Dangers in the Dark

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The pages of 19th century photographic periodicals are littered with the tales of hardships and dangers endured by early photographers. Many did not endure – they were defeated or killed by their insatiable need for pictures.

Photographers fell off mountains and buildings while “stepping back” for a better view; they were attacked by brigands, scalped by Indians, pursued by robbers, and harassed by “heathens” of every colour in practically every country. They were charged by bulls, elephants, and rhinoceroses; mauled by lions and tigers; attacked by alligators and wild dogs. They were shipwrecked at sea and fought for survival in jungles, deserts and blizzards, and faced battles with armed and irate natives. They faced bullets, deadly snakes, swarms of insects, jealous husbands and angry customers. They resourcefully reset and splintered their own broken limbs while alone in the wilderness, and turned tragedy into vaudeville by confounding hostile natives with the ‘magic’ of photography. The above list could be endless and it is not a list of fictional possibilities; each case of hardship, tragedy or survival refers to a specific event in the life of a 19th century photographer.

In pursuit of pictures, photographers bravely and recklessly risked, and sometimes lost, their lives – and they did so with such frequency that the cumulative effect of their reports is to understand an aspect of early photography which is often missing from the history books. And this awareness is enhanced by the understanding that the photographic process itself was fraught with difficulties and hardships. It is one thing to be in peril and yet another to be so when encumbered by all the paraphernalia of the wet-plate process. For good reason, this can be called the Heroic Age of photography.

The dangers did not diminish with the relief of transporting the hard-won glass plates back to the photographer’s home base (in itself, no mean feat). The darkroom could be a deadly place even for those who never ventured outside the studio. And the dangers of processing and printing were all the more insidious for being unseen and often unrealised, until it was too late. A poison arrow from a band of attacking natives and a poison gas in the comfort of a private darkroom might have the same ultimate effect but there is a sense of injustice in the fact that danger exists in a personal space. At least the photographer-adventurer had confronted and accepted the risks (and it was these ricks which might have spurred his need to travel). A feeling of bewilderment suffuses many of the reports of death in the darkroom, particularly if the cause was sudden and unseen.

It is no exaggeration to state that 19th century photographers ran as many risks in the dark as they did in the act of finding and taking pictures. Practically every week the photographic press reported an accident or death of a photographer which occurred during his chemical manipulations. The student or historian, reading these journals page by page, cannot escape the strong impression that darkroom health hazards were rife and real. The dangers in the darkroom can be divided into two main categories: explosions and poisonings. It is worth examining each in turn, and looking at a few typical reports from the photographic press.

Explosions …

Photographers tended to create explosions with terrifying frequency, and with tragic consequences. In some cases the cause was accidental and unpredictable; more often than not, the explosion was caused by the photographer's ignorance of physics and chemistry.

A typical gas explosion occurred in the respected daguerreotype studio of Masury and Silsbee, Washington Street, Boston, in 1854. The photographers were experimenting with the idea of taking portraits by the artificial illumination of gas lights. This seemed a reasonable idea. The studio would be independent of sunlight and studio hours could be extended. At 9 pm one evening in March the gas exploded, or perhaps the flame ignited the fumes from the photographic chemicals. Exact details are wanting. The result, however, is known. The explosion blew out three of the windows in the back of the studio, severely damaged the front of the studio and caused considerable damage to a neighbouring building. "Considerable property was destroyed," reported the Boston Chronicle.*1* Masury suffered a broken leg; Silsbee lost an eye and "his head was terribly shattered." This is the earliest accident, yet found, caused by the introduction of gas for portrait lighting in the studio. Others would be reported at frequent intervals throughout the following decades.

Ether was commonly stored in photographers' darkrooms. When ignited by a naked flame the gas could be deadly. In 1858, a photographer called Courtais, from Bordeaux, was in his darkroom when a bottle of ether suddenly burst, and the fumes were ignited by a candle. In a short time he was "enveloped in flames." He rushed down the stairs before friends smothered the fire, but "he was … so horribly burned that he expired the next day."*2*

Ether fires continued to plague the photographer; the chemical was a major ingredient of the collodium process. As late as 1893, when the wet-plate had been largely superseded by dry emulsions, the Amateur Photographer reported that "ether is again the cause of a fatality."*3* A photographer in Bermondsey kept his bottle of ether on the top shelf of a cupboard in the sitting-room. He was sitting with his wife one evening when a slight hissing noise was heard. The wife went to investigate – and the bottle of ether exploded. The ether was ignited by a gas lamp and the wife was killed by the resulting flames.

The magazine suggested that photographers store volatile liquids in as cool a place as possible – a common plea by responsible writers for several decades, although the constant repetition seemed necessary in light of how often tragic accidents continued to occur. The editorial writer assumed the photographers would he working in a cramped, hot, airless dark room - with a cigarette or cigar in hand. His advice was to remove the chemical rather than ensure adequate ventilation or forego smoking!

Other accidents occurred through laziness and ignorance. Photographers made up solutions with hot water and immediately replaced the glass stopper in the bottle. On cooling the vacuum created in the bottle meant that it required drastic treatment – heating by a fire or tapping the bottle with a hammer – to release the stopper. The result could be unfortunate, even if the chemical itself was not particularly dangerous. For example, “a well known photographer in Liverpool” had trouble removing the stopper from a bottle of fixer. He placed it near a fire. After a while he picked up the bottle which immediately shattered, severely gashing his hand. The result was lockjaw. The photographer was in an “extremely critical state” for three weeks “enduring great agony.”*4*

Other explosions took place in the darkroom “because all photographers are not chemists, although they should be.”*5* This declaration was particularly valid in the 1860s and 1870s when most photographers manufactured their own processing chemicals, and attempted to recover the valuable silver from their used baths. This was usually achieved by boiling the solutions. Unfortunately explosive compounds are created by silver nitrate in the presence of other chemicals which could be, and were, added to the bath by the ignorant or unwary photographer. Some of these precipitates were so unstable that they could be detonated under water. These explosions occurred “not infrequently,” according to the Photographic Times of 1871, and “will blow up a whole factory, machinery and all.” In a paper *6* read before the Photographic Society, Paris, in that year the renowned chemist/photographer DaVanne not only spoke of the extremely dangerous practises of some photographers but also demonstrated the explosive potential of some of their results.

The danger of boiling silver baths was further increased with the practice of adding glycerine to the solution, which was meant to confer some technical advantages to the final image. This was a debatable point and was merely a matter of personal preference – until the silver bath containing the glycerine was boiled. The result was often the production of nitroglycerine, a fierce and unpredictable explosive. The danger was real enough for it to be a major topic of discussion at the 1874 Convention of the American Photographic Association.*7* Albert Southworth, of the famous Southworth and Hawes studio, was one of the few photographers who defended the addition of glycerine to the silver bath. He said that he “had seen it in constant use in a gallery where the average number of sitters was seventy daily, without any evil results.” The majority disagreed, stating that many of them were only present to warn of the dangers, because the mixture had caught fire before the explosive stage of the process.

The Photographic News reported the lucky escapes of the speakers and warned its readers: “The facts stated are sufficient, not simply to suggest caution, but to induce photographers to avoid, at any time, evaporating to dryness a bath containing glycerine,” because, “the smallest particle, when struck by a hammer, [produces] an explosion frightful in its consequences.”

A few years later *8* the same magazine had an occasion to report the death of John Mawson from a nitroglycerine explosion. John Mawson was a household name among photographers in Britain. He was one of the first to manufacture collodion in the early 1850s; he was an expert on the carbon process, invented by his brother-in-law Joseph Swan. He was also prominent in civic affairs as the Sheriff of Newcastle. Mawson was attempting to dispose of the nitroglycerine by pouring it down some pits in the town moor when the explosion took place. Five of his colleagues were literally blown to bits. Mawson was “terribly injured” and blind, “the eyes being destroyed.” He died a short time later.

There were many other dangers inherent in the wet-plate processing chemicals. The chemically ignorant photographer was often warned against mixing iodine and ammonia. Without proper safeguards (recommended by the Rev. J.B. Reade) the combination in a silver bath could produce an iodide of nitrogen “which is so explosive that if only touched with a feather when dry, it will immediately explode.”*9*

In spite of the constant warnings by chemists and editorial writers, photographers who were proud of the fact that they mixed their own solutions continued to play a chemical Russian-roulette in their darkrooms. Sometimes they lost.

The losers were generally those who knew just enough chemistry to prepare standard solutions from well-tried formulae but not enough to safely experiment with new processes. However, there was one highly dangerous ingredient in every photographer’s darkroom which was essential to the wet-plate process: collodion. Collodion was the “emulsion,” a sticky, honey-like substance which held the light-sensitive silver halides on the glass plate. Before each exposure was made, the photographer had to coat the prepared collodion onto a glass sheet and sensitise the viscous liquid by dipping the plate into a silver-nitrate bath. Coating and “exciting” the plate took place in the darkroom. Immediately after exposure in the camera, the plate was processed, again in the dark. All this sounds perfectly safe and straightforward. And so it was, for millions of glass plates. But occasionally the collodion caused trouble – mainly during manufacture. The reason was that collodion is made from explosive guncotton, dissolved in alcohol and ether.

As has been discussed, ether is very volatile and inflammable. A flame near the collodion bottle could ignite the ether and explode the guncotton. This was particularly likely if the collodion bottle was upset. The vapour of ether is very heavy (about two and a half times heavier than air) and tended to slowly drift towards the floor and towards a fireplace or furnace, used to heat the studio. The flame from the fire will run

along the vapour, like a trail of gunpowder, until it explodes the collodion. Oddly enough, photographic magazines would often give their readers step-by-step instructions in manufacturing guncotton for the preparation of collodion, boasting of the formulae's "highest explosive power."*10* The wise photographer bought his collodion ready-prepared from one of the reputable manufacturing chemists, such as Mawson and Swan.

The explosive power of guncotton is vividly illustrated by the following account from Humphrey's Journal in 1861. Leon Dornbach, the proprietor of a studio and a photographic chemist, was drying about 10 lbs. of guncotton in a large wooden box placed in a sand bath over a hot fire. Suddenly, the guncotton exploded:

*… the numerous denizens of the vicinity were startled by the report of a most fearful explosion. Crowds of people soon rushed into the building, where a scene of destruction met their astonished vision. Many of the large panes of glass in the front windows were blown clear across Canal Street. The three windows in the rear, where the laboratory is situated, were nearly demolished, and the whole of both sashes in the window farthest from the furnace, where the explosion took place, were blow into splinters. The glass partitions were all scattered into inch-pieces, and it is a great wonder that the building was not set on fire.*11

Dornbach, who was standing in the middle of the room, was unhurt. Two years later, Dornbach was involved in another guncotton explosion. The substance blew up while he was packing it into a cask with a wooden pole. This time Dornbach was killed. Many photographers were apt to forget, or were not always aware, that guncotton could be exploded by an electric spark or from friction. A major explosion, accompanied by the loss of several lives, at the factory of Messrs Prentice and Company in 1864 was thought to have been caused by a spark from nearby steel machinery.*12* The explosion was so severe that it occasioned a flurry of letters to The Times. A spark caused by friction was blamed for the accident to Osborn Prangley and Alexander Rawlinson in 1867.*13*

Rawlinson, a collodion manufacturer, was illustrating the explosive power of guncotton to Prangley. He rammed an ounce of guncotton into a length of iron pipe with a nail. The explosion shattered the pipe. Prangley's left hand and the thumb and two forefingers of his right hand were amputated. One can assume that Prangley was convinced.

If an ounce of guncotton could produce such damage, the effect of fifteen tons exploding can be imagined. This was the quantity which blew up at the manufacturing plant of Messrs Prentice in 1871. Between 20 and 30 people were killed and over 50 wounded.*14*

As the wet-plate or collodion process was replaced by the dry-plate process, so the reports of guncotton explosions diminished. By 1892, The Amateur Photographer could report:

During the old wet-plate days when quantities of collodion formed part of the stock-in-trade of every professional photographer, the fire insurance offices charged a very heavy premium in consequence of the increased risk, But since the introduction of dry plates these risks have been so reduced that one rarely hears of any accident from the use of collodion. 15

While it was true that the professional photographer rarely used collodion plates in the 1890s, the wet-plate process was still favoured in photo-mechanical printing plants, in the enamelling of prints and for lantern slide production. In these enterprises, collodion could still present major problems. During the same year that the above magazine could report that "one rarely hears of any accident from the use of collodion." An explosion at a photographic enamelling establishment in Paris killed four people and seriously injured two others. A sixteen-quart jar of collodion was knocked over, the liquid spilling across the floor and the ether igniting at a fire in an adjoining room.

Apart from these odd occurrences, the danger of collodion explosions was passing just as a new explosive entered the life of the photographer. That substance was flash powder.

Blitzlichtpulver – flashlight powder – was invented in Germany in 1887 by Adolf Miethe and Johannes Gaedicke. It was a highly explosive mixture of powdered magnesium, potassium chlorate and antimony sulphide. In this case the substance was intended to explode, producing a sudden flash of light on ignition by which the exposure could be made. Unfortunately it was capricious stuff – refusing to explode when it was required to do so, and readily exploding at inopportune moments. If the flashlight photographer was lucky he escaped with singed eyebrows and hand blisters. The more unfortunate users lost their fingers or their lives. Many of the early newspaper and press photographers have told countless anecdotes of the difficulties and dangers of attempting to ignite a pan of flashlight powder, especially when slightly damp. In those conditions the powder would become particularly difficult to control. It is ironic that such an explosive substance should become part of the photographer's stock in trade at exactly the same time that collodion was being replaced by a safer substance.

Typical of a flash powder accident was the death of amateur photographer E.H. Wilhelm of New York.*16* He arranged a group of friends for a photograph in his apartment. He ignited the powder and instead of a brilliant flash of light with very little sound, the mixture exploded violently, killing Wilhelm instantly. It seems likely that the powder was damp, even though he was using a commercially bought compound sealed in cartridges.

A far more dramatic explosion of flashlight powder, but without the fatality, occurred in Brooklyn a few years earlier.*17*

A photographer had attempted to photograph the Pulitzer Building at night by the light of flashlight powder. He had found a good vantage point – the roof of the neighbouring City Hall. After setting up his camera, and opening the shutter, he dropped a match into a large pile of flash powder. The explosion rocked the building to its foundation "and a three hundred pound coping stone went crashing down to the pavement below." Every window pane on one side of the Hall had been blown out and bricks from the roof showered across the street. The photographer and his assistants were flattened but unhurt. No one suffered any serious injury. Again, it seems likely that the damp night air had caused the powder to detonate rather than illuminate.

After the original blitzlichtpulver appeared on the market, photographers began making their own flash powder, often adding together dangerous chemicals without regard to, or knowledge of, the results. As always they often "expanded" the mixture to make it a more personal formula. Photographic editors warned against this practice and gave safety hints – "The only moderately safe way of dealing with explosive flash mixtures being to mix the finely powdered constituents on a sheet of paper, with a long strip of card as a spatula, and even then great care is required"*18* – but the experimentation continued. The photographic press began to report a disturbing number of tragic accidents. This one is typical:

*It appears that John E. Richardson, of Germantown Avenue, Philadelphia, was engaged in the preparation of a mixture Containing magnesium, picric acid, and potassium chlorate, for photographic light, and that while doing so the mass exploded, burning his face and hands and rupturing his left eye. As a result of these injuries he died a few days ago.*19

It was not only careless amateurs who suffered from the explosive potential of flash powder. Dealers and manufacturers found the chemical mixtures highly capricious. Less than two years after Richardson's death another explosion from flash powder occurred in the same city of Philadelphia, at the chemical manufacturing; plant of Wiley and Wallace, of North Seventh Street. The partners had manufactured a good deal of flash powder with various mixtures of potassium permanganate and potassium bichromate. They became nervous about having these explosive mixtures in the factory and decided to dispose of them. Wiley took some of the mixture and threw it down the sink. The explosion killed him instantly, along with two employees; two others were seriously injured. Anthony's Bulletin*20* added to their report:

The moral of all this means: Don't use magnesium mixtures with oxidising substances. Pure magnesium used in a flash lamp will give all the light necessary for any work of this kind, and is not explosive.

The magazine was referring to the practice of blowing a small pile of magnesium powder (unmixed with any other chemical) across an ignition flame. Magnesium burns brightly but does not have the instantaneous flash of the explosive mixtures. For time exposures the safest method of providing high intensity illumination was to burn a length of magnesium wire or ribbon. Of course, this method was only suitable for static subjects. When confronted with moving subjects in poor light, the photographer courted danger – and continued to use flash powders, until the introduction of flash bulbs.

Another major cause of explosions in the presence of photographers also involved the production of artificial illumination. This was the change from the old inefficient oil-lamps in lantern slide projectors to illumination provided by oxyhydrogen gas lamps. The gas cylinders tended to explode without warning, often causing an extraordinary amount of damage to property and people.

A typical case occurred on a Saturday night in Manchester in 1864. Samuel Crowther had been property-master at the Theatre Royal in that city for several years before becoming “a photographic artist.” But Mr Crowther also moonlighted. He manufactured oxyhydrogen gas in his own home for sale to the proprietors of exhibitions and to county theatres. On the Saturday night in question Crowther was making his gas watched by a two year old son, Arthur His wife was in the adjacent room: Suddenly a violent explosion rocked the house:

Mrs Crowther ran out of the shop, exclaiming, “Oh, my husband and my child!” The glass in the shop was broken, but the interior of the kitchen was a complete wreck. Partly buried in the ruins lay the lifeless body of Mr Crowther, the head battered, the legs broken, the clothes burning. The little boy was in a corner, frightfully injured, but yet alive. The fireplace was destroyed, a heap of debris covered the hearth; the front wall of the kitchen bulged outwards, and it afterwards fell into the yard. Mrs Crowther had been struck, and severely injured in the back, and she and the boy were taken to the infirmary. The child died soon after its admission. The mother was found to have received two deep lacerated wounds in the back. While these wounds were being sewn up, the poor woman was absolutely in the pains of labour, and within an hour or two, she gave birth to a girl. 21

This particular report was selected not only for its human drama but also its sequel. Crowther’s death was the catalyst for a full scale investigation of the causes of this and similar explosions. Photographers, chemists and engineers all contributed plausible causes of the accident. As it turned out most of their conclusions were wrong in this particular case. They did, however, offer in the course of their correspondences to the journals many useful hints for safer preparation of the gas for those who were determined to make their own oxyhydrogen gas at home. In the Crowther ease, the inquest reached a firm conclusion for the cause of the explosion and hence of his death: the manganese used in the preparation of the oxygen had been contaminated with lampblack, soot or powdered coal. Expert witnesses agreed that sooty substances were often added to manganese, which is black, by unscrupulous chemists attempting

to defraud their customers. It was “a common thing,” said H.E. Roscoe, professor of chemistry at Owen’s College and one of the investigators, but “most serious.” And “serious” was something of an understatement. The oxygen manufacturing process included the chemical potassium chlorate. When this is mixed with the carbon from the adulterated manganese, a substance not unlike gunpowder is formed “which explodes with a most frightful force.”

After the inquest a verdict of manslaughter was returned against a Mr Hughes, the chemist who supplied the soot-diluted manganese.

Explosions from the manufacture of oxygen and from the use of oxyhydrogen cylinders were particularly common in the latter part of the years due to the fact that the lantern slide show was a popular feature of Christmas festivities. These explosions occurred to the experienced as well as the ignorant photographer. Two of America’s most respected 19th century photographers were involved in such an accident in 1870. J.A. Black and J.L. Dunmore were setting up their equipment for a lantern slide exhibition in a Boston church when the explosion occurred. Both Black and Dunmore were thrown to the ground and stunned, but escaped with minor injuries. The organist was not so lucky – “a splinter was driven up his nostril and out the side of his nose.”*22* The organ itself was blown up and all the glass in the church was shattered. The cause of the explosion remained a mystery. One old lady in the congregation, “whose ancestors were probably Revolutionists,” expressed her theory rather freely. She thought “it was a signal gun, to notify the assemblage that the performance was about to commence.”

Another typical explosion had a more obvious cause. O.H. Willard was giving a lantern slide exhibition to a group of news boys in the Horticultural Hall, New York. The explosion blew out all the windows but no one was hurt, except one man “whose whiskers were singed off quite clear.”*23* The explosion, in this case, was caused by gross carelessness. The containers for oxygen and hydrogen were not clearly identified. As a result, when the containers were recharged during the intermission the wrong gas was added to each container, forming an explosive mixture in both.

For the remainder of the century, photographic journals frequently reported explosions at lantern slide exhibitions and entertainments. So many buildings were damaged that it is a wonder that the owners allowed the projections to take place. Churches were particularly hard hit because they often constituted the village meeting hall as well as a place of worship. Councillor Joseph Scattersgood was responsible for an explosion in the Methodist Church of Ilkeston in 1891. The entertainment seemed to be progressing nicely when without warning the equipment blew up “completely wrecking the interior of the church.”*24* One person, a youth of fifteen, was killed and a large number injured. By the turn of the century other alternatives to the bulky and dangerous oxyhydrogen gas were available for lantern projector illumination. Acetylene gas was popular, since it required only one container, but was also liable to explode. Acetylene explosions were the subjects of frequent news items in the photographic press and they ranged from “a lad named Walker” who was killed in Birmingham while making acetylene for

his projector in his home to a large scale destruction of a photographic establishment in China.*25*

By 1903, editorial writer could comment on the “fewness of such disasters” in comparison with five years earlier.*26* With the turn of the century the lack of explosions signalled one less hazard for the practising photographer.

Poisons …

Throughout the 19th century the photographic process demanded that photographers employed exceedingly dangerous chemicals. Poisonings were so frequent that rarely a week went by without a report of a death in the photographic press. Editorial writers and their expert correspondents incessantly implored their readers to be careful, to observe proper precautions, to understand probable results of inhaling, ingesting or simply handling their chemicals.

One of the most useful, if frightening, contributions was published in The British Journal of Photography in 1860.*27* “A Table of Antidotes to the Poisonous Bodies used in Photography (Drawn up from the Most Recent Medical Authorities)” by Samuel Highley, F.G.S., F.C.S., etc: Late Lecturer on Medical Mineralogy at the Saint George’s School of Medicine, Grosvenor Place, London.” Highley prefaces his table with the remark that “the list of deadly poisons employed in photography make (sic) a formidable array” and gives a few preventative tips, such as during the preparation of gun cotton care should be taken not to inhale the fumes.” He then advises his readers how to act in the case of poisoning. He lists 21 poisons with their symptoms and recommended treatment. What is frightening about the treatment is that a sense of hopelessness suffuses the remarks. “No antidote” is the sparse conclusion or try “an emetic of mustard in warm water.”

Highley was right to emphasise that “prevention is better than cure, particularly when no cure” was known. And editorial writers continued to stress the dangers and plead for precaution. Typical of these editorials was published in The Photographic News during the same year.

Perhaps there are few professions connected with the arts of peace, which involve the daily use of so many dangerous and destructive agents as photography. Corrosive acids, caustic alkalis, and deadly salts are its constant familiars. Whilst the dangers consequent upon the indiscriminate sale of poisons have been for some years past constantly impressed upon the public mind, and ingenuity has been taxed to the utmost to enact precautions, and provide bottles of different colours and shapes in which poisons should be vended, the photographer has been able to purchase, unchallenged, cyanide of potassium, bichloride of mercury, and other equally fatal agents sufficient to poison a colony.*28*

The frequent editorials warning photographers of the dangers of their chemicals had a predictable outcome. Photographers, especially latent hypochondriacs, became aware of symptoms and were able to blame them on their darkroom processes. Naturally, they wrote long letters to the magazines asking for advice. Typical is the letter*29* from "a sufferer" who listed the following symptoms: "Attacks of biliousness; spasms in the stomach; very acid stomach, and general indigestion." He complained that his life had been a misery for the past nine years: "ever since I began photography."

The editor recommended more exercise, regular eating habits, well-ventilated darkrooms and avoidance of taxing the nervous system.

This editorial on "Photography and Disease" in The Photographic News led to an unusually long series of correspondence. Evidently it had touched a highly sensitive spot in the lives of many photographers. The letters of complaints about symptoms and possible cures of illnesses continued in the journal from February to May 1868. These correspondence columns are well worth reading, giving a cumulative impression that, hypochondriacs apart, this was an issue which seriously concerned the professional photographer. Photography as an occupation was, and was known to be, an unhealthy pursuit. It is impossible to quote many of these letters at length but it is worth examining one example as being typical of the rest. The correspondent was J.M. Burgess, who was "well-known in the profession as a skilful photographer of much art and culture – and especially as the inventor of the eburneum process."*30* Burgess neatly summed up the problems of health hazards in the darkroom:

My own opinion is, that the ill effects cannot be attributed to any one chemical agency, but that they are the result of breathing for several hours every day an atmosphere contaminated with noxious fumes arising from the collodion, developer, and, in some cases cyanide, to which may probably be added, absorption of poisonous substances through the skin, when the system has been already debilitated from over work, both of mind and body.*31*

Burgess then referred to the editorial's mention of "overtaxing the nervous system." He felt convinced that photographers were particularly prone to stress arising out of their work – and the strain often resulted in severe physical symptoms:

There is a very great temptation to this in the case of any one who is very fond of the pursuit, and has also to make his living by it. He is never satisfied with the results he obtains; each improvement only makes him more anxious tor higher attainments; hence many hours are spent in though and experiment; and then, when rest is required, there is the work which must be done. The result is that exercise in fresh air is neglected, and work continued to unreasonable hours. Meanwhile, the excitement and pleasure afforded by the pursuit blind him to any symptoms of injury to the constitution until it is almost too late for recovery; too late, at least, for care and exercise alone to effect a cure. Indigestion, wind spasms, violent colic pains, extreme nervousness, and something like local paralysis are induced, until the sufferer is brought to such a state

of weakness as to be unable to digest any solid food. So violent at times is the pain, that the sufferer is convulsed, and symptoms not unlike poisoning by strychnine produced. The face assumes a leaden hue, the limbs become rigid, with the hands tightly clenched, and the back arched, so that the body rests on the back of the head and heels. But is it possible that this can in any way result from the practice of photography?

Burgess answers the question by declaring that his symptoms disappear if he takes a break from photography and has a few weeks holiday in the country, and he therefore concludes that there is a direct link between his illness and his work. This becomes all the more poignant in light of the fact that Burgess died less than five years later – at the age of 31.

A more facetious letter was signed "Hypochondriac" and he reiterated the symptoms of photography related illnesses, and added a new one – copious bleeding of the nose. This was due, he said, to "my face coming into somewhat rude contact with the hand of a vulgar boor, whom I endeavoured to eject from my angle of view, persuasion having failed."*32*

With this single exception all the letters in this series of correspondence took the matter of health hazards in the dark room exceedingly seriously. Most of the solutions were of the common-sense variety – better ventilated darkrooms, the use of tongs in dangerous chemical baths, walks in the fresh air, regular meals, frequent washing of the hands, and "to sponge daily with cold water the whole surface of the body" – but a few writers had more specific antidotes to noxious chemicals. A Dr Napias recommended that photographers drink lemonade or seltzer water "which tend to annihilate the effects of the ether fumes." On arriving home the photographer should down a glass of claret laced with quinine or drink sugar water to which is added a few drops of ammonia or vinegar.*33*

Approaching the problem of poisons from another direction, a Bill was introduced in the House of Lords at the end of this series of correspondence which attempted to restrict the retailing of dangerous substances to registered pharmaceutical chemists. All poisons had to be distinctly labelled. A list of chemicals was drawn up which constituted the poison substances covered by the Bill, most of which were commonly employed by photographers.*34*

During the 1860s and 1870s, there was a good deal of confusion about photographically related illnesses. No statistical evidence or empirical proof at that time could associate a specific disease with a particular photographic operation. Both Oscar Rejlander and T.R. Williams died from diabetes.*35* A photographic magazine seems to imply that photography may have contributed to their illnesses and deaths. As late as 1895 a photographic magazine noted that "the frequent appearance of diabetes among photographers is … remarkable."*36* Camille Silvy was dangerously sick at one point during his career due to cyanide absorbed through a small cut in his finger while

his hands were in the fixing bath. Thomas Sutton attributed “fits of deafness, followed with lethargic sleep”37 to the inhalation of ether fumes from the collodion process. Throughout the 1870s photographers continued to write long letters to the photographic press listing symptoms which they attributed to their photographic work, giving fellow photographers rules and regulations for healthy lives, and objecting to all the fuss about health hazards. J.H. Fitzgibbon boasted*38* that he had been in the business for 36 years, twenty of which were spent in the darkroom:

I suppose I have inhaled enough mercury to make a shining mirror for others to reflect from, and if it could be possible for a chemist to extract the chemicals and compounds that have made acquaintance with the interior of my darkroom, he might get enough ether, alcohol, cyanide, iodine, gold, silver, bichloride of mercury, bromides and chlorides, acids, and other chemicals of minor note, to open a small stock depot at a small cost.

Fitzgibbon challenged anyone to doubt his robust health, by setting in front of him “a plate of good old English roast beef, and a slice of plum pudding thrown in.”

In spite of Fitzgibbon’s assurances, the vast majority of 19th century photographers were understandably worried about the dangerous chemicals which they daily handled. The journals regularly listed photographic poisons and their suggested antidotes. The following are typical: “Photographic Poisons and Their Antidotes,” The Photographic News, 4 May 1877, pp. 207 208; “Poisonous Qualities of some Photographic Chemicals,” The Photographic Times, Vol. X. 1880, pp. 77-79; “Dangerous Photographic Chemicals,” The Amateur Photographer, 21 December 1908, pp. 605-606.

“It would seem,” said The Photographic Review of Reviews in 189539 “that the average dangers which the ordinary soldier has to encounter are not nearly so great as those which beset the photographer’s path. It is a wonder that any of us manage to live through it all …”

It is worth listing a few of these chemicals, in common use in 19th century photography, which presented such dangers in the darkroom.

During the early years of the medium, the daguerreotype process necessitated the fuming of the plate over heated mercury. And mercury vapour is a deadly poison. As far back as 1797 it was known that small traces of mercury, from, say, a broken thermometer, were enough to kill all the plants in a greenhouse. The problem was confounded drastically when daguerreotypists breathed the fumes of mercury placed over a spirit lamp. The photographic magazines attributed many cases of bad health among daguerreotypists to this essential practice. All they could recommend was that the darkroom was well ventilated. Even then, some photographers succumbed. Jeremiah Gurney, one of America’s foremost daguerreotypists, was close to death in 1852 due to the effects of mercury. “He has suffered the most acute pain, and been

unable to move his limbs; his legs and arms have been swollen to nearly double the ordinary size."*40* The magazine which reported Gurney's illness stated that this was the fourth case of this nature which it had known in the previous two years. Photographers were warned not to allow any mercury to spill on the floor as "many cases of bad health have been traced to the presence of small quantities of mercury in the cracks in the floor…"*41*

Even though mercury poisoning was the most likely cause of illness among daguerreotypists, the fumes of iodine and bromine were far from harmless. Even the copper plates on which the daguerreotype silver image was formed could be dangerous. In 1850 a photographer cut his hand while handling a copper plate – the resultant poisoning necessitated amputation of the hand.*42*

By the mid-1850s, the daguerreotype process had been largely superseded by the collodion process. But even here mercury poisoning was common. Salts of mercury, particularly the bichloride which was called "corrosive sublimate," were "to be found in every photographic studio, being commonly employed for intensifying negatives."43 Fortunately the wet-plate photographer, who drank his intensifier in error, had a convenient antidote to hand. The recommended treatment for this virulent poison was albumen, or whites of egg, used in the production of his printing paper.

As late as 1901, when the collodion process had given way to the dry-plate, mercury poisonings still took place. In that year, one of Lafayette's assistants drank mercury intensifier by mistake. Even though he was immediately rushed to hospital he died a few days later.*44*

The explosive and flammable dangers of ether vapour have already been mentioned. But an equally real, if less dramatic, health hazard existed for the photographer who breathed ether fumes from his collodion in a hot, cramped and often ill-ventilated darkroom or tent.

Alcohol fumes were also a source of trouble in the same situation. The Photographic News of 186545 published a long article on the toxic effects of these chemicals. The dangers listed were so gruesome that it is a wonder that any photographer ever again practised the collodion process. The only consolation was that the article admitted photographers could become tolerant of the poison atmosphere in their darkrooms through habit. If the plate-coating assistant was rendered unconscious, magazines recommended "sprinkling with water."

Collodion was not only explosive and the source of dangerous ether and alcohol fumes, it also required two other major ingredients for photographic use, both of which were potential health hazards: potassium iodide and silver nitrate.

In 1861, two year old Henry Giblett died after swallowing a bottle of potassium iodide which he found in the van of an itinerant photographer while his guardians were having

their portraits taken.*46* A similar case occurred in 1870. A photographer had visited the Stoke-on-Trent Workhouse in order to photograph its governor, Mr M'Nish, and his family. He left behind a bottle of potassium iodide. When M'Nish asked for a glass of gin, his wife poured from the wrong bottle – and her husband died an hour later.*47* In both these cases the victims were "innocent," unaware of the nature of the liquid which they drank. Photographers would be less likely to make such a mistake and, even if they did, they would be more likely to know the recommended treatment: drinking albumen, starch paste or milk of magnesia. The effects might have been unpleasant but rarely fatal.

It was also true that silver nitrate poisoning rarely killed photographers; it was not a virulent enough poison to be ingested by the suicidal and its effects could be counteracted to some degree, in the event of accidental swallowing, by the same antidotes recommended for potassium iodide or a good dose of salt water. The fatalities attributed to silver nitrate were usually to the non-photographer. A typical story, with comic undertones, concerned the Abbe Salvy, vicar of a small town in France, who was an enthusiastic photographer. He was transferred to a new parish and asked three of the locals to help move his furniture. The Abbe placed some bottles of cider in the wagon to refresh the men on their journey. He also placed in the wagon a smaller bottle, well-covered and tied up, which he told them they must not touch. The day was hot …

"That must be right good stuff, which the curé told us not to touch." "No doubt," replied another, 'it must be far better than the cider." "Let us try it, 'said all three. The bottle was produced. The man who took a good sup said it was not good. 'See, said he, handing it to one of his companions. The second tried, and pronounced a still more unfavourable opinion. "As it is so bad." said the third. "I shall not have any; let us put back the bottle." Scarcely was this done than the two who partook of the liquid fell on the ground writhing in dreadful agony. In a short time both were dead.*48*

As silver nitrate in the presence of a reducing agent blackens on exposure to light, it had a few bizarre uses. A popular story among 19th century photographers was the image-seeking adventurer in Africa who was captured by natives. The situation looked dangerous. But with admirable presence of mind, he noticed that the chief had a grey beard. He washed the chief's hair in "water," which was in fact silver nitrate, and in a few minutes the beard was black again The photographer was hailed as a miracle-worker and set free. The blackening effect of silver nitrate could be used for less salutary reasons. M. Thiebaut was a photographer – and a ladies' man. His wife objected to his adulterous liaisons, and her actions led to a scandalous court case in Versaille in 1860. "It is a long tale of love, jealousy, infidelity, and vengeance," said a reporter.*49* The wife was charged with disfiguring her husband's mistress with photographic chemicals. She admitted that she had been in the habit of carrying a bottle of silver nitrate in her pocket for the purpose of disfiguring her rival. When she learnt that this would blacken the skin, but little more, she switched to a more serious

solution. “She subsequently threw a quantity of sulphuric acid over her, and beat her severely with a stick.”

Not everyone considered photographic chemicals to be entirely harmful. The French photographer Eugene Ogier claimed that the inhalation of fumes in his darkroom had cured him of pulmonary consumption.*50* F.B. Gage, an experienced American photographer, claimed that silver nitrate had cured his chronic bronchitis.*51* This solution was applied to his throat with a brush. Although this relieved the pain, after a few days the coagulated surface would slough off and the inflammation would begin again. The answer, he found, was to coat the throat with silver iodide – which not only gave temporary relief but the iodine began to cure the inflamed membranes of the throat.

Even the sulphuric acid, used by Mrs Thiebaut to disfigure her rival, had its medicinal uses. The Photographic Times of 188252 asserted that sulphuric acid, in a dilute solution, could cure dysentery, haemorrhages, fevers, ulcerations of the throat, chronic inflammation of the joints, rheumatism and skin diseases. It was also useful as a hair invigorator and to remove dandruff as well as prevent undue perspiration of the feet.

Most of the 19th century articles on photographic chemicals were not so hopeful. Death seemed to be an ever-present concomitant of being a photographer. Even the commonly used developer, pyrogallic acid, was a deadly poison. In spite of warnings in more than 30 years of publications, photographers were still susceptible to silly accidents. In 1891 E.C. Tweedy, a well known photographer of Baltimore, met his death by mistaking in the dim light of his darkroom a solution of pyrogallic acid for a glass of whiskey and water. He knew the danger he was in, and immediately took a powerful emetic. To no avail.” In three days he was a corpse.”*53* A few years later, Dr Browning’s wife mistook pyrogallic acid for a bottle of medicine. She, too, died.*54*

The photographic journals published more than the usual number of articles warning photographers of the poisonous qualities of bichromates. Potassium bichromate was in “general use in the every day practice of many photographers,” mainly in such processes as gum printing, carbon-printing, and practically all photo-mechanical reproductions. As little as fifteen grains of potassium bichromate is enough to cause serious illness. The major problem, however, was not that the solution was ingested, although that too often happened by accident, but that the chemical was inhaled from the polluted air and absorbed through cuts and abrasions in the skin. A fascinating article on the subject was an editorial in an 1864 issue of The Photographic News.*55* Almost the same article was used in The Amateur Photographer in 1901.*56* Very little had changed in nearly 30 years. Both articles asserted that snuff-takers seemed immune from potassium bichromate poisoning through breathing molecules of the chemical in the air. Both warned photographers about cuts in the skin when placing hands in solutions. The warnings were obviously necessary as carbon printers were particularly susceptible to what was known as “bichromate disease.” A long and detailed article, “Poisoning by salts of chromium,”*57* asserts that “cases of poisoning

by compounds of chromium are not rare," and details many specific case histories from eminent medical authorities. Again, there were the odd instances of death due to drinking the chemical in mistake for more refreshing beverages. Thomas Crump, of Scarborough, died in this manner in 1870.*58*

The list of photographic chemicals which caused suffering and deaths in 19th century photography could he extended almost indefinitely. But there is one last substance which must be mentioned as it accounted for more deaths among photographers than all the other hazards combined: potassium cyanide. This deadly poison, which is particularly noxious in that death occurs so rapidly, was a stock chemical in every photographer's darkroom. It had two main purposes – as a fixer for negatives, and as a stain remover for spots and blemishes from drippings of silver nitrate.

What is so intriguing, and ironic, is that a harmless fixing salt (sodium thiosulphate, or "hypo") had been employed from the earliest years of the medium. There seemed to be no good reason why photographers would subject themselves to such a virulent poison as potassium cyanide when an equally efficient and harmless alternative was available. The editorial writer of The Photographic Times in 1880 was equally bemused:
Many people are puzzled, and with good reason, to account for the habit into which numerous photographers have got of using the poisonous cyanide of potassium as a fixing agent, when the innocuous hyposulphite of soda answers the purpose, not merely equally as well but in most instances a good deal better.*59*

It is difficult, if not impossible, to discover where this practice originated, or why: An early textbook by J.B. Hockin, Practical Hints on Photography: its Chemistry and its Manipulations, published in 1860, asserts the superiority of potassium cyanide over hypo, and claims the use of cyanide is a "necessity" in the production of positives (such an ambrotypes). He does not give any reasons for these recommendations – and worse, declares that cyanide is only injurious if imbibed. In fact, he declares that its odour is "by no means unpleasant" and "not at all injurious." This was obvious nonsense, but Hockin's book may be one of the reasons for the continued use of cyanide over hypo.

Napier's Metallurgy outlined the symptoms of poisoning from inhaling fumes from potassium cyanide:

Poisoning by cyanide gives to the mouth a saline taste and scarcity of saliva; the saliva secreted is frothy; the nose becomes dry and itchy, and small pimples are found within the nostrils, which are very painful. Then follows a general languor of body, disinclination to take food, and a want of relish. After being in this state for some time, there follows a benumbing sensation in the head, with pains, not acute, shooting along the brow; the head feels as a heavy mass, without any individuality in its operations. Then there is bleeding at the nose in the mornings when newly out of bed; after that comes giddiness; objects are seen flitting before the eyes, and momentary feelings as of the earth lifting up, and then leaving the feet, such as to cause a stagger. This is

*accompanied with feelings of terror, gloomy apprehensions, and irritability of temper. Then follows a rushing of blood to the head; the rush is felt behind the ears with a kind of hissing noise, causing severe pain and blindness; this passes off in a few seconds, leaving a giddiness which lasts for several minutes. In our own case the rushing of blood was without pain, but attended with instant blindness, and then followed with giddiness For months afterwards a dimness remained, as if a mist intervened between us and the objects looked at; it was always worse towards evening, when we grew very languid and inclined to sleep. Then we rose comparatively well in the morning, yet we were restless, our stomach was acid, visage pale, features sharp, eyes sunk in the head, and round them dark in colour; these effects were slowly developed. Our experience was nearly three years. We have been thus particular in detailing these effects as a warning to all using cyanide; but we have no doubt that, in lofty rooms, airy and well ventilated, these effects would not be felt. Employers would do well to look to this matter; and amateurs, who only use a small solution in a tumbler, should not, as the custom sometimes is, keep it in their bedrooms; the practice is decidedly dangerous.*60

Although photographers occasionally complained about one or more of these symptoms which they attributed to working in a darkroom with potassium cyanide, far more serious effects were caused by absorbing the cyanide through cuts or abrasions iln the skin while fixing plates. The photographic press occasionally reported the sufferings of a photographer whose hands swelled up and were covered in open wounds from this cause. The only solution was amputation. The problem was so real that as early as 1857 John Sang invented a handle for collodion plates in order that the photographers' hands need never be in contact with the cyanide solution.*61* In the same year, one of the major suppliers of cyanide to photographers, Harvey and Reynolds, of Leeds, issued a circular to all their customers "respecting the danger attendant upon the incautious use of cyanide of potassium amongst photographers."*62*

In spite of innumerable warnings, from the 1850s to the early years of this century, photographers continued to die from cyanide poisoning – either by drinking the solution in mistake for some other beverage, or as a quick and certain method of suicide. Only a few examples can be given, from the scores of cases reported in the photographic press:

*In 1855 G.W. Greatrex narrowly escaped death when he made a pot of coffee from water which an assistant had polluted with a cyanide solution. Even though the dilution was considerable, Greatrex was still violently sick. But he guessed the cause, threw away the rest of the coffee and drank the recommended antidotes – iron sulphate, powerful emetics, anything that induced vomiting, inhaling the vapour of ammonia, and cold water "poured from some height in a stream on the naked head, neck, and spine."*63 Green tea was also recommended.

These antidotes might well be administered in cases involving extremely dilute solutions. Otherwise, the effect of cyanide is so sudden that nothing will help. This was

true in the case of a German photographer in 1860. He was cleaning a glass plate, with difficulty. He got angry. He "became suddenly transported with passion, and, in his madness, dashed the plate on the floor, and seizing a vessel of cyanide of potassium, poured it down his throat. He dropped as if he was shot, and died in half a minute."*64*

In 1865 The Photographic News, in reporting two more suicides from cyanide, commented that such deaths are "becoming lamentably common."*65* The next month it reported the death of G. Cameron Hodgson, a photographer from Sunderland, who sipped his fixer after becoming maudlin drunk.*66* Within a few months it asked: "When will cyanide be banished from the photographer's laboratory? Every week we hear of somebody being either maimed, paralysed, or killed by this deadly, and, to a photographer, totally unnecessary poison."*67*

Ignorance and carelessness continued. A photographer reported that he visited a druggist to buy some cyanide and the chemist found one lump was too large to enter the neck of the bottle – so he bit it into two pieces! "Nothing but very prompt measures saved his life."*68* Carelessness caused the deaths of innocents, often the children of photographers. A photographer named Kenneth, of Lochee, Scotland, saw his child drink from a phial of cyanide but he was too late to save it.*69* Other deaths of children from cyanide continued to be reported70 with alarming frequency.

In 1866, Frederick Poller, aged 28, died from inhaling hot potassium cyanide fumes*71*; in 1867 a photographer's lady assistant committed suicide by drinking the fixer*72*; in 1868 a lady poisoned herself in New York by taking a dose of cyanide in mistake for rhubarb(!)*73*; in 1869, Frederick Guinness died from drinking cyanide in mistake for a medicine*74*; in 1870, Elizabeth Lyons committed suicide after a quarrel with her lover, a photographer named Bocock of Liverpool*75*; in 1871, Cordine Gee, daughter of a photographer, in a burst of temper through a trivial domestic quarrel, ran to her father's darkroom and swallowed cyanide*76*; in 1872, Charles E. Pelton, a young photographer, was eating cloves which laid on the darkroom shelf. He picked up a piece of cyanide by mistake.*77* And so on, week after week, year after year. The overriding impression from reading so many of these reports is that the suicides were often for trivial reasons and that if cyanide had not been so readily available, the victims would certainly have recovered enough from their grief, spite, rage or jealousy, to continue life quite happily. The accidents were also wasted lives when such a harmless alternative as hypo was not only available but recommended by many editors.

Magazines constantly affirmed that there was no good reason for potassium cyanide to be used in any photographic darkroom.

This fact makes the death of Professor Fischer, of Czechoslovakia, all the more melancholy. Although he was only 25 years of age, he had gained a reputation as being "of the highest eminence in his profession," and occupied the Chemical Chair at the Prague High School. An ardent experimentalist, he had conceived the idea that the

poisonous properties of cyanide could be neutralised without affecting its efficiency as a fixing agent. He mixed his solution in the laboratory in the Gymnasium of Prague, turned to his assistant and said: “Science has now so far advanced as to be even able to render harmless so dangerous an agent as cyanide of potassium.” With these words he drank the mixture – and died within minutes “with the most violent and excruciating agonies.”*78*

There is some suggestion that Fischer might have committed suicide under the guise of a scientific experiment. This seems unlikely, but if true, he was more successful than the photographer satirised in the popular jingle “The Ballad of Billy Baker.”*79* In this ballad, sung to the tune “One-horse shay,” William Baker “Carte-de-visite taker,” falls in love with one of his sitters, Jemima Jenkins. She will have nothing to do with poor Billy Baker, who decides to take cyanide:

To suicide intent,
darkroom then he went;
But instead of cyanide he swallowed th’ hypo.
Although it gave him pain,
He soon got well again,
But never flirted after in his stu-di-o.

The moral was clear: keep bottles properly labelled, otherwise when you want to kill yourself you may drink the wrong solution.

When Jemima rejected Billy Baker’s love she said: “Take such black paws as those/with heart that’s quite as black, for anything I know,” and struck a blow at every 19th century photographer’s weak spot. The reason why Billy had “black paws” was that his hands were stained with silver solutions, which, as has been mentioned, turned everything black with which it came into contact. Queen Victoria did not allow photographers to use the wet-plate process in any royal residence, as soon as a dry process became practical, as the silver bath drippings ruined the carpets. The most common method of removing these black marks, from hands and furnishings, was to scrub them with potassium cyanide. Photographers had the habit of rubbing their fingers with solid lumps of cyanide at the end of each day’s work. Although risky, “photographers do it every day,” claimed The Photographic News*80* before reporting the death of a Belgian photographer. He had no apparent cut on his hands so proceeded to remove the black silver with a lump of cyanide. A little piece of the lump chipped off and pushed under his fingernail where it broke the skin. He died in a few hours.

In spite of constant warnings that cyanide could be absorbed through the skin, photographers continued to use their hands in the solution. Usually, they escaped harm; often they suffered badly. One photographer wrote:

*I have not yet been able to resume my work in the chemical room. The last few weeks I have passed at the Springs, trying to extract the poison from my hands, which pain me so much that I have been obliged to keep them constantly in cold water. The first apparent effect of the poison was a feeling of numbness after using cyanide. This would soon pass away by a little friction in rubbing both hands together. I did not even then think of any further injurious effect. After some time this was followed by an eruption on the joints and between the fingers, accompanied by a constant itching sensation. This soon increased, until both hands were covered with watery blistering sores, and the itching pain became so intolerable that no words can describe the torture, which could only be borne by keeping both hands in cold water.*81

Cyanide sores on the hands were a common complaint of photographers. The recommended treatment was rainwater. Several photographers on both sides of the Atlantic claimed to have been cured by this method. A typical letter reads:

*The winter of 1867-68 I had cyanide sores on my hands for several weeks. My family physician failed to heal them. I then, on going to bed, wrapped my hands in muslin wet in rain-water, and kept them wet all night from a dish by my bed. After three nights' treatment in this way they were well.*82

Such cures might or might not have worked but it seems strange that photographers continued to expose their hands to the risk of cyanide sores when safer hand cleaning solutions were available. For example, in 1868 M. Carey Lea wrote an article on "Poisoning by External Use of Cyanide of Potassium" in The Philadelphia Photographer in which he states "there is no recognised treatment for such troubles." He suggests prevention, by avoiding cyanide to remove silver stains. He recommended a solution of potassium bichromate, 1 part; hydrochloric acid, 2 parts; water, 20 parts. Once this has removed the silver stains, rinse the hands in sodium thiosulphate (hypo) and wash with soap and water.

A similar method was recommended in "A Safe Method of Removing Silver Stains from the Skin," in The Photographic Times of 1881.*83* Not everyone agreed that an alternative to cyanide was necessary. E.P. Ogier, for example. He was a writer from St. Heliers', Jersey, who suffered from bronchitis which, he believed, was turning into consumption. His doctor advised more manual labour, so he became a photographer. He not only used cyanide for fixing but also for cleaning his hands, using a particularly strong solution and often rubbing the stubborn stains with a pumice stone. The abrasions absorbed the cyanide: "In a couple of months the serious symptoms with which I had been troubled had passed away, and now for three years I have enjoyed, relatively speaking, perfect health. My chronic bronchitis even, that had troubled me so long, almost disappeared."*84* The next week, D. Welch, a photographer from Newry, Ireland, also attributed the relief of his consumption to photography. But apart from these isolated examples of the beneficial effects of potassium cyanide, the overwhelming mass of evidence condemned the use of this chemical in photographic darkrooms.

Potassium cyanide was not an essential ingredient in 19th century photography – yet it accounted for hundreds, and probably thousands, of lives. In many respects it represented a puzzling phenomenon of almost willful masochism – yet it led to small news items which readily bring to the senses the zeitgeist of an age. Historians constantly write about and talk about the establishment figures, the rich and the famous among 19th century photographers, whose names regularly appeared in the photographic press. The suicides of failures remind us that there was another, more shadowy and insubstantial but nonetheless equally human side of the medium. So, just for the record, let one essay on photographic history mention the name of W. Dickson. In April 1883 he was 40 years old. He was discovered by a policeman on the east side of Calton Hill, near Edinburgh, far from his hometown. An envelope was found in one of his pockets. On it was written: “Have no work, no money, no friends and no place to sleep in tonight. – W. Dickson, Photographer, April 12, 1883.” Alongside the body was a small bottle of potassium cyanide.*85*

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