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The Darkroom

CHEMICAL CULTURAL INDUSTRIAL

Guest Editor
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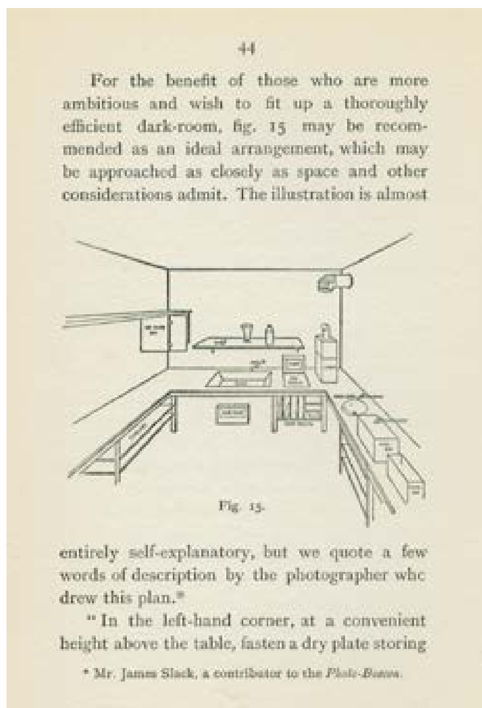
From the Editor
Locating the Darkroom

The darkroom is everywhere behind the histories of analogue photographic image-making. From stifling mid-nineteenth century portable tents to modern-day adequately aired and temperature-controlled rooms, the need to construct a space to protect light-sensitive photographic materials has always been a fundamental requirement to make photographs. The history of the photographic darkroom, however, is not simply a story of how innovations in science and technology have led us to a more comfortable environment for photographic production. As the configuration of the darkroom has changed, so has its relationship to the external physical environment, the social profile of the operators expected to work in this space, and the meanings and values allocated to the acts of developing and printing images. The common denominator in these photographic darkrooms is the presence of an outside which enters this darkened enclosure as a latent image and, through the agency of the darkroom operator, exits it as a visible photo-object. Each photographic process calls forth a specific human intervention that enacts this transmutation but, as we will see, this also contains a slippage from the technical gaze to the potential to provoke remembered or imagined experiences of the world.


44

For the benefit of those who are more ambitious and wish to fit up a thoroughly efficient dark-room, fig. 15 may be recommended as an ideal arrangement, which may be approached as closely as space and other considerations admit. The illustration is almost

Fig. 15.

entirely self-explanatory, but we quote a few words of description by the photographer who drew this plan.*

"In the left-hand corner, at a convenient height above the table, fasten a dry plate storing

* Mr. James Slack, a contributor to the *Photo-Bazaar*.

fig. 1
James Slack, illustration of a 'thoroughly efficient dark-room', reproduced in: Percy Lund (ed.), *Photography for Novices: The Primus Handbook,* London 1902, 44. Author's collection.

The porous space of the darkroom, then, has never been a neutral container for photographic production, nor has usually been the sanitised and orderly space that many of its representations have sought to convey (__fig. 1). Studies of two similar spaces of production – the scientific laboratory and the artist's studio – have demonstrated that there is an important reciprocal influence between the architecture and dynamics of space, the production of knowledge, and the identity of those who operate within such space.[1] However, to date, and for reasons that will be explored later in this introduction, there has been limited scholarly research bringing theoretical and critical understandings of photography to bear on the relationship between the darkroom, the people who have worked within this space, and the products of their labour.

The Darkroom: Chemical, Cultural, Industrial is the first edited volume to explore the darkroom as a topic of analysis. Its aim is to examine the darkroom as a generative space, looking in particular at how its changing material constitutions, social settings, and the experiences that these factors enabled and constrained, impacted on the wider discipline of photography. In doing so, this special issue begins to unearth those histories of ecological transactions between people and their phys-

1 __ The secondary literature on the scientific laboratory and the artist's studio is large. See, for example, Daniel Buren and Thomas Repensek, 'The Function of the Studio', in: *October,* vol. 10, 1979, 51–58; Peter Louis Galison and Emily Ann Thompson, *The Architecture of Science,* London 1999; Mary Jane Jacob and Michelle Grabner (eds.), *The Studio Reader: On the Space of Artists,* Chicago 2010; Karin Knorr Cetina, 'The Couch, the Cathedral, and the Laboratory: On the Relationship between Experiment and Laboratory in Science', in: Andrew Pickering (ed.), *Science as Practice and Culture,* Chicago 1992, 113–138; Steven Shapin, 'The House of Experiment in Seventeenth-Century England', in: Isis, vol. 79, no. 3, September 1998, 373–404; Darren Wershler, Lori Emerson, and Jussi Parikka, *The Lab Book: Situated Practices in Media Studies,* Minneapolis 2022; and Ronnie L. Zakon, *The Artist and the Studio in the Eighteenth and Nineteenth Centuries,* Cleveland 1978.

ical and chemical environments, of labour, of class, gender, and racial inequalities, but also of collaboration, that subtend our global photographic heritage, and to start a critical conversation on the place that the darkroom has occupied in the wider history of photography.

What is a darkroom?

In the 1840s, the operations required for preparing photographic materials could take place in any 'darkened' or 'dark' ordinary room. For some of the wealthier amateur-experimenters,[2] this could be one's laboratory at home.[3] The concept of *darkroom* as a dedicated space for photographic production only really emerged with the wet collodion process, announced in 1851, which forced photographers to devise practical solutions for working on the sensitive plates in the moments immediately before and after their exposure. Charles A. Long's *Practical Photography on Glass and Paper* from 1859 opens with a chapter on "The Dark Room", "the room in which the various operations in the Photographic processes about to be described are conducted."[4]

Until the 1880s, the terms "dark-room" and "dark room" (with and without the hyphen) were used interchangeably to name the environment reserved specifically for preparing chemicals and for sensitising and developing plates. In the English-speaking world, this space was also known as "dark chamber", "developing room", "laboratory", "chemical room", "operating room" (in the 1870s, the meaning of "operating room" changed to refer primarily to the studio in which commercial photographers took the images) and, when in portable form, "dark tent" or "portable dark room/dark-room."

This was a very unpleasant environment: the handling of chemicals such as mercury, ammonia, and cyanide could be lethal or cause serious health problems, while the extremes of heat or cold in cramped and poorly lit and ventilated spaces made for appalling working conditions.[5] Because of the toxic chemicals used and their fumes, and the fact that printing relied primarily on daylight, this space was usually kept separate from the other areas of photographic production. In medium- to large-size photographic establishments, the photograph, on its journey from latent to printed image, moved from the dark-room through to the enlarging room, printing room, washing room, toning room, drying room, mounting room, retouching room, and so on.[6] Commercial photographic studios were obviously not the only places that necessitated a darkroom; the camera was quickly adopted in a wide range of contexts – scientific exploration, colonial government, police forces, hospitals, asylums, universities, newspapers, etc. – and the darkroom went with it. These historical darkrooms are photographic environments that we still know precious little about. Many of these spaces would have been set up by a professional photographer, and, as such, they would have reflected (or sought to reflect) the arrangements found in commercial photographic studios.[7]

This organisation of photographic spaces primarily functioned to protect photographic materials, not the people who were expected to perform skilled tasks in

2 — Grace Seiberling and Carolyn Bloore, *Amateurs, Photography, and the mid-Victorian Imagination,* Chicago 1986.
3 — For a description of the daguerreotype and calotype processes and the light conditions that each required in the different passages of preparation and development, see Robert Hunt, *Manual of Photography,* London 1852, 198. See also Michael Pritchard's article, pages 62–77.
4 — Charles A. Long, *Practical Photography on Glass and Paper,* London 1859, 7.
5 — Tanya Sheehan, 'A Matter of Public Health: Photographic Chemistry and the (Re)production of Healthy Bodies' in: Tanya Sheehan, *Doctored: The Medicine of Photography in Nineteenth-Century America,* University Park Pennsylvania 2011, 106–131. See also Jennifer Tucker's article, pages 16–31.
6 — See Kelley Wilder's article, pages 110–121, for an example of how this arrangement continued into the twentieth century.
7 — For a description of darkroom arrangements in some of the main photographic studios in England, Scotland, France, Belgium, Prussia, Bavaria, Austria, and Hungary in the 1880s, see H. Baden Pritchard, *The Photographic Studios of Europe,* London 1882.

challenging conditions. Holding plates, preparing and pouring solutions, or rocking the developing dish, for example, required a manual dexterity that determined the quality of the final negative or print. For this reason, expert darkroom technicians were often referred to as “practiced hands” or “old hands.”[8] The hand, however, still needed the support of the eyes, especially because it was through the appearance of the image that one knew whether the plate or a print had been properly developed or fixed. Working in the darkroom was a collaborative process between touch and vision, it was an experience that demanded a mastery of tactile and sensory skills, in other words, the acquisition of tacit knowledge. The whole body of the darkroom operator – not just the eyes – was, and to some extent still is, the medium through which darkroom manipulations occurred. This physical commitment (willing or otherwise) to photographic production is very important to consider when thinking about the darkroom because what our bodies can do when they use certain tools shapes our material world *and* our understanding of it.[9] The entanglement of darkroom-based material practices and embodied perceptions, however, has been largely unexplored.

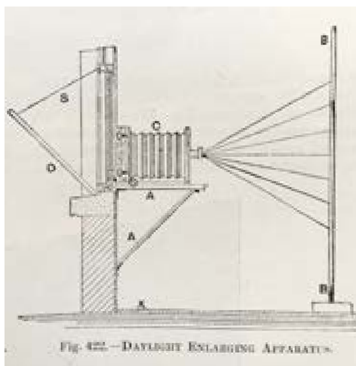


Fig. 422.—Daylight Enlarging Apparatus.

fig. 2
‘Fig. 422. Daylight Enlarging Apparatus’, reproduced in: Paul N. Hasluck, *The Book of Photography: Practical, Theoretical & Applied,* London 1907, 301. Author’s collection.

At the end of the nineteenth century, the development of photographic processes began to transform the essential components of this space, which acquired some of those distinctive features that are still with us today. The higher sensitivity of gelatine dry plates and later celluloid films forced darkroom operators accustomed to working under yellow light, which was commonly preferred because less strenuous on the eyes, to shift to red light. The source of this light also changed from candles, gas, and paraffin, which released dirty fumes during combustion, to the comparatively odourless, clean (at the point of use), and easier to control electricity. The development of negatives, up to that point done by observation, moved for the majority of practitioners to sealed tanks that could be operated in any space. Electric light eventually replaced daylight for printing and enlarging too. Up to this point, the former had been done by contact and the latter by locating a camera on the wall or window of a room and then projecting the negative onto sensitised paper secured to an easel (__fig. 2). Such horizontal enlargers could also employ oxyhydrogen and magnesium light or gas lamps as their illuminating agent, but the process was costly, not free from risks, and the preserve of commercial establishments. With electricity, the activities of printing and enlarging fused into the vertical enlarger similar to today’s models. This could be operated in any darkened room, and it became essential with the diffusion of smaller sized negatives.[10] Within the context of the growing photography industry, the preparation of sensitised materials moved from the basements and back rooms of cottage businesses to large scale laboratories.[11] And as ready-to-use chemical solutions were becoming more reliable, and the ability to control heating, lighting, water, and ventilation increased, people, not just sensitive photographic materials, could now inhabit this space without the serious risk to their wellbeing that had affected previous generations of darkroom workers.

These transformations brought more people to the darkroom, and brought the darkroom to new places. Dark tents had already signalled that a darkened environment could be set up almost anywhere, the only requirement being proximity

8 __ The Anglophone photographic press is full of such examples. For a discussion of the role of touch in Victorian photography, see Kate Flint, ‘The Photographer’s Hand’, in: Peter J. Capuano and Sue Zemka (eds.) *Victorian Hands: The Manual Turn in Nineteenth-Century Body Studies,* Columbus 2020.

9 __ See, for example, Lissa Roberts, ‘The Circulation of Knowledge in Early Modern Europe: Embodiment, Mobility, Learning and Knowing’, in: Ian Inkster (ed.) *History of Technology: Volume 31,* London 2012, 47–68; and Richard Sennett, *The Craftsman,* New Haven 2008.

10 __ See also Michael Pritchard’s article, pages 62–77.

11 __ See also Michelle Henning’s article, pages 48–61.

figs. 3a & b
Album prints, ca. 1900, approx. 6 × 8 cm, possibly Germany (one of bottles is labelled VORSIC, "Attention"). The presence of a developing dish, chemistry glassware and scale, plate holder, and the free-hanging lightbulb on the wall next to the suspended shelves suggests that this space would have been used as a darkroom. Image courtesy of Sebastian Riemer.

to a water supply. This capacity to occupy almost any space and to change its function, perhaps making the darkroom in itself a metonymy for the Western colonial project, was fraught with anxieties about the integrity of the body and of the photographic materials. As the relationship between chemical and physical phenomena inside and outside of the darkroom was better understood and managed, photographers' nervousness with being in this space slowly dissipated, and the darkroom made its way into the everyday life of more and more people. This is exemplified by the expanding presence of the darkroom in the home environment. The growing number of non-professional photographers made the best they could out of domestic-turned-photographic spaces as garden sheds, attics (__figs. 3a & b), kitchens, bathrooms, boudoirs, cellars, cupboards under the stairs, and living rooms (__fig. 4) were requisitioned for photographic work.[12] At the same time, camera clubs, photographic dealers, chemists, hotels, and cruise ships made space for darkrooms on their premises to cater for the growing number of tourists with cameras.[13] The term "darkroom", now contracted into one word, began to be used to describe the wider environment within which negatives were turned into positive images, a connotation that is still with us today.

Seeing in the darkroom

This brief overview of some of the main changing material conditions of the darkroom, then, indicates that, like other spaces of making, the darkroom is a conglomerate of people, techniques, apparatuses, infrastructures, and discourses that interact with each other. However, the photographic darkroom also creates the possibility for distinctive practices of observation that are unique to this space.[14] Indeed, as the previous section has shown, the words "dark-room" and then "darkroom" have historically been used to describe the space of the first encounter with the latent image in the *process of being made first visible, then permanent:* initially by developing and fixing the negative (in the "dark-room") and, once the inspection of the plate

12 __ There is a vast literature on setting up a darkroom in the home that flourished in the 1890s and continues to this day. For a selection from the English-speaking world, see John A. Hodges, 'The Dark-Room and its Fittings', in: *Elementary Photography,* London 1897; David Charles, *Home Photography,* London 1949; Mark B. Fineman, *The Home Darkroom,* Garden City N.Y. 1976; Ray Miller, *Building a Home Darkroom,* Rochester N.Y. 1994, c1981; Roger Hicks and Frances Schultz, *Darkroom Basics … and Beyond,* London 2003; and Konrad Eek, *Analog Photography: Setting Up a Home Darkroom,* Carpenteria CA 2015. See Uschi Klein's article in this special issue for a discussion of the home darkroom in Romania between the late 1970s and 1980s, pages 122–133.

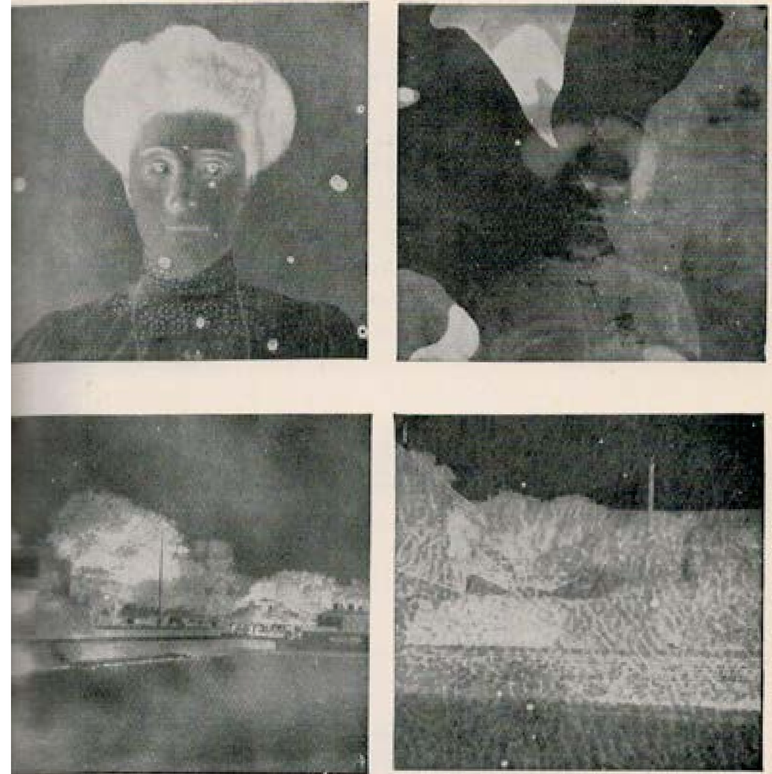
13 __ Sara Dominici, 'Darkroom Networks: Mundane Subversiveness for Photographic Autonomy, 1880s-1900s', in: *photographies,* 2021, vol. 14, no. 2, 265–286.

1 (a) "Shelves, shelves, and still more shelves."

1 (b) Curtains draw over the shelves and the room does not look unsightly.

2 (a) "Shelves wide and generous."

2 (b) Hidden with drapery.



[Photos reproduced by courtesy of the Imperial Dry Plate Co., Ltd.

FIG. 71a.—Faults in Negatives.

1. Negative covered with clear spots, due to air-bubbles attaching themselves to the film during development. 2. Marks on negative caused by the developer not covering the plate all over when first poured on. 3. Negative mottled by emanations from, or contact with, a metal sheath. 4. Negative mottled through dish not being rocked during development.

fig. 4
Carine Cadby, 'A Photographic Workroom', *Amateur Photographer,* 09 April 1903, 296–298, 297.
© British Library Board. Shelfmark: LOU.LON 692.

fig. 5
'Faults in Negatives', reproduced in: F. T. Beeson and A. Williams, *Amateur Photography,* London, not dated (around 1910s). Plate inserted between pages 136 and 137. Author's collection.

or film became unnecessary, by developing and fixing the print (in the "darkroom"). Through the camera, the world is collected and brought into this controlled environment as a latent image to be transmuted by the darkroom operator into a positive, authoritative, and rational visual object or, increasingly during the twentieth century, into the visual expression of individual experiences. Once this transmutation is considered to be complete, the world is released back into daylight into the form of a visible and chemically fixed image. This very particular encounter that the darkroom operator has with the world-as-image – or, more precisely, with the world as a soon-to-be-fixed image – has the potential to transform the relationship between the individual and its surroundings.[15]

The starting point for thinking about the darkroom in these terms is the obvious fact that the darkroom operator is not a neutral observer. Rather, they are an agent whose work in the darkroom is conditioned by their own situatedness and personal experiences, somebody who is thus unavoidably invited to scrutinise the outside world as represented in or evoked by the images processed in the darkroom, and in some instances also in the exposure record books that aided their development, *vis-à-vis* their own present. This makes the darkroom a place where photographs are

14 —— This applies primarily to black & white photography. Colour photography generally requires complete darkness; in the early twentieth century, however, Autochrome and Dufay plates were also developed "by means of a special safe light" in order to observe the "first appearance of the image." 'Direct Colour Photography,' in: *The "Wellcome" Photographic Exposure Record and Diary,* London 1915, 67–68. See also 'The Autochrome Process in a Nutshell,' in: *Photographic News,* 27 September 1907, 304.

15 —— For the darkroom as a quasi-magical space, see Junko Theresa Mikuriya's article, pages 32–47.

not simply produced but actively *productive*. "Critics," Patricia Hayes writes, "talk about the stuck temporalities induced by photographic images in history" but "[the darkroom] creates an even bigger temporal space, replete with many further mediations and 'shared perceptions,' both freezing time and expanding."[16] This creates the conditions to scrutinise both images and world anew. Working to turn a latent image into an apparent image on the negative, and then in printing into a positive image (in a conventional process), undermines the Western ocularcentrism that has historically projected photography as a rational and objective technology. In the darkroom, the photographer, or technician, is the first witness to the imperfections of the photograph as a record of external reality (__fig. 5); to its subordination to the actions of chemistry and physical elements (light, water, dust, air, as well as weather conditions, climate, seasons); to its limitations in speaking the language of its author unaided (techniques such as dodging, burning, toning, and cropping come to mind); and, more generally, to the negative's dependence on the operator themselves to become a scientific and/or aesthetic object for public consumption. The darkroom, as Pamila Gupta observes, is a "site of crossings where specific images happened, and were made to happen ... where important decisions are made by photographers and/or technicians."[17] Lily Cho similarly points to the fluidity of the developing and printing as an instability in the process, noting that "In this uncertain and perpetual calibration, the darkroom is a place of fleeting possibility and material agency."[18]

This process can also transport the mind of the darkroom operator back into the world by evoking memories, stimulating curiosity and fantasy, or triggering trauma. In the nineteenth century, the experience of the amateur photographers processing their own negatives and prints, for instance, was generally a positive one. A typical description is that written by American landscape photographer Clarence E. Woodman in 1880: "No one who has never worked with dry plates can know what a fascinating thing it is to watch the development of a dozen or so of plates taken, perhaps, months before, and to see coming slowly out the gradually strengthening traces of the beautiful spots one has visited; each plate suggesting some well-remembered scene, and reminding one of some pleasant incident of his trip. The hours pass by without being perceived."[19] For the scores of mostly unacknowledged technicians whose occupation was literally that of making visible others' views and experiences of the world, or who encountered upsetting images as part of their job, the time spent in the darkroom would not have passed as quickly. There are very few historical accounts written by this group, a point to which I return in the following section, but consider the words of a journalist who visited the darkrooms of a police department in Paris in 1880: "The official whose ghastly office it is to photograph the swollen and disfigured bodies which form so repulsive an exhibition at the Morgue must have nerves of iron, or in the gloomy recesses of the dark room he could not go on day after day developing hideous pictures, any one of which is enough to 'appal the guilty and make mad the free.'"[20] Moreover, different photographic processes would have stimulated minds differently. For example, with the wet collodion process, the site of ex-

16 __ Patricia Hayes, 'Santu Mofokeng, Photographs: "The Violence is in the Knowing"', in: *History and Theory: Studies in the Philosophy of History,* vol. 48, no. 4, 2009, 34–51, 36.
17 __ Pamila Gupta, 'Of Sky, Water and Skin: Photographs from a Zanzibari Darkroom', in: *Kronos,* vol. 46, no. 1, 2020, 266–280, 271. See also Geoffrey Batchen, *Negative/Positive: A History of Photography,* New York 2021.
18 __ Lily Cho, 'Darkroom Material: Race and the Chromogenic Print Process', in: *Postmodern Culture,* vol. 28, no. 2, 2018, n.p. On the fluidity of photography, see Kaja Silverman, *The Miracle of Analogy, or, The History of Photography. Part 1,* Stanford 2015; and Jeff Wall, 'Photography and Liquid Intelligence' in: Peter Galassi (ed.), *Jeff Wall: Selected Essays and Interviews,* New York 2007.
19 __ Clarence E. Woodman, 'Dry Plates', in: *Photographic Mosaics,* 1880, 126–129, 129.
20 __ 'Photography In and Out of the Studio', in: *Photographic News,* 28 May 1880, 253.

posure and that of development would have broadly overlapped, while dry plates and celluloid films put a spatial and temporal wedge between exposure, development, and printing that created expectations both in those waiting for the prints to be returned from the lab[21] and in those processing the negatives at home at a later stage.

Accounts from the twentieth century indicate that the darkroom had an impact on political formation and social and personal identity too.[22] For example, writing about South African printer Graham Goddard whose clients included members of the anti-apartheid Afrapix Collective, Hayes notes that "the crux of Goddard's excitement was getting to see *photographs otherwise never seen*. … many photographs that were seen outside South Africa were not seen inside the country, except perhaps in the darkroom."[23] Or consider photographer Sunil Gupta's reflections on the time spent in the darkroom following his HIV positive diagnosis in 1995: it was "a very transformative and healing process […] doing darkrooms is magic."[24] How different people, in different places, and at different times might have interpreted and then acted upon the recollections, ideas, questions, or concerns triggered in the processing of images, however, is still largely an open question.

These observations, then, suggest that while we are familiar with the relationship between photographs, memory, imagination, and identity,[25] perhaps the darkroom too participated in and informed practices of self-perception, as well as shaping social and political desires, through these distinctive encounters between people and images – images that made an impression on photographic materials as well as in the mind. This brings under new light the relationship between the photographic darkroom and the *camera obscura* (Latin for "dark room"), a visual device, the latter, often presented as a model for the photographic camera instead. In his influential interpretation of the camera obscura in the seventeenth and eighteenth centuries as "synonymous with the production of truth and with an observer positioned to see truthfully,"[26] Jonathan Crary showed that the subjective vision afforded by photographic technology makes such model of continuity untenable.[27] As Julie Park has convincingly argued, however, the camera obscura was "as much a space of wonder and imagination as an instrument of the orderly and rational," indeed, it could be "a medium for a sensorially and emotionally intensified experience of reality."[28] Therefore, the photographic darkroom is a descendant of the camera obscura as described by Park to the extent that it shares an akin ability to stimulate personal responses to external reality. Crucially, in the darkroom, the outside world is encountered as a latent-turned-visible image, thus, from the subject position of somebody whose agency transforms sense impressions into photographic records. Despite the vastly different material and social conditions that have shaped the many iterations of the darkroom, and which would need to be considered in any historical study, this space of photographic production affords an experience where the image of the outside world and the operator's own self reciprocally affect one another. We could thus think of the darkroom as a modern laboratory

21 ___ Annebella Pollen, *More than a Snapshot: A Visual History of Photo Wallets,* London 2023.
22 ___ See also Núria F. Rius' article, pages 94–109.
23 ___ Patricia Hayes, 'Photographic Publics and Photographic Desires in 1980s South Africa', in: *photographies,* vol. 10, no. 3, 2017, 303–327, 309. Original emphasis.
24 ___ Sunil Gupta, 'Being the Dark Room is Healing', in: *TateShots,* published on YouTube on 04.08.2017 and archived on UK Government Web Archive on 24.09.2019: <https://webarchive.nationalarchives.gov.uk/video/tate/doVmfYt0994> (10.12.2023).
25 ___ See, for example, Elizabeth Edwards, *Photographs and the Practice of History,* London 2022; Marianne Hirsch, *Family Frames: Photography, Narrative and Postmemory,* Cambridge Mass. 1997. For an overview of work in this area, see Gil Pasternack, (ed.) Handbook of *Photographic Studies,* London 2020.
26 ___ Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century,* Cambridge, Mass. 1990, 32.
27 ___ Crary 1990 (reference 26), 26.
28 ___ Julie Park, *My Dark Room: Spaces of the Inner Self in Eighteenth-Century England,* Chicago 2023, 24, 263.

of memory and the imagination, or even of trauma. A place of power, privilege, and hierarchy, but also a space that contains the potential, perhaps too often unrealised, to challenge dominant ideas, to turn imagination into *critical* imagination.

Researching the darkroom and its silences

The darkroom is difficult to research, especially when looking at the nineteenth century, for two main reasons. First, unrecognised and often exploited labour was not recorded because it was considered to be unworthy of notice or, even if implicitly, in order to support the idea of individual authorship (the photographer's). Second, the darkroom was often omitted from the historical record as a matter of course.[29] In the Anglophone world, which is the context I am most familiar with, the voices of those who worked in commercial darkroom settings, in particular, rarely come to us directly, their experiences normally mediated by the middle and upper classes, and their own fears and desires.[30] Consider the following examples:

"At one studio, in Paris, which we visited in summer," wrote the London-based *Photographic News* in 1877, "we once observed a negro-operator, working away in a smoking dark room in his shirt and trowsers [sic], and we consoled ourselves with the idea that he was probably better fitted to bear the stiflingly hot temperature than an European."[31] Such disturbing historical accounts, which bring together racialised bodies, oppressive heat, and exploited labour, say something about why, at this time, the art of photography was considered by some to be in the taking – not the developing and printing – of the image. As the commercial portrait studio photographer J.M. Appleton of Dayton, Ohio, commented in 1895, "I must emphasize the one point we must have indelibly fixed in our minds, viz., our picture *must be made under the light,* not in the laboratory or print-room."[32] Therefore, casting the work in the darkroom as ancillary to that of exposing the sensitised photographic material to daylight was in large part a judgment guided not by different properties intrinsic to the acts required to produce a photograph, but by a desire (consciously or otherwise) to diminish and disempower the contribution made by one group of people – the darkroom operators – to the ubiquity and celebration of one the most influential products of Western modernity.

With the progressive industrialisation of photography, the idea of the darkroom as the site of passive mechanical actions, and of the studio, or the field, as the place where active individual choices were made, was propelled further by the commercial imperative of creating an ever-bigger market for photographic products. The narrative pushed by camera and film manufacturers whose profits came from selling film rolls and developing & printing services is, in this respect, a fitting example.[33] In George Eastman's famous slogan "You press the button, we do the rest", "the rest" is shrugged off as a technical nuisance taken care of on behalf of customers, and this, as Cho neatly puts it, "diminished [the darkroom's] role as an agent in the production of the photographic image."[34] This diminished role – and the exploitative social and material conditions on which much of the photographic industry (as many other industries) was built – extended from the people to the space in which they

29 —— For an example of this, see Franziska Lampe's article, pages 78–93.
30 —— See Steve Edwards, *The Making of English Photography: Allegories,* University Park Pennsylvania 2006, 1–18.
31 —— 'Hot and Cold Dark Rooms', in: *Photographic News,* 20 July 1877, 337. The piece, unsigned, may have been written by the editor, George Wharton Simpson, or by the journal's French correspondent at the time, Ernest Lacan.
32 —— J.M. Appleton, 'Portrait Negatives', in: *Photographic Mosaics,* 1895, 156–164, 164. Original emphasis.
33 —— Peter Rockwell and Peter Knaack, *Out of the Darkroom: A Short History of the Photofinishing Industry,* London 2007.
34 —— Cho 2020 (reference 18), n.p.

worked, carrying into the twentieth century.[35] Remember, for instance, the strikes that took place at the Grunwick film-processing laboratory in north-west London in 1976-78, when a group of workers, predominantly migrant Indian women from East Africa, walked out over poor working conditions and pay.[36] "In the record-breaking heat of the British summer of 1976," Annebella Pollen writes, "holiday photographs proliferated like never before, but the snaps were processed in windowless buildings without air conditioning where overtime was compulsory."[37] The processed photographs, as Pollen shows, were returned to customers in colourful photo wallets that invisibilised darkroom labour, coating it with hegemonic social norms and associated photographic ideals (__fig. 6). Through these strategies, to be made unworthy of attention was also the space of the darkroom itself and its social construction; perhaps the reason why its complex role in the wider history of photography has been largely ignored for so long.

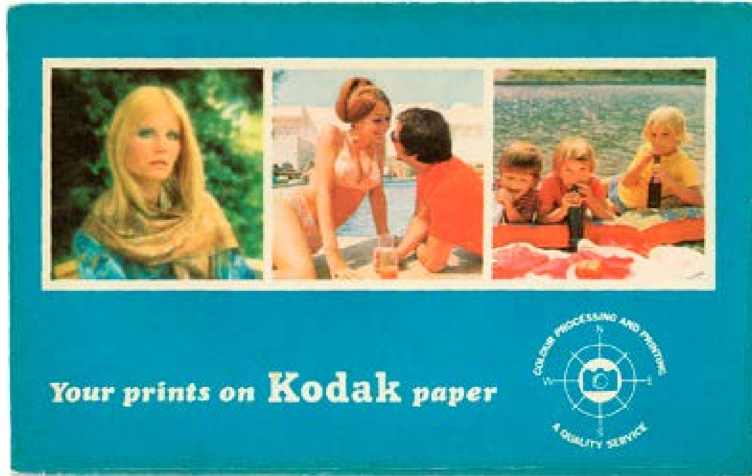


fig. 6
Photo wallet, ca. 1970s–1980s. Originally published in: Annebella Pollen, *More than a Snapshot: A Visual History of Photo Wallets,* London 2023, 93. Image courtesy of Four Corners Books.

This conceptualisation of the darkroom as a mechanical space that was engineered to realise a vision that expressed itself in the taking of the image collapsed the moment professional and amateur photographers alike broadened their understanding of photographic authorship to include darkroom manipulations. This happened the moment the space became less toxic to the body; no longer feeling the urge to rush out, practitioners started responding differently to the experience of inhabiting the darkroom and processing images. Indeed, it was in the realms of modern art and leisure life that the idea of the darkroom as a creative space for self-expression took root. Consequently, the great majority of historical accounts of being in the darkroom that have come to us are written by this group of practitioners.

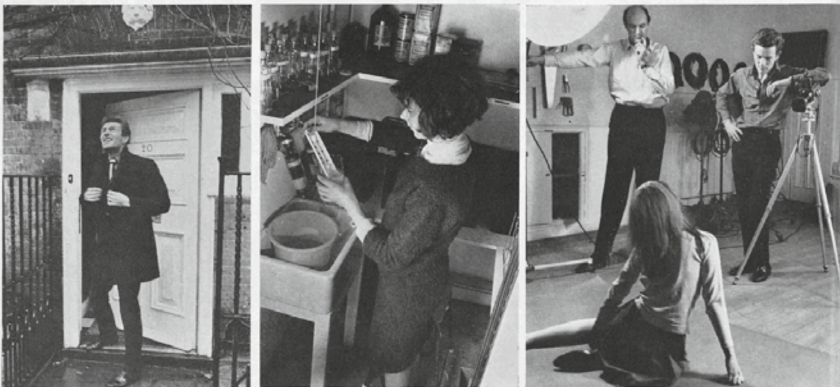
Following wider society's recognition of the idea of photography as a modern art form, initially promoted by well-known figures such as Alfred Stieglitz (1864–1946) and landmark exhibitions like *Film und Foto* in Stuttgart, Germany, in 1929, but only fully realised with the photo-boom of the 1970s and 1980s as part of a wider transformation within the arts,[38] the craft that goes into producing a print was fully accepted as the expression of one's artistic sensibility. This was something that amateur photographers had advocated since the 1890s. By the 1960s, the darkroom had broadly secured social status, as for example illustrated by the "Aristocrats in the Darkroom" feature published in the high-end magazine *London Life* in 1966 (__fig. 7). It is worth pausing here to reflect on how the different members of this photographic studio were represented. The point of view adopted to capture photographer and business-owner Lord Patrick Lichfield, his "studio and darkroom assistant" Lord Encombe, and the camera on the tripod, all gazing at the model sitting at their feet, Rory Davis, is symmetrically opposite to that adopted to photograph the "secretary" Lady Elizabeth Ramsay, who "apart from writing the letters, booking the models and

35 __ While this introduction focuses very specifically on the photographic darkroom, it is important to note that poor working conditions and the exploitation of human labour and natural resources were not issues restricted to the darkroom nor to the wider photography industry only. For a discussion of photography-workers, see Edwards (reference 30).

36 __ Andy Beckett, *When the Lights Went Out: Britain in the Seventies,* London 2010.

37 __ Pollen 2023 (reference 21), 86.

38 __ See, for example, Andy Grundberg, *How Photography Became Contemporary Art: Inside an Artistic Revolution from Pop to the Digital Age,* New Haven 2021; and Juliet Hacking, *Photography and the Art Market,* London 2018.



london life

Lord Lichfield outside his studio . . . Lady Elizabeth in the darkroom . . . Lichfield with Lord Encombe and model Rory Davis. Opposite: the product

Aristocrats in the darkroom

As any trendsetter will tell you, London's new aristocracy is made up of photographers and their models. Perhaps in an effort to maintain their inherited status, three aristocrats, old-style, have started a photographic studio: run by the Earl of Lichfield, assisted by Viscount Encombe, and with Lady Elizabeth Ramsay as secretary, the studio starts off with an unbeatable social edge.

Patrick Lichfield, 26, a cousin of the Queen, has been a keen photographer since he was at Harrow. After service with the Brigade, he overcame family opposition to join an advertising studio, and two years ago decided to risk starting his own. Viscount Encombe, 29, tried painting, documentary films and the importing of icons before deciding to join Lichfield as studio and darkroom assistant.

Lady Elizabeth Ramsay, 24, is the daughter of the Earl of Dalhousie, and had been a secretary before joining the studio. Apart from writing the letters, booking the models and keeping the books, she also develops all the films.

Just to round off the picture, the model being used the day we went to the studio was a former Deb of the year – 18-year-old Rory Davis. Her father is just a straightforward film director, but at least she doesn't let the side down too badly.

Tough, chunky, '66 people all: yet more proof that the British upper classes invented the philosophy which goes . . . if you can't beat them, steal the Whigs' clothes.

fig. 7
'Aristocrats in the Darkroom', *London Life,* 8 January 1966, 7. © Illustrated London News Ltd/Mary Evans.

fig. 8
Advert for Ilford's Ilfobrom paper, *Creative Camera,* August 1968, 412. Author's collection.

keeping the books … also develops all the films ."[39] This gendered division of labour harkens back to the nineteenth century when female labour, cheaper than male labour, was employed in photographic establishments in Britain and North America.[40] Ramsay's position in high society and family wealth put her in a very different socio-economic situation, but the article's mention that her clerical duties included developing films, while printing was presumably left to Lichfield and Encombe, shows how the value of darkroom labour was split along gender lines (or, as we saw above in the example of the Grunwick strike, along race and class lines).

In the second half of the twentieth century, the darkroom thus established itself as a locus where the individuals could process (both literally and metaphorically) their own memories (__fig. 8), give rein to their fantasies and desires (__fig. 9), and where negatives could become art-objects. This is for example illustrated by the Ilford Photographic Awards 1984, a competition "specially designed to recognise the individual and combined talents of both photographer and printer" (__fig. 10). In the introduction to *The Photographer's Cookbook,* a collection of recipes and food-related photographs assembled in the late 1970s but only published in 2016, curator Lisa Hostetler looks back to this pre-digital age as one in which darkroom manipulations were considered to be at the heart of creativity and self-expression. "Many amateur and professional photographers", she writes, "spent hours in the darkroom making and mixing chemicals to concoct variations (their own recipes, if you will) on standard photochemical procedures to suit their aesthetic impulses."[41] This goes some way towards explaining why, with the rise of digital photography and the al-

39 __ Aristocrats in the Darkroom', in: *London Life,* 08 January 1966, 7.
40 __ See, for example, 'Female Employment in Photography', in: *Photographic News,* 04 May 1888, 286; 'At Messrs. Valentine and Sons, Dundee', in: *Photographic News,* 13 November 1891, 778; Catherine Weed Barnes, 'Women Photographers', in: *Photographic Mosaics,* 1891, 117–112; and 'Editorial Chat', in: *Photographic News,* 05 July 1901. For a discussion of this period's changing social position of women, see Lucy Delap, 'The "Woman Question" and the Origins of Feminism', in: Gareth Stedman Jones and Gregory Claeys (eds.), *The Cambridge History of Nineteenth-Century Political Thought,* Cambridge 2011, 319–348.
41 __ Lisa Hostetler, *The Photographer's Cookbook,* Rochester N.Y. 2016, 10. The project was originally conceived and edited in 1977 by Deborah Barsel, assistant registrar at what was then known as the George Eastman Museum (today George Eastman House). There are several other instances in which darkroom practices have been compared to cooking. In the nineteenth century, 'cooking' was used to describe the preparation of emulsion. See, for example, John Matthews, 'Preparing Gelatine Plates', *Photographic News,* February 1880, 65. In the twentieth century, it was sometimes used to describe darkroom work more generally. See, for example, Stephen G. Anchell, *The Darkroom Cookbook,* Boston 1994.

most entire closure of commercial labs from the 2000s, the home darkroom has supported a resurgence of interest in film photography and historic photographic processes and, more recently, environmentally-friendly darkroom practices (e.g., The Sustainable Darkroom collective, founded in 2021), a testimony to the enduring fascination with creating photographic images.

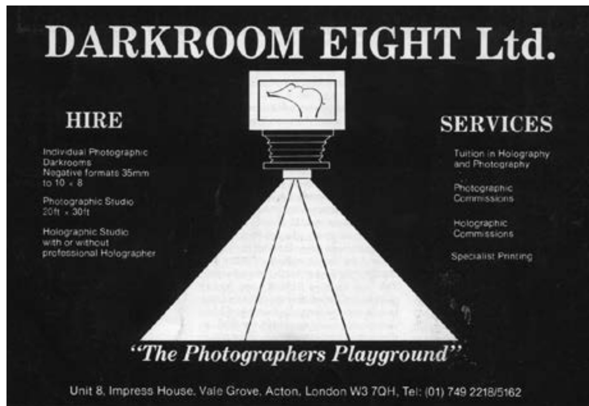


fig. 9
Advert for Darkroom Eight Ltd., *Creative Camera*, issue 11, 1987, n.p. Author's collection.

Researching the histories of the photographic darkroom, then, means considering not simply the relationship between photographic manipulations, the particularities of the physical space in which these occurred, and the resulting visual products, but, more fundamentally, their links with the class, race, and gender dynamics of darkroom labour; the devastating effects that darkroom chemicals had on the body of darkroom operators themselves and their immediate surroundings (think waste disposal and water pollution);[42] and the imagined and real worlds that, triggered by the image, inhabited the darkroom, and how these shaped people's social and material lives. This puts the darkroom at the intersection, as the title of this special issue proposes, of chemical, cultural, and industrial processes.

PhotoResearcher no. 41 originates in the international conference "In the Photographic Darkroom", which I convened at the University of Westminster (London) in June 2023.[43] Developing some of the conversations that were held there, it seeks to present a balanced collection of thematic and case-study perspectives. By applying a range of theoretical and methodological approaches to the study of the darkroom, the contributors to *The Darkroom: Chemical, Cultural, Industrial* historicise this space, exploring some of the different ways in which the darkroom has been used, the roles that it played in shaping photographic cultures, and its relationship to people, environments, and ideas.

The articles unfold in loosely chronological order, beginning with **Jennifer Tucker's** exploration of the chemical dangers that lurked in the darkroom in nineteenth century Britain, the attempts to regulate them, and how these shaped broader perceptions of photographic labour. As Tucker shows, some of these ideas left a legacy in our present. From the analysis of the relationship between darkroom chemicals and the body of the person using them, we move with **Junko Theresa Mikuriya** to consider how chemical manipulations could also influence the mind of the darkroom operator, in the case of her article, that of the French physician Hippolyte Baraduc (1850–1909). Mikuriya explores how the darkroom was, for Baraduc, a laboratory of scientific imagination, a locus for the encounter between the physical (photomechanical processes) and the metaphysical (cosmic vital forces made visible through photography).

Michelle Henning progresses the discussion by drawing attention to the relationship between the industrial darkroom and its environment from the late nineteenth century to the 1930s. Her article explores Ilford Limited's development of air conditioning; this sought to protect photographic materials from the damaging action of air pollution, but it simultaneously contributed to the degradation of the

42 —— For a discussion of the relationship between photographic production, resource extraction, and the histories of labour, capitalism, and environmental degradation, see Siobhan Angus, *Camera Geologica: An Elemental History of Photography,* Durham 2024 [forthcoming].

43 —— 'In the Photographic Darkroom' conference, University of Westminster London, 08 and 09 June 2023. <https://sites.google.com/my.westminster.ac.uk/darkroom/home?authuser=0> (16.12.2023). For a review of the event, see Alice Mercier, 'Darkroom Development: In the Photographic Darkroom Conference', in: *CREAM,* 09 October 2023. <https://cream.ac.uk/features/darkroom-development/> (16.12.2023).

fig. 10
Advert for the Ilford Photographic Awards 1984, *Creative Camera,* volume 233, May 1984, n.p. The image used for this advert credits both photographer Ken Lennox and printers Bill Graham and Brian Rance. Author's collection.

environment. **Michael Pritchard** then takes us to some of those who used the products of the growing photographic industry in Britain between the 1840s and the 1930s, the amateur photographers. Pritchard explores the material culture of the amateur darkroom, teasing out the unfolding relationship between darkroom technologies of personal use and photographic practice. Darkroom technology is also the focus of **Franziska Lampe's** article, which looks at the mobile darkrooms produced around 1900 by publishing houses such as the Munich-based Bruckmann to support the growing economy of photomechanical art reproductions. Through a close analysis of Bruckmann's archive, Lampe reconstructs the processes that made the reproduction of large-scale colour paintings possible, processes in which the mobile darkroom played a crucial role.

The subsequent articles explore the darkroom in particular social and political contexts of the twentieth century. **Núria F. Rius** takes up the analysis of the darkrooms set up within athenaeums and worker cooperatives in Barcelona between the 1900s and the 1930s. She explains how these "photographic laboratories," as they were generally called, gave working class photographers a space to nurture social relations, mutual assistance, and a shared visual language that rejected bourgeois images and practices. Then, **Kelley Wilder** examines the American Signal Corps darkroom operating in Paris during World War II in relation to the political and economic power that this space exerted. Her article shows that the representation of this space as professional and benign was key to promoting both American democracy and Kodak's interests. **Uschi Klein's** research explores how the home darkroom offered a material and social form of political resistance to those photographers who opposed the communist regime in Romania between the early 1970s and 1989. Developing photographs in the home gave photographers a sense of agency and, in turn, this contributed to shape their political identities.

The Darkroom: Chemical, Cultural, Industrial closes with a case study in the form of a conversation between **Lucy Rogers** and three members of the London-based collective **The Gate Darkroom, Carô Gervay, David Whiting,** and **Jonathan Blower.** These contemporary darkroom users share their experiences of and aspiration for the darkroom, and consider the financial and environmental challenges of practising analogue photography today. By inviting them to close this volume, I wish to maintain the importance of listening to the voices of photographic practitioners when researching photographic cultures. Indeed, undeterred by the rise of digital photography, the darkroom continues to attract interest. Moreover, while The Gate Darkroom's own experiences are obviously far from generalisable, they do remind us that, today as in the past, the darkroom produces more than photographic images.

Sara Dominici
London, April 2024