate distance, gives the optical impression of continuous tone. See Sean Cubitt, *The Practice of Light: A Genealogy of Visual Technologies from Prints to Pixels* (Cambridge, MA: MIT Press, 2014), 88–90.

6. Geoffrey Batchen, *Burning with Desire: The Conception of Photography* (Cambridge, MA: MIT Press, 1997), 50.

7. W. J. T. Mitchell, *Picture Theory* (Chicago: University of Chicago Press, 1994), 35.
8. W. J. T. Mitchell, *Image Science: Iconology, Visual Culture and Media Aesthetics* (Chicago: University of Chicago Press, 2015), 19.
9. James A. Secord, "Scrapbook Science: Composite Caricatures in Late Georgian England," in *Figuring It Out: Science, Gender, and Visual Culture*, ed. Ann B. Shteir and Bernard V. Lightman (Hanover, NH: Dartmouth College Press, 2006), 169.
10. For more detail on early nineteenth-century album culture in England, including in the pre-photographic period, see Patrizia Di Bello, *Women's Albums and Photography in Victorian England: Ladies, Mothers and Flirts* (Aldershot: Ashgate, 2007), 29–52.
11. Secord, "Scrapbook Science," 169, 178.
12. Secord, 175. Citing an advert in Thomas Hood, *Comic Annual* (London: Charles Tilt, 1831).
13. Secord, 175 and 186.
14. Di Bello, *Women's Albums and Photography in Victorian England*, 41.
15. Secord, "Scrapbook Science," 174–175.
16. Hans Öjmyr, *Josabeth Sjögrens Stockholm: En unik bildskatt från 1800-talet* (Stockholm: Stockholmia förlag, 2016), 12. This figure is based on calculations using the historical currency converter available at <http://historicalstatistics.org/Jamforelse pris.htm> (accessed February 17, 2019). See also Rodney Edvinsson and Johan Söderberg, "A Consumer Price Index for Sweden 1290–2008," *Review of Income and Wealth* 57, no. 2 (2011): 270–292.
17. Erika Piola and Jennifer Ambrose, "The First Fifty Years of Commercial Lithography in Philadelphia: An Overview of the Trade, 1828–1878," in *Philadelphia on Stone: Commercial Lithography in Philadelphia, 1828–1878* (University Park: Penn State Press, 2012), 32. The low status of coloring vis-à-vis the actual lithographic printing process is underlined by the fact, reported by Piola and Ambrose, that a formal training college for women printers in 1850s Philadelphia explicitly "forbade students to hand-color lithographs, declaring this a misuse of their education" (*ibid.*, 22).
18. Michelle Henning, *Photography: The Unfettered Image* (London: Routledge, 2018), 54.
19. Tom Gretton, "Signs for Labour-Value in Printed Pictures after the Photomechanical Revolution: Mainstream Changes and Extreme Cases around 1900," *Oxford Art Journal* 28, no. 3 (October 1, 2005): 371, <https://doi.org/10.1093/oxartj/kci033>.
20. The Engravers' Act was still in force after 1862 and appears to have been used in disputes between printers and photographers, according to McCauley, "Merely Mechanical," 71.

21. Ronan Deazley, "Commentary on the Engravers' Act (1735)," in *Primary Sources on Copyright (1450–1900)*, 2008, www.copyrighthistory.org.
22. Indeed, as Rose notes, the 1735 Engravers' Act is frequently called "Hogarth's Act." It seems clear that Hogarth, who was interested in protecting his income from the engravings made by himself or his own workshop of images that were his own design, used his position as an operator in the print trade to assert, by proxy as it were, his position as what we could now call a content provider for the same trade. See Mark Rose, "Technology and Copyright in 1735: The Engraver's Act," *The Information Society* 21, no. 1 (January 1, 2005): 64, <https://doi.org/10.1080/01972240590895928>.
23. Ronan Deazley, "Breaking the Mould? The Radical Nature of the Fine Arts Copyright Bill 1862," in *Privilege and Property: Essays on the History of Copyright*, ed. Ronan Deazley, Martin Kretschmer, and Lionel Bently (Cambridge: Open Book Publishers, 2010), 296–297.
24. Rose, "Technology and Copyright in 1735," 65. See also Lionel Bently, "Art and the Making of Modern Copyright Law," in *Dear Images: Art, Copyright and Culture*, ed. Daniel McClean and Karsten Schubert (London: Ridinghouse, 2002), 350 note llxxviii.
25. Robertson Blaine, *On the Laws of Artistic Copyright* (London: John Murray, 1853), 26; Deazley, "Breaking the Mould?," 297.
26. Deazley, "Breaking the Mould?," 319.
27. As Tom Gretton has observed, the fidelity with which lithography reproduced its originals also worked against the recognition of skill on the part of the printer: "The more successful the labour, the more easily the value it added could be transferred to the account of the authorial artist," as a lithograph "approximated a facsimile, rather than a transcription" of its original artwork. See Gretton, "Signs for Labour-Value in Printed Pictures," 374.
28. Bently, "Art and the Making of Modern Copyright Law."
29. Michel Foucault, "What Is an Author?" (1969), *Screen* 20 (1979): 20.
30. Foucault, 20.
31. The system of printing privileges and licenses that preceded what Mark Rose has called "the inauguration of modern copyright law," which took place in 1710 with the enactment of the Statute of Anne (8 Anne, c. 19), was precisely a system of censorship whereby the granters of licenses, such as the Stationers' Company in London, were tasked with upholding moral and legal standards. See Mark Rose, "The Public Sphere and the Emergence of Copyright: Areopagitica, the Stationers' Company, and the Statute of Anne," in *Privilege and Property: Essays on the History*

of *Copyright*, ed. Ronan Deazley, Martin Kretschmer, and Lionel Bently (Cambridge: Open Book Publishers, 2008), 67.

32. Hilary Evans, Mary Evans, and Andra Nelki, *The Picture Researcher's Handbook: An International Guide to Picture Sources—and How to Use Them* (New York: Scribner, 1974), 15.

33. Gretton, "Signs for Labour-Value in Printed Pictures," 373.

34. Gretton, 374.

35. Estelle Jussim, *Visual Communication and the Graphic Arts: Photographic Technologies in the Nineteenth Century* (New York: Bowker, 1974), 43.

36. Jussim, 44.

37. In this respect, and if readers will forgive a little anachronism, lithography refigured the attractions of both the "one-step" process of Polaroid photography and the "what you see is what you get" (WYSIWYG) principles of computerized word processing. Neither of these terms was of course accurate an description of the technical operations involved, but rather invented as marketing slogans to convey the simplicity and directness experienced by users. Inside the Polaroid camera, as Peter Buse reports, mechanism and chemistry performed several hundred steps beyond the ken of its operator. On "one-step photography," see Peter Buse, *The Camera Does the Rest: How Polaroid Changed Photography* (Chicago: University of Chicago Press, 2016), 10–12. On WYSIWYG, see Matthew Kirschenbaum, *Track Changes: A Literary History of Word Processing* (Cambridge, MA: Belknap Press, 2016), 3.

38. Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge, MA: MIT Press, 1999), 21.

39. Apart from one archive visit to the Mary Evans Picture Library, when I was able to consult the original copy (*sic!*) of the print held in its files, I have mainly been looking at this lithograph through an digitized online surrogate, switching between the modes of "immediacy" (looking past the screen to focus on the image) and "hypermediacy" (making use of sizing tools in the MIA web gallery application). See Bolter and Grusin, 31.

40. Batchen, *Burning with Desire*, 34.

41. Jussim, *Visual Communication and the Graphic Arts*, 44, 48.

42. Jussim, 50.

43. Steve Edwards, *The Making of English Photography: Allegories* (University Park: Pennsylvania State University Press, 2006), 33; Blaschke, *Banking on Images*, 9–10.

44. William Henry Fox Talbot, "A Brief Historical Sketch of the Invention of the Art," in *Classic Essays in Photography*, ed. Alan Trachtenberg (New Haven, CT: Leete's Island Books, 1980), 28.

45. Edwards, *Making of English Photography*, 43–44.
46. Edwards, 32. See also the account of Talbot's attempt at starting a mass-production business in France in the 1840s in Nancy Keeler, "Inventors and Entrepreneurs," *History of Photography* 26, no. 1 (March 1, 2002): 26–33, <https://doi.org/10.1080/03087298.2002.10443250>.
47. See, for instance, Elizabeth Anne McCauley, *Industrial Madness: Commercial Photography in Paris, 1848–1871* (New Haven, CT: Yale University Press, 1994); Roland Meyer, "Formatting Faces: Standards of Production, Networks of Circulation, and the Operationalization of the Photographic Portrait," in *Format Matters: Standards, Practices, and Politics in Media Cultures*, ed. Marek Jancovic, Axel Volmar, and Alexandra Schneider (Lüneburg: Meson Press, 2020), 147–166.
48. The classic account of Atget's case is Molly Nesbit, "What Was an Author?," *Yale French Studies*, no. 73 (1987): 229–257. For a similarly detailed discussion of Sarony, see Jane M. Gaines, *Contested Culture: The Image, the Voice, and the Law* (London: BFI, 1992), 42–83.
49. See, for instance, Ronan Deazley, "Struggling with Authority: The Photograph in British Legal History," *History of Photography* 27, no. 3 (September 1, 2003): 236–246, <https://doi.org/10.1080/03087298.2003.10441249>; Anne McCauley, "'Merely Mechanical': On the Origins of Photographic Copyright in France and Great Britain," *Art History* 31, no. 1 (2008): 57–78; Steve Edwards, "'Beard Patentee': Daguerre-type Property and Authorship," *Oxford Art Journal* 36, no. 3 (December 1, 2013): 369–394, <https://doi.org/10.1093/oxartj/kct030>.
50. See especially Steve Edwards, "Why Pictures? From Art History to Business History and Back Again," *History of Photography* 44, no. 1 (2020): 3–15, <https://doi.org/10.1080/03087298.2020.1827832>.
51. Blaschke, *Banking on Images*, 42.
52. The classic example is Baudelaire's concession of photography's uses as a "handmaiden to the arts." See Charles Baudelaire, "The Modern Public and Photography" (1859), in *Classic Essays on Photography*, ed. Alan Trachtenberg (New Haven, CT: Leete's Island Books, 1980), 83–89. On the role of graphic reproduction technologies in the dissemination of art, see especially Bann's discussion of "Reproducing Mona Lisa" in Bann, *Distinguished Images*, 21–46.
53. Stef van Gompel and P. Bernt Hugenholtz, "The Orphan Works Problem: The Copyright Conundrum of Digitizing Large-Scale Audiovisual Archives, and How to Solve It," *Popular Communication* 8, no. 1 (2010): 61–71, <https://doi.org/10.1080/15405700903502361>.
54. Harriet Bridgeman, "Specialist Commercial: The Cooper-Bridgeman Library," in *Picture Librarianship*, ed. Helen P. Harrison (London: Library Association, 1981), 437–442.

55. Bridgeman, 438.
56. Bridgeman, 438–440.
57. *Bridgeman Art Library, Ltd. v. Corel Corp.*, 25 F.Supp.2d 421 (S.D.N.Y. 1998). This account of the case relies especially on Simon Stokes, “Graves’ Case and Copyright in Photographs: *Bridgeman v. Corel (USA)*,” in *Dear Images: Art, Copyright and Culture*, ed. Daniel McClean and Karsten Schubert (London: Ridinghouse, 2002), 109–140, and Carla J. Shapreau, “Art, Internet, and US Copyright Law,” in *Dear Images: Art, Copyright and Culture*, ed. Daniel McClean and Karsten Schubert (London: Ridinghouse, 2002), 142–159. See also Nina Lager Vestberg, “Copyright between Commerce and Creativity: Art, Photography, and the Law,” *The Art Book* 15, no. 1 (2008): 58–59.
58. Bridgeman, “Specialist Commercial,” 439.
59. Geoffrey Crabb, “Copyright in Artistic Works,” in *Picture Librarianship*, ed. Helen P. Harrison (London: Library Association, 1981), 196.
60. Stokes, “Graves’ Case and Copyright in Photographs,” 117.
61. Stokes, 120.
62. Stokes, 117–118.
63. Vestberg, “Copyright between Commerce and Creativity,” 58.
64. Judge Kaplan cited in Stokes, “Graves’ Case and Copyright in Photographs,” 117.
65. Wolfgang Ernst, *Digital Memory and the Archive*, ed. Jussi Parikka, trans. Christopher Jenkin-Jones (Minneapolis: University of Minnesota Press, 2013), 98.
66. Wendy Hui Kyong Chun, *Updating to Remain the Same: Habitual New Media* (Cambridge, MA: MIT Press, 2016), 2.
67. Blaschke, *Banking on Images*, 166.
68. Howard Besser, “Imaging: Fine Arts,” *Journal of the American Society for Information Science* 42, no. 8 (1991): 594.
69. Geoffrey Batchen, “Photogenics,” in *Each Wild Idea* (Cambridge, MA: MIT Press, 2001), 154; Bill Gates, *The Road Ahead*, rev. ed. (New York: Penguin, 1996), 257.
70. Blaschke, *Banking on Images*, 167.
71. Blaschke, 168.
72. Blaschke, 166.
73. Siva Vaidhyanathan, *The Googlization of Everything (And Why We Should Worry)* (Berkeley: University of California Press, 2011), 183.
74. Anne Friedberg, *The Virtual Window: From Alberti to Microsoft* (Cambridge, MA: MIT Press, 2006), 226.

75. Sherry Turkle, *Alone Together: Why We Expect More from Technology and Less from Each Other* (New York: Basic Books, 2011), 279.

76. Andrew Dewdney and Frank Boyd, "Television, Computers, Technology and Cultural Form," in *The Photographic Image in Digital Culture*, ed. Martin Lister (London: Routledge, 1995), 155.

77. Nanna Bonde Thylstrup and Stina Teilmann, "Thumbnail Images: Uncertainties, Infrastructures and Search Engines," *Digital Creativity* 28, no. 4 (October 2, 2017): 279–296, <https://doi.org/10.1080/14626268.2017.1375961>.

78. See, for instance, McKenzie Wark, *A Hacker Manifesto* (Cambridge, MA: Harvard University Press, 2009).

79. Wark, 197.

80. Wark, 197.

81. For an astute discussion of the contemporary implications of the idea that information should be free, see Sean Cubitt, "Mass Image, Anthropocene Image, Image Commons," in *Photography Off the Scale: Technologies and Theories of the Mass Image*, ed. Jussi Parikka and Tomáš Dvořák (Edinburgh: Edinburgh University Press, 2021), 36.

82. G. Spratt, *The Connoisseur* (1830), published by G. Madeley, printed by C. Tilt. 22.23 × 15.24 cm. Accession no. P.17,459, Minneapolis Institute of Arts (The Minnich Collection, the Ethel Morrison Van Derlip Fund, 1966), <https://collections.artsimia.org/art/77469/the-connoisseur-g-spratt> (accessed May 13, 2020).

83. In June 2021, Bridgeman's reproduction fees for *The Connoisseur* ranged from GBP40 for personal use to GBP100 for reproduction in a book or magazine. Depending on the terms agreed between the museum and the platform, MIA should be entitled to at least 60 percent of the sum paid by clients upon download from Bridgeman Images. With over 4,000 items "for rent" in this way, the income from even a small number of transactions per item can make a difference to budgets in a publicly funded institution. Bridgeman Images, "The Connoisseur, 1830," accessed June 9, 2021, <https://www.bridgemanimages.com/en/asset/880581/>.

84. Bonhams, "Lot 106: SPRATT (GEORGE) The Antiquarian; China; The Conchologist; The Mineralogist; The Itinerant Apothecary; The Circulating Library; The Connoisseur; The Entomologist; The Grocer, C. Tilt, 1830 (9)," Bonhams, August 19, 2020, <https://www.bonhams.com/auctions/26014/lot/106/?category=list&length=265&page=1>.

CHAPTER 2

1. Oliver Wendell Holmes, "The Stereoscope and the Stereograph (1859)," in *Classic Essays on Photography*, ed. Alan Trachtenberg (New Haven, CT: Leete's Island Books, 1980), 81.

2. There are of course exceptions to this rule, however, even picture libraries maintained by public or nonprofit institutions such as museums, national libraries, and universities would often be expected to cover the costs of their services to clients through the charging of fees.

3. Estelle Blaschke, "From the Picture Archive to the Image Bank: Commercializing the Visual through Photography—the Bettmann Archive and Corbis," *Études Photographiques*, no. 24 (November 9, 2009), <http://journals.openedition.org/etudes-photographiques/3435>.

4. My use of "commodity form" is based on Tom Gretton's definition of it as a "material correlate of genre"—a novel may be consumed in the different commodity forms of "*roman-feuilleton*," "railway fiction," "the paperback," or, for that matter, airport fiction, e-book, audiobook, and other formats. The concept of commodity form thus overlaps with that of the format, with one important distinction: commodities, unlike formats, are primarily intended for consumption. See Tom Gretton, "The Pragmatics of Page Design in Nineteenth-Century General-Interest Weekly Illustrated News Magazines in London and Paris," *Art History* 33, no. 4 (September 2010): 682, <https://doi.org/10.1111/j.1467-8365.2010.00766.x>.

5. Paul Frosh, *The Image Factory: Consumer Culture, Photography and the Visual Content Industry* (Oxford: Berg, 2003), 35.

6. Frosh, 35. This account has been challenged by Diana Kamin, who has found all the hallmarks of a stock photography business in place by the end of the 1920s, in her case study of the US agency H. Armstrong Roberts. See Diana Kamin, "Picture-Work: On the Circulating Image Collection" (PhD diss., New York University, 2018), 244.

7. For an astute discussion of how the same discourse was articulated in different terms by two custodians of public (i.e., not-for-profit) picture collections in the United States during the same period, see Diana Kamin, "Mid-Century Visions, Programmed Affinities: The Enduring Challenges of Image Classification," *Journal of Visual Culture* 16, no. 3 (2017): 310–336.

8. Lisa Gitelman, *Paper Knowledge: Toward a Media History of Documents* (Durham, NC: Duke University Press, 2014), 56. Examples of relevant studies include Trebor Scholz, ed., *Digital Labor: The Internet as Playground and Factory* (New York: Routledge, 2013); Mar Hicks, *Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing* (Cambridge, MA: MIT Press, 2018); Sarah T. Roberts, *Behind the Screen: Content Moderation in the Shadows of Social Media* (New Haven, CT: Yale University Press, 2019).

9. This purpose is spelled out in the title of Hilary Evans's contribution to a 1981 volume on picture librarianship: Hilary Evans, "Exploitation," in *Picture Librarianship*, ed. Helen P. Harrison (London: Library Association, 1981), 171–191.

10. Andrew Ross, "The Ecology of Images," in *Visual Culture: Images and Interpretations*, ed. Norman Bryson, Michael Ann Holly, and Keith Moxey (Hanover, NH: University Press of New England, 1994), 335.
11. Jenny Tobias, "Re-Use Value," *Cabinet*, no. 22 (2006): 44–47.
12. J. Abbott Miller, "Pictures for Rent: From Stereoscope to Stereotype," in *Design Writing Research: Writing on Graphic Design*, ed. Ellen Lupton and J. Abbott Miller (London: Phaidon, 1999), 121–133.
13. Daniel F. Spulber, "Market Microstructure and Intermediation," *Journal of Economic Perspectives* 10, no. 3 (1996): 135.
14. Spulber, 136.
15. Estelle Blaschke, *Banking on Images: The Bettmann Archive and Corbis* (Leipzig: Spector Books, 2016), 135.
16. Blaschke, "From the Picture Archive to the Image Bank."
17. Blaschke, *Banking on Images*, 114.
18. Blaschke, "From the Picture Archive to the Image Bank"; Blaschke, *Banking on Images*, 120–124.
19. Quoted from Blaschke, *Banking on Images*, 131.
20. Otto L. Bettmann, *Bettmann the Picture Man* (Gainesville: University Press of Florida, 1992), 132.
21. Bettmann, 132, 135.
22. Blaschke, *Banking on Images*, 138. In the first edition of *The Picture Researcher's Handbook*, the *Bettmann Portable Archive* is described under the entry for the Bettmann Archive as "not exactly a catalogue, but a splendid sampler containing 3669 pictures, much entertainment, some wise and lucid thoughts on the picture business . . . , and a book which every researcher should have on the shelf." See Hilary Evans, Mary Evans, and Andra Nelki, *The Picture Researcher's Handbook: An International Guide to Picture Sources—and How to Use Them* (New York: Scribner, 1974), 95.
23. Blaschke, *Banking on Images*, 139.
24. Blaschke, "From the Picture Archive to the Image Bank."
25. Craig Robertson, *The Filing Cabinet: A Vertical History of Information* (Minneapolis: University of Minnesota Press, 2021), 101.
26. C. H. Gibbs-Smith, "The Hulton Picture Post Library," *Journal of Documentation* 6 (1950): 12–24. This journal began in 1945 as the scholarly publication of ASLIB,

the UK Association of Special Libraries and Information Bureaux, and since then it has published research, reviews, and think pieces on documentation, libraries, and information management of all kinds. To give an idea of its thematic coverage, in the five volumes preceding the one in which Gibbs-Smith published his article on picture libraries were articles on topics from fine art libraries and sound recording archives to microfilm and an exciting new image transmission device called the Ultrafax. On the history of ASLIB, which existed between 1924 and 2014, see David Bowden, "ASLIB: A De Facto National Library/Information Organization," *Alexandria* 26, no. 1 (April 1, 2016): 15–27, <https://doi.org/10.7227/ALX.0038>; Dave Muddiman, "A New History of ASLIB, 1924–1950," *Journal of Documentation* 61, no. 3 (June 1, 2005): 402–428, <https://doi.org/10.1108/00220410510598553>.

27. "Charles Harvard Gibbs-Smith: Noted Aeronautical Historian," *The Times*, December 7, 1981, sec. Obituaries.

28. Gibbs-Smith, "The Hulton Picture Post Library," 13, 12.

29. Gibbs-Smith, 12, 13, 13–14.

30. See, for instance, Evans, "Exploitation"; Helene E. Roberts, "A Picture Is Worth a Thousand Words: Art Indexing in Electronic Databases," *Journal of the American Society for Information Science and Technology* 52 (2001): 911–916; Kamin, "Mid-Century Visions, Programmed Affinities," 323–324.

31. Gibbs-Smith, "The Hulton Picture Post Library," 19.

32. Julia, interview with author, London, January 31, 2008. Julia was employed at the Hulton Picture Library in the 1970s, when it had been acquired by the BBC.

33. Gibbs-Smith, "The Hulton Picture Post Library," 14, 22.

34. Gibbs-Smith, 14, 15, 21.

35. Gibbs-Smith, 22.

36. Terry Cook and Joan M. Schwartz, "Archives, Records, and Power: From (Post-modern) Theory to (Archival) Performance," *Archival Science* 2, nos. 3–4 (2002): 173.

37. See, for instance, S. Muller, *Manual for the Arrangement and Description of Archives: Drawn up by Direction of the Netherlands Association of Archivists*, trans. Arthur H. Leavitt (New York: H. W. Wilson, 1940); Sir Hilary Jenkinson, *Manual of Archive Administration, Including the Problems of War Archives and Archive Making* (Oxford: Clarendon Press, 1922).

38. Terry Cook, "What Is Past Is Prologue: A History of Archival Ideas since 1898, and the Future Paradigm Shift," *Archivaria*, February 12, 1997, 21. See also Jane Birkin, "Describing the Archive: Preservation of Space, Time and Discontinuity in

Photographic Sequences," *Networking Knowledge: Journal of the MeCCSA Postgraduate Network* 9, no. 5 (July 5, 2016), <https://doi.org/10.31165/nk.2016.95.457>; Cook and Schwartz, "Archives, Records, and Power," 174.

39. Blaschke, *Banking on Images*, 112–113.

40. Costanza Caraffa, "From 'Photo Libraries' to 'Photo Archives': On the Epistemological Potential of Art-Historical Photo Collections," in *Photo Archives and the Photographic Memory of Art History* (Berlin: Deutscher Kunstverlag, 2011), 24.

41. Lanre Bakare, "Getty Uses Remote Working in Effort to Preserve Photo Archive," *The Guardian*, April 2, 2020, sec. Art and design, <https://www.theguardian.com/artanddesign/2020/apr/02/getty-uses-remote-working-effort-preserve-photo-archive>.

42. Gibbs-Smith, "The Hulton Picture Post Library," 15.

43. Bert Garai, *The Man from Keystone: Behind the Scenes of a Great Picture Agency, by the Man Who Scooped the World* (London: Frederick Muller, 1965), 23.

44. Garai, 24.

45. Garai, 57; Sarah McDonald, "In the Front Line," *Black & White*, no. 30 (February 2004): 94.

46. Garai, *Man from Keystone*, 16. Emphasis in the original.

47. Garai, 20.

48. For more on this topic, see Nadya Bair, "Never Alone: Photo Editing and Collaboration," in *Getting the Picture: The Visual Culture of the News*, ed. Jason E. Hill and Vanessa R. Schwartz (London: Bloomsbury Academic, 2015), 228–235.

49. The opposition between "fast" and "good" photographs was grounded in material differences between the respective distribution networks of so-called wire services, named for their privileged access to the wires and cables of early telecommunications, and agencies that relied on physical transportation methods by land or air. In the logic of the wire service, the best photograph of an event was the first photograph available of it. Regular agencies and freelance photographers, on the other hand, could not in the same way rely on the immediate "news" value of their images, and therefore tended to produce more in-depth coverage of unfolding events and ongoing situations. This often meant constructing a story in a sequence of aesthetically striking, that is, "good" images, which would ideally have a shelf-life (or rather file-life) of much more than one twenty-four-hour news cycle. See Zeynep Devrim Gürsel, *Image Brokers: Visualizing World News in the Age of Digital Circulation* (Oakland: University of California Press, 2016), 37–38, <http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1196937&site=ehost-live>.

50. Gibbs-Smith, "The Hulton Picture Post Library," 22.

51. Bair, "Never Alone," 228.
52. One appreciative reader has been identified as Romana Javitz, head of the Picture Collection at New York Public Library, who according to Diana Kamin "referred . . . often" to Gibbs-Smith's article. See Kamin, "Picture-Work," 62.
53. Gibbs-Smith, "The Hulton Picture Post Library," 12, 15. Emphasis added.
54. Robertson, *The Filing Cabinet*, xiii.
55. Julia, interview.
56. Michelle Henning, *Photography: The Unfettered Image* (London: Routledge, 2018), 54.
57. This was documented in a classic study published in 1904, which undertook to document the impact of women workers in this industry around the turn of the previous century. The study was performed by a group of labor movement activists—for the most part women, although they were led by Ramsay MacDonald, who was to become the first UK Labour Prime Minister. Reading the researchers' reports from interviews and observations across a range of workshops and factories, one is struck by the similarities between the rhetoric about women workers in the early years of the twentieth century and that about robots in the early years of the twenty-first: both are either coming to take jobs or have already taken them. See James Ramsay MacDonald, ed., *Women in the Printing Trades: A Sociological Study* (London: P. S. King & Son, 1904), http://www.gutenberg.org/ebooks/42275?msg=welcome_stranger.
58. Henning, *Photography: The Unfettered Image*, 54. Citing Sadie Plant, *Zeros + Ones: Digital Women + the New Technoculture* (London: Fourth Estate, 1997), 121. A compelling example from the field of literature is the children's author Astrid Lindgren (1907–2002), who famously composed her manuscripts in the Melin system shorthand acquired through her training as a secretary. See Jens Andersen, *Astrid Lindgren: The Woman behind Pippi Longstocking*, trans. Caroline Waight (New Haven, CT: Yale University Press, 2018).
59. Friedrich A. Kittler, *Discourse Networks 1800/1900*, trans. Michael Metteer and Chris Cullens (Stanford, CA: Stanford University Press, 1990), 352.
60. Matthew Kirschenbaum, *Track Changes: A Literary History of Word Processing* (Cambridge, MA: Belknap Press, 2016), 143–144.
61. Ruth Matthews, ed., *Who's Who in Photography* (London: Focal Press, 1951).
62. Helen Faye, "About the Picture Division," in Helen Faye, ed., *Picture Sources: An Introductory List* (New York: Special Libraries Association, 1959), vi, <http://hdl.handle.net/2027/mdp.39015015193850>.
63. Faye, v.

64. "Preface," in Faye, vi.

65. Faye, 20.

66. The back of the print was revealed to me by staff at the Hulton Archive only because I had made a research visit in which I expressed my scholarly interest in original captions and other analog metadata, and when I first sought to license this photograph for publication they kindly provided me with a scan of the verso as an additional service. My thanks to Sarah McDonald and Caroline Theakstone, who in this way demonstrated the abiding value of picture librarians as skilled and knowledgeable intermediaries.

67. For a longer discussion of provenance information gathered on the backs of photographs, including some originating from Keystone's Paris office, see Nina Lager Vestberg, "Archival Value: On Photography, Materiality and Indexicality," *Photographies* 1 (2008): 49–65; Nina Lager Vestberg, "Flytande fotografier—originalitet och upphovsrätt i det digitala arkivet," in *I bildarkivet. Om fotografi och digitaliseringens effekter*, ed. Anna Dahlgren and Pelle Snickars (Stockholm: Kungl. biblioteket, 2009).

68. Joanna Sassoon, "Photographic Materiality in the Age of Digital Reproduction," in *Photographs, Objects, Histories*, ed. Elizabeth Edwards and Janice Hart (London: Routledge, 2004), 186–202. See also Jasmine Burns, "The Aura of Materiality: Digital Surrogacy and the Preservation of Photographic Archives," *Art Documentation: Journal of the Art Libraries Society of North America* 36, no. 1 (April 14, 2017): 1–8, <https://doi.org/10.1086/691368>.

69. Miller, "Pictures for Rent," 122.

70. Luke Dodd, *The Lost Art of the Picture Library* (London: The Guardian and the Observer, 2008). See also Nina Lager Vestberg, "From the Filing Cabinet to the Internet: Digitising Photographic Libraries," in *Fotografie als Instrument und Medium der Kunstgeschichte*, ed. Costanza Caraffa (Berlin: Deutscher Kunstverlag, 2009), 129–144; Nina Lager Vestberg, "The Photographic Image in Digital Archives," in *The Photographic Image in Digital Culture*, 2nd ed., ed. Martin Lister (London: Routledge, 2013), 113–130.

71. Vestberg, "The Photographic Image in Digital Archives," 116.

72. Robertson, *The Filing Cabinet*, 25.

73. Robertson, *The Filing Cabinet*; Hicks, *Programmed Inequality*; Lilly Irani, "The Cultural Work of Microwork," *New Media & Society* 17, no. 5 (2015): 720–739, <https://doi.org/10.1177/1461444813511926>; Roberts, *Behind the Screen*.

74. Yanni Alexander Loukissas, *All Data Are Local: Thinking Critically in a Data-Driven Society* (Cambridge, MA: MIT Press, 2019), 67.

CHAPTER 3

1. Hilary Evans, Mary Evans, and Andra Nelki, *The Picture Researcher's Handbook. An International Guide to Picture Sources—and How to Use Them* (Newton Abbot: David & Charles, 1975).
2. Hilary Evans, Mary Evans, and Andra Nelki, *The Picture Researcher's Handbook: An International Guide to Picture Sources—and How to Use Them* (New York: Scribner, 1974), 3. I have been unable to establish why the US edition is dated 1974, when by all accounts the UK edition was the original one.
3. Jill Turner, "Love and Knowledge Builds Huge Collection," *Library Association Record* 78, no. 8 (1976): 362. This referred to the well-known series of eating and travel guides instigated in the United Kingdom in the late 1950s by Hungarian émigré Egon Ronay (1915–2010).
4. Peter Bazalgette, *Egon Ronay: The Man Who Taught Britain How to Eat* (London: Newbuz, 2011).
5. Evans et al., *The Picture Researcher's Handbook* (1975); Evans et al., *The Picture Researcher's Handbook* (1974); Hilary Evans, Mary Evans, and Andra Nelki, *The Picture Researcher's Handbook: An International Guide to Picture Sources, and How to Use Them* (Melbourne: Wren, 1975).
6. Harold Evans, *Pictures on a Page: Photojournalism, Graphics and Picture Editing* (London: Pimlico, 1997), 324. This widely read book on picture editing and photojournalism was first published in 1978. The mention of the handbook was most likely owing to the picture researcher Doris Bryen, who was credited with having given "assistance" to the section on "How to Find a Picture."
7. Evans et al., *The Picture Researcher's Handbook* (1974), 21.
8. "Research, n. 1," in *OED Online* (Oxford University Press), accessed May 21, 2020, <https://www.oed.com/view/Entry/163432>.
9. Marquard Smith, "Theses on the Philosophy of History: The Work of Research in the Age of Digital Searchability and Distributability," *Journal of Visual Culture* 12, no. 3 (December 1, 2013): 376, <https://doi.org/10.1177/1470412913507505>.
10. Smith, 376–377. Emphasis removed. The second part of this quote paraphrases the eleventh thesis from Karl Marx, "Theses on Feuerbach" (1845 [1888]), Marx/Engels Internet Archive, 2005, <https://www.marxists.org/archive/marx/works/1845/theses/theses.htm>.
11. Celeste Olalquiaga, "Dead Stock: The Researcher as Collector of Failed Goods," in *What Is Research in the Visual Arts? Obsession, Archive, Encounter*, ed. Michael Ann Holly and Marquard Smith (Williamstown, MA: Sterling and Francine Clark Art Institute, 2008), 43.

12. Michael Thompson, *Rubbish Theory: The Creation and Destruction of Value* (Oxford: Oxford University Press, 1979).
13. See Estelle Jussim, "The Research Uses of Visual Information," *Library Trends* 25, no. 4 (1977): 764; Laura McCann, "The Whole Story: News Agency Photographs in Newspaper Photo Morgue Collections," *The American Archivist* 80, no. 1 (2017): 163–188, <https://doi.org/10.17723/0360-9081.80.1.163>.
14. J. Abbott Miller, "Pictures for Rent: From Stereoscope to Stereotype," in *Design Writing Research: Writing on Graphic Design*, ed. Ellen Lupton and J. Abbott Miller (London: Phaidon, 1999), 121.
15. This account of the Mary Evans Picture Library draws on an interview with Tom Gillmor, Head of Content, at the picture library's premises in London in January 2019, as well as biographical details given on the MEPL website: "Mary Evans," Mary Evans Picture Library, 2019, <https://www.maryevans.com/about.php?pageName=about5>; "Hilary Evans," Mary Evans Picture Library, 2019, <https://www.maryevans.com/about.php?pageName=about6>.
16. Hilary Evans, "Exploitation," in *Picture Librarianship*, ed. Helen P. Harrison (London: Library Association, 1981), 171.
17. "Our History," Mary Evans Picture Library, 2014, <https://www.maryevans.com/about.php?pageName=about3>.
18. "Our History."
19. Hilary Evans, *Practical Picture Research: A Guide to Current Practice, Procedure, Techniques and Resources* (London: Blueprint, 1992), 112–113. This principle had been strengthened in the provisions of the Copyright Act 1988, when photographers were granted the same authorial status as artists, and the expiry date became linked to the year of the author's death, regardless of production or publication dates.
20. Anna Dahlgren, *Travelling Images: Looking across the Borderlands of Art, Media and Photography* (Manchester: Manchester University Press, 2018).
21. Thompson, *Rubbish Theory*, 8–9.
22. Thompson, 7. For a discussion of computer obsolescence in part relation to Thompson's rubbish theory, see Jonathan Sterne, "Out with the Trash: On the Future of New Media," in *Residual Media*, ed. Charles R. Acland (Minneapolis: University of Minnesota Press, 2007), 16–31.
23. Thompson, *Rubbish Theory*, 26.
24. Mary Evans Picture Library, *Fifty: 50 Pictures for Our 50th Birthday* (London: Mary Evans Picture Library, 2014), n.p.
25. Thompson, *Rubbish Theory*, 26.

26. Olalquiaga, "Dead Stock," 43.
27. Walter Benjamin, "Unpacking My Library," in *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (London: Pimlico, 1999), 63.
28. Benjamin, 65–66.
29. Pierre Bourdieu, *La distinction. Critique sociale du jugement* (Paris: Éditions de Minuit, 1979); Pierre Bourdieu, *Distinction: A Social Critique of the Judgement of Taste*, trans. Richard Nice (Cambridge, MA: Harvard University Press, 1984).
30. Thompson, *Rubbish Theory*, 46.
31. Mary Evans Picture Library, *Fifty*, n.p.
32. Thompson, *Rubbish Theory*, 27.
33. Thompson, 27.
34. Evans, "Exploitation," 190.
35. Around 1990 the picture library moved into its current premises at 59 Tranquil Vale, also in Blackheath, which is another conservation-grade building, a former parish hall built in the 1920s on a bombsite from World War I.
36. From this point on I will refer to specific editions of *Picture Researcher's Handbook* using numbered acronyms (e.g., *PRH1* for the first edition, *PRH5* for the fifth, etc.) while "the handbook" will be used when referring to the book on a general basis.
37. Evans et al., *The Picture Researcher's Handbook* (1974), 4.
38. Evans et al., 21.
39. The eight stages were specified as "Preparation," "Primary research," "Ordering material," "Visiting sources," "Receiving pictures," "Selection day," "Returning preliminary rejects," and "Returning used material" (*PRH1*, 22–24).
40. *PRH1*, 22.
41. *PRH1*, 22, 82.
42. *PRH1*, 4, original emphasis.
43. *PRH1*, 4, 32.
44. *PRH1*, 23.
45. *PRH1*, 24.
46. *PRH1*, 21.
47. *PRH1*, 21.
48. *PRH1*, 36.

49. Evans, "Exploitation," 171.
50. Benjamin, "Unpacking My Library," 68.
51. Wolfgang Ernst, *Digital Memory and the Archive*, ed. Jussi Parikka, trans. Christopher Jenkin-Jones (Minneapolis: University of Minnesota Press, 2013), 100.
52. *PRHI*, 83, 87, 112.
53. Yanni Alexander Loukissas, *All Data Are Local: Thinking Critically in a Data-Driven Society* (Cambridge, MA: MIT Press, 2019), 3.
54. Nina Lager Vestberg, "Index/Finger: Medium and Materiality in the Archives," in *The Archive as Project/Archiwum Jako Projekt* (Warszawa: Fundacja Archeologia Fotografii, 2011), 168.
55. Olalquiaga, "Dead Stock," 39.
56. Benjamin, "Unpacking My Library," 68.
57. Alan Bennett, "Baffled at a Bookcase," *London Review of Books*, July 28, 2011, 6, <https://www.lrb.co.uk/the-paper/v33/n15/alan-bennett/baffled-at-a-bookcase>.
58. Ernst, *Digital Memory and the Archive*, 60.
59. Jussi Parikka, "Archival Media Theory: An Introduction to Wolfgang Ernst's Media Archaeology," in Wolfgang Ernst, *Digital Memory and the Archive* (Minneapolis: University of Minnesota Press, 2013), 12–14.
60. Ernst, *Digital Memory and the Archive*, 68.
61. Parikka, "Archival Media Theory," 12.
62. Smith, "Theses on the Philosophy of History," 382.
63. Bill Gates, *The Road Ahead*, rev. ed. (New York: Penguin, 1996), 144.
64. Hilary Evans, *Picture Librarianship* (London: Clive Bingley, 1980), 13.
65. The sections on how to do picture research would be separated out from the directory and expanded into a separate volume, published first as *The Art of Picture Research* in 1979, and then slightly revised as *Practical Picture Research* in 1992.

CHAPTER 4

1. Hilary Evans and Mary Evans, *Picture Researcher's Handbook: An International Guide to Picture Sources and How to Use Them*, 5th ed. (London: Blueprint, 1992), n.p.
2. Evans and Evans, n.p.
3. Hilary Evans and Mary Evans, *Picture Researcher's Handbook: An International Guide to Picture Sources and How to Use Them*, 6th ed. (London: Routledge, 1996), n.p.

4. Hilary Evans and Mary Evans, *Picture Researcher's Handbook: An International Guide to Picture Sources and How to Use Them*, 7th ed. (London: Pira International, 2001), vi.
5. Hilary Evans, Mary Evans, and Andra Nelki, *The Picture Researcher's Handbook: An International Guide to Picture Sources—and How to Use Them* (New York: Scribner, 1974), 22–24.
6. Evans and Evans noted the adoption of “computer cataloguing” by a number of picture libraries in the third edition of the handbook; see Hilary Evans and Mary Evans, *Picture Researcher's Handbook: An International Guide to Picture Sources—and How to Use Them*, 3rd ed. (Wokingham: Van Nostrand Reinhold, 1986), viii. As for online access, historical statistics from the International Telecommunications Union (ITU) show that 11 percent of inhabitants in “developed countries” were “internet users” in 1997, and in total only 2 percent of the world's total population had internet access. By the year 2000 these numbers had risen to 31 percent in developed countries, 2 percent in developing countries, and 7 percent in the world as a whole. See ITU, “ICT Statistics,” July 15, 2008, <http://www.itu.int/ITU-D/ict/statistics/ict/>.
7. Evans and Evans, *Picture Researcher's Handbook* (1986), viii; Evans and Evans, *Picture Researcher's Handbook* (1992), n.p.
8. Jonathan Coopersmith, *Faxed: The Rise and Fall of the Fax Machine* (Baltimore, MD: Johns Hopkins University Press, 2015), 145.
9. Coopersmith, 146.
10. Coopersmith, 145–146.
11. Coopersmith, 162–163.
12. Coopersmith, 145–181.
13. Lisa Gitelman, *Paper Knowledge: Toward a Media History of Documents* (Durham, NC: Duke University Press, 2014), 84.
14. Gitelman, 110.
15. Peter Buse, “Polaroid into Digital: Technology, Cultural Form, and the Social Practices of Snapshot Photography,” *Continuum* 24, no. 2 (2010): 215–230, <https://doi.org/10.1080/10304310903363864>.
16. Evans and Evans, *Picture Researcher's Handbook* (1996), n.p.
17. Evans and Evans, n.p.
18. W. J. Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era* (Cambridge, MA: MIT Press, 1992).
19. Fred Ritchin, *In Our Own Image: The Coming Revolution in Photography: How Computer Technology Is Changing Our View of the World* (New York: Aperture, 1990), 5. See also Fred Ritchin, “The End of Photography as We Have Known It,” in *PhotoVideo*:

Photography in the Age of the Computer, ed. Paul Wombell (London: Rivers Oram Press, 1991), 8–15; Fred Ritchin, *After Photography* (New York: Norton, 2009).

20. Evans and Evans, *Picture Researcher's Handbook* (1996), n.p.

21. Rick, interview with author, London, January 16, 2008.

22. Craig Robertson, *The Filing Cabinet: A Vertical History of Information* (Minneapolis: University of Minnesota Press, 2021), 176.

23. P. G. B. Enser and C. G. McGregor, "Analysis of Visual Information Retrieval Queries," *British Library R & D Report* (London: British Library, 1993).

24. Enser and McGregor, 25.

25. Peter G. B. Enser, "Pictorial Information Retrieval," *Journal of Documentation* 51, no. 2 (1995): 150.

26. Warren Sack, *The Software Arts* (Cambridge, MA: MIT Press, 2019), 67.

27. Sack, 69.

28. Linda H. Armitage and Peter G. B. Enser, "Analysis of User Need in Image Archives," *Journal of Information Science* 23, no. 4 (August 1, 1997): 287, <https://doi.org/10.1177/016555159702300403>.

29. Peter Enser, "Visual Image Retrieval: Seeking the Alliance of Concept-Based and Content-Based Paradigms," *Journal of Information Science* 26, no. 4 (August 1, 2000): 206, <https://doi.org/10.1177/016555150002600401>.

30. The discussion of Poliakoff's drama builds on two earlier publications on this work. The description of plot and characters is largely drawn from Nina Lager Vestberg, "Index/Finger: Medium and Materiality in the Archives," in *The Archive as Project/Archiwum Jako Projekt* (Warszawa: Fundacja Archeologia Fotografii, 2011), 160–176. See also Nina Lager Vestberg, "Archival Value: On Photography, Materiality and Indexicality," *Photographies* 1 (2008): 49–65.

31. Robin Nelson, *State of Play: Contemporary "High-End" TV Drama* (Manchester: Manchester University Press, 2007), 44.

32. Robin Nelson, *Stephen Poliakoff on Stage and Screen* (London: Methuen Drama, 2011), 23.

33. "Shooting the Past (1999)," Stephen Poliakoff, accessed July 3, 2021, <http://www.stephenpoliakoff.com/shooting-the-past-1999>.

34. Review in the *Sunday Times*, quoted on the back of DVD cover: Stephen Poliakoff, *Shooting the Past* (BBC Worldwide, 2003).

35. Amy Holdsworth, "'Slow Television' and Stephen Poliakoff's Shooting the Past," *Journal of British Cinema & Television* 3, no. 1 (May 2006): 128, <https://doi.org>

/10.3366/JBCTV.2006.3.1.128. See also Vestberg, "Archival Value"; Christopher Hogg, "Re-Evaluating the Archive in Stephen Poliakoff's *Shooting the Past*," *Journal of British Cinema & Television* 6, no. 3 (November 2009): 437–451, <https://doi.org/10.3366/E1743452109001125>; Nelson, *State of Play*, 35–44; Nelson, *Stephen Poliakoff on Stage and Screen*, 23–30.

36. Sarah McDonald, conversation with the author, the Hulton Archive, London, November 7, 2007.

37. Poliakoff, *Shooting the Past* (2003).

38. Stephen Poliakoff, *Shooting the Past: A Screenplay* (London: Methuen, 1998), 4.

39. Nelson, *State of Play*, 27.

40. Poliakoff, *Shooting the Past* (1998), 118.

41. Poliakoff, 22.

42. Poliakoff, 26.

43. Poliakoff, 41.

44. Poliakoff, 82.

45. Michael Thompson, *Rubbish Theory: The Creation and Destruction of Value* (Oxford: Oxford University Press, 1979), 27.

46. Poliakoff, *Shooting the Past* (1998), 62.

47. Poliakoff, 62–63.

48. Poliakoff, 103.

49. Poliakoff, 135–136.

50. In the real-life picture industry of the late 1990s, meanwhile, an investment banker in the United Kingdom (Mark Getty) had recently purchased the Hulton Deutsch Collection in order to secure an inexhaustible supply of historical pictures for his online visual content platform, while a software magnate in the United States (Bill Gates) had acquired the Bettmann Archive with the intention of digitizing its entire collection.

51. Poliakoff, *Shooting the Past* (2003). Quote attributed to *Sunday Times* on DVD cover.

52. Enser, "Visual Image Retrieval," 200.

53. Evans and Evans, *Picture Researcher's Handbook* (2001), vi.

54. A. S. Tope and P. G. B. Enser, "Design and Implementation Factors in Electronic Image Retrieval Systems," Library and Information Commission Research Report (London: Resource: The Council for Museums, Libraries and Archives, 2000), 69.

55. Tope and Enser, 64.

56. On the history of computer graphic display, see Anne Friedberg, *The Virtual Window: From Alberti to Microsoft* (Cambridge, MA: MIT Press, 2006), 219–239; Jacob Gaboury, “The Random-Access Image: Memory and the History of the Computer Screen,” *Grey Room* 70 (Winter 2018): 24–53, https://doi.org/10.1162/GREY_a_00233.

57. Until this time, according to Enser, computer science researchers had been working on problems of image retrieval from the perspective of “computer, rather than human vision” in isolation from “the practitioner community” of picture researchers and librarians for whom computer-assisted visual search methods would theoretically be most relevant. See Enser, “Visual Image Retrieval,” 199–200.

CHAPTER 5

1. Hilary Evans and Mary Evans, *Picture Researcher's Handbook: An International Guide to Picture Sources and How to Use Them*, 7th ed. (London: Pira International, 2001), vii.

2. Evans and Evans, vi.

3. Julia, interview with author, London, January 31, 2008.

4. Marie-Louise, interview with author, London, January 22, 2008.

5. Hilary Evans and Mary Evans, *Picture Researcher's Handbook: An International Guide to Picture Sources and How to Use Them*, 8th ed. (Leatherhead: Pira International, 2006), vi.

6. Evans and Evans, vi.

7. Nick Srnicek, *Platform Capitalism* (Cambridge: Polity, 2017), 42.

8. Estelle Blaschke, *Banking on Images: The Bettmann Archive and Corbis* (Leipzig: Spector Books, 2016), 168. See also Paul Frosh, *The Image Factory: Consumer Culture, Photography and the Visual Content Industry* (Oxford: Berg, 2003), 193–195.

9. In 2016 Bill Gates sold Corbis to the Visual China Group, which immediately entrusted Getty Images with the worldwide management of the platform outside China. Soon after the Corbis platform was discontinued, and its contents have been merged alongside with Getty's numerous other brands on the same platform. See “Corbis Sold to Visual China Group—Absorbs into Getty Images,” *Photo Archive News* (blog), January 22, 2016, <https://photoarchivenews.com/news/corbis-sold-to-visual-china-group/>.

10. Evans and Evans, *Picture Researcher's Handbook* (2001), viii.

11. Evans and Evans, viii.

12. "Blood and Oil," *The Economist*, March 4, 2000, 97. All quotes to follow in this paragraph and the next are from this source.

13. Corbis Images acquired a similar range of picture sources over the same period, including the historical Bettmann Archive, as discussed in chapter 2, as well as two stock photo agencies, the French photojournalist agency Sygma, and the electronic licensing rights to a host of private and public picture collections. See Blaschke, *Banking on Images*, 168.

14. Hilary Evans and Mary Evans, *Picture Researcher's Handbook: An International Guide to Picture Sources and How to Use Them*, 6th ed. (London: Routledge, 1996), n.p.

15. Paul Frosh, "Beyond the Image Bank: Digital Commercial Photography," in *The Photographic Image in Digital Culture*, 2nd ed., ed. Martin Lister (London: Routledge, 2013), 135.

16. For more on the significance of keywords on the Getty Images platform, see Doireann Wallace, "Words as Keys to the Image Bank," in *Revisualizing Visual Culture*, ed. Chris Bailey and Hazel Gardiner (Farnham: Ashgate, 2010), 83–96; Nina Lager Vestberg, "The Photographic Image in Digital Archives," in *The Photographic Image in Digital Culture*, 2nd ed., ed. Martin Lister (London: Routledge, 2013), 113–130.

17. A. S. Tope and P. G. B. Enser, "Design and Implementation Factors in Electronic Image Retrieval Systems," Library and Information Commission Research Report (London: Resource: The Council for Museums, Libraries and Archives, 2000).

18. Tope and Enser, 66.

19. Tom Gillmor, Head of Content at Mary Evans Picture Library, conversation with author, London, January 17, 2019.

20. This confidence was testified by a whole subsection of the introduction to *PRH7*, where Evans and Evans rhetorically asked, "will the digitized image entirely replace the transparency?" before offering a range of possible reasons why it might not. See Evans and Evans, *Picture Researcher's Handbook* (2001), vi.

21. Evans and Evans, vii. Further quotes in this paragraph are from the same source.

22. This usage appears strikingly at odds with the terminology of artificial "intelligence" and "smart" devices that would become ubiquitous in the second decade of the twenty-first century.

23. Evans and Evans, *Picture Researcher's Handbook* (2006), vi.

24. Mary Evans Picture Library, "Mary Evans Picture Library . . . Closer to History," 2004, 3.

25. Mary Evans Picture Library, 48.

26. Lisa Gitelman, *Paper Knowledge: Toward a Media History of Documents* (Durham, NC: Duke University Press, 2014), 117.
27. Evans and Evans, *Picture Researcher's Handbook* (2006), vi.
28. Rick, interview with author, London, January 16, 2008.
29. Rick, interview.
30. Marie-Louise, interview.
31. Julia, interview.
32. Julia, interview.
33. Julia, interview.
34. Rick, interview.
35. Adam, interview with author, London, November 27, 2007.
36. Marie-Louise, interview.
37. Julia, interview.
38. Information on (now disbanded) Keystone classification category from Sarah McDonald, research visit to the Hulton Archive, London, November 7, 2007.
39. Terry Cook and Joan M. Schwartz, "Archives, Records, and Power: From (Post-modern) Theory to (Archival) Performance," *Archival Science* 2, nos. 3–4 (2002): 171–185.
40. Julia, interview.
41. Susi, interview with author, Oxford, February 1, 2008.
42. Peter Buse, *The Camera Does the Rest: How Polaroid Changed Photography* (Chicago: University of Chicago Press, 2016), 9–10.
43. Evans and Evans, *Picture Researcher's Handbook* (2001), vi.
44. As Hilary Evans once noted, any picture researcher should consider "working with pictures . . . a reward in itself." See Hilary Evans, *Practical Picture Research: A Guide to Current Practice, Procedure, Techniques and Resources* (London: Blueprint, 1992), 7.
45. Apparently, several other members of the Getty family also invested in the company, and *The Economist* duly noted that these "have done better since Getty Images floated in 1998 than they would have if they had left their money in oil," comparing the share prices of Getty Images with those of Texaco between 1998 and 2000.
46. As Cheryce Kramer has shown, the decisive difference, in Getty Images' case, was to combine investment and deployment of digital technologies with the advanced

intermediation techniques of the financial sector, manifested among other things in “tiered and complicated royalty arrangements” that could be likened to “carefully calculated instruments of risk management in an arena of financial investment.” See Cheryce Kramer, “Digital Beasts as Visual Esperanto: Getty Images and the Colonization of Sight,” in *Thinking with Animals: New Perspectives on Anthropomorphism*, ed. Lorraine Daston and Gregg Mitman (New York: Columbia University Press, 2005), 141.

47. Susi, interview.

48. Indeed, far from being replaced by a machine, Susi went on to set up her own business online as a combined picture researcher, footage researcher, shoot producer, and user-generated-content specialist.

49. The platformization of the music industry through both social media and streaming services, and its impact on the record company as a business model, is of course another parallel that could be drawn here.

CHAPTER 6

1. Florian Cramer, “What Is ‘Post-Digital’?,” in *Postdigital Aesthetics: Art, Computation and Design*, ed. David M. Berry and Michael Dieter (Basingstoke: Palgrave Macmillan, 2015), 24.

2. “Blood and Oil,” *The Economist*, March 4, 2000.

3. Beate Löffler and Tino Mager, “Minor Politics, Major Consequences: Epistemic Challenges of Metadata and the Contribution of Image Recognition,” *Digital Culture and Society* 6, no. 2 (2020): 225, <https://doi.org/10.14361/dcs-2020-0211>.

4. Jane Birkin, “Institutional Metadata and the Problem of Context,” *Digital Culture and Society* 6, no. 2 (2020): 23, <https://doi.org/10.14361/dcs-2020-203>.

5. Nanna Bonde Thylstrup, *The Politics of Mass Digitization* (Cambridge, MA: MIT Press, 2018), 3.

6. Lara Putnam, “The Transnational and the Text-Searchable: Digitized Sources and the Shadows They Cast,” *American Historical Review* 121, no. 2 (April 2016): 379, <https://doi.org/10.1093/ahr/121.2.377>.

7. According to computer game theorist Espen Aarseth, for instance, “we became postdigital” sometime in the early 2000s, or at least before 2006, when he declared to an audience of fellow researchers in digital culture that “we can all go home now” because “cyberculture . . . has been subsumed by mainstream culture.” See Espen Aarseth, “How We Became Postdigital: From Cyberstudies to Game Studies,” in *Critical Cyberculture Studies*, ed. David Silver and Adrienne Massanari (New York: New York University Press, 2006), 37. See also Cramer, “What Is ‘Post-Digital’?”

8. Putnam, "The Transnational and the Text-Searchable," 379.
9. Putnam, 378.
10. Putnam, 378–379.
11. Siva Vaidhyanathan, *The Googlization of Everything (And Why We Should Worry)* (Berkeley: University of California Press, 2011), 152.
12. Thylstrup, *The Politics of Mass Digitization*, 42.
13. Emma Rothschild, "The Future of History," in *Going Digital: Evolutionary and Revolutionary Aspects of Digitization*, ed. Karl Grandin (Stockholm: Center for History of Science, 2011), 289.
14. Hilary Evans, Mary Evans, and Andra Nelki, *The Picture Researcher's Handbook: An International Guide to Picture Sources—and How to Use Them* (New York: Scribner, 1974), 21.
15. André Malraux, *The Voices of Silence*, trans. Stuart Gilbert (London: Secker and Warburg, 1954), 13–128; Peter Geimer, "The Art of Resurrection: Malraux's *Musée Imaginaire*," in *Fotografie als Instrument und Medium der Kunstgeschichte*, ed. Costanza Caraffa (Berlin: Deutscher Kunstverlag, 2009), 77–89.
16. The concept of the long tail was launched by the editor of online bible *Wired* in 2004 to describe how e-commerce enabled businesses to reach more diverse audiences and thus make money from a wider selection of its products than just a few big sellers. In stock photography it formed the basis of an entire new business model, microstock, which enabled photo amateurs to sell their pictures at very low prices through online platforms. The original microstock platform, iStockphoto, was acquired by Getty Images in 2006 for USD50 million. See Chris Anderson, *The Long Tail: Why the Future of Business Is Selling Less of More*, rev. ed. (New York: Hachette Books, 2008); Matthew Stibbe, "All Contributions Welcome," *Director* 60, no. 4 (November 2006): 76–81.
17. Putnam, "The Transnational and the Text-Searchable," 395.
18. Löffler and Mager, "Minor Politics, Major Consequences," 225.
19. On the iconicity of the "Times Square kiss," see Robert Hariman and John Louis Lucaites, *No Caption Needed: Iconic Photographs, Public Culture, and Liberal Democracy* (Chicago: University of Chicago Press, 2007), 67–86. On the problematic aspects of the conditions under which this photograph was produced and specifically the lack of consent from the depicted woman, see Brooke L. Blower, "V-J Day, 1945, Times Square," in *The Familiar Made Strange: American Icons and Artifacts after the Transnational Turn*, ed. Brooke L. Blower and Mark Philip Bradley (Ithaca: Cornell University Press, 2015), 70–87.

20. Elizabeth Edwards and Janice Hart, "Introduction," in *Photographs, Objects, Histories: On the Materiality of Images*, ed. Elizabeth Edwards and Janice Hart (London: Routledge, 2004), 12.
21. J. Abbott Miller, "Pictures for Rent: From Stereoscope to Stereotype," in *Design Writing Research: Writing on Graphic Design*, ed. Ellen Lupton and J. Abbott Miller (London: Phaidon, 1999), 122.
22. Annabella Pollen, "Photography's Mise en Abyme: Metapictures of Scale in Repurposed Slide Libraries," in *Photography Off the Scale: Technologies and Theories of the Mass Image*, ed. Tomas Dvorak and Jussi Parikka (Edinburgh: Edinburgh University Press, 2021), 133.
23. See, for instance, the reproduction history of the *Mona Lisa* in Stephen Bann, *Distinguished Images: Prints in the Visual Economy of Nineteenth-Century France* (New Haven, CT: Yale University Press, 2013), 21–45.
24. Peter Walsh, "The Rise and Fall of the Post-Photographic Museum: Technology and the Transformation of Art," in *Theorizing Digital Cultural Heritage: A Critical Discourse*, ed. Fiona Cameron and Sarah Kenderdine (Cambridge, MA: MIT Press, 2007), 28. See also Donald Preziosi, *Rethinking Art History: Meditations on a Coy Science* (New Haven, CT: Yale University Press, 1989); Robert S. Nelson, "The Slide Lecture, or The Work of Art History in the Age of Mechanical Reproduction," *Critical Inquiry* 26 (2000): 414–434; Costanza Caraffa, *Fotografie als Instrument und Medium der Kunstgeschichte* (Berlin: Deutscher Kunstverlag, 2009); Costanza Caraffa, ed., *Photo Archives and the Photographic Memory of Art History* (Berlin: Deutscher Kunstverlag, 2011).
25. Ronald E. Day, *Indexing It All: The Subject in the Age of Documentation, Information, and Data* (Cambridge, MA: MIT Press, 2014), 9.
26. Elizabeth Edwards and Christopher Morton, "Between Art and Information: Towards a Collecting History of Photographs," in *Photographs, Museums, Collections: Between Art and Information*, ed. Elizabeth Edwards and Christopher Morton (London: Bloomsbury Academic, 2015), 3.
27. Edwards and Morton, 6–7.
28. Nelson, "The Slide Lecture," 422.
29. For an introduction to the tapestry in English, see Lasse Hodne, "From Centre to Periphery. The Propagation of the Virgo Virga Motif and the Case of the 12th Century Høylandet Tapestry," *Il capitale culturale. Studies on the Value of Cultural Heritage*, no. 10 (June 14, 2014): 23–41, <https://doi.org/10.13138/2039-2362/767>.
30. Hodne.
31. Edwards and Morton, "Between Art and Information," 13.

32. This information was shared informally by current-day employees of the University Museum in March 2020.

33. See, for instance, Edwards and Morton, "Between Art and Information," 7; Elizabeth Edwards and Sigrid Lien, "Museums and the Work of Photographs," in *Uncertain Images: Museums and the Work of Photographs*, ed. Elizabeth Edwards and Sigrid Lien (Farnham: Ashgate, 2014), 4–7; Georgina Born, "Public Museums, Museum Photography, and the Limits of Reflexivity," *Journal of Material Culture* 3, no. 2 (1998): 243.

34. For more on digitization projects linked to work-to-welfare schemes in Sweden and Norway, see Kajsa Hartig, "Digital Dilemmas: The Impact of Digital Tools on Photograph Collections," in *Uncertain Images: Museums and the Work of Photographs*, ed. Elizabeth Edwards and Sigrid Lien (Farnham: Ashgate, 2014), 223–241; Ole Marius Hylland, "Even Better Than the Real Thing? Digital Copies and Digital Museums in a Digital Cultural Policy," *Culture Unbound: Journal of Current Cultural Research* 9, no. 1 (September 1, 2017): 62–84, <https://doi.org/10.3384/cu.2000.1525.179162>.

35. Torkel Johansen et al., "Revita-Prosjektet 2006–2015. Sluttrapport" (Trondheim: NTNU Vitenskapsmuseet, 2017), 9–12, https://www.ntnu.no/documents/10476/1264113666/Komplett_Sluttrapport_REVITA.pdf/44983be5-3e97-4383-8046-806641d471a0.

36. Löffler and Mager, "Minor Politics, Major Consequences," 225. See also Jasmine Burns, "Visual Materials in the Archive: Determining and Maintaining Value in a Postmodern Climate," *VRA Bulletin* 41, no. 1, art. 5 (2015).

37. Löffler and Mager, "Minor Politics, Major Consequences," 225. See also Joanna Sassoon, "Photographic Materiality in the Age of Digital Reproduction," in *Photographs, Objects, Histories*, ed. Elizabeth Edwards and Janice Hart (London: Routledge, 2004), 186–202.

38. Löffler and Mager, "Minor Politics, Major Consequences," 226. For an especially illuminating discussion of mass digitization and digital authorship with reference to Google Books, see Kris Cohen, "Literally, Ourselves," *Critical Inquiry* 46, no. 1 (2019): 167–192.

39. Putnam, "The Transnational and the Text-Searchable," 400.

40. Born, "Public Museums, Museum Photography," 243.

41. Sean Cubitt, *The Practice of Light: A Genealogy of Visual Technologies from Prints to Pixels* (Cambridge, MA: MIT Press, 2014), 269.

42. Hodne, "From Centre to Periphery," 25.

43. Burns, "Visual Materials in the Archive."

44. As legal scholar Antoinette Rouvroy has noted, with regard to data mining and data profiling: "Knowledge is not produced *about* the world anymore, but *from*

the digital world. A kind of knowledge that is not tested-by or testing the world it describes and emanates from: algorithmic reality is formed inside the digital reality without any direct contact with the world it is aimed at representing." See Antoinette Rouvroy, "The End(s) of Critique: Data Behaviourism versus Due Process," in *Privacy, Due Process and the Computational Turn: The Philosophy of Law Meets the Philosophy of Technology*, ed. Mireille Hildebrandt and Katja de Vries (London: Routledge, 2013), 147.

45. Hilary Evans, "Exploitation," in *Picture Librarianship*, ed. Helen P. Harrison (London: Library Association, 1981), 187.

46. Edwards and Morton, "Between Art and Information," 3.

47. Lanre Bakare, "Getty Uses Remote Working in Effort to Preserve Photo Archive," *The Guardian*, April 2, 2020, sec. Art and Design, <https://www.theguardian.com/artanddesign/2020/apr/02/getty-uses-remote-working-effort-preserve-photo-archive>. Further quotes are from this source.

CONCLUSIONS AND IMPLICATIONS

1. "About Us," Shutterstock, <https://www.shutterstock.com/about> (accessed February 11, 2022).

2. "Stock Images, Photos, Vectors, Video, and Music," Shutterstock, <https://www.shutterstock.com/> (accessed February 11, 2022).

3. "Sell Photos, Footage Clips, Illustrations & Vectors," Shutterstock, <http://submit.shutterstock.com/> (accessed February 11, 2022).

4. Nick Srnicek, *Platform Capitalism* (Cambridge: Polity, 2017), 76.

5. As Srnicek quotes Marx: "piece-wage is the form of wages most in harmony with the capitalist mode of production." Karl Marx, *Capital: A Critique of Political Economy*, vol. 1, trans. Ben Fowkes (London: Penguin, 1990), 697–698, quoted in Srnicek, 76.

6. Paul Frosh, "Beyond the Image Bank: Digital Commercial Photography," in *The Photographic Image in Digital Culture*, 2nd ed., ed. Martin Lister (London: Routledge, 2013), 138.

7. Sean Cubitt, *The Practice of Light: A Genealogy of Visual Technologies from Prints to Pixels* (Cambridge, MA: MIT Press, 2014), 269.

8. Beate Löffler and Tino Mager, "Minor Politics, Major Consequences: Epistemic Challenges of Metadata and the Contribution of Image Recognition," *Digital Culture and Society* 6, no. 2 (2020): 226, <https://doi.org/10.14361/dcs-2020-0211>.

9. Emma Rothschild, "The Future of History," in *Going Digital: Evolutionary and Revolutionary Aspects of Digitization*, ed. Karl Grandin (Stockholm: Center for History of Science, 2011), 282.

10. Estelle Jussim, "The Research Uses of Visual Information," *Library Trends* 25, no. 4 (1977): 764. Jussim (1927–2004) prefigured the digital humanities approach to picture-based research by a couple of decades in this article, presciently advocating for the establishment of large-scale research collections of "visual information" to support emerging forms of inquiry that required "sufficient quantity of information to permit generalizations [and] the verification of hypotheses about the nature of various phenomena" (765). She also envisaged a time when "the artist, designer, and scientist can sit down at computer terminals providing some type of access directly to visual elements" (773).

11. Lara Putnam, "The Transnational and the Text-Searchable: Digitized Sources and the Shadows They Cast," *American Historical Review* 121, no. 2 (April 2016): 377, <https://doi.org/10.1093/ahr/121.2.377>.

12. Sarah T. Roberts, *Behind the Screen: Content Moderation in the Shadows of Social Media* (New Haven, CT: Yale University Press, 2019), 1, 3.

13. Roberts, 209.

14. Sean Cubitt, "Mass Image, Anthropocene Image, Image Commons," in *Photography Off the Scale: Technologies and Theories of the Mass Image*, ed. Jussi Parikka and Tomáš Dvořák (Edinburgh: Edinburgh University Press, 2021), 37.

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