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DAVID OCTAVIUS HILL, R.S.A.—1802-1870.

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DAVID OCTAVIUS HILL, R.S.A.—1802-1870.

THE FACULTY of imitation is inherent in human nature, and up to a certain point is one of the most important factors in our intellectual development, but when one has passed the period of primary education and begun to attack his life-work he must subdue the tendency to follow the easy path of redoing what others have done, and work directly from his own self-consciousness if he is to attain any distinction.

He is indeed a fortunate man who, endowed with talent and courage, finds himself at work in a field where there are no precedents and who must simply follow the guidance of his own instincts. Art-work produced in such circumstances is generally fine and always interesting, as witness the beautiful forms created by the primeval potters, the frescos of Fra Angelico, or the paintings of the Van Eycks.

Such productions are evolved as unconsciously and as directly from nature as are the trees and flowers, and constitute a pure product; but soon there come imitators who, incompletely comprehending the work of the master, produce something resembling it in its more obvious features but lacking the subtler qualities, with the result that in course of time the pure art disappears and certain conventions and mannerisms are accepted in its place. This is true in the realm of photography also, and is strikingly exemplified in the work of the subject of this paper, David Octavius Hill, R.S.A., who, sixty years ago, produced photographic portraits which have charmed and delighted artists of every school who have had the fortune to become acquainted with them.

To present-day pictorial photographers it is extremely interesting and almost humiliating to observe that on the very threshold of the photographic era there was one doing with no apparent effort what they would fain accomplish with eager strivings, and thinking so little of his achievements that when he returned to what he considered his serious work it was with a sense of having frittered away three solid years in following a most fascinating amusement.

D. O. Hill, as he was familiarly termed by his friends, was a painter of considerable repute in Scotland in the earlier part of last century. Born in Perth in 1802 he soon showed an aptitude for art and was fortunate in having a father who encouraged him in its pursuit and sent him to Edinburgh to study in the Trustees Academy. He began to exhibit in 1823, and six years later his work was considered of sufficient merit to entitle him to full membership of the Royal Scottish Academy. During the following year he was appointed secretary to that institution and for forty years he devoted his energies and much of his time to the furtherance of its interests. In his early days he painted subjects illustrative of Scottish life and character, but for the greater part of his life he devoted himself to landscape-painting. Many of his pictures were engraved, and such an able critic as P. G. Hamerton had many appreciative things to say of his art; but "the good men do is oft interred with their bones," and had Hill only painted pictures his memory
would already be almost confined to the archives of the Academy. It is to a dramatic event which occurred in Edinburgh in 1843 that we are indirectly indebted for the wonderful work which he has done in photography, and which will undoubtedly "live after him."

The event referred to was the disruption of the Church of Scotland, when 470 ministers rose in the Assembly Hall and, resigning their churches, manses, and livings for conscience sake, left the building in a body. Hill was a witness of the striking and impressive spectacle, and in a rash moment resolved that his art should preserve a record of a scene so memorable.

Gradually the tremendous nature of the self-imposed task, which involved the painting of 500 portraits, began to dawn on the distressed painter, and it occurred to him to consult his friend Sir David Brewster, who, he knew, had been recently experimenting with the new process by which the impressions of the camera obscura could be fixed on paper. Sir David replied that calotype was the thing for his purpose and that he could recommend a clever young chemist, Robert Adamson of St. Andrews, as a qualified assistant in the technical manipulation.

Thus the partnership began which was to produce the noble and extensive series of portraits which for powerful characterization and artistic quality of uniformly high excellence have certainly never been surpassed and possibly not even rivaled by any other photographer. This may seem an extravagant appreciation of Hill's work, but it has been arrived at after mature deliberation. The great majority of the original paper negatives are still in existence and are in the hands of an Edinburgh gentleman who, it is anticipated, will shortly publish a worthy representation of the series so that the public generally may have an opportunity of studying the portraits and estimating their value.

In many respects Hill was fortunate. He had no traditional conventions to bias the natural bent of his artistic instincts. There was no ready-made photographic studio which he might have been tempted to use, fitted with all manner of devices for rendering soft and puerile the heads and hands of vital character which were so frequently possessed by his sitters. The calotype process was such that he could not obtain a clear, sharp image if he would; his exposures averaged three minutes in duration, yet the negatives retained full modeling in high light and shadow to a degree unknown to the worker with gelatine emulsion, and he was not aware of the possibility of halation.

While there were no technical conventions to misdirect him, Hill was evidently strongly impressed by the portraits of the recently deceased painter, Sir Henry Raeburn. Raeburn's portraits constitute ideal models for the study of the photographer, and it is interesting to note that this fact was appreciated by a contemporary writer and referred to as follows in a criticism of Hill's portraits:

"There is the same broad freedom of touch; no nice miniature stipplings, as if laid in by the point of a needle—no sharp-edged strokes; all is solid, massy, broad; more distinct at a distance than when viewed near at hand."
The arrangement of the lights and shadows seem rather the result of a happy haste, in which half the effect was produced by design, half by accident, than of great labor and care; and yet how exquisitely true the general aspect! Every stroke tells, and serves, as in the portraits of Raeburn, to do more than relieve the features: it serves also to indicate the prevailing mood and predominant power to the mind."

The experiments were conducted in a house on the Calton Hill, that classic monumented rock which bounds the eastern vista of Princes Street, Edinburgh, and would form a fitting Mecca for the future devotees of the art. Hill speedily became fascinated with the new process, and when he had photographed the more interesting of the ministers, and many magnificent types there were among them, he forgot the original cause of his experiments and busied himself portraying the features of the men and women of intellect in Edinburgh at a period when the northern capital rivaled the metropolis itself in the force and character of its literary activity. It was a period also when convention and cosmopolitanism had not molded the sartorial and tonsorial aspect of the civilized world in one universal characterless form. Men wore their hair as it pleased them and their clothes were soft and fitted to their form. Their collars were unstarched if their stocks were high and uncomfortable, and the general aspect was infinitely more pictorial than it is to-day. Breeding is said to be the art of concealing one's feelings, and so highly has our breeding developed nowadays that our faces have almost assumed the uniformity of our clothes. That this was not so in Hill's time is very evident from his photographs. Take, for example, the portrait of that physical and mental giant, "Christopher North" (Professor Wilson), with his great head and massive girth, instinct with power, passive for the moment, but ready to exert his tremendous force in crushing some poor "rascally Whig" who had ventured to attack him in the Edinburgh Review. Then compare with this the portrait of his co-editor of "Blackwoods," John Gibson Lockhart, the son-in-law and biographer of Sir Walter Scott. Hill has at least four portraits of him which vividly represent his keen, refined, reserved, intellectual character, and one can readily believe that the fighting articles which appeared over his nom-de-plume, "The Scorpion," were distinctly reminiscent of that creature.

One becomes so fascinated by the interest of the persons who sat to Hill and by his magnificent characterization of them that it is only as a secondary consideration that one thinks of the artistic qualities of his pictures. This is really one of the highest compliments that one could pay them if it be true that "the greatest art is that which conceals art," for there is absolutely no appearance of conscious effort in the arrangement of his compositions, nor is there any feeling of affectation in the striking attitudes in which he frequently portrayed his subjects.

He simply photographed his sitters as he did because it satisfied his instincts at the moment, and it is not unlikely that if he thought of the matter at all he would expect others to do precisely as he did. It is
abundantly evident, however, that he had an absolute genius for seeing his sitters in a grand and impressive manner. His spacing is always perfect, his masses of light and shade are always broad and simple, and his pictures possess that power and distinction so difficult to describe or explain but which is always apparent in the work of a master and distinguishes it from that of an earnest conscientious practitioner of less capacity.

The portrait of Dr. Munro illustrates very well the qualities alluded to. It is simple and powerful to a high degree. There is no evidence of conscious posing, yet the head and hands are admirably disposed and the whole picture is in excellent tone. Dr. Munro was the third of three generations who for one hundred and twenty-six consecutive years filled the chair of anatomy in the University of Edinburgh, and one could imagine that in those days, when anesthetics were little known, he would amputate a limb without having his feelings specially harrowed by the sufferings of his patient.

A volume would be necessary to treat of all the notable persons who were portrayed by Hill's camera. Nearly all his contemporary Academicians sat to him, many of them in various costumes, and one can imagine their delight in the wonderful results of the new process. They were a picturesque group, but hardly more so than the professors, literary men, lawyers, and aristocrats who also posed for him.

That he was possessed of humor is indicated by the portrait reproduced of Lady Ruthven. The pose suggests that it was not chosen for its quaint grace alone, and as a companion portrait to the full length of her liege lord, who stands in the orthodox manner, it is distinctly amusing. The Lady herself may have been, to some extent, responsible for the picture. She was one of the leaders of the intellectual society of Edinburgh for many years and was as noted for her wit as for her knowledge of literature, art, and music. She was an intimate friend of Sir Walter Scott, and her picturesque old house of Winton was the original of Sir Walter Scott's Ravenswood Castle in the "Bride of Lammermoor."

But it was not only the personalities of Edinburgh who sat to Mr. Hill. Many noted visitors found their way to his studio and thus we have excellent renderings of Sir Francis Grant, P.R.A., of Etty, of Mrs. Jameson, the well-known authoress of "The Early Italian Painters," etc., and others. The photograph of Mrs. Jameson and that of Mrs. Rigby are probably Hill's finest female portraits. They both contain the qualities which we have ascribed to his male studies, and without in any way diminishing the artistic strength of the compositions he has successfully imbued them with the spirit of feminine grace and refinement. We know of no sweeter presentation of old age by photography than this charming portrait of Mrs. Rigby. She was the mother of the gifted Lady Eastlake, and one can well imagine from her features and her beautiful head-dress that she also was possessed of considerable intellectual and artistic qualities.

Hill was certainly fortunate in his sitters, but the sitters were equally fortunate in their photographer.
Certain pictures evoke admiration in one artist and dislike in another, according as they belong to the school of realists or impressionists, but there are paintings of such merit that they command universal admiration, such as the works of Titian, Velasquez, and Rembrandt. So is it with Hill’s portraits, artists of every school seem to delight in their fine qualities.

The late Sir Frederick Leighton had an intense admiration for them, and Mr. Sargent, writing to Sir James Guthrie regarding them, says, “They are simply magnificent; I have never seen more interesting photographs or more interesting types.”

On one occasion the writer sent some copies to Mr. Whistler and by return of post received the following note:

I1O, Rue du Bac, Paris.

Dear Sir: How very kind and nice of you to send me those most curiously attractive photographs! I should more simply say pictures, for they certainly are pictures, and very fine ones too! Pray accept my best thanks for your present and for the flattering thought that prompted it.

Very faithfully yours,

May 26, 1893.

J. McNeill Whistler.

After quoting the opinions of such authorities nothing more need be said of the quality of Hill’s work.

At the end of three years the studio on Calton Stairs was given up and there is no evidence that he even photographed again.

The completion of his portrait group was a severe trial to him and it was only the repeated injunction of his wife, “Stick to your guns, D. O.!” which brought it to completion twenty years later.

He died in 1870 much honored and lamented for his many fine personal and social qualities.

J. Craig Annan.

THE ORIGIN OF THE POETICAL FEELING IN LANDSCAPE.

Many theories as to the origin and nature of our poetical emotions have been constructed by philosophers, and, having lived their day and served their purpose, have been overthrown by other philosophers. As at the present moment there seems to be rather a dearth of theories, I propose to step into the breach and offer what appears to me to be the most scientific and ultra modern explanation of that peculiar poetical or personal feeling which we involuntarily ascribe to certain classes of landscape, and also to show why certain classes of landscape lend themselves more easily to pictorial photographic purposes than others.

We have all heard a thousand times of the charm of the Dutch landscape, of its romantic windmills, of its amusingly stunted trees, queer canals, poetical little cottages, and the long, low horizons that all, without aid from any artist, compose themselves into pictures. And these natural pictures take us into their confidence; they tell us strange tales of a world we have
never seen; they speak to us in a language without words, but so distinctly, that having once heard we never forget and always retain a longing to hear them again.

Now, to what can we ascribe this music we all feel when we are in Holland? Certainly to no association with our homes, or with that which we love, or with what we have seen before, for no other spot looks like those lowlands; nor can we say that the cause is on account of any attachment to Holland, for we need never have been there; she enraptures us the first instant we see her. Whence, then, comes this fascination? Before attempting to answer, let us ask if it is only the country of our Knickerbocker ancestors that has the power to thus entrance us? Yes, if we mean in this very particular way, but most decidedly no, if we mean, by entrancing, the power to lead us into dreamland, for there are a thousand things and spots on this earth that take us out of ourselves into the land of dreams and desire. When we walk into the great forest we are spellbound by those gigantic tree-trunks that are twisted and contorted into shapes almost human, by the deep and mysterious shadows whose gloom whispers of something awful that has once happened, that may happen again. A dark pool by the roadside will hold us with its subtle reflections, the little flowers in the field at the edge of the woods raise our hopes and lead us to imagine joys to come, the pale moon tells of gentle sorrow or perhaps its rays sparkle with mirth; the night, the twilight, and the dawn, each have their own language, and when we hear the storm and the wind and the little brook we can hardly but believe that their voices are human. But all in nature does not move us equally deeply, and some objects and moments seem without power to arouse within us what we call our poetical emotions; and of the productions of man, it seems that only the most primitive affect our sensibilities. Our cities are mostly commonplace, and when we do see a beautiful piece of architecture it does not impress us as being part human. Our skyscrapers are ugly and our factory-districts dreary deserts—yet factory-districts should seem to contain sufficient elements to arouse great interest; they are teeming with life and character, saturated with color and tone and great shadows, and the ponderous smoke certainly lends itself to the thought and imagination. And lastly, when we enter a railroad-yard we feel that life indeed is horrible.

Why is all this? The answer is far for us to seek. We must move back thousands and thousands of years to those days when we were wild savages, when we ran naked, lived in the woods, when we howled even more than we do now, and when the chase was our means of subsistence. At that time we dwelt in huts made of branches of trees covered with hides and bark. In the dawn and evening our minds were alert with expectancy; it was the hour of the chase. The night was our favorite time for murdering enemies and for enemies to murder us; we lurked behind trees awaiting an opportune moment for the onslaught; we suspected every shadow to contain death. We danced war-dances around a camp-fire with flaring torches, and were familiar with sights of strongly illuminated faces seen

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against the black background of night. When we died our souls did not
go to heaven as they do nowadays, but they remained on earth around us;
they made their abode in the trunks of big trees, in the wind and storm,
in pool and brooks. Our shadows that followed us where we went had
more importance then than they do now; they were additional souls, and
our reflections in water were second selves.

It was in that period of our existence that we learned to love and wor­
ship some objects, and to fear and hate others; it was in those prehistoric
days that the germs of our poetical and art-senses were sown—that is to say,
that certain of our brain-cells assumed particular molecular forms, and
although these same cells have been added to and built upon by later
generations, the original germ still remains there. And when I say that it
was in those countless ages before civilization, even before the barbarous
period, that our poetical and art-senses began to exist, I mean that it was then
that there were first made those fundamental cells, which if to-day appealed
to by any outside stimulus, produce in us what we call the artistic and
poetical feelings. For example, when we look upon a big tree in the forest
there responds within our brain some special structure, but this structure
contains within itself as its basis that earlier organism which in our savage
ancestors answered either to the sight or conception of a tree. But to them
a tree meant more than it does to us; it meant something human, something
to revere as sheltering the souls of their fathers. It does not necessarily
follow that the sight of a tree will be sufficient stimulus to act upon the older
as well as the more lately acquired parts of this structure; possibly only those
parts that have been added since tree-worship has ceased to exist will be
brought into play; but when the whole cell is affected, then will we feel, with­
out knowing the cause, that same reverence our ancestors did, and we will
say that we are artistically or poetically affected, or that we are carried into
another land. The power of a tree-trunk to arouse within our mind a vague
remembrance of the past will be stronger in proportion as the surrounding
conditions are more like what they were in the past, the absence of the hand­
work of man, silence, and deep shadows are additional stimuli. In the latter
case the shadows themselves induce past memories, and the original sense
of fear they aroused will be felt as a sad yearning, or, possibly in certain
persons, still as fear, but there will always be the feeling that the cause
of sadness or danger is far away in some distant time, which indeed it is.
A pool added to the scene will enhance, even if that pool be a dirty,
shallow frog-pond, as long as the bottom is not seen and it appears deep.
A large, dark brook flowing silently and swiftly under the trees produces
a strong sensation, but a babbling brook is jolly because only good and
cheerful spirits lived there.

The association of joy with flowers has always existed, and the interesting
contrast of a field of flowers on the edge of the dark woods, or the ivy cling­
ing to the old oak-tree, is a psychological one and of the same order as those
we have just studied. A little one-story thatched hut meant home to our
forefathers, so to-day a house of that shape and structure, or as near like it
as possible, plays upon a chord within us that reverberates back to the remotest times. And in the same manner the moonlight and the night, the dawn and the evening, the storm and the wind all carry us away to the day when we first came on earth, to the land of dreams.

But there are certain people known to the artist as Philistines who have either in the progress of civilization lost, or dropped, those primitive parts of their brain, or in whom, for some reason, these parts seem to be sluggish, and they never see or feel anything except the surface of nature, and as a rule do not care for the country for its own sake. We of the more highly developed brain, or, let us say, we who have retained and not lost any part, are apt to speak of them as savages; but in truth it is we artists and poets who are much nearer the savages; we connect much more closely with the Indians, the mound-builders, and the cannibals. Philistines are a product of civilization. Let us hope that civilization will not become too general. However, as the process of brain-growth is continual we may all eventually lose our link with the remote past, and in the distant future come to look upon buildings in the shape of banks or stock-exchanges or bar-rooms, as being poetical, and even skyscrapers may be the ideal architecture.

In putting forth the claim that personal feeling in landscape has its origin in our savage life, I do not mean to say that all that we feel to be personal is of this order; much can be traced to later periods, even connecting with the very present, such as shapes like church-spires, and even half-remembered attachments of our childhood will act in the same way, but the further back the root is the stronger will be the sentiment induced.

As a matter of interest, although it has nothing to do with landscape, I will here point out that the feeling of awe which a portrait or figure lit in a Rembrandtesque manner inspires in us is unquestionably due to an inherited memory of the past, a memory of the same order I have been speaking of, an instinctive remembrance of those religious war-dances when we contorted ourselves madly under the flaring torchlight.

Quite different from the above exists another order of attribution of personality to landscape. We are very apt to feel that there is something human in nature when its forms or motions to any extent imitate those of either men or animals. The waving arms of the windmill act as if they lived, often clouds and trees look like grotesque monsters, and outlines of hills and mountains frequently copy the nude.

Now, let us see how you as a pictorial photographer can apply these psychological laws to the direct end of producing pictures. We all know that a picture is the combination of nature with the artist's personality, but as in photography this combination is intensely difficult to effect, unless indeed you are one of the princes of art, there are left two courses to you: either to introduce the human element through local manipulation, by the glycerine and gum process, etc., or to select some such motive as by the very nature and composition of its material produces in you all those reflex thoughts we have been speaking of, and revives a broken chain of memories. If you select the second method, namely what is usually termed straight photography, be
sure that you do not become confused between inherited race associations and personal likings which have been formed during your lifetime, for charming as these latter may be to you, they are not general, and therefore, although not necessarily inartistic, are unartistic. But if you are a true artist and thoroughly arrived, why, then you can disobey all the voices of nature—you may even succeed in the almost impossible feat of combining your thoughts with railroad-yards, locomotives, and skyscrapers.

Roland Rood.

ON ART AND ORIGINALITY AGAIN.

Every now and then there is a recrudescence of those views based on the popular obsession that mere optical and chemical excellencies and mathematical accuracies make for art in photography, while, as a matter of fact, they are especially misleading to their undiscriminating admirers. Though oft confused—as much as such persons can be said to be confused—the exponents of such ideas still urge accuracy and “truth to nature”—by which they mean only apparent truth to the facts, accidentals and all, in their line of vision. They argue that “delicate rendition of planes,” “apparent depth,” and so on, are reasons for a peculiar claim to artistic value for the products of pure photography when tastefully done. This at best is bald naturalism, but at its usual worst it is as bad as claiming that “all hand-painted” work is art. If the most elementary laws of esthetics be considered with an open mind, any fair student must see that in no form are renderings or representations of natural facts truly art merely because they are good reports, no matter how accurately, how daintily or how deceptively they may be done. But there seems great need for a continual protest against views so mistaken, especially when in any way put forth by advocates of pictorialism, who thus hinder the cause they try to advance—yes, need to save photography from its many ununderstanding friends, above all others. Almost every one means to love beauty and tries to appreciate it—just as they intend to do right—but often their conceptions of beauty, as sometimes of right, are rudimentary, or twisted, or ill-proportioned. The cure for this ill, and the need for all, is ever for greater culture, to broaden the understanding of life and of art. If people will only try to look at art with vision undistorted by primitive prejudices and childish ideas concerning natural phenomena, they will see that artifice is not art, and they will find themselves greatly rewarded and spiritually enriched.

Briefly: graphic art is a means to tell us something by symbolizing, on a flat surface, any of the objects seen by us in space. It is employed to give us some idea that was in the mind of the artist, to communicate the sentiment he had about this thing, or collocation of space-objects. He assembles certain things in his picture because he considers them essential to his idea, selecting them thus to make an esthetic unity. If it helps his purpose to have many gradations and many focal planes or abundant detail,
well and good; he should have them. But if such optical and chemical technicalities and such florid ornateness hinder his object—as they probably will, if he has an esthetic intent and is not trying for a lens- or plate-maker's prize, he must throw such complications overboard. He will find his skill more highly exercised and taxed when he tries, by every means in his power, to accent the idea, the feeling that he wishes to express; and the more of what is not absolutely essential that he can eliminate in the process the better will the result be—as art. Let us pause to consider this “idea,” the theme, or “motif,” in art. It is not a thing of fact-communication as in science, but a thing of feeling, in graphic art as in poetry or in music. Its thought is in terms of sentiment, not of logic; its growth and sequence are by emotional connection, so that its coherence must be one of feeling and not of rhetorical reasoning—of the heart and not merely of the head. And that explains why faking, insincerity, vanity, or even honest but prosaic endeavor, can not accomplish anything that rings true.

Obviously it is ridiculous, for philosophic and esthetic reasons, to make truth and perfection in “copying nature” the crucial test and gauge of art. It is even absurd on physical grounds. There can be no “perfect copy” upon a flat surface of three-dimensional objects; no, not even a perfect copy of the way we see them. To talk of such a perfect copy is more than paradoxical; it is a mere contradiction in terms. Old-time critics, it is true, said that the artist’s ideal was to “hold the mirror up to nature.” Well and good; it was—and is. But how? What did they mean? They were not materialists nor scientists. By nature they meant not merely physical matter, but all things, quick as well as dead; and mainly the emotions. And the mirror? Did they mean a Claude Lorraine glass, and then a rectangle of canvas? No, they meant a man’s heart. Our esthetic aims and intents to-day do not differ from those of the ancients or of the Renaissance in these essentials so much as in other ways. We have gone forward (or roundabouts!); we have built on their buildings, and we have perforce continued to differentiate—perhaps spiritualize?—certainly to evolve species from species and to specialize the individual. The printing-press and other cheapening means of reproduction, the closer association of nations, have made past, and foreign, art achievements so generally known that we can not merely imitate or repaint and rewrite, to present in the style and fashion of our own day and land the beautiful truths that others have said in their own way before us, though it is ever a great temptation to retell these in the new aspect of our modern feeling. However, captious critics so inflate and wave on high the bogey of plagiarism, even while they cry aloud that there can be nothing more, really new, born under the sun, that we moderns must apparently tremble even when we dare to use the universal ideas in which we live and move and have our being. As a matter of fact, no true artist would or could actually and merely plagiarize. However, print is so cheap and there is so continual a hullabaloo, that all are kept on edge by the watch-dogs that smell poachers and thieves everywhere. Discipleship seems at a discount—only temporarily, let us hope; and one might think derivative work to be
shouted down effectually, just as if it were a crime to be young and to admire and study a great master, and so show his influence. But though all are chastened by the shouting and though some are thereby infected with the ruinous genius-bug, those who are any good still wholesomely survive and continue to be inspired by their elders and their betters. As an average instance of criticism, we can call to mind how a writer recently told us, in effect, that a certain artist painted well, but with an ingenious "preconceived determination" to see pictures in nature, instead of showing a "struggle to express ideas associated with a rare and true vision." The distinction is a subtle one, and requires something of a transcendentalist to make it. It is upon a plane where we must be extra careful not to be confused by catchwords, for idealities and spiritualisms add their batteries to the studio critical patter, which is quite misleading enough for rapid writers, as well as readers, without such mystical additions. However, it should in fairness be added that many current formularies of ephemeral criticism are a growth of the endeavor to criticize by indirections, and so to avoid throwing stones that can hurt other glass-house dwellers materially.

To the fakers who look outside for their ideas, it has become a serious question as to what they may take undetected and uncontemned. But to the artist who looks within and holds up the mirror of his heart, there comes no such problem. His serious question is: will what I see, as best I can render it, be understood and valued by others? All that exists, including all that has gone before, is his—if he can make it vitally and truly of himself; for he never was before and what is really his will be a new note struck in art. That is the meaning of the "personality" of to-day: it is not the eccentricity of effort; it is not the egoism of the prescientific romanticist; though a true individuality, it works by more scientific methods than of old, and is replete with the poise of uncommon common-sense. Life "goes in courage"; art "comes out power." For art is the esthetic projection of a trained "organism which is functioning freely"—to adapt further from John J. Chapman's essay, "Education: Froebel," in his volume entitled "Causes and Consequences." He enlarges, further on, thus: "We find that in the old vocabulary such words as genius, temperament, style, originality, etc., have always been fumblingly used to denote different degrees in which some man's brain was working freely and with full self-consciousness [i.e. self-realization]. A deliverance of this kind has always been designated as 'creative,' no matter in what field it was found."

A certain brilliant English writer has said that life imitates art more than art imitates life. Paradox though this be, there is a fruitful germ of truth in it. It is only the crystallization into an epigram of the facts that people are ruled by convention in art as in other things, but that for the expression of beauty they turn to the works of those who have made the study of beauty their especial pursuit; so that the artist sooner or later guides and teaches, as well as do the advanced minds in other fields. But the very artists must also be creatures of conventions and either adopt old or adapt new ones: thus is the paradoxical circle completed. Indeed, the artists do not
know half what they stand for in the world. Many good makers consider such theories as those developed in this article to be mainly impractical rainbow-chasing. They have fenced their minds about with working formulae; an instinctive feeling restrains them from expeditions into that domain of philosophy whence they have intuitively derived all in their processes not due to the observation and imitation of others. They smile at philosophical criticism, general theories, and inductive reasoning (except in a few classical authorities). That accomplished artist, John La Farge, gives the attitude of the painters in his suggestive little volume, “Considerations on Painting,” when he says: “The difficulty for the artist who works in things to put his thoughts into words is a natural difficulty. . . . All efforts made in any direction are made at the expense of our being able equally well to carry out others of a different kind; the artist’s nature has warned him of the loss, and his usual willingness to be satisfied without words is not misplaced.” How different from the critic’s point of view! I never had this more beautifully illustrated than lately. A noted New York critic gave a most instructive address on the growth and construction of music. But a successful musician took issue with him, saying that he was misleading; that he had shown us merely the empty forms, the dead bones of music, and not its living spirit. Then the musician went over part of the same ground; played things that the critic had had played, and explained their ideas in construction and feeling from his utterly different point of view—and the hearers learned from both!

The acme of the critical attitude is well given in an essay by the paradox-lover, the “artist in attitudes,” who has been quoted a while back. He argued that pure criticism was in reality creative work, a form of literature in which the art treated of was merely material which the critical essayist used for his own artistic ends. And surely this suggestive essay is more than just a brilliant tour de force. Whatever thinker we study, we find that if he be more than a half-cultured or a mechanical reasoner, from whatsoever point of view he has regarded the ways of man in the creation of the beautiful, all conclusions center at the one goal. Art is to him the skill, of every kind, that man uses: (1) to select from nature what pleases his taste, to express his idea; (2) to correct faults in nature, so as to unify his selections; and (3) to embody the results in appropriate form. All these operations he does more or less simultaneously; originality is the result of power to do them well and to do them sincerely. We call it genius when the organism is in all respects “functioning freely,” as Chapman put it, or, as La Farge said, when man possesses in high degree “the power of organizing ideas, images, signs, without employing the slow processes of apparently consecutive thought.”

Dallett Fuguet.
THE TRAGEDY OF THE PSYCHO-KODAK.

EVEN NOW, at the end of twenty years, I fear that this partial confession may be indiscreet. Yet I can not but feel that I owe something to myself. I can not quite forego some little word of explanation to rehabilitate in part the reputation of a man who, whatever may have been his shortcomings, has made a long, an ample, and an unrecognized atonement; a man who, for a third of his natural span of life has lived misrepresented and despised, yet silent and uncomplaining, although he had it in his power by a word to set society by the ears and to destroy the self-satisfaction of his fellow-men. Having said so much in explanation, let me set down the facts I am free to reveal, and, if at any time I seem less than frank, I only ask that no man judge me until he has heard the whole.

With the part of my life that preceded the spring of 1922 this tale has small concern. At that time I was thirty-three, rich, handsome, and thoroughly satisfied with life and with my share of it. My father, who had died when I was twenty, had left me an ample fortune, a fair outfit of brains, and, alas, a too thorough appreciation of both. I may as well own frankly that I was vain of my looks, my accomplishments, and my position. I had graduated at an early age, and with honors, and had purposed embracing medicine as a profession, even going to the length of taking my degree; but I had soon found the life incompatible with my tastes and had abandoned it for one of well-disguised leisure. I was a man about town, a prominent dabbler in science, an amateur philosopher, and a dilettante in art.

I know now that as a scientist I was looked upon as lucky rather than original, that as a philosopher I was considered something of a bore, and that as an artist I was not considered at all. But at the time no inkling of all this had reached me. I had, however, been lately troubled by a haunting consciousness of discomfort in my environment. The telepathic reaction of my personality upon my associates, and even upon casual acquaintances at my clubs, was unsatisfactory. There was an intangible something, a faint touch of flippancy—even at times a hint of veiled antipathy—in their attitude toward me which, to a person of my temperament, was unbearable. I redoubled my efforts to impress, and hoped that it would pass; yet it grew worse instead of better. I, who had never known the meaning of the word, found myself uncertain and ill at ease. I finally decided to consult Dr. Ströler, the eminent psychologiopath.

"You are suffering," the doctor announced, after a searching examination, "from an enlargement of the follicular glands of the fifty-third anterior convolution of the inner cerebellum."

I gazed at him in amazement. The fifty-third anterior convolution of the inner cerebellum, as every school-boy knows, is the seat of the appreciation of self-importance. Did he mean to say that the psychic effect, the slightly acid mental reaction which I noticed when in company was due to my cerebral overproduction of ego-waves? The man must be mad!
Nevertheless, having let myself in for a fat fee, I felt that I might as well get all that I could for it.

“What would you prescribe?” I asked.

“I should advise you,” he said, and I remember thinking that his grammar was as superficial as his psychology, “I should advise you to undertake the solution of some really useful and important problem. The more you succeed the more relief you will get from your trouble, and once you are thoroughly entitled to be proud of yourself the disease will disappear.”

At the time I gave little attention to what the man had said, but, what with my increasing disquietude and the consequent distaste for my habitual occupations, I found myself coming back to the matter with less and less disdain. At the moment it happened that I was much occupied with some matters of scientific interest. Von Plantzof was then publishing the results of his investigations into the absorption lines in mental spectra, and Schnaegel, of Jena, had recently discovered and announced his telepathic rays. I had, of course, followed both subjects in the current reviews, and had enjoyed pointing out fallacies in the deductions made by the discoverers, and now the matter suddenly presented itself to me in a new light. “Here,” I said to myself, “is the opportunity to put Ströler’s orders to the test. I will take up and extend these German investigations for myself.”

I therefore fitted up a laboratory and went to work. For weeks I gave myself up to my occupation with an enthusiasm that was as pleasant as it was engrossing. Yet I made little enough headway, and when by chance I met any of my former friends I failed to notice any change in the conditions that had driven me to the undertaking. At last, disheartened, I again called on Dr. Ströler.

“Well,” he said, “what progress?”

“Progress?” I replied, “None, absolutely none! Why, I met young Fevershaw just now, and he positively grinned in my face.”

“Ah,” said the doctor, “I see that you have not been following my instructions. I advised you to interest yourself in some work, and I see that your chief attention is still centered in yourself.”

I left the office in disgust, and went back to my laboratory determined to dismantle it and abandon the absurd experiment. So angry was I indeed that I may fairly say I was beside myself, and I did things that no sensible man would think of doing with delicate apparatus.

The next morning, inclined to repent my hasty temper, I entered my work-room and looked at the havoc I had created. The destruction seemed complete. Cameras and sensitodes, Schnaegel bulbs and astraradiometers were piled one upon another in hopeless confusion. Yet, on top of the heap I found something that astonished and mystified me. The discretion to which I have referred, and the necessity for which the reader will soon acknowledge, forbids my going into detail. A word, a hint even, might put some unscrupulous person on the trail and bring about the catastrophe which I have sacrificed my career and my reputation to forestal. I must therefore content myself with saying that I was aroused as I had never been before.
A photographic record, horrible but fascinating, challenged my powers of explanation. I spent hours recalling with the utmost minuteness my actions and my psychic condition of the night before. I forgot to eat. Day and night, tireless and absorbed, I worked on without pause, until at last, exhausted but triumphant, I had gotten fairly upon the track of the principle, which, for the purpose of this confession, I will call Astral Actinosity.

At last, I told myself, Ströler’s conditions were being fulfilled. Who could ask a more important or a more useful labor than the photographic recording of the thoughts of man? For it was no less a thing than this that I had in view. I heard myself hailed as the benefactor of the race, the greatest discoverer of the age. Visions of wealth and fame, dreams of sneers turned to adulation, filled my tired brain with anticipatory gratification. Then the reaction set in, and I slept forty-eight hours on end.

When I awoke I made the round of my clubs, and announced casually that I had made the greatest discovery of the century.

"Yes?" said Sneidecker, "Who is he?"

"He?" I asked. "He? It is a scientific principle, my man. A scientific principle that in my hands is destined to revolutionize psychology; make perjury a lost art; bombast of no avail; prevarication useless; mental reservations unknown; remove the bushel from the light of truth, and let the meek inherit the earth."

"Gee!" said Sneidecker. "And what will you do then?"

I could afford to disregard Sneidecker, however, for within a month I hoped to show him a picture of himself that would make the conceited puppy cringe. But I was wrong about the month. It took me six. There were difficulties which in my first enthusiasm I had underrated, and there was the hampering need of secrecy; but before the new year I was ready for the test. That was before the days of filmless photography, but I had incorporated in my machine all the then improvements in the ordinary camera; the scarfpin-lens, the vest-pocket magazine, the distendible Para film. It had all been built in sections and assembled by myself. I had kept my methods and my aims as secret as death itself.

Early in December I loaded up and was ready for the trial. I made a series of exposures, and prepared to develop them with a trembling expectation which no words can describe. There, in that little case, I had the truth about a score of human beings. I was about to look, not at, but into, the human heart. I was about to sense the viewpoint of God himself.

You who read these lines can imagine with what care I developed the compressed films; with what breathless anxiety I rolled the tiny negatives out to 16 x 20 and proofed them. But you can make no guess at the consternation with which I gazed at the first result, nor at the growing horror and distrust with which I viewed the others as they came from the printing-machine. Here was my best friend; the director of the Federated Chain of North and South American Banks; a philanthropist with whose praises the world happened to be ringing; half a dozen casual acquaintances; the steward of one of my clubs; a few men snapped at random on the street.
The philanthropist came first, although I had to look again before I could believe that it was he. Was this, then, the mind of the great altruist? I shuddered and laid it aside. I took up another. It was my friend! I looked at another. "God!" I cried, "Can such things be?" For it was like turning over mossy logs in a summer wood and looking at the things beneath.

Believe me, it was not what they thought of me, these men. For once I forgot myself. It was Humanity! Humanity, trapped in its secret chambers; surprised without its mask, seen—heaven help me!—without even the decent covering of its own self-deception.

I crossed fourteen names from the list of my acquaintances, reloaded my magazine, and tried again. I developed the new lot in trembling hope, finished them with a sinking heart, and looked at them with loathing. I became as one distraught, possessed by a mad access of iconoclastic rage. I determined to put my entire fortune into psycho-kodaks and distribute them gratis to the men whose souls I had laid bare. But some inkling of the dreadful truth restrained me. I began to realize the result. I saw that within a month business would cease. The Stock Exchange would be closed. The banks would be drained of deposits. The insurance companies would be insolvent. The doctors would be mobbed, the clergy hooted from their pulpits, the physicians tarred and feathered. Diplomacy unmasked, nation warring against nation, the veil of polite convention rent asunder, and the illusion of civilization dispelled, the beneficent dynasty of Pretense would be overthrown, and Truth—fell, unspeakable, naked Truth—reign supreme in her own hell!

It was too much. I abandoned the idea of publication, gave over my investigations, and bore in contemptuous silence the jibes of Sneidecker and his fellows. From passive neglect the attitude of my friends changed to open contempt. For twenty years I have lived misrepresented and despised, and more and more retired from the world.

It is true that for a time I made occasional experiments with my discovery. Again and again, hoping against hope, I put my doubts to the test of the psycho-kodak. But only to be disappointed, disillusioned, and disgusted. I gave it up at last and retired from active intercourse with my kind.

I am an old man, old before my day. My hand can hardly hold the pen that writes these words. For twenty years, another Sampson, I have leaned against the foundations of Philistia, my arms twined about the pillars of society. Yet I have never put forth my strength, and I know now that I never will. Last night I burned my camera and destroyed my notes. I hardly know myself whether it is because I love the world so well or despise it so thoroughly that I make it a present of its peace of mind.

J. B. Kerfoot.
PLATES

EDUARD J. STEICHEN.
I. Rodin—Le Penseur.
II. Portrait of a Young Man.

ROBERT DEMACHY.
III. L’Effort.
HAS THE PAINTERS' JUDGMENT OF PHOTOGRAPHS ANY VALUE?

THE QUESTION as to whether the painters' opinion of pictorial photography has any value is becoming of increasing interest, and this, owing to the fact that each year as photography is more and more receiving its due recognition as one of the fine arts, so each year the painters are more and more assuming the authority of their seniority. Possibly, therefore, it may be profitable to analyze the painters' attitude toward photography to determine if it is the right one, and, if not, to devise some method for putting them right. It is even not inconceivable that the photo-pictorialists themselves may be a little in the wrong and need instructing! Let us inquire.

In photography, as in all the graphic arts, there are three considerations: the mechanical, the technical, and the psychological, the latter being familiarly known as the esthetic qualities. The correctness of this classification will undoubtedly be conceded by both painters and photographers. Beyond this, however, I believe they will admit and understand little in common. Let us experiment.

Show any painter a photographic print of a landscape with a superbly gradated sky. To produce such a sky in painting is a difficult, technical problem, mechanics entering but slightly; whereas, in photography, it is almost entirely a matter of mechanics (chemical matters naturally being included with mechanics), and every snap-shooter frequently, and without even intention, obtains exquisite gradation. The painter, however, remembering his own struggles, will unconsciously give far more credit to a good mechanical performance of this kind than it deserves. Also, as almost all the drawing that the photographer does is really the work of the camera, and consequently mechanical, it deserves far less praise than the plyer of the brush usually bestows upon it. On the other hand, the little drawing that the photographer can do, such as the elimination of exaggerated effects of geometrical (monocular) perspective, which drawing (I am speaking of straight photography now) the photographer accomplishes through proper selection of point of view, lens, etc., but which he accomplishes only by exercising unusual knowledge and expending much thought, is entirely ignored by the painter, although it is sometimes so essential to the making of the picture. The painter gives it no praise, for the simple reason that he himself has only a most limited understanding of what geometric perspective is, for from the very beginning of his career he has either been taught to draw, or has instinctively drawn, binocularly. He vaguely believes that "the camera gives wrong perspective," and when he sees a photograph in which this fault has, with infinite pains, been eliminated, he thinks "it just happens to be right."

When we come to photography of the nude, the artist will almost invariably praise where there should be no praise, and freely censure what should be censured with caution; namely, the artist can not help but admire the marvelous precision with which the lens has delineated that which his brush, with toil and sorrow, has so often failed to express; and with equal
lack of logic he will find much fault with the "nakedness" of the result, not realizing that in photography, where the power of selective combination is eliminated, the problem of producing the nude must be almost impossible.

Again, take a purely mechanical question—that of the printing-paper—show a worker in oils a print on one of the P. O. P. papers and he may find it a little hard; "A photograph, of course," he will say. But, let him see another print in gum (straight), not letting him know that the paper is different, and he will usually conclude that the man who made the negative had a finer sense of art than most of the photographers he knows; that he must have taken his photograph on one of those "softly luminous days." In other words, the artist will often mistake a purely mechanical matter for an esthetic one. And when we come to the varying scales of gradation, from light to dark, that the photographer can produce by merely altering his printing-paper, or, in other cases, the sensitizing-bath, the artist never understands at all. It remains incomprehensible how a mechanical "trick" should produce a technical and even psychological change. How the same negative should, through the alteration of mathematical and chemical conditions, produce at one moment a light, soft, dreamy, gray day, and the next a hard, dark, cheerless day, is most mysterious to him; and equally so is the fact that under one chemical and physical condition a negative will give all its detail to the sensitized paper, and under another will hold it back, for he has always been taught to believe that the subordination and expression and general handling of detail belong exclusively to the esthetic department of art.

Examples of misconception of the esthetic anatomy of photographs on the part of the painters can be found in abundance, but various as these examples may be in their form, they all teach one lesson, namely: that our philosophy of art is possibly not resting on as solid reasoning as thinkers have generally supposed; that "there are more things under the heavens than Plato dreamed of in his philosophy"; and that some of our systems of esthetic thought may require revising. Nor am I exaggerating, for when we find an art in which the mechanics produce upon our artistic sensibilities the same effect as the psychological qualities do in another, and vice-versa, we feel much as must have certain mathematicians when they discovered an algebra in which $a$ multiplied by $b$ did not equal $b$ multiplied by $a$. The position of pictorial photography from the philosophical standpoint is intensely interesting; one might say that it has entered the art-world as has radium the physical world; there is something decidedly uncanny about it, and we really don't know where we stand.

So, after all, the ignorance of the painter is not gross; it is quite excusable; only until he learns more of this photo-pictorial factor so newly arrived in the art-world, his judgment regarding the intentions, efforts, and means (mind you, I do not say results) of the photographers is utterly valueless. But, and it is a big but, I maintain that when it comes to judging photographs as works of art, as results utterly independent of how they have been produced, then any ordinary body of painters will judge better than any
ordinary body of photographers, because, on the average, the painter has spent far more time and had far more experience with art than has the photographer. Many of the best camera-workers, as we all know, only practice their art as a side-issue. However, I think it would be the greatest mistake to hand over the judgings of the prints entered for exhibitions to a body composed exclusively of painters for the following all-important reason: the painters might select those prints which displayed the greatest knowledge of art, but the very ones which showed some great photographic advance, which solved some much-vexed optical or chemical problem, would frequently be the ones turned down; and as at the present moment it is far more important that photography should advance photographically rather than paintorially, so is it also more important that all possible encouragement should be given to purely photographic qualities of expression. Now, I say, that at present the purely photographic qualities are the ones to be encouraged, for the simple reason that until they have been developed to the full, or at least far more than they are at present, it will be impossible even to divine the direction that photography will eventually take; but if the judgment of what is what is exclusively left to the painters, it is not at all impossible to conceive that they might throw photography off its natural and most profitable track, thus precluding, or at least retarding, the discovery of new fields of art. A painter once remarked to me that a pictorial photographer was like a man who, when he wanted to throw a stone, stood on his left ear instead of his legs, and that he should be stopped doing this nonsense. Nor would my friend admit that even if standing on the left ear while throwing a stone should, if long enough persisted in, produce an entirely new and interesting result that the act was in any sense defensible.

But there is another side to the question which was pointed out to me by Alfred Stieglitz. Photographers frequently do not understand painters; I do not mean their work, that is not really necessary, but their way of expressing themselves about art, and particularly about photographs. When a photograph is shown to a painter he will be affected, and think and reason in the manner we have already seen; but under all this runs another current of thought, or, rather, there runs a current of translation. As fast as his mind grasps any photographic beauty, just so fast does it translate it into painter-images (that is, if the photograph appeals); and further: in those passages where the photograph is only partially successful, the painter may see infinite possibilities; and it is of these images and possibilities that he speaks, and not of what he is really looking at. Why this is so is not difficult to explain. All artists are in the habit of making sketches, sometimes nothing more than mere daubs, and into these, to other people meaningless blotches, they will stare to discover the possibilities of their projected picture. In this way their imagination becomes cultivated to a high degree, and a black-and-white scrawl is often all that is needed to conjure up a picture replete with color. In addition to this, their preconceived idea that photography is but the handmaiden to art, is so strong that it never occurs to them to look at a photograph as the thing itself; it is regarded as something
to be translated, and possibly to be made use of. In other words, the artist
does not think of the print he is talking about, whereas the photographer is
in dead earnest and believes that he is getting an honest opinion. This
habit of translating is so habitual to artists that you will frequently hear them
speaking of a slight pencil-sketch of an old master in exactly the same terms
as they would of one of his completed canvases, but no other artist would,
even for an instant, mistake them.

In this misunderstanding the photographer is mostly to blame, for if he
only stopped and really thought, and at times, too, were a little less conceited,
he could see for himself that it was impossible for his work to possess all
those numerous artistic truths.

There is also another reason why the photo-pictorialist frequently fails
to learn what is going on in the mind of the painter. The photographer
will on occasions show such an overweening appreciation of his own pro­
ductions that the painter no longer takes him seriously, and will, to get rid
of him, agree with any and every preposterous assumption. I think,
however, that when the painter rushes into print he is thoroughly honest.

Before closing I will cite just one of a number of the little conceits that
camera-workers as a whole class are guilty of, one which they have undoubt­
edly acquired through the misunderstanding I have spoken of. Camera­
workers speak of tone, of tonality, and really think that their work has
something to do with tone. But it hasn't. Tone is a condition which can
only exist when color is present, and the peculiar effect that a picture in tone
makes upon the mind can never be produced by black and white, or by a
monochrome; tone is one of the very highest qualities that color can possess,
and only color can possess it. What photographers so fondly think of as
their tonality is no more or less than envelopment, and is due to a particular
balance of values, focus, and edges.

But, enough. It would appear, then, that painters should be looked
upon with apprehension; something exceedingly useful and of incalculable
assistance to be sure, but to be closely watched; in fact, they ought to be
labeled in large letters "DANGEROUS."

Roland Rood.
THE ADVANTAGES which ozotype possesses over all other photographic pigment processes should entitle it to a place in the front rank of popular appreciation. There is a distinctly visible image during exposure which no other pigment process presents. It can be worked in either a gelatine or a gum medium. In gelatine ozotype no transfer is required as in carbon-printing, and in working with gum the insolubilizing action commences from the surface of the paper and penetrates through the pigmented gum, making it a theoretically perfect process. In ordinary gum bichromate the more insoluble portion of the gum film is on the top, away from the paper, and it requires a perfectly homogeneous and exceedingly thin film of the medium to produce the requisite half-tone.

It is remarkable that all the photographic processes which were destined to become popular suffered from imperfections when first placed upon the market, but a long course of experience and observation on the part of the inventors surmounted the initial defects and the processes leaped into popularity. Eight years elapsed between the discovery of the gelatine dry plate and the commencement of its commercial prosperity. The carbon process took a much longer time to become popular. Ozotype has been no exception to the rule; but during a period of four years before the public so much experience has been gained by a close study of the quality of the materials and the delicate chemical actions involved that it may now be regarded as the easiest and most reliable pigment process. It is unique among pigment printing methods, inasmuch as it gives a distinctly visible image during exposure, and the direction of the insolubilizing action from the paper through the film is scientifically correct. When once the scientific principle of a process is firmly established it is through improvements in materials that perfection is arrived at.

A brief description of the process is as follows:

1. Any good paper is sized with gelatine or starch.
2. The sized paper is coated with the ozotype patent sensitizing solution and dried in the dark.
3. The exposure is made in daylight, producing a distinctly visible image.
4. The print is washed in cold water.
5. A piece of pigment plaster (which is carbon tissue specially modified for this process) is placed in a very dilute solution of acidulated sulphate of copper and hydroquinone for about half a minute; the print is then immersed in the bath and both the print and plaster, clinging together, are brought out and laid upon some smooth hard surface and pressed into contact with a flat squeegee. The combined papers are then hung up until ready for development.
6. At the expiration of thirty to forty-five minutes the combined papers are immersed in a bath of water at 115°F; the plaster backing is
removed and the development takes place in a similar manner to carbon-printing.

In Great Britain and neighboring countries, where postal delivery does not take longer than a day or two, the paper is supplied ready sensitized, but in America and the British Colonies it becomes necessary that the worker should sensitize the paper.

This is not at all a difficult operation and I have not yet come across a worker who has not succeeded after a trial or two.

The paper dries in about ten to fifteen minutes and is ready for exposure as soon as dry.

Two varieties of paper, specially sized for the process, of smooth and medium rough quality are on sale in America, but some workers might prefer to print on the paper of their choice. This is an easy matter when ordinary drawing-papers are being used, but for fine, delicate work the specially sized F paper should be procured.

SIZING.—For sizing drawing-papers either gelatine or starch may be employed.

The gelatine solution may be made up as follows:

<table>
<thead>
<tr>
<th>Water</th>
<th>5 ounces</th>
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<tbody>
<tr>
<td>Gelatine</td>
<td>1 dram</td>
</tr>
<tr>
<td>Methylated Spirit</td>
<td>1 ounce fluid</td>
</tr>
</tbody>
</table>

Dissolve, of course, in an outer vessel of hot water and then add the spirit. Lay on with a fairly soft hog-hair brush in a warm room.

The starch solution is:

| Arrowroot | 40 grains |
| Water | 6 ounces |
| Methylated Spirit | 1 ounce |

Mix the arrowroot in a little cold water. Boil the six ounces of water, add the arrowroot, and stir until the mass becomes gelatinous. Allow to cool and add the spirit with vigorous stirring. Dip the paper into the solution or spread with a brush.

The special sizing solution sold for the purpose is, however, the easiest and most comfortable to handle. It is a preparation of gelatine and starch which by a newly discovered physical principle remains liquid at ordinary temperature and keeps indefinitely. All one has to do is to pour a pool onto the middle of the sheet of paper and spread the liquid over the surface with a damp sponge or cloth.

One coat of the above sizings is sufficient for papers resembling cartridge in texture, but two coats are required for rough absorbent papers.

It is essential that the sizing should be perfectly dry before the application of the sensitizing solution.

SENSITIZING.—The instructions given in the text-books need little modification. The best method, after all, for ordinary work is to rub the sensitizing solution on the surface of the paper with a flannel pad and finish off with a dry cloth. Very rough paper should be coated with a brush.

A solution of gum arabic, one part to two of water, is the best medium.
to mix with the sensitizing solution when coating; just five drops should be
added to the two drams of sensitizing solution and stirred round with a
glass rod. Fish glue has a tendency to coagulate into clots with the more
recent sensitizing solutions.

Exposure.—If we were fortunate enough to always expose correctly
nearly all our difficulties would vanish. To make an accurate exposure,
either in the camera or in the printing-frame, is one of the most difficult
things in photography. It requires practice even with photometers, but
where one can see the image growing under the influence of light, the
operation becomes much easier. In ozotype and aristo the amount of the
light-product is visible and the coloration is a measure of the light passing
through the negative. The usual carbon actinometers do not measure the
light that is passing through the negative, and a trial or two is necessary to
determine the ratio of the light which the negative allows to pass and the
chemical activity of the light before it enters the negative. A visible image
must therefore be a far better guide to exposure than an actinometer.

Ozotype follows the law of most other printing processes. Strong
negatives are better exposed to sunlight and weak negatives in the shade.
Print until the details in the half-tones are visible or until the details in the
high lights can only just be seen. A good plan is always to keep your eye
on the margin that has been covered by the rebate of the printing-frame.
You know that this has not received an exposure, and a comparison between
this unexposed strip and the printed portion is a great assistance in judging
the extent of exposure. Light clouds will probably not show on the initial
image, but they will appear in the finished picture if kept long enough in
contact with the plaster. When a weak negative is being printed from, a
weak image will, of course, result. In this case do not overexpose or print
through the high lights. Everything will come right afterward by leaving
the print in contact with the plaster a longer time, say forty-five minutes to
one hour.

The sensitive salt that will give the deepest colored image does not
possess the highest pigmenting quality. The color of the initial image
depends to a large extent upon the sizing and quality of the paper used.
A paper strongly sized with gelatine, such as the F paper, will not give an
image so strongly colored as a thinly sized drawing-paper, but the keeping
quality of the sensitive F paper will be six or seven times better than the
drawing-paper. The rule to be observed is, when you are using an unknown
paper, or, in fact, all papers not specially manufactured for photographic
purposes, keep the sensitive surface upon it as short a time as possible, make
your print, and then wash away all the sensitive material.

Washing.—Some readers might think that washing the print is an
extra "fag" which is not required in carbon-printing. In carbon-printing,
the same as in ozotype, the sensitive salts must be thoroughly removed or
the print will suffer. In carbon-printing the sensitive salt is partly washed
away in the hot developing-water, but it is absolutely necessary that any
remaining bichromate should be removed, and therefore a final alum bath
and washing are required. In ozotype the elimination of the sensitive salt is accomplished before the picture is made, and if this were not done well we should soon know it in the pigmenting operation. We may therefore be perfectly sure that in ozotype all the sensitive salts have been discharged from the paper and there is no necessity for any subsequent chemical treatment after the development. Never leave the washing till the following day; wash as soon as convenient after the batch of prints is made. Of course, the washing may be done in full daylight, as the prints, as soon as they are immersed in water, are insensitive to light.

Pigmenting.—The washed initial image will keep for many months in a pigmentable condition, if kept dry and away from light. I have succeeded in pigmenting a print four years after exposure. The washed initial print is reduced in a chemical sense by contact with a damp atmosphere, by long exposure to light, and by lapse of time. The chromium is not lost, but the chromates become partly reduced to chromic oxide, which can be converted into a chromic salt by a continued action of the acid bath. Therefore, those prints which have been kept six weeks or two months should be kept in contact with the plaster for an hour or more, and prints that have been kept six months should remain in contact with the plaster for two hours, or until the gelatine is dry. Bearing in mind that the chemical action ceases as soon as the gelatine becomes dry, plastered prints may be developed the next day, provided they are not overprinted and the drying action takes place fairly rapidly. Of course, in all cases where the gelatine becomes dry, or nearly so, the plastered print should be soaked in cold water for half to one hour before development.

The Acid Bath.—The acid bath consists of a very dilute solution of an acid such as acetic acid, a reducing agent such as hydroquinone, and an accelerator (sulphate of copper). The usual negative-developer consists of a strong solution of a reducing agent, an accelerator, and a restrainer. In ozotype the acid acts upon the image and releases chromic acid, or more probably converts the insoluble chromates into soluble bichromates; these are reduced again by the hydroquinone to normal chromates. These chromates exert a strongly insolubilizing action upon gelatine and the oxidized hydroquinone also has a powerful tanning effect. But how does the copper act? It is absolutely necessary for quick work. That copper is an accelerator of the action between an organic developer and the chromates can be demonstrated by a few experiments. Copper also obviously acts in another way, for it adds another strongly tanning chromate (the chromate of copper), which has a powerful insolubilizing action upon gelatine.

After prolonged and exhaustive experiments with nearly all the true acids, acetic acid has been found to work the most satisfactorily with gelatine. The reason seems to be that while the mineral acids release chromic acid from the chromates, acetic acid does not go so far, but converts the insoluble chromates into soluble bichromates. Now, it is obvious that
the bichromates would be more easily reduced than chromic acid, and the copper would be more easily converted into a chromate.

There are many combinations of acetic acid, copper, and hydroquinone which will yield excellent results and it has been a very difficult matter to select one particular formula for distinct recommendation, but I have found the following a good all-round bath: First make up a 20 per cent. solution of Sulphate of Copper, thus:

| Water | . . . . . . . . . . . . . . . . . . . . . . 20 ounces |
| Pure sulphate of copper | . . . . . . . . . . . . . . . . . . . . . . 4 " |

The water should be warmed, and the crystals suspended in a muslin bag just under the surface of the water; dissolution will then take place in about fifteen minutes. As this solution keeps indefinitely, a fair quantity can be made up at a time.

**Concentrated Acid or Reducing Solution.**

| 20% solution sulphate of copper, | . . . . . . . . . . . . . . . . . . . . . . 100 parts, say 5 ounces |
| Glacial acetic acid | . . . . . . . . . . . . . . . . . . . . . . 6 " " 2 3/4 drams |
| Glycerine | . . . . . . . . . . . . . . . . . . . . . . 5 " " 2 " |
| Hydroquinone | . . . . . . . . . . . . . . . . . . . . . . 5 " " 2 " |

**Working Acid Baths.**

| Concentrated Acid Solution, as above | 2 drams | 4 drams | 6 drams |
| Water | . . . . . . . . . . . . . . . . . . . . . . 40 oz | 40 oz | 40 oz |

A will produce a strong picture from a weakly printed proof; B will produce a medium picture from a medium printed proof; C will produce a delicate picture from a strongly printed proof.

These baths will produce a picture from a correctly printed initial image in half an hour to one hour after squeegeeing.

**Development.**—It is advisable not to separate the plaster backing until the corner seems fairly easy to pull off, especially when large sheets are being worked. When the backing is off keep the print face downward on the surface of the water, and move it about so as to assist the dissolution of the soluble gelatine. The mug may be used after this, if found necessary. Brush-work should be done with care. The best brush to use is a very soft Siberian mop-brush, as it holds more water than an ordinary camel's-hair brush. Always keep the brush well saturated with water, and it is well, sometimes, to perform the brush-work while the print is being held under the surface of the bath. When manipulating light clouds the brush may, with advantage, be dipped in cold water.

**A Word to Beginners.**—In some countries outside England, various writers upon the ozotype process give a formula for the sensitizing solution carelessly copied from an old specification. I would warn beginners to beware of employing this formula. Like everything else connected with ozotype, the sensitizing solution has been immensely improved, with the result that the sensitive surface keeps much longer, the insolubilization of the gelatine is stronger, precautions have been taken to prevent the solution
from penetrating too far into the paper, and the facility of washing has been considered.

I have come across a large percentage of beginners who start ozotype by using almost any kind of paper, thinly sized at home, and employ carbon tissue for pigmenting. This is certainly not the way to learn. I would strongly urge the beginner to use only the materials supplied for the purpose, which have been prepared with the distinct object of reducing his initial difficulties to a minimum.

The whole process is based upon scientific principles, measured by constant experiment, and the beginner who follows the instructions most faithfully will be the most successful man. Of course, after a time and a certain experience has been gained, then he has a right to make modifications. In starting a new process the worker should not forget his initial failures in aristo, bromide, and platinum printing.

Probably the beginner's first difficulty would be in the exposure. A few trials will overcome the trouble, as it did when he first took a photograph. In ozotype, however, as in platinum printing, when once the faculty of judging the exposure is acquired, the difficulty ends.

I do not think that the washing of the print should present much difficulty, especially if the sensitive paper is used quite fresh. There is a danger of overwashing in very hot weather when the temperature of the water is as high as 70° to 75° F. In this case probably three or four minutes would be sufficient. The prints are not sensitive to light while in the water, but do not let a strong light fall upon them while putting them in.

If the printing and washing have been correctly carried out, more than half the battle is over. The pigmenting operation presents no difficulty. If the plaster, when removed from the envelope, assumes a very obstinate curl, pass a sponge, dipped in cold water, over the gelatine surface and it will soon become quite docile; streaks don't matter.

In laying the combined papers down upon a slab for the purpose of squeegeeing, the plaster should be uppermost; but if the plaster and print after squeegeeing become separated, a plentiful crop of white specks will be the result. The best way to avoid separating them is to use a penknife to lift up a corner of the underlying paper. I strongly recommend this precaution.

White round spots are caused by air-bells clinging to the plaster or print while in the acid bath; these would be blisters in carbon-printing. Small white specks are generally due to imperfect contact between the plaster and print, or the acid bath is too cold. Paper coated with too hard a sizing will often show white specks, carbon single transfer-paper is therefore unsuitable. The remedy for this trouble would be to warm the acid bath to 70° or 75° F., or to dip the print not longer than two seconds in hot water at about 140° F. before placing it in the acid bath, so as to soften the sizing. Very rough papers should be placed under pressure after squeegeeing. The papers specially prepared for ozotype work do not, as a rule, require any heating of the acid bath, unless, of course, the temperature is very cold (below 55° F.).
Black spots may be caused by dust or foreign matter getting between the plaster and the print, or defects in the paper or plaster. The point of a penknife is the best remedy.

A picture from an overexposed initial print looks like all overexposures do—no depth in the shadows and no high lights. A picture upon an insufficiently washed initial print looks very much like an overexposure, with the exception that in the case of a properly washed and overexposed print the margin covered by the rebate of the printing-frame will be quite white, whereas in an underwashed print the margins will be covered with insoluble pigment.

Try and avoid overexposure; a print which looks underexposed may not be so in reality, and if the contact with the plaster is prolonged to about one hour, it will in all probability turn out a good picture.

I can not at the moment recall any further difficulty that the beginner might encounter. As Baron von Hübl remarked in his treatise on ozotype, “the process presents no difficulty to an intelligent worker, and will, when a few initial imperfections have been overcome, develop into a much-used printing process.” The imperfections associated with all new work have now been overcome, and a beautiful, simple, and permanent printing process is ready for the earnest picture-maker.

Thomas Manly.
PLATES

A. HORSLEY HINTON.
I. Rain from the Hills.
II. Beyond.
EXHIBITION NOTES.

THE PHOTO-SECESSION IN EUROPE.

IN RECENT numbers we spoke of printing some reviews of the Photo-Secession Invitation Collections which had been sent to various European capitals. We had hoped to publish in this number extracts from these articles, but upon mature consideration have deemed it best to omit them. The Photo-Secession and its workers have so often been accused of overweening arrogance and conceit that the eulogistic tone of all these critiques would seem, if reprinted by us, to lend some truth to these charges, and therefore, to save our modesty, we feel constrained to forego publishing these reviews.

PICTORIAL PHOTOGRAPHY AT THE LEWIS AND CLARK EXPOSITION.

As we go to press, the Lewis and Clark Exposition in Portland, Ore., opens. A great feature of this Exposition is to be its art section which, under the management of the painter, Mr. F. V. Du Mond, of New York, is by invitation only. A section of this exhibit has been devoted, under the same rules, to pictorial photography. Mr. Du Mond having appointed Messrs. Alfred Stieglitz, F. Benedict Herzog, present president of the Camera Club, New York, Eduard J. Steichen and Joseph T. Keiley a committee to select twenty-five photographs worthy of exhibition. The following photographers are represented in this collection of twenty-five: E. S. Curtis, Seattle, Wash.; W. B. Dyer, Chicago; Frank Eugene, New York; R. Eickemeyer, Jr., New York; F. Benedict Herzog, New York; Mary Devens, Boston; Alvin Langdon Coburn, New York; Radclyffe Dugmore, New York; Gertrude Käsebier, New York; Joseph T. Keiley, New York; W. B. Post, Freyburg, Me.; George H. Seeley, Stockbridge, Mass.; Eduard J. Steichen, New York; Alfred Stieglitz, New York; Clarence H. White, Newark, O.

Naturally the task of the committee was unusually difficult, as not only did the invitation come at the eleventh hour—as inevitably seems to be the lot of photography—but the very limited number of twenty-five frames left no great scope. No single exhibitor was represented by more than two pictures. We trust that this recognition by the exhibition authorities, together with the collection sent, will be but the beginning of a fairer and more reasonable attitude toward photography by those in authority of future exhibitions. This treatment of pictorial photography as the other arts comes as a relief after the fiasco at St. Louis.
OUR ILLUSTRATIONS.

Through the kindness of Mr. J. Craig Annan we were permitted to look over a collection of the work of that pioneer of pictorial portrait-photography, Mr. D. O. Hill, the Scotch painter. So impressive was the effect of this work done over fifty years ago that we inquired of Mr. Annan whether it would not be permissible for us to reproduce in Camera Work some of these charming photographs. Much to our gratification we received the reply that he would secure some of the original paper negatives which were owned by a friend of his.

The three photogravures published in this number were accordingly made for us from the original paper negatives by the firm of T. & R. Annan & Sons, of Glasgow, and Mr. J. Craig Annan was good enough to write for us the leading article of this number. By giving our readers photogravures made directly from the original Hill negatives we have afforded them a fair basis to compare this early pictorial work with the accomplishments of to-day.

The process reproductions of the Hill pictures were made from modern reprints of the original Hill negatives.

In contrast to the work of Hill we reproduce some of the landscapes of Mr. A. Horsley Hinton, the editor of the Amateur Photographer, London, and the founder of the so-called Hinton School of Landscape Photography. The firm of Annan made the gravure plates from which these reproductions were pulled. The original platinotype prints are all of exceptionally large size and naturally in the reduction some of their quality has been lost.

In reproducing three gum prints, one of M. Demachy and two of Mr. Steichen, we afforded further opportunity to study the possibilities of gum printing and to realize the scope of individuality inherent to this medium.

Things Very Much Worth Looking Into.

The Advertising pages of Camera Work, which not only contain the advertisements of first-class houses, but also many announcements of personal interest to all photographers. That is the place to find the details of competitions, as well as various new and interesting departures in photographic fields. Our advertisers appreciate that the readers of Camera Work are interested in nothing but the best, and accordingly take this into consideration in using their space. We can but repeat that we heartily recommend our readers to carefully study the following pages.
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4. Prints must be mounted.
5. Every print should be marked on the back with the “nom de plume” or pseudonym of the author. A sealed envelope containing this pseudonym as well as name and address is to accompany each shipment.
6. All competing prints are to become the property of the C. P. Goerz Optical Works.
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8. No employees of the C. P. Goerz Optical Works will be allowed to compete.
9. In sending the pictures, mark the package visibly “Goerz Catalogue Competition.”
10. The awards made by the jury are final.
11. The pictures sent in will be judged exclusively for their artistic and decorative effect and for their appropriateness as a cover-design.
12. This Competition will close the 30th of September at midnight. All prints sent after that date will be excluded from the Competition.
13. The following list of Cash Prizes will be awarded by the jury:

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