

The beliefs and opinions that come to dominate a person's adult life take root in his/childhood years, those years when he is ~~so~~ impressionable vulnerable to so many outside influences and his mind a blank slate or in contemporary metaphors an empty computer disc. Every experience is indelably recorded and with difficulty later amended or rejected. To change one's fundamental beliefs early acquired would require deep-seated psychological ~~and a agonizing~~ self-appraisal which only a traumatic event could call forth. Parental influence, where it receives noncoercive attention within an atmosphere of warm, loving mutual family relationships involving/respect ~~for each other~~ between adults and children and between siblings, ^{does not} and depends not simply on arbitrary authority, becomes the foundation not merely of principled behavior ~~XXXXXXXXXX~~ but of beliefs and convictions, material and ethical, in later life.

The influences that directed my mental and moral development were from a Darwinian father and a humanist mother. My father was a young man at the time of Darwin's revolutionary ideas on biological succession. With a group of contemporaries, young men and women of Chicago, who were similarly influenced, he helped found ^{the Agassiz} an association that met frequently to discuss and exchange ideas on current scientific theories in biology, geology and evolution. My father became a dedicated protagonist of the scientific interpretation of natural phenomena with an unshakeable belief in causality and a fierce rejection of purpose as a driving force in the universe. And perhaps because he was the only child of a widowed mother, the wife of an episcopal minister who died when my father was five years old; ^{and} had been brought up under the strict guidance of the episcopal faith, ^{he} and retained, if not the religious, ⁱⁿ but very ^{certainly} strongly its moral precepts.

My maternal grandparents were Unitarians. Mother's mother, Lucy Wadsworth, whom I remember as a sweet and affectional ^{from} granny, died when I was still very young.

maternal grandfather, William Eliot Furness, for whom I was named, My ~~mother's father~~ was a veteran of the Civil War, a major who commanded a Negro battalion that never saw action. My mother's older sister Grace died of tuberculosis in California, a younger sister Margaret ~~XXX~~ survived her, and a younger brother Jim ~~XXX~~ died of typhoid in Cuba in the Spanish American war. My mother attended Bryn Mawr College where she developed a literary taste, made life-long friends, some of whom became associated with the Jane Adams' Hull House in Chicago. I suspect that it was not only family tradition but these ~~XXXXXXXXXXXX~~ liberal friendships that encouraged an emotional bias for a feminist and racial point of view. She supported women's rights, the suffragist movement, and racial equality, and the progressive ~~liberal~~ political movements.

It was against this background that my beliefs in many spheres of concern took shape. As a young man under the influence of Darwin's writings my father professed agnosticism; in later years he disclaimed such qualified scepticism and pronounced his disbelief in ~~the XXXXXXXXXX~~ of a god or the need for a supernatural explanation of existence as inconsistent with a purposeless world. We children were never taken to church. The only contact we had with religious ceremonies was at Sunday dinner at ^{next door} Grandmother's ~~XXXXXXXX~~ when she always said grace before the meal. Although he seldom talked about his anti-religious beliefs it is not surprising that I absorbed ^{my father's} ~~his~~ point of view. Years later, how unknowingly ~~my~~ beliefs are passed on to one's children was ^{dramatically} clearly demonstrated, ~~by XXXXX~~ quite out of the blue, by a son who asked, "Daddy, do you believe in God?" I was taken aback and tried to evade the question by saying there were differences of opinion on the question ~~subject~~ but was interrupted by his saying, "I know you don't believe in God, Daddy." My father's other influences were much more positive. He took us children camping and on Sunday walks and talked to us at length about geology, ~~and~~ paleontology, and astronomy and about marine biology during our summers in Maine. My father was at heart a naturalist, instilled into his children ^{perhaps more profoundly in me,} a fascination with the

natural world, ~~and perhaps most profoundly in me.~~

My father's standards of moral conduct were equally positive. Lying and cheating ^{are} were inexcusable ~~immoral~~; only ~~immoral~~ ^{are} harmless untruths to avoid hurt feelings ~~were~~ tolerable. He didn't lecture us on these ethical matters; it was by example that we learned ~~them~~ ^{live by his} to honor and ~~they these~~ principles of behavior.

It was through my mother's influence that I learned racial and religious tolerance, or, more correctly, was not exposed to social prejudices. Not until I was sixteen and went away to boarding school did I learn about ethnical distinctions and how they subverted personal and social judgements. I knew not the distinction between Jews and non-Jews because it was a difference to which I had not been exposed. The term Christian being uncommon in my family, I did not place myself in any particular category of belief. In the suburban community in which I grew up and went to school lived very few Negroes who were by tradition and my grandfather's Civil War experience, the freed people. A (We were also exposed to differences of political opinion.) My father was Republican throughout his life whereas mother when women attained the franchise voted Democratic or for third party candidates which encouraged in her children a tolerance for not always acceptable political views. An example of ^{political} intolerance that had a lasting effect on me occurred during my first year in boarding school. ~~THE FIRST~~ World War I was drawing to a close and the Russian Revolution had deposed the Czar. A young teacher of history and government described to his class the working of the Kerenski government. Word got around that he was subverting his students by promoting Bolshevism and ^{he} was summarily dismissed. The chairman of the board of the school, an old man in his dotage, was called upon to address the assembled school to explain what had happened to the popular teacher. He was fired, he told us, because our minds were being poisoned by this dragon of Bolshevism,

And so I grew up in the liberal tradition, now considered politically obsolete, which, ~~xxxxxxx~~ in the absence of convincing arguments to the contrary, I still subscribe to. That a government, any government, particularly a democratic government dependent on popular sanction for its existence, should be ^{responsible for} involved with the general welfare of the governed is a foregone conclusion ^{that seems to be} not universally accepted today. Social and economic welfare is currently sacrificed for military security to assure the survival of the society it ~~is~~ ^{has} ~~designed to protect~~ diminished for its own protection. Excessive militarism defeats its intended purpose in a constitutional democracy when the rights and liberties and economic welfare of the people are made secondary to their defense for which they are being defended.

My father's influence on my developing ^{attraction to} interests in science and nature was supplanted by Mr. Boyle, my High School chemistry teacher. Chemistry became an overriding interest which lasted though my ~~xxxxxx~~ formal university and medical school ^{education} ~~years~~ and with diminishing intensity for ten years thereafter until photography ultimately supplanted it. The influences that guided the course of my ^{professional career} interests during these ^{beginning} early years ^{pushed} drove me in a direction that I slowly began to recognize could not lead to the fulfillment of my ^{hopes and} aspirations. I was not the dedicated scientist I had so romantically envisioned in my highschool chemistry class. I had entrapped myself, been encouraged to do so by family and social pressure, in the belief that I could ~~be~~ ^{by research to the elucidation of the way things work and} make discoveries and contribute ~~to the unraveling of the complexities of~~ ^{how they happen} natural phenomena. The Discoveries were elusive although simultaneously I enjoyed ^{recording} depicting the outward appearances of things by photography. I suppose I might have used some other medium had circumstances been different but photography was a means that any one conversant with the elementary chemistry could learn by himself,

In the beginning, however, it was not photography that held my youthful attention. It was nature and a fascination with birds. In the spring time when not incarcerated in school and during the summer vacations I spent many hours hunting for birds' nests, learned ~~by simple~~^{sub} ~~observation~~ their identities and characteristics, and by the unconscious processes of awareness something of the habits and behavior of their creators. I collected birds' eggs but I did not rob the birds' nest, a morally unacceptable act; I waited until the young had fledged when occasionally there would be an infertile egg left behind in the nest. ~~landscape~~ Because my father was an enthusiastic amateur/photographer, who took landscapes with ~~xxx~~ a postcard size Kodak on all his camping trips, ~~xxxxxxx~~ I was given a box Brownie when I was still quite young. With this instrument I tried unsuccessfully to photograph the nest I found. A year or two later in Maine during ~~xxxxx~~ an expedition to a heron rookery on a neighboring island I photographed with the Brownie a terrified juvenile great blue heron standing ~~x~~ in a raspberry thicket that we had frightened from its nest by our intrusion. The picture turned out to be one of those flukes of photography, much better than anything I had made before, which so impressed my father that he had an enlargement of it made. On my next birthday I was given an Eastman folding Kodak with a top shutter speed of one three-hundredth of a second. With this camera I started photographing the larger ~~birds~~ common birds of the Maine coast, gulls, terns and ~~xx~~ fish hawks.

Gradually, photographing birds became a major summer avocation. Eventually I acquired a Graphlex camera with a focal plane shutter speed of 1/1000 sec., short enough to stop the motion of large birds in flight. As the years went by my interest shifted to the small passerine birds that were native in large numbers to my Maine island in the breeding season. I became enchanted by the colorful ^{wood} warblers of which ten to twelve species nested there. But they were almost impossible in the

However, it was almost impossible

shady conditions prevalent in their woodland habitats, to photograph in ways ^{to meet the} ~~the standards of photography~~ ^{of overall clarity & definition of the image} I had learned to require ^{and definition} in other fields of photography ~~in respect to the overall clarity of~~

the image. Most of the photographs of birds published in ornithological journals and popular magazines were by even the most ^{generous} ~~forebearing~~ standards. The presentation of aesthetic standards, completely ~~unsatisfactory~~ unacceptable. That there was

an image of a bird only half in focus, unidentifiable, but never before photographed, in an environment not ~~contributive to the meaningfulness~~

of the picture as a whole, was satisfactory to most critics (who had a low opinion of photography, in any case, compared to paintings of birds which

were ^{often} made from collected specimens arranged by the artist and painted at leisure). To remedy this situation ^{and make photos of birds comparable aesthetically with paintings} would require either much faster film ^{high intensity} or the use of artificial light. About this time flash bulbs were invented

which when used in multiple close to a subject permitted the exposures at small apertures with an increase in definition and depth of focus. These

~~images of the birds and their surroundings were sharp~~ Most of the photographs

^I ^{using} took with this technique were of nesting birds and ^{was a great improvement} ~~the images and surroundings were sharp~~. But a lot of planning for each subject was always

necessary. One had to consider the position of the bird in relation to its nest and the adjacent foliage and since the behavior of the subject was not easily predictable many opportunities to make photographs had to be ^{paved up} ^{applicable to all subjects} rejected. The guiding principle ^{was} the quality of the total picture ^{be important to} in which everything within the frame of the camera had to count ^{towards} its aesthetic content, ^{ideally, nothing should be extraneous.}

The chief disadvantage of the flash ^{bulb} technique ^{was} that the ~~shutter speed of the camera determined the shortest~~ ^{ed} exposure time available, usually about 1/220 of a second, ^{which was} was not fast enough to stop wing motion, ^{stopped motion} with the result that many pictures were spoiled by the subject moving during the exposure. About this time I saw some photographs of a hummingbird in flight by Harold Edgerton. His technique ~~was~~ depended on high voltage discharge of electricity through specially

designed tubes producing a flash of light. The flash duration, which could be made as short as desired by proper design, determined the exposure and could easily be synchronized with a between-lens shutter. I wrote to Edgerton asking for information about the apparatus and he very generously sent me plans for its construction, which I immediately set about to do. The device worked well but was unsatisfactory because the light output was too low to use with the small apertures I needed for maximum depth of field. The next step was to obtain more suitable equipment. I consulted Strobe Research, a commercial laboratory, and it build a special flash unit to meet my requirements. It ^{gave} had a high light output at 1/5000 sec. distributed between three lamps which could be arranged to give natural illumination and when placed three feet from the subject

permitted exposures at f/45. With this equipment ^{and a 4x5 View Camera} I was able to obtain sharp ^{but} photographs of birds in motion ^{that met the standard applicable to other fields of photography.} and with every thing surrounding them also in focus. These photographs were more meaningful than any I had made before because one was not limited by ^{variable light} ~~light~~ and could plan each subject from ^{the} ~~most~~ favorable aspect so that every object within the frame of the camera contributed to the unity of the final picture. My camera, a 4x5 view camera, ~~was~~ ^{was} the same

interest a book of ^{their bird} ~~the~~ photographs

When I tried to ~~inquire~~ ~~a~~ publisher in ~~the~~ photographs I was told they could not be published because ~~they were too dark~~ ~~and~~ ~~the~~ ~~birds~~ ~~could~~ ~~not~~ ~~be~~ ~~identified~~ ~~in~~ ~~black~~ ~~and~~ ~~white~~; that they should be done in color. This is what started me photographing with the recently introduced Kodachrome film.

~~I used for other subjects, was the equipment with which I learned that everything included within the picture area must count towards contribute to the integrity of the whole; ideally nothing should be extraneous~~

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and ^{to} since I usually had color film with my camera, I began using it/photograph other things, ^{besides birds} mostly close-ups of natural subjects, some of which I had photographed before in black and white, ~~although~~ Color film gradually stimulated a new kind of vision. Things that I had passed ~~up before~~ ^{by} as dull subjects in black and white, in color were transformed into ~~XXXXXXXXXX~~ brilliant and vibrant objects. Decaying wood, dead leaves, lichens tree bark/became things of beauty to which previously I had been blind. ~~As I began to experience~~ ^{receded} these fresh experiences, I began to realize that I was seeing the world in a new light. Previous black and white subjects were much more general, much more conventional; they were wider views, architecture and landscapes, but with color I zeroed in ^{to} the closer horizons. The big views did not attract me as they had ~~for~~ ⁱⁿ black and white, which I think is because they become superficial and cheapened in color. Blue skies I found particularly objectionable; clouds, as they always do, help, whereas a general overcast often improved the situation. Atmospheric conditions strikingly influence ~~the~~ photographic possibilities of closer subjects. In subdued light ^{and effectance} colors become more harmonious, which is lost in bright sunlight due to excessive contrast even though the colors may actually be brighter. Woodland scenes are almost impossible to photograph in color on sunny days because ~~of~~ ^{they become} the spots of sunlight that speckle the ground are so intense/~~and~~ disturbing elements in the subject. There are, however, no invariable rules for optimal conditions for photography, or, as a matter of fact, for composition either. ~~A~~ Popular subjects for the ^{the} amateur and beginning photographer are flowers, whose attraction is based on long established romantic appeal, awesome beauty and the mystery of their very existence. To express these emotions the photographer will usually focus on the blossom, isolating it from all connection with its environment to produce a botanical illustration or flower catalogue picture of ~~the flower against~~ ^{with} a nebulous background.

This style of flower photography seldom ^{well} contribute to the art of photography. This is not to say ~~that~~ it can't be done only that flowers seldom are photographed in this style creatively. What is missing in my opinion is context; flowers do not exist in isolation except in horticulture. In the wild, ~~xxxxxxxxxxxx~~ every part of the habitat is integral to the whole and necessary to a resolution of the appeal, both emotional and intellectual, that drew the attention of the photographer in the first place.

And so I began to accumulate pictures on a great variety of subjects other than of birds, although birds remained my major interest. I tried in vain to interest ~~a~~ publishers in a book on birds, which was ^{always} rejected on grounds of cost. Color reproduction in the forties was unheard of for book publication; its use being principally in ^{magazines and} advertising. My wife told me that my nature photographs reminded her of Thoreau and that I might be better advised to consider ^{doing} (illustrating) a book ^{on Thoreau using} of quotations from ^{his writings} Thoreau and to set aside the birds for the time being since ~~competition with the popular illustrations~~ by painters were generally considered superior ~~popular illustrations of birds~~ to ~~photographs~~ the of photographs competitive obstacle to acceptance. I started reading Walden, which at first I found dull, ~~and~~ went on to his other books and ultimately to his journals, becoming more and more enchanted with what I found. Thoreau described the things that attracted me as ^{photographic} subjects to ~~photograph~~. They were ~~xxxxxxxxxxxx~~ the small things of the woods and fields, the intimate relationships, not the big views, and they had to be photographed in color to illustrate and compliment Thoreau's words.

For several years I worked on the Thoreau book, put together an album of ~~presentation~~ with quotations and photographs that to me ~~expressed~~ carried the same message, which I presented to publishers with no more success than I had had with the birds

photographer
 For several years I worked on ~~a~~ ^{this} book of ~~photographs~~ ^{correlated} with ~~associated~~ ^{photographs} with words of Thoreau that to me expressed the same feeling, which ~~I~~ ^{summed} as a mockup I presented to publishers with no greater success than I had had with the birds. Eventually it was published by the Sierra Club under the title "In Wildness Is The Preservation Of The World", a quotation from Thoreau's essay on walking. Up to this time I had not given much thought to environmental issues or ^{the} conservation of nature but on becoming associated with the Sierra Club these matters were brought ^{forcefully} to my attention and I became a strong ~~supporter~~ and life long supporter of these movements. I was converted to -- what in the circles of the ruthless developers and exploiters ^{are} of our natural resources/disparagingly termed- ^{is then} an environmentalist. My photographs of the natural scene were considered to carry a conservation message and ^{be a contribution to} valuable ~~for~~ ^{for} the cause of environmental protection. ~~These~~ ^{But} ~~they~~ ^{because} ~~could~~ ^{positive} ~~be used~~ ^{purpose.} / I never, ~~however~~ ^{because} photographed with that purpose in mind. / My over-riding involvement with photography, above all other considerations, was the artistic potential of the medium. They could, however, ~~be used~~ ^{depict} serve a positive purpose to illustrate ecological relationships and the most appealing aspects of the natural scene. On the other hand I have seldom been ^{motivated} ~~inspired~~ by the ~~negative~~ ^{to photograph} approach to conservation ~~produced~~ ^{thoughtless} the devastation ~~caused~~ ^{by} ~~ruthless exploitation~~ ^{thoughtless} exploiters.

When I became seriously involved in photography back in the thirties ^{Ansel} under the influence of Adams and Stieglitz, the f/64 school dominated the field. The accepted technique was straight photography, ^{sharp focus and} ~~no~~ manipulation

of ~~the negative or combines~~ images ~~and sharp focus~~. This period was a healthy reaction to the preceding era of soft focus sentimentality, of photography's ~~imitating~~ ^{ed} self-conscious justification by imitating painting. Tinting of prints and combined negatives were scorned by the pure photographers. To rely on these procedures manifest a failure to appreciate ~~the~~ and ~~to~~ exploit the unique ^{potentials} ~~properties~~ of the photographic process that sets it apart from all other media. And it demonstrated a paucity of imagination for the ^{possibilities} of ^{or} photographic applications, ^{everywhere material} of the infinite variety of subjects. In recent years there has begun a full cycle turn away from straight photography back again to the manipulation of the image, but this time by the ^{use} (application) of numerous sophisticated techniques. Anything now goes. And concomitantly (simultaneously) with this new vision a turning away from natural subjects is evident. Nature is considered passe and trite; ^{the accepted} subjects are contrived and surreal. I do not ~~(off-hand)~~ reject these trends, when sensitively applied they do contribute to the art of photography, but it is a pity that literal representationalism should be disparaged at a time when the ~~natural~~ nonmaterial ~~environmental~~ values of the natural environment are being sacrificed for the economic profit. Beauty in ~~wildness~~ the natural world is generally recognized but wildness is feared with a willingness to ^{degrade beauty} ~~sacrifice~~ ^{its} for ^{and} (substantial) extractable properties, the result of the suburbanization of society.

Another controversy ~~in~~ within the photographic field developed with the advent of color film. The leaders in the school of straight photography nearly unanimously rejected color photography as being too literal and restrictive, permitting little freedom for interpretation, and therefore was a less creative process than black and white. Not being one of the original f/64 group, less strictly bound by its premisses, and because I adopted color film ~~as~~ as the only means by which to accomplish my purpose in bird ^{and nature} photography and subsequent goals, I ~~took~~ ^{dissonance with} strong exception to this criticism. The critics

failed to apply to color ~~photography~~ the principles they had so successfully promoted for black and white photography. They did not appreciate the added dimension color ^{gave} to certain subjects, that its use ^{does} was not simply a matter of copying nature, that interpretation ^{is} ~~was~~ possible through ^{selective} emphasis just as ^{with} ~~in black~~ shades of gray. They did not make prints so they never understood that more controls were available than in black and white to obtain a desired result in the printing process. In spite of this denigration by the photographers whom I most admired and some who profoundly influenced me, I persisted with color photography although I never gave up black & white entirely. They are distinct media, each has its particular area for creative expression which cannot be successfully invaded by the other. This distinction is fortunately becoming more and more recognized so that finally color photography is acquiring an established place in photographic art.

^{Just} As one's beliefs in ~~the~~ social, economic, and political ~~realms~~ fields originate ^{are} implanted, develop, and, ^{with luck} (it is to be hoped), ^{mature} purified of prejudice, ~~and~~ ^{too} ~~and~~ during the course of a long life, so/for those whose lives have been devoted to pursuits in the arts and sciences a reevaluation, rejection of old and adoption of new ideas, is inevitable. For me these changes ^{aesthetic} have lead to a somewhat different point of view on the/acceptability of various styles of photography; some that I once felt critical of I now feel more tolerant towards and others that had positively influenced my seeing I now ^{find} ~~found~~ ordinary and uninspiring.