

When we are children ~~xxxxxxxxxxxxxxxxxxxx~~ our interests are ~~xxxxxxxx~~ and directed by the influences of ^{child} human relations and the circumstances of our daily lives. Our parents ~~xxxxxxxxxxxxxxxxxxxx~~ ~~effect~~ in particular as well as our playmates often have a determining influence on the course they take, but exterior events outside the family circle ^{could} ~~may~~ also have an effect that may not be recognized until almost as soon as they learn to talk much later in life. Most children/if provided with the means express their visual impressions of the world around them by drawing. This world at first encompasses mother and father, sisters and brothers, the dog or cat, and the house they live in; later it includes the books they read or are read to them and today what they see on television. The subjects that especially obsess boys are space age warfare. But manual dexterity of which drawing is one expression is manifest early in playing with toys building with blocks and as skill develops assembling mechanical models. With some children and perhaps with all if fundamental inherent attributes are fostered by parental interest and example ~~makingx~~ using simple materials to make their own toys and other objects provides a basic creative satisfaction.

I have observed these influences and consequent developments in my own children and grandchildren but I am unable to define ^{point to} ~~them~~ any that could have determined the course of my life before the age of six. I am sure that parental influence ~~xxxxxxxxxx~~ of a humanist mother and a scientifically minded father was strong. I have no recollection of having spent ^{any} ~~much~~ ^{imaginary} time drawing/pictures ~~xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx~~ but very early I did get real pleasure from making things out of wood with my first tool a pocket knife. I ^{was} also, ~~xxx~~ while still quite young, attracted by the natural world, the first growing things of spring and by birds/^{a preoccupation} which became later a dedicated vocation. All these interests were treated with sympathy and encouragement by my parents, especially by a scientifically inclined father with whom my sister and brothers and I would go on Sunday walks on Lake Michigan's shore and be told about the geological history

of the Great Lakes, ~~and~~ about the significance of fossil~~s~~ crinoids which could occasionally be found in the sands of the beaches, and about ^{was} how it all/tied together by evolutionary change.

My precocious interest in wood working received ~~a~~ strong support one Christmas when I was given a work bench with a vice and a chest full of tools. It was a day I can still remember; my surprise and overwhelming joy when after Christmas dinner the doors to the parlor were the Christmas tree revealed by encouraging manual activities opened/and I was introduced to the present that/was to have a profound and lasting effect ~~for me the range of my opportunities~~ ~~effect xxxxxxxxxxxxxxxx~~ in broadening ~~the range areas in which xxx~~ ~~xxxxxxxxxx~~ ~~needed~~ for self expression.

Christmas was always ~~a~~ a day of intense excitement as I am sure it was for many middle class children. It started early ~~in~~ Christmas morning when we went down stairs ~~before xxxxxx~~ in our pyjamas before breakfast Santa Claus was supposed to have filled ^{the} fire place to open out stockings that we had hung the night before from the ~~living room~~ mantel piece in the living room that we called the library because it was lined with shelves of books. The Christmas tree had been set ⁱⁿ up the night before and decorated by our parents in the room across the ~~the~~ front hall from the library known as the parlor, ~~being~~ a more formal room with a grand piano and an aeolian organ that my father played. The floor in the parlor was covered with several oriental rugs, kazak, tabreeze, and ~~Decorated~~ ^{its} of moderate size leaving much polished wood in between, adding to ~~the~~ formality ~~of the room~~. The floor in the library on the other hand was almost completely covered by a thick red oriental rug, figureless ^{decorated} except for a ~~decorated~~ boarder in blue and green and black. The sliding doors to the parlor were kept closed all Christmas morning, ~~a~~ ^{who would} a challenge to us children ~~to~~ surrepticiously peek in through the cracks ~~because~~ it was here where ~~that~~ we would receive ~~most~~ most of our presents after Christmas dinner.

The one exception to this custom was the year I was given an electric train. It had been set up in the library and the tracks could be seen from the stairs into the front hall as we came down to open our stockings,

The electric train was not a great success. Mechanical toys with their limited possibilities for operation and holding ~~interest~~ ^{than} attention, appeal more to fathers ~~and~~ to sons. A child soon tires of an electric train on its circle of track; it offers no challenge as a model railroad does for an older boy or an adult with its possibility for improvement and enlargement.

Somehow Christmas morning had to be gotten through, so to ease the strain we were ~~sent~~ ^{to} out to play in the snow or/going coasting or taken for a walk on the beach. The reason for delaying the distribution of presents until Christmas afternoon was that granny and grandfather, ~~my~~ ^{late in the morning} mother's parents, and aunt Peggy her sister came out ~~from Chicago~~ on the Northwestern Railroad for Christmas dinner. We loved them and they helped reduce the tension but nevertheless our excitement and impatience continued to grow throughout the meal from soup to desert, ^a cream ~~and~~ asparagus or mushroom soup, roast turkey ~~with~~ ^{and} chestnut stuffing, mashed sweet potatoes ^{with a caramel sauce} ~~with a caramel sauce~~ coating, cranberry jelly, salad, and mince and pumpkin pie with icecream. After all that, around one-thirty or two o'clock, the most important event of the day ~~was~~ began when father opened the doors to the parlor.

The carpenter's bench was installed in my bedroom where it soon became the source of much litter and shavings on account of which there were seldom complaints from higher up. Eventually the hand tools were supplimented by an electric scroll ^{from} saw and ~~with~~ ^{thinned it} bass wood ~~from~~ the local lumber yard I made ^{nut boxes} ~~bird houses~~ for house wrens and boats with propellers driven by rubber bands. In this receptive period of my early life new experiences and knowledge in retrospect cannot be placed in strictly chronological order. They ~~are~~ flash into my memory in kalidoscopic disarray; one thought superseding another with no logical sequence, mysteriously recalled from deep recesses in the brain through unresolvable networks.

^{brain cells}
 of (neurons). Visions of my tool bench ~~is~~ tucked in a corner of my bedroom,
 is ~~observed by~~ veiled by
 disorder all about, suddenly ~~the~~ thoughts of Halloween ~~observes the room~~
 and the memory of, the time when my friends planned to ~~raid~~ ^{raid} my father's
 fruit cellar which I had to circumvent. No doubt ~~is~~ ^{but} a physiological
~~connection~~ process connects these random memories, / the vast network of routes
 defies resolution. When one gives ~~in~~ ^{direct} in to uncontrolled thinking it
 is called day dreaming and when one tried to ~~direct~~ his thoughts they
 often become channelized ^{into vast earth} and contact with the past is closed.

Another event in my boyhood which had implications for the future
 was the acquisition of a chemistry set simultaneous with the present of
 popular book on chemistry and a highschool chemistry course. To supplement
 the chemicals in the set I purchased more effective reagents, concentrated
 nitric and sulphuric acids, and chemicals for producing violent reactions,
^{Simulated by Fourth of July fireworks,}
~~in other words explosives, which always have a fascination for boys.~~ I made
^{like gun powder like}
 a variety of explosive ~~power~~ (from potassium nitrate, carbon and sulphur)
 but fortunately failed to make nitroglycerine. An explosive device that I
 learned to make with my friends from simple available materials : a key
 with a hollow stem and a nail to fit snugly into the hollow and a loop of ~~string~~
~~connection~~ joined by a loop of string
~~string connecting the handle of the key to the nail.~~ The scrapings from the
 heads of ordinary kitchen matches are packed into the hollow key and the
^{is} nail/wedged in against them. When the assembly is ~~swung~~ ^{swung} by the string to
 strike the nail against a hard surface the blow will cause the match heads to
 explode with a loud bang. The device can also be made into a miniature
~~aerial~~ bomb by attaching a ribbon to the head of the key so that when it is
 thrown up into the air it will land on the nail and detonate ~~on~~ ^{against} a hard surface.

Chemical reactions, especially of the most vigorous kind, involving
 such reactive substances as
~~extremely~~ unstable compounds such as potassium perchlorate and permanganate
 and metallic sodium, which violently reacts with water to produce hydrogen,
 challenge
 were an irresistible ~~temptation~~ ^{challenge} to ~~experiment with~~ experimentation.

Experimentation with chemicals, to find out what would happen if two substances were mixed together, to see if what was supposed to happen actually did take place, to satisfy that curiosity became ^{for me} a compelling impulse. ~~Thexxxxxxxaxxxxxxx~~ Reactions of the most vigorous kind ~~involving~~ were the most challenging ~~textxxx~~ and irresistible to try. I experimented with potassium perchlorate and permanganate and with metallic sodium, which violently reacts with water to produce hydrogen. I discovered that perchlorates mixed with sugar are explosive. That I never injured myself can probably be attributed to instinctive caution ~~and~~ ^{and} good luck. One of the phenomena I played with was the ^{differential} ~~different~~ affinity for oxygen of metals; thus aluminum can capture the oxygen from iron oxide or rust under proper conditions. The phenomenon ^{was} ~~is~~ used in the thermite process for welding railroad rails. A mixture of powdered aluminum and iron oxide in a graphite crucible can be ignited with magnesium ribbon ~~and~~ ^{to start the reaction which rapidly} will proceed/ with a shower of incandescent sparks at several thousand degrees Fahrenheit/ until the aluminum has ~~rexxxxxx~~ combined with the oxygen leaving a puddle of molten iron in the bottom of the crucible. In my room the display was spectacular; it burned holes in my rug and charred ^{spots on} the painted floor but I never set anything on fire and I am sure my parents ^{knew nothing about the pyromaniac going on in my room} ~~never knew about these thermite experiments~~. It does seem that my interests at this ~~timexxxxxxx~~ period of my education were notably aligned on a course of exothermal ~~prexxxxxx~~ ^{devices}; I even attempted to construct an electric arc furnace, blowing many fuses in the process ^{without} ~~unknown~~ to my father knowing about it which ^{if he had} ~~he~~ probably would have put a stop to.

My activities weren't devoted solely to solitary pursuits in my room; I did have friends, who participated in some of the ~~more~~ more spectacular experiments, but with whom I played out of doors. The community of Hubbard Woods - who Hubbard was I never knew - was ~~axxxxxxxx~~ ^{the northern part} of the village of Winnetka, not ~~an independent~~ politically independent although it did rate ~~a~~ its own station of the Northwestern Railroad on which my father commuted to Chicago. The part of Hubbard Woods where my friends and I lived was

on the lake front east of the tracks. West of the tracks was the business district with its stores, public buildings, and schools and farther west the great Skokie, the Indian name for marsh, the place we rode out to on our bicycles to hunt for marsh bird's nests. Hubbard Woods east of the tracks was divided into several sections by a branching ravine, the course of a stream before the area was settled, that flowed into Lake Michigan and subsequently was diverted into storm sewers. ~~When the~~ The ravine became the route for northern highway Sheridan Road the principal ~~route~~ out of Chicago, until it was superseded by a less winding route west of the tracks. The house my father built was east of the ravine on a bluff overlooking the lake whereas most of my friends lived ~~west~~ on its west side. The Wallings were directly across as were the Fishers and the Nelsons father west on a side branch of the ravine, ~~which was~~ the only ^{the place where we more} part without a road in it, and for that reason played ~~in it more~~ than anywhere else. South of where the ravine cut through the bluff onto the shore of Lake Michigan were the homes of the ^{Matts} ~~Matts~~, the ^{Menilla} ~~Joneses~~, and the Carpenters in that order. Since there were no boys ~~in the Matts~~ that home remained always a mystery. An older ^{Jones} boy was the bully of the neighborhood. I was afraid of him because he was always threatening to beat me up and when my mother urged me to stand up to him I am ~~in~~ ^{replied} told that I said that ~~that~~ would be dangerous. Fairbank Carpenter was just my age and eventually became my best friend up until college days.

^{Nelson} Curtis the third ~~child in the~~ family in a family of four with an older brother and an older and younger sister. His brother Thatcher, ^{was} the seldom saw and ^{Curtis's} oldest we looked upon with awe; (his) older sister ^{factor} ~~Loise~~, friend of my sister Nancy, entered little into our daily lives except in my case years later when ~~she~~ by chance circumstances she became an important / in events that influenced the course of my life. Phoebe his younger sister was the indirect cause of much unhappiness ^{to} him. Discipline in the Nelson family, particularly as it pertained to Curtis, was strictly enforced by a

martinet of a governess, Miss Ridgeway. Mrs. Nelson, who from the perspective of Curtis's friends, seemed never to be involved with the regulation of her ~~child~~ children's lives, had presumably delegated authority for their upbringing to Miss Ridgeway who would summon Curtis home/^{by telephone} from whatever friend's home he happened to be playing ~~in~~ - he was required ~~to~~ always to ~~tell her~~ ^{keep her informed} where he was - ~~(on the)~~ ^{Most frequently} pretext that Phoebe was alone and he must come home ^{After answering the telephone} ~~return~~ to play with her. /Curtis would say, "Miss Ridgeway says I must come home to play with Phoebe".

One day I saw an advertizement ~~for~~ ^{of} a small treddle operated, similar to the early Singer sewing machines, wood turning lathe. I decided I had to have it but the price was beyond what my modest allowance would finance even with ^{self denial} the most rigid ~~severing~~ so I perswaded Curtis to go in with me for it. When it arrived I installed it in my room and Curtis's opportunity to use it was very limited. Eventually his parents found out about the deal and insisted that the lathe be more equitably shared by being ~~placed~~ kept half time in his possession. This was obviously difficult to arrange especially as Curtis was not really very ~~little~~ interested in ~~turning things on the machine~~ using it. The predicament was eventually resolved when my shocked parents learned about my ^{sold} ~~reproved me for~~ ^{greed big so unfair reimbursement} ~~selfishness~~, paid off my partner and reduced my allowance. Curtis Nelson ^{for his} childhood, ~~was~~ ^{and was affected in his later life} ~~overwhelmed by guilt and inferiority~~, was not a happy time for him. He went to Harvard and medical school and while under psychotherapy apparently suffering from unsupportable depression ^{hospital} jumped to his death from his ~~bedroom~~ window.

Willoughby Walling, my ~~younger~~ brother Edward's age, younger than most of my friends often went tagging along and in trying to keep up would make a ~~nuisance~~ ^{nuisance} of himself to which we older boys ^{reacted} responded by teasing him, sometimes unmercifully. He was especially eager to participate in our ~~chemical~~ ^{chemical} experiments with explosives so one day I proposed that we play a ~~chemical~~ ^{chemical} trick on him with the ~~chemicals~~ ^{the reagents in} of my chemistry set. ~~By~~ When

iron sulfide and hydrochloric acid ^{be mixed with} come together the gas hydrogen sulfide ~~is~~
~~produced~~ that smells like rotten eggs ^{is produced.} ~~to produce a hydrogen sulfide~~
 sulfide generator ~~On some pretext to see Willoughby we conspirators went~~
~~to his house with a small bottle of dilute hydrochloric acid and some lumps~~
 of iron sulfide ^{As} ~~we~~ ^a ~~conspirators~~ ^{mission we} on our nefarious ~~purpose~~ ^{joval} went to
 see Willoughby one afternoon all radiant with deceptively friendly intentions.
 I had brought ^{with me} a small bottle of dilute hydrochloric acid and some lumps
 of ferric sulfide. On some pretext one of us lur^{ed} Willoughby out of his room
 whereupon the quickly assembled ^{the} hydrogen sulfide generator was secreted it
 above the door inside Willoughby's closet. We all left shortly thereafter
 and heard no repercussions of our prank until the next day. Willoughby
 caught on, ^{to} later in the day because of the stink, ^{what} we had been up to but
 it took him a long time before he located ~~in~~ its source, revealed by the
 brown stained plaster above the door. No parental wrath ensued from this
 practical joke
 escapade probably because the amount of gas produced was small and it was
 taken in good part by the victim. ^{a young boy} Innocent and gullible as Willoughby
~~was, at this time~~ ^{when} he grew up ^{he} became the most adventurous of all ^{my}
 friends and the inspiration for ~~adventures~~ exploits I undertook years later.
 Probably disillusioned by the standards of success in conventional society
 he dropped out of Cornell to seek adventure in the west, became a migratory
 laborer, rode freights, and worked in lumber camps but eventually returned
 to Cornell where he obtained a degree in forestry.

For ^{recall} ~~perhaps~~ ten years after father build the house I was born in, the
 land to the north on the same side of Sheridan Road remained a wild ^{and} wooded
 area where we children played, ~~in the spring and summer~~ ^{and} picked wild ^{flowers}
 in the spring and strawberries in the summer. Then two houses were build
 and I remember feeling resentful at the destruction of our playground. There
 were two girls in the Metler family that moved into the nearest house; the
 older one Marcella ^{was} my ^{sister's} age and her sister Barbara the same age

Their ^{There were three children} family
 as Edward. ~~The~~ father was a retired doctor. / In the Fentress / in the
 farther house ~~were three children~~, two girls and a younger boy. Mr. James
 Fentress ~~the father~~ was an excentric, delightfully ~~and~~ entertaining
 southerner. ~~The second girl Louise was my younger brothers's contemporary.~~
 whose relationship with his children was exceptionally sympathetic and ~~understa~~
 understanding. The second girl, Louise, was in the age group of my brothers
 Edward and Fairfield with whom she and Barbara Metler became constant
^{companion} playmates. Their play took place mostly at the Metlers and the Fentresses
 and evolved into a continuous game about an imaginary country they called
 Edfaloba, a combining the first two letters of each of their
 names.

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Another game we played similar to ^{our} ~~the~~ games in the ravine behind
 the Nelson house was a game of tag on the roof of our barn. The barn built
 at the beginning of the century at the same time as the house was planned
 for horses and carriages. It was a brick building with second floor living
 quarters for a coachman and his family. A one story ell/extended at right
 angles from the main carriage area and opened onto ^{paddock enclosed by a} a high brick walled
^{entered through} paddock provided with a double door gate wide enough for carriages ~~to pass~~
 through. I do not remember the horse and carriage time because it was
 superseded in a few years by the motor age. The barn / ~~became~~ ^{was turned into a} garrage and
 the horse stalls became obsolete and vacant. The cedar shingled / ^{pitched} ~~roofs~~ of
 this complex building ended at four inch high raised gutters beyond which
 from the two story building ~~extended into the paddock~~ a shed roof of less
 steep pitch. ^{large} extended into the paddock. A / dormer window projected from the
 main roof above the shed. With our school friends my brother Edward and I
 discovered that the roofs of the barn were a woderful place to play tag. We
 could chase each other around the dormer window, slide down onto the gutter
 and run around on the top of the paddock wall without ever having to ^{come to} ~~touch~~
 the ground. How long this sport would have ^{gone unnoticed} (been permitted) had not an

unfortunate accident brought it to the attention of adults is impossible/ to say. It was brought to an end one day after school when Edward slid over the gutter on the horse stall ell and landed feet first in a trash barrel. H went howling into the house more frightened than hurt and when father came home that evening and heard about it he ordered us ^{angrily} ^{never play on} indignantly/ to stay off the roof because we would damage the shingles.

Besides having a group of friends with whom serious disagreements seldom arose and fights never occurred, we shared a few enemies some more threatening than others by virtue of age and nationality. One lesser skirmish I had with a tease my age who ^{hunted in both here} ~~changed my name to~~ Idiot and dared me to fight him because he was sure I didn't have the gumption to stand up to him. ^{during recess} When I ~~did~~ he turned his back after the first blow and that ended that. A more persistent trouble maker was Paul Owsley whose house I rode past on my way to school. He would throw snow balls at me and threaten to knock me off my bicycle. Eventually with my friends we told him we would beat hell out of him unless he left us alone, which with repeated reminders in school persuaded him he'd better mind his own business. The most terrifying danger came from across the tracks in the person of Tony Montenegro, older and bigger than any of us, who must have felt that his self esteem and ^{rich} social status required that he show those/ boys from the east side who was ^{near the railroad tracks} boss. One day/ on my way to school I was confronted by Tony. It was a frightening situation but fortunately the Mackilvane boy who, had protected me once before from being beaten up by Jones came along at that moment and was about to engage Tony on my behalf when Tony whiped out a knife. My aunt Frances, father's sister on her way to the station saw the drama unfold and with great authority and dignity told Tony to put his knife away, ^{saying} that we don't fight with knives in this country. Tony humiliated ~~and~~ sulkily withdrew.