

Exposed to the Wind

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Throughout the early decades of photography, from the introduction of the daguerreotype to the demise of the collodion wet-plate, photographers believed that the direction of the wind significantly affected the exposure times of their plates. This was not an idle fancy, dreamed into existence by a small group of uneducated eccentrics. It was a firmly held conviction by the vast majority of serious photographers from 1840 to the 1860s. Checking the direction of the wind was an indispensable preliminary to uncapping the lens.

Photographers took it for granted that the direction of the wind influenced the exposure times in the camera. An exhortation in verse form (in order that the lesson was easily memorized) was known and mentally chanted by every tyro of the art:

*When the wind is in the East,
Double the exposure at the least.*

The form of this couplet undoubtedly originated from the first two lines of a longer verse which was penned by "Poetus Photographicus" in 1854. Here is the complete exposure/weather guide:

*Whene'er the wind is in the East,
Use twice the seconds at the least.
And if the East incline to North,
Take not the wretched sitter forth.
Come cloud electric, or of hail,
Then every picture's sure to fail.
But with light zephyrs from the West,
In scarce five seconds 't is imprest
And if the West incline to South,
In three you have eyes, nose and mouth.*

Although this verse, and the couplet which was based on it, originated in The Photographic Journal of 1854, the author was merely reducing to rhyme some commonly held beliefs about the interaction of weather, wind and photography which arose with the beginnings of the medium, fifteen years earlier.

Few photographers disputed the influence of the wind on the actinic properties of light; many did dispute the rhyme's compass settings. In other words, no one doubted that

when the wind blew from certain directions there was always an increase in the actinic power of light, and when it came from other quarters the reverse occurred. But which wind directions caused an increase in sensitivity and which caused a reduction in sensitivity and longer exposure times?

That question was discussed at length whenever 19th century photographers gathered together and many reports of these debates can be found in photographic periodicals throughout the wet-plate period. The majority of photographers tended to agree with the instructional verse: an east wind necessitated longer exposure times. Others were equally vociferous that – at least in their case – a south wind demanded longer exposures than a north wind. Each point of the compass had its champions and detractors. And every participant in the controversy had his own pet theory for the reasons why wind would affect the actinic power of light, or the degree to which light produced density on the emulsion.

And at this point it should be stated that these photographers agreed that the wind direction also affected exposure times while making prints, as well as negatives. Did the direction of the wind influence the actinic power of light and so affect exposure times in the camera? The majority of contemporary photographers would undoubtedly answer “No,” and they would probably react to such a notion with the feeling that this is yet another example of an old-fashioned myth or fallacy once held by our ignorant predecessors which seems mildly amusing from our more sophisticated and scientific place in time.

This seems a reasonable assumption, particularly as Victorian photographers were lacking precise tools for the accurate measurement of light intensity, except for two disturbing facts.

First, many of these early photographers were numbered among the most brilliant men of their age, and were certainly better “educated” than the majority of contemporary photographers. The best-known wet-plate workers would not have been ignorant of the facts and laws of geography, geology, meteorology, chemistry and optics; indeed, they would have undoubtedly been more conversant with natural phenomena and actinism than most of us.

Second, they were eminently practical men – they had to be in order to operate the extremely recalcitrant collodion process under daunting conditions. And they experienced in practice, even if they could not explain it in theory, a curious phenomenon their exposure times not only depended on lens stop and light intensity but also on the wind direction!

The only honest conclusion is that these photographers did indeed observe that the direction of the wind affected exposures in the camera, even though no satisfactory explanation for this oddity was forthcoming. A possible, and tentative, solution to this

puzzle, which may explain at least some of the exposure discrepancies which resulted from various wind directions, may be found in air pollution.

Air pollution was a major problem in the aftermath of the Industrial Revolution, especially as coal was the staple article of fuel in all large towns. Such pollution was infinitely worse than anything we experience, or perhaps can even imagine, today but which was an inescapable hellish fact of Victorian life.

By the beginning of the wet-plate era more Britons lived in towns than in the country, and one-third of the population was crammed into cities of over 50,000 inhabitants. And what cities! Their filth-impregnated stones were almost constantly under the shroud of smoke. This caused an appalling toll of respiratory disease, the major nineteenth century urban killer. Add fog to the smoke and it is evident that photographers often contended with the pattern of attempting to make exposures through an impenetrable neutral-density filter.

It was not unknown for prints to be exposed in the open air in London for an entire day without the slightest outline of the negative being impressed on the paper.

In spite of this handicap, the majority of photographers lived and worked in or near major industrial cities, in order to be accessible to their clients. Fog (or smog) was therefore a constant threat. The degree to which the fog would affect the photographer's printing or camera exposures would depend on the location of his studio, or picture-taking site, and the direction of the wind.

For example, a London photographer who was at all successful would wish to be located in the West end, close to the richer areas of the city and the more prosperous clients. Therefore, when the wind was wafting from the East, it would blow the smoke and pollution from London in his direction, and force the photographer to "double the exposure at the least." However, a West wind would blow from the open country and the actinic power of the light would be increased.

From a contemporary viewpoint this might seem far-fetched, but readings in Victorian literature would confirm that thick smoky fogs were exceedingly common. Also, these fogs are often described as "yellow-brown vapours." All the emulsions used by these early photographers were only sensitive to blue light. Even the colour of the fog would drastically reduce the actinic power of the light, as though the photographer was attempting to produce an image by exposing through a safelight filter.

The majority of winds tended to blow from the south, west, to northwest. Therefore it was advantageous for photographers to be located in the westerly suburbs of the city where the prevailing winds for the maximum period each year wafted from the open country instead of from the city centre. It just so happens that these were more prestigious areas of the city, at least in London, and this might have given rise to the couplet about the East wind necessitating increased exposure times.

The discrepancies noted by other photographers might have their basis in the locations of their studios. For example, the advocate of southwinds creating longer exposures may have had his studio in a northern suburb, where a breeze from the south would carry with it the fog from the city. Other discrepancies could be explained in the same way. The conclusion would be the same; wind direction influenced exposure times.

It would be unfair to imply that Victorian photographers were totally ignorant of the effects of city smog. Far from it. Printing establishments, which were not dependant on the convenience of portrait clients for their locations, were usually located in the suburbs, not only because of cheaper rents but also because of cleaner air.

The relationship between wind direction and the location of the work place in reference to the city centre seems a logical explanation for what, at first glance, is a strange and mythical belief of Victorian photographers, that the wind affects exposure times. The prevalence of smog in the 19th century might explain such an odd phenomenon when the photographer was operating in or close to major cities. It does nothing to explain the fact that the principle was adhered to even when the photographer was operating in the open countryside. In that case, the mystery remains.

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