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TRUANCY AS RELATED TO THE MIGRATING INSTINCT.

By LINUS W. KLINE, Clark University.

CHAPTER I.

INTRODUCTORY.

Aside from psychological interests truancy has some very important pedagogical and sociological aspects. Attendance and attention of the first order are probably the most serious factors to be successfully met by the practical teacher. It is becoming recognized more and more that the realization of these two coveted prizes of practical pedagogy depend primarily on a physical and sociological basis.

Morrison¹ says: "That biological conditions are directly and indirectly important factors in determining the course of human action." Richardson,² in speaking of felicity (well being) as a physiological quality, says: "Of the two living natures with which man is endowed and which distinguishes him from the lower creatures—the pure animal and the pure intellectual natures—felicity belongs to the animal nature. . . . The center of the emotions of felicity (well being) is in the vital nervous system, in the great ganglia of the sympathetics lying . . . in the cavities of the body itself, near the stomach and the heart."

Dawson³ says: "The first elements to be noticed in the early surroundings of these delinquent children are the poverty and improvidence of the parents." These citations indicate the general considerations that have influenced the present investigation—the *biological, the physical and the sociological*.

BIOLOGICAL.

Differentiation in psychic qualities are believed more and more to take place simultaneously with differentiation in form and activities of the animal. A study of the forces which cause the latter may aid in the interpretation of the former process. The chief of these forces are recognized to be food, temperature, and sociological.

Probably the most vital connection between food and organic life is seen in the influence that nutrition has in determining the sex of the animal. Herr Yung⁴ has shown that, if tadpoles be fed beef, the proportion of female to male will be raised from 46 male and 54 female (the proportions existing in nature) to the proportion of male 22 to female 78; if they are fed on fish the proportion is 19 male and 81 female, and if they are given in abundance the sciatic muscle of frogs the predisposition to the female is 92 as against 8 for the male.

Moleschott⁵ begins the first sentence in his work on *Materials for Nutrition* by saying: "That the wild cat became a house cat through the influence of food."

¹ Morrison: *Juvenile Crime*.

² Richardson: *Common Health*, pp. 290-92.

³ Dawson: *A Study in Youthful Degeneracy*. PEDAGOGICAL SEMINARY, Vol. IV, No. 2.

⁴ Yung *Arch. des Sci. Phys. et Nat.*, Vol. XIV, pp. 502-22, 1885.

⁵ Moleschott: *Lehre der Nahrungsmittel*.

The tamer of wild animals knows the secret power of food in allaying the ferocity of his beasts. It is said that the peculiar quality of tone of certain song birds depends on the kind of food given them. Esau lost his birthright through the hunger of his father. Buckle¹ calls attention to statistics, showing that the percentages of marriages in England fluctuate with the price of corn. But food material is only one factor essential to the animal's well being. Temperature imposes certain conditions on the effectiveness of food. Kerner,² describing the effect of heat on plant growth, says: "Without this there is no growth. It has been shown that the decrease of young herbaceous plants in two successive days had sunk, in consequence of a sudden storm and visitation of cold, from 8cm to $\frac{1}{2}$ cm. There is no doubt that such a decrease of growth stands in causal connection with the fall of temperature, and also that quick growth is to be laid to the account of a rapid increase of heat." In fact, growth is a consumption of free heat. Light is essential in forming constructive material, but heat is essential to put it into *form*, to *organize* it.

To prevent the radiation of heat by night that they have gained during the day, many flower buds are pendulous, bell-shaped and tubular, or leaves become arched in the shape of a dome, cap or umbrella, above the stamens or pistils, in which case inner portions of such flowers are hidden as in a niche. In these hidden nooks they are comparatively well protected against loss of heat, and at least no radiation of warmth towards the night sky proceeds from the anthers and stigmas. The air in the pendulous bell flower is 1 to 2 degrees warmer in the morning, before sunrise, than the surrounding air. In many instances the flower buds and young flowers only assume an inverted position periodically, *i. e.*, only when a cold night is to be expected. The falling of the umbel of the carrot at night, and assuming an erect position at the rising of the morning sun, is an example of the movements of plants in obedience to temperature.

Stahl³ has shown that myxomycetes when placed on a piece of filter paper, one end of which was immersed in a glass beaker of water of 7°C, and the other end in a beaker of water of 30°C, that they at once migrated to the beaker of the higher temperature.

Mendelssohn⁴ has found that the unicellular organism (*paramaecia*) is positive thermotropic for certain temperatures and negative for others. He discovered their optimum to be from 24°C-28°C. He shows that if they be kept in a temperature from 36°-38°C from 4-6 hours, and then placed in a rectangular vessel whose end temperatures are 24°C-36°C respectively, they will occupy a position corresponding to 30°C-32°C. If the temperature be *suddenly* raised, they reach their optimum at 24°C, but if it be raised slowly, their optimum can be raised to 32°C. Thus these unicellular organisms can be acclimated to different temperatures if given time. The inner molecular and chemical changes very probably need time in which to alter the rate and quality of their activities to suit the new condition imposed upon the cell. Can it be demonstrated that a disturbance, or an alteration in the equilibrium and constancy of external forces affecting the organism is accompanied or stands in causal connection with physico-chemical changes of the organism. Do these external changes alter the metabolic processes, and if so, what is the significance of the alteration.

The writer addressed these propositions to tadpoles. It was found that they are negative thermotropic for temperatures above 24° and

¹ Buckle: History of Civilization, Vol. I, Pt. 2.

² Kerner: Anton Von Marilaun: Nat. His. of Plants. Trans. by Oliver.

³ Botanisch, Zeitung, 1884.

⁴ Pflüger: Archiv für die ges. Phys. Bd. 60, 1895.

positive at temperatures below 18°C, and that their optimum was between 19°C and 23°C. Having determined the temperature in which the tadpole appears satisfied and is at complete harmony with its environment, so far as temperature is concerned, the next step was to ascertain the quantitative difference, if any, between the metabolism of tadpoles at their optimum temperature and at temperatures above and below the optimum. As far back as 1795, Lavoiser showed that the absorption of oxygen and the production of carbon dioxide were among the chief processes of life. Later investigators, as Regnault¹ and Reiset in 1849, Colosanti² 1877, and Chapman³ and Burbaker in 1891, have found an intimate relationship between the ingress of the one and the egress of the other.

Colosanti, for instance, found that in the guinea-pig the relation by weight between the discharge of carbon dioxide and the absorption of oxygen is always the same. The guinea-pigs were exposed to temperatures ranging all the way from 5.5°C to 22°C, and in every case the quantitative relationship between the two was constant. This relationship between the weight of the oxygen absorbed and the weight of the oxygen in the carbon dioxide produced is termed the respiratory quotient. Richet,⁴ Grüber⁵ and others show, however, that the quotient is not constant, but varies to some extent on account of food, external and internal temperature, age, time of day, muscular activity and the species, being higher in warm blooded than in cold; but these variations are not serious enough to prevent an inference as to the intensity of the one when the other is given or known with reference to a given species, in which case the quotient does not vary over 5 to 10 in a 100. In general, then, by knowing the respiratory quotient for any species, and one factor, the other is readily determined.

Physiology teaches that oxygen is used in breaking up the complex food received by an organism into simpler elements, and thus prepares it to form new and more highly complex combinations. In short, oxygen is concerned with the integrating, the anabolic process. On the other hand carbon dioxide is one of the several disintegrating or katabolic products. These two constituents are not only always present in metabolic processes, but are of such prime importance to the process that a quantitative determination of either or both is a fair measure of metabolism itself. In the present investigation the amount of carbon dioxide produced under given conditions is selected as that measure. It is not the purpose to determine the absolute amount of metabolism, such a task is beyond present laboratory methods. The object here is to estimate the relative amount at different temperatures and regard these quantities as merely indices to what the absolute quantity may be at a given temperature.⁶

The results of the experiment show that a maximum amount of carbon dioxide is produced at the optimum temperature, and that the amounts decrease for temperatures above and below the optimum, and further that the fall is much more rapid toward the lower temperatures than toward the higher ones. If, then, the production of CO² is

¹ Regnault et Reiset: *Recherches chimiques sur la respiration des Animaux des diverses classes. Annales de Chimie et Physique*, pp. 299 et seq., 3me Ser., Tome XXVI, 1849.

² Colosanti: *Ueber den Einfluss der umgebenden Temperatur auf den Stoffwechsel der Warmblütes*; *Pflüg arch.* Vol. XIV, pp. 92, 409, 1877.

³ Chapman and Brubaker: *Proc. Acad. Nat. Sci. Phil. Jan.*, 1891.

⁴ Richet: *Comptes Rendus*, Vol. CVI, 1888, pp. 496-498, also *Archiv. de Phys. Normale et Path.* Vol. XXII, pp. 17-30.

⁵ Grüber: *Zeitschrift f. Biologie*, Vol. XXVIII, 1891, pp. 466-91.

⁶ Methods, the many corrections, and precautions, etc., incident to such an investigation are here omitted, since they are quite apart from the main article. They are inserted in a paper on "Migrations vs. Love of Home."

a fair index of the amount of metabolism in an organism, the conclusion of the present experiment is that *for this species of embryos* maximum metabolism is coincident and very probably a function of optimum temperature.

The next question of importance here, is what effect has maximum metabolism on the tadpole as a whole. Is well-being in this case a function of rapid metabolism? Does the tadpole select its particular temperature in obedience to some inherent or attractive force that the water may have at 19°-23°c? Are they drawn to it as iron filings to a magnet, a moth to a bright light, or a horse to a hot fire? Or may it not be that the forces of evolution have evolved in this creature a molecular and chemical constitution of such a pitch, vibration or rhythm that it requires just the stimulus offered by this particular temperature to set the molecular and chemical activities agoing throughout the organism at that rate or pitch which natural selection has determined?

It is generally conceded that the conditions that produce growth are conducive to well-being. In fact we are accustomed to think that well-being conditions growth. If, then, the optimum temperature of the tadpole is one of well-being rather than a kind of an inherent spell-bound attractive force, the growth at that temperature ought to exceed that of temperatures above and below the optimum. This likewise was put to the test by an experiment. It was found that 10 tadpoles enjoying their optimum temperature kept constant, gained in two months 11.2 gr. in weight and .77 cm. in length, while 10 tadpoles subjected to a temperature 6°-8°c lower than the optimum, gained in the same time with same food, same shape and size of vessel, etc., 8.5 gr. in weight and .6 cm. in length.

Summing up the relations of temperature to organic life, as shown by these experiments, it is found, first, that plants alter their structure and go through periodic movements that they may keep a more constant temperature; second, that the unicellular organism, paramaecia, is both positive and negative thermotropic, and that they have an optimum temperature; third, that tadpoles are both positive and negative thermotropic and that they have an optimum between 19°c-23°c; and fourth, that maximum metabolism and the growth of tadpoles are functions of their optimum temperature.

What bearing have these facts on truancy? Do they not justify the assumption that every creature has been keyed, as it were, to a certain rate or pitch of metabolism, which rate has been fixed by natural selection and that its maintenance is essential to the creatures' well-being? It is the animals' power of nutrition. This rate of metabolism demands certain external stimuli in the way of food, temperature, light, etc.

An excess or a denial of an adequate amount of the stimuli is a direct cause of molecular and chemical changes which destroys the well-being of the organism. To regain the condition and sense of well being, the metabolic processes must either be keyed to a different rate, one in harmony with the new condition, or else it must seek an environment in which stimulus and food supply are proportional to the normal rate of the metabolism. According to the theories of differentiation both have been employed ever since life began, the former laying the foundations of morphology and the latter of more complex physiological processes. But of the two, *i. e.*, change of *structure* or *position*, the latter is more often the cheaper. Movement, therefore, is a universal mode, excepting parasitic life, by which organisms restore the stimulus essential to their well-being, be it temperature, food, light, pressure, or what not.

It is the universal mode by which organisms relieve the manifold

strains and stresses that are created by the forces that continually affect all life.

Starting with this general biological conception as a sort of background, the truant problem is further approached through child study, which is the subject of the next chapter.

CHAPTER II.

CHILD STUDY.

Runaways.

The data for this study consisted of answers given to rubrics I and III of Syllabus III, 1896-97. Migrations, Tramps, Truancy, Running Away, etc., vs. Love of Home.

Q. I. Consider whether you know any small child with a propensity to run away; and if so, describe the circumstances—why, when, where it went, whether alone, and planned or impulsively, and all the details and incidents of each case; its adventures, how it was found, whether deterred later by its experiences, at what age this disposition appeared and when it ceased, and why.

Q. III. Describe any case of truancy from school or church, its motives, traits of the child, mode of concealment.

In each case specify each of the following points: 1, age; 2, sex; 3, nationality; 4, occupation of parents; 5, are one or both living? 6, do they own their homes? 7, are their food and clothes good? 8, plays; 9, books; 10, pin-money; 11, affections; 12, has the child any physical defects? 13, is it oldest, youngest, or only child? 14, is it quick-tempered? 15, sensitive; 16, demonstrative; 17, laugh and cry easily; 18, cheerful; 19, active; 20, generous; 21, fond of play-mates or reticent and inclined to be alone; 22, does it seek to govern others and does it obey readily? 23, love or shun crowds; 24, or dark; 25, animals; 26, deep water; 27, out-of-door life, fondness for woods, fields, etc.; 28, does it love music; does it dance? 29, a good color sense; 30, is it careless or tidy and dressy? 31, has it had pets, is it good to animals? 32, careful of property; 33, and of others' rights; 34, made a collection of things; 35, is it persistent in carrying out tasks? 36, is it inquisitive and talkative? 37, were there ample opportunities for taking exercise, were games and sports encouraged? 38, was there plenty of physical and manual labor at home? 39, must there have been long hours of sedentary work at home and in school? 40, *always specify the season of the year of every incident, if possible*; 41, was there immoderate love of sight-seeing, being out evenings, camping out, hunting, excursions, picnics, etc.

Kindly send your answers to

G. STANLEY HALL,
or L. W. KLINE.

CLARK UNIVERSITY,
Worcester, Mass., Oct. 26th, 1896.

Section I. 250 returns were received in answer to rubric I. Twenty-five per cent. of the cases are females. Eighty-five per cent. are Americans, the rest are Irish, French, Scotch, German, etc.

Homes. By far the majority of their parents belong to the comfortable living class, though running away occurs alike amidst extreme poverty and much affluence.

Physical Defects. Sixteen per cent. were physically defective—mostly in speech, spine and hip trouble.

Oldest, Youngest, and Only Child. Seventy-nine per cent. belong to the oldest, youngest, or only child group. Of the 21% not in this

group, 11% are either the only boy or girl in a large family numbering from 8 to 10 children; so that only 10% of the cases escape suspicion from their numerical relation in the family. This subject will receive some consideration in the analysis of the next rubric.

Disposition. They are usually reported as demonstrative, sociable, loving crowds and outdoor life, very active, restless, impatient of restraint, and having but few fears. They are very careless and untidy in dress. The majority have made no collection of toys, playthings and the like, common to children. They are destructive of property, some take a peculiar delight in destroying anything that falls within their power. These are likewise cruel to animals.

Seventy-six per cent. are persistent in whatever task they undertake. Of those not persistent 50% were never cured of running away. They did things by fits and starts, would work real hard a few days and loaf as many weeks. They were sent to reform schools, some to prison, others became professional tramps. This class, *i. e.*, those who do work by fits and jerks, forms 20% of the whole number that were not cured by home management.

Havelock Ellis,¹ referring to the paternal ancestor of the famous Jukes family, says: "He is described as living the life of a backwoodsman, a hunter and fisher, a hard drinker, jolly and companionable, averse to steady toil, working by fits and starts. This intermittent work is characteristic of that primitive mode of life led among savages by the men always, if not by the women."

Time of Running Away. Thirty-eight per cent. of the 250 cases ran away during the summer; 33% at all seasons; 20% in the spring; 4% in the fall, and 1% in the winter.

Causes. The immediate causes of running away are probably best made out from the cases themselves, examples of which are given below in three groups: first, cases of children from 1 to 3-4 years; second, cases of children from 4 to 7 years inclusive; and third, cases from 8 to 12 years inclusive.

I. Group of Runaways from 1 to 3-4 year of age. (50 cases.)

1. A teacher of long experience, says: "Think I never knew a child that did not love to run away soon after it could walk with ease. Cause, I have observed, seemed impulse. A little girl of four, next door to me, runs away whenever left unguarded in the yard, and even tries to outrun and escape whoever is watching her. My own nephew would dash off into the street when he could but just run alone. I think spanking, tethering with a rope about his waist, and confining in a pen in the yard, finally broke him of it. He has not done it since he was three years old."

2. M., 1 yr. 6 mos. Had played quite a long time in the yard, finally he started off into the road. Mother says: "I saw that he was off in the mud and started for him. Seeing me coming, he commenced running as fast as his little feet could carry him, splashing through the little puddle of water standing in the grass."

3. M., 1 yr. 8 mos. Was left playing in the yard while the mother was dressing to go calling. He knew that she was about to go. She says: "When I came into the hall to see him again, he was going just as hard as he could walk to town—thought he'd go too—I started after him and he, seeing me, commenced running, so I commenced running, but he turned the corner and had gotten nearly to the blacksmith shop before I caught him. He was highly amused at the fun, and screamed with laughter when I finally took him up in my arms."

4. M., 3. Frequently left in search of his papa, when the gate was

¹ Havelock Ellis: *The Criminal*, p. 101.

closed he would crawl under the fence. Took a pail and went down Broad Street where parents get milk. Child said: "I fought I needed some milk, mamma. I was going to put it in dat pitcher and not drink it."

5. F., 4. Had never ran away before. One day in the spring time the child was out playing. An older sister of the child had just departed for a brief visit to a friend's house, not far away. It was supposed that the child had not seen the sister going, but the girl had scarcely arrived at her friend's house, when looking out, saw the child standing outside.

6. F., 3. Ran away whenever the opportunity offered. She never seemed to have laid out any plans for running away, but seemed to act apparently upon the impulse. One time she ran away for two or three blocks, and when found was making mud pies, in which occupation she was deeply interested and very angry when taken home. Again she ran away and found a large doll on a neighbor's porch. This she carried home to play with.

7. *Aimless*. M., 3½. No playmates. Yard gate tied to keep him in. His desire to get out of the yard was so strong that he persuaded the passers-by to untie the rope. The gate was opened for him and out he went. On he went alone for a great distance. Was found in a blackberry patch, tired and feet scratched. Realized himself lost and began to cry.

8. *Following*. F., 3. Followed secretly after her father, who had gone to the pasture for horses. She lost sight of him: continued her journey until she had gone about two miles from home.

8½. M., 2. Had no playmates. Too small to be allowed in the streets with the boys. Stranger called at the house. When he left, the boy slipped through the gate and followed him until he saw some little boys with whom he immediately made acquaintance.

9. *Beggars*. M., 3½. Two twins ran away on a hot day. Stopped at a store. Begged that each might have a parasol. Went on further to a merry-go-round, hesitated, then accosted the manager for a ride.

10. *Water*. M., 2. Always went alone. First trips were to a duck pond.

10½. M., 4. Ran away during the summer. Two years old when he began. Would go to the beach and neighbors' houses.

10¾. M., 3. Never went any great distance. He liked very much to go down to the water and generally could be found there when missed.

11. *Hunting*. M., 18 mos. Eluded those who watched him, and found half an hour afterwards in the sage brush in eager but unsuccessful pursuit of lizards and horned toads.

11½. M., 4. Heard frogs sing. Asked mother what they were and desired to go at once to see them. Was told that they would jump in the water and could not be seen. A few days later M and a younger brother, 13 mos., disappeared suddenly. After a long search they were seen coming towards home through a field adjacent to the frog pond.

12. *Impulse to go*. M., 3½. Walked a mile and a half to the station, boarded a train and got off at Newark, which is about 30 minutes' ride from his home. His father works in it,—probably the reason for his going, although I should think he was too little to think about going there. Went alone. Did not prepare, not even wear a hat. Found in a very dirty condition. Was taken to his father's office by a friend. The child, however, was perfectly contented, not seeming to care at all about what had happened.

12½. M., 3. Began to run away when only 3. Parents lived in the country about 1 mile from any house. Always went alone and would

never have anything on his head. When found would be talking to himself or playing with sticks and stones by the roadside. Would go away three or four times in a day, no matter how much he was scolded or punished for it. He continued to do this until he was about nine.

13. *To See New Things.* M., 3 yrs. 4 mos. Has shown a tendency to wander since he was 14 months old. Mamma would wrap him up and put him in the yard to play; and when people would come for the doctor, M would start for the gate and slip out. Would get down the street some distance before mother would miss him. When she would start for him he would laugh and skip on. He runs away to see everything that comes along, no matter what. He would have to stop and make friends. He continues to roam and I believe always will; even though he receives severe punishment he will run away. It has never ceased, but grows stronger.

14. *To the Fields.* F., 2. Great propensity to run away. Every time it found the gate open or a hole under the fence, it would make its escape and be gone. One morning mother awoke, found child gone. Being alarmed, she immediately went down stairs and searched. Not finding it, she awoke the sleepers and a general search was made. The child was found in the fields plucking flowers and singing to itself. It seemed to be in perfect content and happiness, and I know did not plan the performance, but waking up, as it did, before the rest of the family, and finding the door open walked out, bare-headed and bare-footed, nothing on but a night-gown.

15. *Love of Change.* M., 21. Related by his sister. "He began to run away when about 18 months old. One member of the family was always detailed to watch his little excursions. Was very frequently picked out of danger a mile or two from the house. Strangers were frequently finding him and setting him over in other people's yards. One day he ran away naked rather than miss an opportunity. He was then two. To prevent his going over the stile we erected a dough face on the side, which frightened him very much. Remained in the house for three days; on the third day he got out by climbing a high back fence and going through a neighbor's garden. This occurred at the age of three.

"He has an aversion to monotony. To quote his own language: 'I have a holy horror of monotony, such as travelling on water affords, unless there is abundant material to take my attention inside the steamer. I could never sit placidly down as some do and watch wave after wave come following each other in toward the ship. This began to grow on me at about my sixteenth year, or a little before, though of course it is shown in my life before. My instinct is to travel about in search of variety. Between the ages of sixteen and nineteen I made more than thirty moves in one town. Within that period I think I lived in every part of the city and its suburbs. It is also a fact that I disposed of my trunk for a valise simply because the valise represented less property than the trunk and thus relieved me of a burden. I regret very much to buy an overcoat, owing to the numerous hot days when it is of no use to me and lies a silent burden on my hands.'"

These are samples of 50 cases of runaways between the ages of one and 3-4 years. They indicate strongly that running away is common among all children at that age. It is impulsive, aimless, wholly unconscious of attendant circumstances, such as bodily danger, anxiety and worry to parents. Oftentimes playfulness, a sort of roguish delight, especially when being pursued by mother or nurse, prompts them to run further. (Cases 1, 2 and 3.)

A sort of imitation, following after anything that moves, fondness for water, to become acquainted with, and to hunt and capture animals,

to search and gather fruits are all stimuli that may touch off and set agoing the nervous, quivering, unco-ordinated organism at this age.

These activities also present within themselves an almost complete picture of a very primitive civilization even before nomadic times, before man had taken the trouble and patience to tame his captured beast for food and labor. The picture is complete when one thinks of the great variety of primitive weapons for hunting and war that are made by young children. A collection of such implements may be seen in one of the rooms in Clark University.

Begging occurs amidst plenty, among children provided with all the wants of child life. Children leave a home of plenty and ask for bread, enter a store and beg for an article of clothing.

There is almost a total absence of anger, planning, deception or injured feelings, previous to their leaving home.

Aside from these temporary, passing impulses, that appear to be a phenomena of normal growth, as much so as gill slits or milk teeth, there is still present in some cases an impulse to go, that is deep seated, a propensity that is a part of the child's character itself, ingrained in the nervous organism, a passion that must be gratified. It dominates not only childhood, but the entire life, increasing with age. Case fifteen exhibits not only this passion, but other traits that seem inseparably bound up with it. Among these are aversion to monotony, love of change, carelessness in dress, and neither care nor appreciation for the value of property.

II. Group of Runaways from 4 to 7 Years Inclusive. (Selected from 80 Cases.)

1. M., 5. Continually runs away to have his own way—has a roving disposition, never stays long in any one place—walking quietly along with his mother who stops to talk with a neighbor, he takes advantage of the opportunity and skips.

2. M., 5. Always follows a band, or a crowd of any sort.

3. M., 4. Runs away as often as he can make his escape, object seems to be to find out where the people are going who pass his house.

4. F., 4. Active child, fond of company, noise and new sights, when let out to play will stay awhile in the yard and then start off; sometimes she will go to the neighbors, sometimes to the store, and sometimes to the pond.

5. M., 5. "When living in the country was continually running to the fields of clover and daisies and playing in the sand. Now living in the city he is so eager for seeing, so excited over anything new, that he's off and away often even after I have told him to stay in the yard." Taken from a mother's diary of her children.

6. M., 7. Thought it would be great fun to go down street *without* his parents; went with the milkman. When left in the town alone suddenly became lost, was frightened and began to cry.

7. F., 5. This child has no fear of anything. She will make friends with all kinds of animals, large or small, will run after wagons which pass the house, will walk up to a stranger and take his hand and go anywhere with him, never giving a thought to home. She will wade in water up to her neck. She starts off in the morning on one of her excursions around the town as soon as she can slip away unseen. Her first act, as soon as she is out of sight of home, is to throw away her shoes and stockings. When found does not try to hide, seems willing to go home, although she may run away again as soon as she finds she is not watched.

8. M., 5. Left home in the morning with another boy to visit a glass factory. Search was instituted about noon and continued till

about 2 P.M., when he returned of his own accord. His sister says: "His little face and hands were black and much besmeared. We were all so glad to see him and get him back again that we laughed and cried alternately. At this he was very much amazed and opened his big blue eyes in wonderment."

9. F., 6. "Would go whenever she had a chance. On a warm day in July she started off through a large cornfield with her little boy cousin of 6. They ran on and on through the corn. Pretty soon F., who was very fond of taking off her shoes and stockings, sat down and removed them, M. did the same—left shoes and stockings in a little heap, and jumping up ran on, F. leading. They finally grew tired and began to think of getting back home, but they found themselves suddenly lost; they began to cry, not knowing which way to go; they ran aimlessly through the corn and finally emerged into the road, when they were rescued. Both repented and promised to do so no more. The shoes and stockings were not found until the fall, when the corn was cut."

10. F., 5. Had been kept at home a great deal. Left one day with a playmate to see the city, went to water works a mile from home, then to the court house and several other public buildings. "These places were new to them, and it was a great fascination for these children to go alone, and not only a satisfaction to go by 'themselves,' and stay as long as they wished, but it was a great delight to tell their associates about it and boast of their little adventure."

These are typical cases of children's fondness for new places, new sights, strange people, desire to do new things not supervised by their elders, make new acquaintance with man, beast, plant and earth, to explore places and experience the unexpected. There is no special interest in any one place or thing, but it is all places and all objects. Anything will set them agoing, a stranger, or loud dressed persons, a peddler, a tramp, a crowd, a team, a band, a procession.

There is much material here for speculation, both for the atavist and teleologist, but more especially valuable hints for pedagogy. These activities are the expression of a very complex organic structure acting not unlike an automaton not well controlled or co-ordinated as yet. The range of stimulus that will set it agoing is wide. Through activity, through experience, comes co-ordination and control. Lloyd Morgan¹ says: "Chicks, for example, at first peck indiscriminately at almost everything that catches their eye, notably at their own excrement. . . . And you may watch the stages of gradual avoidance of pecking at this material ranging from mere hesitation to complete neglect." They learn not to pick up lady-birds after a very few experiences with its distastefulness. "These, though simple cases, are examples of activities under control as the result of experience."

Primitive man, too, had to learn to recognize the animals that would make a repast, that would destroy his food or challenge his strength, and the fruits that are palatable and distasteful. Are not the early hunting and searching activities of the child atavistic, and at the same time giving it a practical acquaintance with nature?

1. M., 7. Runs away to play with other children. Sometimes goes home with them. Fond of playing at the river.

2. F., 4. Had not brothers or sisters; ran away a great deal to play with other children.

3. F., 7. Runs away to play with other children. Mother does not let her get her playthings around and have a real good time, and as she is an only child she likes to go where there are other children.

¹ Lloyd Morgan: Introduction to Comparative Psychology, p. 176.

4. F., 6. Youngest child, good home and plenty of toys, but runs away to play with other children.

5. M., 5. Has to be harnessed and tied to be kept in the yard. Persuades people who are going by to untie him. One day some large boys dragged him across a railroad bridge. He could not get back home. This frightened him so much that he did not care to run away again.

6. M., 5. Loved crowds and gatherings, would not stay at school nor at home. Different means were employed to break him. Was bright, and readily learned his lessons. At seven he quit it. The change which was wrought upon him I think largely due to the fact that his school work was being made more interesting.

7. M., 8. Began to run away as soon as he could walk. Stopped at 8. Due to his mother's discipline and interest in affairs at home.

8. M., 6. Got mad at his little sister, who had charge of him. Mother was sick. He started across a large field, entered a woods, soon grew tired and started back, but was lost. He fell asleep. Was found in this condition. Never left home afterwards.

9. M., 4. Wandered off frequently, once into a strange street. When found was being cared for by an Irish woman. Was always punished for running away. His mother, when a child, was even worse given to running than M.

10. F., 3-4. "I used to run away to play with other children. Was the only child and became lonesome at home. Gate was tied. I climbed the fence. My mother has always been subject to desires for roving. She is not strong mentally, owing to ill health. When everything does not suit her, she works herself up to a great nervous strain, and then goes traveling for a day or two to wear off the evil effects. Sometimes she leave in an injured mood and aimlessly starts out."

These cases illustrate the effort very common among young children to relieve the sense of loneliness, and a longing for playmates; also the less common causes for running away, *e. g.*, anger, disappointment, punishment, injured feelings and the like. Cases 9 and 10 indicate that heredity may have been the controlling factor.

III. Group of Runaways from 8 to 12 years Inclusive. (Selected from 120 cases.)

1. M., 11. Always wanted to be out of doors. Whenever anything did not please him became angry and would take his hat and start on a run. At first he was only gone two days, no one knew where and he would not tell. The older he grew, the longer he stayed away. His parents treated him well and on his return baked him an extra cake and tried many means to please him — did no good. In about a year he would leave again, usually about harvest time. The feeling that he must run away lasted him through life, for he ran away a number of times after he was married, leaving a wife and two children for nearly eighteen months.

2. M., 8. Would wander off in search of adventure, and persisted in doing so in spite of the whippings administered by his father (chaplain to the penitentiary) on his return home. Kept posted on the doings of leading outlaws and adventurers.

3. M., 8 and 10. Both left home secretly. Wandered from place to place. Slept in lumber piles. Had comfortable homes and kind hearted parents. Said "they wanted to go somewhere."

4. M., 8. Went 20 miles from home into the woods, where a great number of men were at work, went on the tote team, made some money. Stayed as long as he wished and reported a very enjoyable time to his worried parents on his return home, though he must have suffered intense

cold and hardships of winter camp life. Now thirteen, and a great home baby. Left off running away gradually.

5. M., 11. Was a leader. Disliked to be ordered to do anything. Otherwise willing and anxious to work. Ran away from home to get work for himself. Succeeded. Work was very hard, but he would not give it up. Parents learned of his whereabouts and had him sent home. "He had been away three months, had earned some money, bought new clothes and base ball and bat. His hardships were many, but he was so persevering that he rose above them. He has grown to manhood and he believes this experience one of the best in his life, as it taught him self-reliance."

6. M., 9. Lived in a quiet place, with grandparents, seven miles from village. Ran away every opportunity to the village to see what was going on and to increase his chances for taking things. Could not resist the temptation to take money. If he could not steal money, would take eggs and sell them, would even ask entire strangers to loan him money. After grandfather's death he still kept up his mischief, and at last stole jewelry, for which he was sent to a reform school.

7. M., 8. "Causes us many a heart-ache these days. He often tells lies to hide some mischief he had done, and sometimes sticks to it for a day or two. He and another little boy ran away from school twice—a thing our other boys never did." (Taken from a mother's diary.)

8. M., 9. "Not satisfied with A's (younger brother) company. Seems determined to get with older boys, and to do this often goes far from home. Then he, to shield himself, does not hesitate to tell wrong stories and insists that they are so."

9. M., 11. "Not satisfied with a generous allowance of spending money, stole sixty dollars from his father when family were asleep. Spent the money on an excursion and treating companions. Was caught and sent home. Had run away before and stayed three or four weeks. Father has sent him around the world to try and reform him."

10. M., 8. Vexed at his father, decided to run away, bought an old boat and started down the river, was caught and brought back.

11. M., 10. Began to run away at 10, seemed to get spells of being disagreeable or ill-tempered, when he would do something that would make him afraid of punishment. On one occasion was set to churning, when he arose and kicked the churn over, then went away. Another time he wanted to milk a pet cow belonging to a little lame sister who always milked her, he knocked the little girl over, then fled. At other times mere mischief seemed to be in him so strong that he would do something that would make him afraid to stay. He once took a notion and painted black spots all over the white pigs, then went away. After the first time the impulse to run away grew stronger, he became more brave each time. Took a trip one fall up the canal, was thinly clad, came home several months later dirty, ragged, and nearly frozen. His trips were never planned; always seemed glad to see all the family on his return.

"This restless nature has clung to him all his life. As I know him to-day he stays in one place only a short time, is quick tempered, a hard worker, and still has these moods of irritable feelings which find their vent in drink and roving."

12. M., 8. Left home clandestinely with a companion one fine spring morning to seek fortune on the tow-path, several miles from home. Returned late at night, foot-sore, weary and hungry. Mother said: "You may help yourself to some bread and milk." In after years he told the story. "I crumbed a whole loaf of bread into a whole pan of milk and had a very comfortable supper." He became a very successful business man.

These are examples of the period of childhood in which the impulse to run away exhibits the genuine traits of *Wanderlust*, (cases 1, 2 and 11).

It is the period in which an inordinate love for certain pleasures, impatience, restricted liberty, inferior home comforts, incompetent parents, injured feelings and anger, desire to earn their own money, are all variable factors in causing runaways.

Planning, all manner of cunning and secret preparation may attend their departure. Very astonishing and serious breaches are committed against the moral law, such as stealing, lying, swearing, willful destruction of property, and cruelty to playmates and animals. It is the period of hardness, indifference, the hot-bed of the chronic forms of truancy and a perennial spring for juvenile crime. The energies of the child readily unite with the katabolic elements in the established order of society and government. He is impervious to moral suasion and the influence of example. The welling up of the great fountain of altruistic motives of adolescence has not yet begun.

On the other hand, as it will be shown later, genuine penitence for wrong doing appears at ages 9 and 10. Oftentimes running away ceases at 8 and 9, owing to new interest in home and society, the discovery of new relation of self to environment and increasing self-respect.

Those answering the questionnaire assigned the following causes for children running away. Impulse to be going form 21% of the causes given. To play with and be with other children 13%. Curiosity to explore and see new sights 11%. Love for outdoors 8%. Lesser causes are loneliness, anger and disappointment, love of change and excitement, to see relatives and friends, impatience of restraint, to seek a fortune, cruel parents and injured feelings, inherited, to avoid work, etc.

Making preparations for leaving, and secretly planning, form a very small (16%) proportion. By far the great majority leave openly at any time, many go without covering for the head, without shoes and without raiment. This applies, of course, to the *first* time of running away, and more especially to the younger children. If the habit persists, various devices are employed to escape unnoticed.

The great majority went to the water, next in order comes woods and fields, followed by streets and neighbors, then to various places of activity, *e. g.*, factories, saw-mills, canals, erection of large buildings, and to the railroad or depot. Many were found at play, sometimes alone and talking to themselves, some still running, others at work, and still others hiding, stealing, asleep, or crying. Quite a number were found crying, and of those who had fallen asleep, the dried tear on the cheek, feverish brow and frightened manner of awakening, indicated that they, too, had been crying. Mention is made of this because the crying was caused by the overwhelming sense of being lost. They run on and on, throwing off garments and any impediment that obstructs the full swing of the impulse, and then suddenly, through fatigue, perhaps, they stop, impulse has vanished, or perhaps shifted to the farthest opposite extreme from that coincident with the running. If the former was positive, it is now negative. The whole being is bewildered, in utter confusion with the sense of being lost. The sense of orientation is gone, and with this comes, not in reality, but an equivalence to a state of paralysis, not a limb nor a muscle moves with any precision. They dart here, now there, all within a short radius, and when completely exhausted fall asleep.

It is remarkable, too, that those who experience this shock seldom run away again.

To sum up a portion of the data thus far examined, it appears:

First, that running away in childhood falls into three periods, each differentiated from the other by certain characteristics, impulses and activities. The first period extends from the time the child is able to walk with ease to between three and four years. It is common to all children, regardless of home life or physical conditions. It is characterized by aimlessness, openness, and unconsciousness of danger or any wrong. During their little escapades some very primitive as well as semi-barbaric practices crop out, *e. g.*, chasing and capturing animals, begging, taking things that please their fancy, etc.

The second period, extending from 4 to 7 years inclusive, shows a dominating love for play and companions, and outdoor life. It exposes in rough outline the child's disposition, likes and dislikes, on a dim background of home life, parentage and physical condition. Home life is illustrated when the child leaves on account of loneliness, absence of toys and other childish amusements. The personnel of the parents is frequently indicated when the child is broken of the habit by firm and proper home treatment, or when the child leaves on account of cruelty of parents. It is the period of curiosity, the age of attempts, and a sort of diffused universal interest for nature and man. All things attract him, seeks the acquaintance of any and everybody, enjoys new sights and the unexpected, likes to do new things as a test of his courage and to make explorations into new vicinities.

Anger, injured feelings, desire for wider liberties begin to appear at the latter end of the period; also an occasional truant is born in the sixth or seventh year. It is also worthy of notice that many quit the habit altogether toward the close of this period and the beginning of the next. Focusing down of interests, a growing love for parents, attachment to certain groups of playmates, fondness for school work and teacher are all forces overcoming and destroying this powerful relic of primitive man.

The third period, extending from eight to twelve inclusive, brings out in bold relief the part played by home life and comforts and parents in the behavior of the child. In this period the child frequently abandons the habit altogether, due to the influence and integrity of the home, or he begins it in serious form for the first time in life, due to incompetent parents and an unattractive home, or to the impulse itself, which dominates all his life activities, unfitting him to wrestle with fortune and destroying the desire to do so. He becomes more impulsive in action, non-persistent in tasks, impatient of restraint, careless in person, indifferent towards property. He has little or no sympathy with modern movements of society, and will not fuse with it, but stands out like an outcrop of an older formation, pointing the genetic psychologist back to the probable origin of the migrating instinct.

Section II. One hundred and ninety-five returns were received in answer to Q. III, "Describe any case of truancy from school or church, its motives, traits of the child, mode of concealment."

A consideration of this data brings us into closer quarters with the truant problem.

The following typical cases illustrate the character of the returns together with the probable causes of truancy.

I. *To play and be out doors.* M., 10. Plays truant frequently. Sometimes he stays around grocery stores, but usually plays with groups of children whenever he can get them together or can find them. He will tell a lie as quick as the truth. Has a good memory. Always has good lessons, learns them readily.

Dislikes School. M., 8. Ran away from school. Did not try to

conceal it, nor did he care for the punishment received from his parents or teacher. He was not inclined to like study.

To Eat and Steal. F., 7. Left school to obtain meals from a charitable institution. She was underfed, undersized, parents poor, child reticent. She merely disappeared from school and presented herself at the other establishment. Kept her secret a week.

M., 13. Left school at noontime with another boy to "steal apples" from a rich farmer.

Impulse to Go Off. M., 13. Was given to running away from home and playing truant. He was pleasant, handsome, popular with the boys, giving no trouble while at school, a good student and very smart.

In April vacation, not very long after he had entered school, he disappeared. The police were employed, who finally found him at work in S—, dirty, and in a miserable condition. He had no pride. He had a mania of going off with no intention of returning. He gave no reason for going. He is now on a fruit ranch in California. His style is that of a cowboy.

Impatient of Restraint. F., 16. Ran away from school on an average of three days in the week. She did this because she was too indolent to get her lessons. She was the oldest of the children and had always been taught that she was very smart. She possessed a determined disposition and wished to have authority over her associates.

Dull. M., 13. Not all bright, has a good home, good food, well dressed, but can't get his lessons.

M., 17. Rather dull and heavy. Disliked study, but not otherwise troublesome. Ran away, got to B. Stowed himself away in a freight car. Slept there over night, but seeing in the morning that the car had not moved he returned to school.

Lazy. M., 16. Came from a wealthy home, was lazy, but not ugly. Hated to study and to be driven to his books. Had been in school some little time when the prospect of study again upset him just after a vacation (in the warm weather). He suddenly disappeared; was found after a week hiding in a cave that he had dug out in the woods within half a mile of the school. Other boys had carried him provisions.

Poor Home. M., 15 and 14. P. came from a poor home. His father a drinking man. This boy was very happy at school, but was led off by L. In the spring time both started for New York (both lived in N. Y.) but were caught and brought back. They were thoroughly frightened by the policeman, who threatened to lock them up. They never ran away again.

Indulgent Home. M., 15. Had a pleasant home and indulgent mother. Father dead. Ran away from school several times. Ran home, of course, walking all the way or borrowing car fares. Mother had no control over him. Could not make him return to school. He hated study. As the habit of running off was not broken, I advised the mother (and after much persuasion she consented) to have the boy arrested the next time he ran home from school. He was arrested and put in the lock-up and given the choice to return to school or be put in the Westboro Reform School. The boy was cured. Afterwards became a railroad fireman.

Influenced. M., 10. Was induced by another boy to play truant. Both went down to the wharf after licorice root. He was very much afraid after he had done this, and went home when it was time for school to be dismissed. On entering the house his mother (having heard what he had done from the other children) asked him where he had been, at this he burst into tears and begged to be forgiven,

saying that he would never do it again. He was pardoned and has never done it since.

Weather. F., 10. "Instead of going to school, took my lunch and spent the whole day playing along a brook in a cornfield. I did it because it was hot in school and to see how it would go to play truant. After returning home I felt ashamed, could eat but little supper. Finally confessed to my mother."

Home Life and Disposition. M., 5. Had a father and stepmother, his own mother died when he was 2 years old. At first he merely did not like to go to school, did not like the confinement, did not want to learn to read. He would loiter along the road until too late for school, then would go behind stores or in some secluded spot and play in the dirt and pick up strange or curious articles that he might find. When school was dismissed, he would see other children going home and would go home himself. Sometimes he would find other children who did not attend school and would play with them. He seemed to find a great delight in digging out with his fingers the leavings in sugar barrels and in picking up decayed oranges or apples from refuse piles. Whenever his father knew that he did not attend school he whipped him severely, locked him in a room alone, deprived him of his meals. He would not stay at school more than one day at a time. A kind old gentleman induced the boy at 7 to come to his home each day and pick up chips and do light work. Through this man's influence he was induced to attend school about two weeks, and might have continued, but the old man found a little fault with the boy one day and spoke sharply to him, the boy became angry and would not go near the old gentleman or the school any more. His stepmother did not care where he was or what became of him. He very often, when a little older, slept at night in a barrel or box behind stores, did not care to play with other children, preferred to be alone. He was morose, quiet, very quick tempered and obstinate, would fight, strike, throw stones and clubs at other children on the least provocation, and sometimes was severely hurt by larger children. He soon began to quarrel with his stepmother, threw stones at her through the window, ran away and did not return for several days, until his father caught him one day and dragged him home with many a kick and cuff. At about 13 years of age he fought so much with his stepmother that his father put him in a Reform School. After he was released he chose the worst of company, was arrested for stealing and shut up a second time. Before dying, he said his father and stepmother were to blame for the life he had led. He was the youngest of his father's first family. His two sisters lived out and took no interest in him. His food and clothing were not good. He had no toys, no books, no pin-money, no affection shown him.

Aside from the causes to be gleaned from these cases there are mentioned "homesickness," "out of humor with the teacher," "to defy authority," "afraid of being late," "desire to be alone," "religious scruples," "to meet a member of the opposite sex," etc.

These instances show first, that truancy is common to all children regardless of sex, physical, parental and home condition; second, that the immediate causes are many and quite varied.

The following table is a comparison of the home, parents, and mental traits of truants with runaways.

ITEM.	Runaways 201.	Truants 195.
	Per Cts.	Per Cts.
Don't own home,	46	41
Parents living,	81	76

ITEM.	Runaways 201.	Truants 195.
	Per Cts.	Per Cts.
Good food,	89	81
Spending money,	61	54
Affectionate,	60	44
Oldest, youngest, only group,	79	83
Quick tempered,	75	64
Laugh easily,	75	42
Generous,	70	62
Untidy,	52	55
Destruction of property,	68	61
Girls,	25	19

It shows that runaways are more liable to be destructive of property, and quick tempered than truants, while in all other respects, *e. g.*, home comforts, untidiness, affections, etc., the comparison favors the runaway, placing the truant in a rather more unfavorable setting. One is impressed, however, with the close parallelism that holds throughout the comparisons.

Fifty-six per cent. of the truants are reported as "not affectionate"—of which 52% had poor clothing and food and no spending money, except what they earned, showing a striking correlation between wholesome surroundings and the emotional life of the child. Again the greater number of the 55% that were untidy in dress, destruction of property and regardless of others' rights, were likewise the children of poverty, rags and dirt.

Attention has been called to the large percentage found by the oldest—youngest—only child group of runaways. It is found that the percentage (83.5%) is still larger among truants.

The writer has had during this investigation no preconceived notions as to the probable degeneracy of truants and runaways. Neither has advantage been taken of hints or suggestions that might give credence to such a view, and yet the failure to give full value or to ignore the probable significance of the oldest—youngest—only child group would be a very unscientific procedure.

Of 120 truants, 16%¹ are neither oldest, youngest nor only child; 30% belong to the youngest group; 27% belong to the oldest child; and 25% belong to the only child group. What is the significance of being the first or last child of a family? Is it generally unfortunate to stand in this numerical relation in the household?

Space prohibits a thorough discussion of the subject. A few general facts must suffice.

First: It is generally agreed that the normal period for child-bearing is between the ages of 24 and 35. Second: "That² mothers under 24 and over 35 are those more specially liable to have idiocy in their children."

Korosi, quoted by Ellis, concludes, after having examined 24,000 children, that the most healthy children have a mother below the age of 35; the children born between 35 and 40 are 8% weaker; after 40, 10% weaker.

Third: The children of father under 20 and over 40 are liable to have weak constitution, feeble minds, and prone to break the moral law. "Marro³ found by dividing fathers into three groups according

¹ Further investigation of the migrating problem shows that among lovers of home and persons who have never run away (cases 225) 45 per cent. are neither oldest, youngest or only child of the family, as opposed to 16 per cent. in the case of the truants under consideration.

² Duncan: Sterility of Women, p. 65.

³ Ibid: p. 93-94.

to age at conception: the first included those in the period of immaturity, which he reckoned as below 25 years of age; the second was the period of maturity from 26-40; the third, from 41 onward, the period of decadence. He found that the largest proportion of immature parents is among the class of thieves, although among the insane the proportion is still larger. More remarkable is the abundantly large proportion of criminals with parents belonging to the period of decadence."

Mitchell¹ says: "Among 443 idiots and imbeciles consecutively examined, I found 138 first born or 31.1 per cent; and 89 last born, or 20.1 per cent." That is, over 50% of 443 idiots belong to either the oldest or youngest child. In the present investigation the youngest child in the youngest group is 6 years, indicating that he would probably remain the youngest of the family. It is almost needless to add that the truants belonging to the oldest group are more liable to be the offspring of immature parents and that the youngest child of decadent or declining parents, and would, therefore, suffer in mind and body a lack of growth energy. He will fail to flower out, and according to Mercier and others, a lack of initial growth force expresses itself in a failure of the complete development of the nervous system. For this reason he is less able to meet the demands of home and modern school life. His power of nutrition, his rate of metabolism is not keyed to the intensity of the stimuli arising from school life; to get in harmony with a stimuli equal to his rate of metabolism he seeks surroundings less exacting, which to the writer is oftentimes a recommendation for the boy and an unfavorable comment on modern school regime.

What is the meaning of the only child?

Upon this point Duncan² says: "Only child fertility or one-child relative sterility occurs in two forms; as an exhaustion of the fecund energies leaving the general bodily health vigorous, or as an exhaustion of both sexual power and general constitutional strength." In either case the chances are in favor of the child inheriting a weak constitution. 25% of 120 truants (30) form the "only child" group, and of this number 86% had both parents living at the time of observation, so that it looks as if the only child in this investigation cannot escape suspicion of a feeble constitution. Aside from these physiological considerations the youngest—oldest—only child group presents very often peculiar and unique social relation to the family and community. Case F. 16 (impatient of restraint), illustrates the domineering and impetuous child often found in the oldest child. Every one knows that the youngest child is the "spoiled child" of the family, and the only child is the petted child of the community.

Mode of Concealment. By far the great majority aim to join the other children on their way home from school and so manage to return home at the usual time and with their regular companions. The teacher is usually deceived (?) by a note written by the pupil himself or by some friend. Some tell their parents that their good conduct earned them an early dismissal or a half-holiday, others that the teacher is attending an Institute or is sick, or has died.

Places of Concealment. Woods, up a tree, cave, dugout, behind old buildings, on the roof, in the cellar, in bath-room, in a barrel, in a box, in a lumber yard, wood shed, pigeon house, freight car, and the like.

Where they Went. The great majority went to river, brook, pond, to fish, swim, skate, and play in the water. Next in order comes the woods and fields, then to play ball and other games, to see parades and be in large gatherings and on the street. Many are described as

¹ Duncan: Op. cit., p. 62.

² Duncan: Op. cit., p. 14.

having an immoderate love for sight-seeing, excitement and out door activity. There is much material here for speculation, especially that furnished by the water psychosis, and also valuable hints as to the usefulness of out door excursions, etc.

Duration of the Habit and Number Cured. The duration of the period at which the child will play truant cannot be made out from the present material. It is noticed that many stop at 8 and 9, while others begun at that time. The average age of the truants is 13. The length of truancy varies all the way from a single instance to the entire school life. Sometimes it is the beginning of a series of offences against society that ultimately leads the unfortunate to the reformatory or State prison. Ninety returns on this point show that 58% are cured by firm, intelligent measures of parents and teachers. Of the remaining 42% some outgrow it, others stop and settle down to serious labor, and still others are cured by reform and truant schools, and finally there is that residuum to which truancy is but a stepping stone to the higher degrees of trampdom. Of the 42% that were not cured by home and school influence, 40% came from inadequate homes.

Thus far our notion of the truant rests on evidence gathered for the most part at second hand. The next chapter presents the truant from his side, together with certain facts gained through anthropometry.

CHAPTER III.

ANTHROPOMETRICAL AND SOCIOLOGICAL.

Section I. To ascertain the truant's side of the story the following series of five questions were sent to the several truant schools of the State:

- I. What caused you to play truant?
- II. Who helped you?
- III. Where did you go and what did you do?
- IV. What did you tell your teacher and parents?
- V. What did you like and dislike about your school?

The principals and teachers of the truant schools were asked to present these questions to the boys in the form of a language lesson and to encourage them to express themselves as fully and freely as possible. One hundred and sixty boys wrote papers as requested. They seem to have rejoiced at the opportunity to unburden themselves in the manner suggested and to have told a "plain unvarnished tale."

The following are examples of their responses.¹

1. "I played truant because I didn't like to go to school. Nobody helped me to play truant—I helped myself. My father asked me why did n't I go to school; I said I was late; the teacher asked me, I said I had to go to Boston. In the summer time I went down swimming and in the winter I threw snow balls. I didn't like the teacher and I didn't like to stay in school all day."

2. "I played truant because I wanted to. I played truant with boys, but I don't want to tell their names. I told my parents that I was sick. I told my teacher that there was a disease in my house. I went to the Charles Street gymnasium. I disliked everything in school."

3. "Going with bad company helped me to play truant. I told my parents that I was at school and told them what happened, and told my teacher I had to go to the city for my mother. I went to the city, to the theaters and such places, with bad company. I did not dislike anything about my school, but liked it very much indeed."

4. "I played truant because the day was good. No one helped me play truant. I didn't tell my mother or teacher anything, I went around the streets. I did not dislike anything in the school."

5. "I played truant because I didn't like to go to school. The boys helped me to play truant. When I played truant I went in swimming. When I came home I told my parents that I went to school, and when I went to school the next day I would tell my teacher I was sick. I liked my school because my teacher liked me, and I disliked it because I had to go every day. When I came home after not going to school, I would not go in the house until 9 or 10 o'clock at night. I used to feel sorry to see all the boys coming and going into their homes after coming from school. I was ashamed to go home. My mother used to stay awake all night or until I came in. I used to mind my mother almost all the time. I was arrested once for breaking glass. I used to curse, but hope I never will again. The worst thing I ever did, and the last I have to say is, I am very sorry I disobeyed my parents."

¹ The answers represent five truant schools in the State of Massachusetts.

6. "Because I wanted to have a smoke and to go picking up cigarettes. James Kelly and Ellis Wentworth helped me to play truant. I went up the Merrimac River stealing boats, and Jim Reading (truant officer) caught me. I told my parents that I went to school. I told the teacher that I was very sick and that I had the measles and would come next day, but I never went. The teacher was cross with us and I liked nothing about the school."

The evidence furnished by these one hundred and sixty compositions becomes valuable and unique, when reckoned with the data on run-aways and truancy previously considered and with facts of anthropometry yet to be treated.

"What caused you to play truant?"

Sixty-one per cent. of the answers to this question assign causes apart from themselves, *e. g.*, disliked the school, the teacher, punishment received, or bad company, etc. Thirty-nine per cent. give causes originating within themselves, and the greater number of these left school to have fun, be out doors, to go to places of excitement. A few went to work. The answers to the second question illustrate forcibly the influence of companionship on a boy's conduct. Fifty-five per cent. were helped and influenced by other boys, a few by an indulgent grandmother, or a kind uncle and aunt. Some were persuaded to leave by men of the theatrical and peddler type. Those who played truant on their own account use such expressions as "No one helped me," "helped others," "it came into my mind to play truant," "myself made me run away," "helped myself," which savor with individuality, a trait that I found, through personal contact, pronounced in many.

Only 2% of 160 stayed at home, the rest, 98%, started for school, and either played truant on the way or left school at a convenient time during the day. A portion went to other towns and cities. The majority remained in their own town, a larger part of which spent their time in some form of activity and pleasure afforded by water, *e. g.*, swimming, learning to swim, rowing, sailing a boat, or learning how to sail one, fishing, playing in the water and skating. Others went to the gymnasium, theater, ball games, horse races, fairs, hunted cigarette stubs, stole, rode on various sorts of delivery wagons, hopped freight cars, amused themselves in dodging the truant officers, took a special delight in "getting chased." It is worthy of mention that few loafed on the streets. Their shelter at night was the woods, or a cave, a dugout, a dry goods box.

What did you tell your parents and teacher?

Eighty-seven per cent. lied to their parents, while 84% lied to their teachers. Lying to the parent is rather uniform, *viz.*: that they had attended school, and in many instances they sought to produce evidence to confirm this statement. Others report their good conduct earned them a half holiday, the teacher kept them after school, etc.

The opportunities for deceiving the teacher are greater, of which they took advantage, as are displayed by the varied forms of their lying. The following is a list: Sick headache, sick (without specifying the cause), mother sick, father in the hospital, to go for the doctor, had been crippled, to get teeth pulled, had measles, had cramps, had been vaccinated, disease in the house, earache, pain in the stomach, to run errands, kept at home, to mind the baby, to help wash, to go to church for instruction, etc. These boys are from 9 to 14 years of age, the age in which lying is regarded as a very minor breach of the moral law; so that when bodily discomfort and the good will of superiors are at stake they traffic in it freely without compunction of conscience.

In specifying their likes they show no great uniformity, unless it is, perhaps, for the out door games and exercises that the school affords. Gymnastic exercises, ball games, fire drill, nice play grounds are mentioned. Others specify the teacher, certain playmates, studies, etc. 66% disliked school life. 38% dislike the teacher, one states that "the teacher was to blame for everything." Among other things are mentioned the following: disliked to stay after school; certain studies; the whippings; prayers and catechism; to stay in the school five hours; to stay in the school nice days; disliked everything; disliked the looks of the school; disliked the girls; master and principals; disliked the sister superior, etc.

SECTION II. ANTHROPOMETRICAL.

This data was collected to ascertain whether or not there is anything in the truant's physical condition that will help to account for his offense against society, to see if his conduct is a function of a special physical setting, of certain fundamental physiological conditions.

To determine his physical condition the following plan was adopted :

I. The weight in slippers (without coat and vest), the height, and girth of chest over one garment was determined of 218 truant boys December 29th, 30th and 31st, 1896. During the week beginning Jan. 18th, 1897, the weight and similar measurements were made on 613 boys of Worcester public schools under the same conditions.

Nationality and occupation of the parent were obtained of both groups.

II. From April 5th to 8th, inclusive, a second series of the same determinations were made on the same truant boys, and during the week of April 25th the same boys in the public schools were remeasured. A strenuous effort was made to have the conditions of the second determinations similar to those of the first. This was unavoidable in some cases where the boys had changed their winter for spring underclothing. This occurred in both truant and public schools, which lessens the error to some extent. In these measurements regard was had only for the actual increase or decrease in weight, and for the increase in height over the weight and height first observed.

III. The sight and hearing of 113 truant boys were tested. The attendant physician of the North Chelmsford truant school tested the sight and hearing of 62 boys. I examined 51 boys of the Roxbury Parental School for sharpness of vision and hearing. Snellen's test cards were used for acuteness of vision and the ticking of a watch for the sensitiveness to sound.

The results of the first series of determinations show (see Tables I and II) that the mean heights, weights, and girth of chest of the truants are less than the public school boys in every instance, except at the age of 10, at which age they are equal in weight and height.¹ These relations are diagrammatically expressed in Chart I. The chart shows that the height curve crosses the weight curve between the ages 12 and 13 of the public school boys, while those of the truants boys do not cross until the ages of 13 and 14 are reached.

The results of the second series of determination show (see Table V) that the public school boys have gained more in height and less in weight than the truants. A much larger percentage of the former lost in weight. These relations, expressed in curves, show the increase-weight curve of the truants far above that of the normal, while the

¹ For comparing weights, etc., of Worcester Public School boys with school boys elsewhere. See Table II.

Showing average mean weights and heights (in slippers), rate of increase, etc., etc., of Public School Boys of Worcester, and Truant School Boys of Massachusetts.

WRIGHTS.					HEIGHTS.				
PUBLIC SCHOOL BOYS.					TRUANT SCHOOL BOYS.				
Age.	No. of Observations.	Average Weight.	Mean Weight.	Rate of Increase.	No. of Observations.	Average Height.	Mean Height.	Rate of Increase.	Ratio of mean Weight to mean Height.
9	68	62.10	61.43	—	18	57.73	56.75	—	1.20
10	82	65.56	63.50	2.07	23	64.75	63.51	6.75	1.21
11	109	71.43	72.00	8.50	35	69.85	68.25	4.70	1.32
12	120	77.27	76.00	4.00	50	74.55	72.37	4.12	1.37
13	112	87.49	83.12	7.12	55	83.30	80.25	7.88	1.45
14	84	93.98	93.25	10.13	26	85.98	89.50	8.25	1.55
15	37	105.24	105.00	11.75	11	94.00	95.00	5.50	1.69
Total,	612				218				218

positions of the increase-height curve are reversed. The truants fall below the public school group at every age (see Chart III).

Of the 113 boys tested for sight and hearing, 38% were defective in sight and 47.7% dull of hearing. Of the 54 defective in hearing, 55.5% had abnormal vision.

CHART I.

Curves of rate of growth of Public School and Truant Boys.

The results of Dr. Reichard's¹ extended investigation on the hearing of children show 22.27% defective. Dr. West² found 41% of Worcester public school children defective in sight below the ninth grade. For the ninth grade the defectiveness was 18%.

These are the findings respecting the physical conditions of two hundred and eighteen truants. What is their meaning? Before one attempts to interpret these facts, the nationality and occupation of the parents of the two groups of boys must be compared, that no mistake nor unjust discrimination be made against the truant boys. (See Table IV on nationality.)

¹ Chrisman: PEDAGOGICAL SEMINARY, Vol. II. Summary from Reichard.

² West: *American Journal of Psychology*, Vol. IV.

Both groups represent a conglomerate nationality. The Swedes are in the majority, followed closely by Americans in the public school group. In the truant group the Irish lead, followed by Americans, with French Canadians next in order.

CHART II.¹

Curves showing relation of weight and height of Boston School Boys.²
(American.)

It has been shown among the adult population of the British Isles³ that the Northern or Scandinavian element is larger than the Teutonic, and the Teutonic than the Celtic. The difference would be less among their children under like conditions, yet the fact cannot be ignored in the present case where these racial elements are so pronounced. Accordingly the data has been reconsidered in three ways. (1) The weights and heights of the Swedes of the public school boys were compared with those observed of the mixed population of the same group to see to what extent, if any, they affected the standard. Table III shows that the Swedes are not a disturbing factor in the public school group.

II. The Irish form 44% of the truant group. Can it be that such a large Celtic element has lowered the weights and heights of the truant? The weight and height of the truant Irish boys are compared with the truant mixed population. They show a close parallelism, ex-

¹ This chart is inserted merely as a convenience for comparison.

² Measurements made by Bowditch, Mass. State Board of Health, pp. 314-315, etc.

³ Roberts: *Manual of Anthropometry*, p. 95.

CHART III.

Curves showing increase in Height and Weight during three months, Jan., Feb., March.

ooooooo = Height } Public School Boys.
 ————— = Weight }
 o-o-o-o = Height } Truant School Boys.
 - - - - - = Weight }

Increase in lbs. and inches.

cept at ages 13 and 14, when the weights have been materially lowered by the Celtic element; and yet the difference between the Irish truant weight and the mixed truants, at these two ages, barely equals the difference between the mixed truant weights and the weights of the public

TABLE II.

Showing girth of chest and ratio of weight to chest of Worcester Public School Boys and Truant School Boys of Massachusetts.

GIRTH OF CHEST.				WEIGHT, HEIGHT, ANNUAL INCREASE, ETC., OF BOSTON PUBLIC SCHOOL BOYS. (BOWDITCH.) ¹					
PUBLIC SCHOOL BOYS.				BOSTON PUBLIC SCHOOL BOYS.				ANNUAL INCREASE IN WT. AND HT. IN LBS. AND IN.	
TRUANT SCHOOL BOYS.				Irish.				American.	
Age.	No. Obs.	Mean Girth in Inches.	Ratio of Wt. to Girth.	Mean Weight.	Mean Height.	Ratio of Wt. to Ht.	Ratio of Wt. to Girth.	Mean Weight.	Mean Height.
9	68	23.48	2.65	59.97	50.09	1.22	2.59	58.92	49.53
10	82	24.30	2.63	66.62	52.21	1.30	2.59	64.99	51.57
11	109	25.34	2.83	72.62	54.01	1.35	2.72	69.60	53.10
12	119	26.28	2.36	79.82	55.78	1.39	2.82	75.70	54.82
13	111	27.28	3.04	88.26	58.17	1.45	2.95	82.84	56.70
14	81	28.53	3.26	99.28	61.08	1.55	3.23	91.19	58.88
15	36	29.90	3.51	110.84	62.96	1.65	3.46	102.21	61.15
								11.56	1.88
								11.02	2.91
								8.44	2.39
								7.43	1.77
								6.65	2.12
								5.54	1.93
								4.80	1.81
								6.07	2.09
								4.61	1.53
								7.14	1.72
								8.35	1.88
								10.02	2.18
								11.88	2.27

¹ Report of Massachusetts State Board of Health, p. 314, etc., 1877.

For comparing the weights and heights of different and the same nationalities with each other and with mixed nationalities of the Public Schools of Worcester and Truant Schools of Massachusetts.

[illegible]

school group. So here again the racial element fails to account for the whole difference between the truant and public school boys. (See Table III.)

III. A direct comparison made between 96 truant Irish boys and 134 public school Irish boys shows a greater weight at every age, for the latter, except at 10. The difference between the weight at 11 years is also slight. It would seem that ages 10 and 11 are periods of equalization in the life growth of man. A period when heights and weights become more nearly equal, regardless of nationality and occupation.

On the whole it is evident that differences of race does not account for the large difference already indicated.

The two groups were next compared according to the occupation of their parents. The occupations were divided into professional, mercantile, skilled and unskilled—a classification recommended and followed by Dr. Bowditch. For a comparison of the occupations of the parents of the two groups see Table IV.

This comparison is decidedly in favor of the public school group, if the occupation of the parent reflects at all the tone and propriety of the home. It is fair to assume that the home of the merchant and skilled laborer is less liable to privations and irregularities in the necessities of life than that of the unskilled laborer, whose minimal value as a producing factor greatly menaces the steady supply for the home.¹

The home conditions are better appreciated from the facts gained by queries addressed to the boys themselves, and to the officials and records of the truant schools. It was found that 65% of 180 boys had incomplete homes, by which is meant the absence of father or mother, or both, by death, insanity, separation or imprisonment. (See Table IV.) Seventy-seven (42.7%) are partially or totally orphaned. The great majority of this number falls within the ages 9, 10, 11 and 12. There were no orphans present at 14, and only 1 at 15. This fact deserves emphasis, for the reason that the significance goes farther than the loss of the parent to the home, which fact may often be a source of truancy. The death of one or both parents occurring while their offspring is yet in childhood, is an indication that their parents are of an inferior stock.²

If there is a causal connection between the juvenile criminal and degenerate parentage, then the fact that 18% of 180 truants had committed petty crimes would strengthen the inference concerning the degeneracy of their parentage. Again, the relation of the truant to the parents points to incompetent parentage. The fact that the welfare of the child is transferred to the State, is evidence of the impotency of the parent to control the child. The character to control and influence the child aright is wanting.

Mr. Walton,³ illustrating by a concrete example parental incompetency, says: "Here were these children, apparently of fair, if not of average capacity, perhaps slightly dwarfed in body, shy and reserved, living with parents of vulgar self-assertion and conceit, bred out of their shiftlessness, poverty and low ambition. The children themselves were forming idle and dissolute habits, and growing up in ignorance under the corrupting influence of their natural protectors, seemingly having no proper sense of moral distinction."

¹ Our Consular reports of 1884 and 1895 of labor in foreign countries furnish very valuable and complete statistical matter on this point.

² "In every community, for various causes other than weak parents, there is a certain percentage of young orphans, which is the norm of that locality. Just what per cent. above the norm (yet undetermined) would indicate degenerate parents, can only be reached by actual observation."—Dr. W. H. Burnham.

³ Fifty-ninth Annual Report, Board of Ed., Mass., 1894-95, p. 569.

TABLE IV.

Showing Parentage, Domestic Relations, etc.

PUBLIC SCHOOL BOYS.				HOME CONDITIONS OF 180 TRUANT SCHOOL BOYS.				HABITS.			
Name.		No.	Per Ct.	No.	Per Ct.		No.	Per Ct.	No.		
Swede,		189	30.6	1	.4	Dead,	37	20.5	7	Second term in truant school,	
American,		186	30.3	61	28.4	In prison,	1	-	33	Arrested for petty crime be-	
Irish,		134	21.8	96	44.	Intemperate,	17	9.4		fore present commitment,	
French Canadian,		48	7.6	24	11.	Dead,	30	11.		Used tobacco (mostly cigar-	
Jew,		28	4.5	8	3.6	In prison,	7	3.8		ettes),	
German,		12	1.9	3	1.3	Insane,	5	2.7			
Scotch Irish,		5	.8	2	.9	Intemperate,	7	3.8			
Scotch,		4	.6	4	1.8	Both parents dead,	10	5.5			
Dane,		2	.3	-	-	Both intemperate,	3	1.6			
Pole,		2	.3	2	.9	Separated,	1	-			
Italian,		1	.1	10	4.5	Orphans,	77	42.7			
Portugese,		-	-	2	.9	Incomplete home,	117	65.			
Unknown,		2	.3	5	2.3						
Professional,		8	1.3	3	1.3						
Mercantile,		96	15.6	6	2.7						
Skilled,		280	45.6	85	38.9						
Unskilled,		202	32.9	102	46.7						
Unknown,		27	4.4	22	10.						

TABLE V.

Showing the actual mean increase in height and weight of boys of Worcester Public Schools and of Truant Schools of Massachusetts during three months and one week—Jan., Feb., March, and first week of April.

INCREASE IN WEIGHT.									INCREASE IN HEIGHT.	
PUBLIC SCHOOL BOYS.					TRUANT SCHOOL BOYS.				PUBLIC SCHOOL BOYS.	TRUANT SCHOOL BOYS.
Age.	No. of Observations.	Mean gain in Lbs.	Per cent. gained Wt.	Per cent. lost Wt.	No. of Observations.	Mean gain in Lbs.	Per cent. gained Wt.	Per cent. lost Wt.	Mean gain Inches.	Mean gain Inches.
9	55	1.00	80	20	21	1.12	85	9.5	.87	.43
10	76	.37	61	34	19	2.00	84	10.5	.87	.50
11	97	.62	71	23	30	2.25	80	13.	.75	.60
12	101	1.12	80	17	40	2.25	80	15.	.87	.75
13	86	1.37	81	17	39	1.75	87	10.	1.12	.62
14	67	2.37	77	20	14	4.17	93	7.	1.12	1.00
15	28	2.50	86	14	5	3.00	80	20.	1.25	.75

These defects of home express themselves to the child in poor food, insufficient clothing, improper hygienic conditions and oftentimes as a baneful heritage of a diseased and degenerate constitution.

It is conceded by all biologists that activity of the proper amount and kind is absolutely essential to normal growth.

De Varigny¹ has shown that the size of *Lymnola Stagnalis* varied with the amount of surface offered for its free activities. Of two vessels of equal volume, but unequal surface, the larger surface produced the larger animal. The lack of opportunities for the proper kind and amount of exercise of the truant during his public school life, both at school and at home, is very probably one cause for his inferior size. Nearly every truant enters into some form of bodily activity on leaving school. Very few ever loaf.

These several considerations indicate strongly that the inferiority of the physical proportions of the truant is caused by poor food, scanty clothing, incompetent, and oftentimes degenerate parents, and very probably a lack of proper activity.

The horizontal lines of the standard plotting paper Charts I and II, when indicating increase in weight, are read "pounds," when used to show increase in height, are read "inches." This plan of plotting facilitates the comparison of the growth in height with that of weight,

¹ De Varigny: *Experimental Evolution*, p. 79.

TABLE VI.

Table showing the relations between the increase in height and weight during three months, and the time spent in the truant school before the first series of measurements were made.

No. Obs.	Av. Age.	Time spent in School before 1st Measurements.	Gain in Weight. Pounds.	Gain in Height. Inches.	Ratio of gain in Weight to gain in Height.
15	13	1 mo. and less.	3.81	.53	7.2
16	11	2 months.	4.97	.62	8.01
10	11	3 "	4.17	.46	9.00
1	11	4 "	1.50	.75	2.00
2	13	5 "	1.50	.18	8.33
7	10	6 "	2.66	.58	4.58
8	11	7 "	1.90	.57	3.33
2	12	8 "	1.50	.62	2.42
4	11	10 "	2.68	.74	3.62
5	11	12 "	1.99	.42	4.73
1	13	13 "	2.75	2.75	1.57
3	13	15 "	1.75	1.37	1.27
41 ¹	11	2 "	4.31	.53	8.13
33 ²	11	8.7 "	2.02	.77	2.62

and exposes a significant fact already mentioned viewed from the point of arrested development. Roberts, Bowditch and others have shown, during periods over which their observations extend, that the most favored class has a mean height of about two inches greater than the industrial classes, and further, that there is an entire cessation of growth at the age of nineteen or twenty in the non-laboring classes; "while in the artisan classes growth is more uniform and extends to about the twenty-third year." This suggests that the *anlage* is originally cut out or planned to fill specifications and dimensions by growth processes, and that if the rate of growth, the building process, be retarded through a scarcity of growth material or other causes, the time for completing the structure is extended. The postponement of the crossing of the height and weight curves in the truant group until the fourteenth year finds an explanation in this theory.

¹ Average below four months.² Average for all above three months.

Showing the rate of growth of small, medium and large boys of Worcester Public Schools and Truant Schools of Massachusetts during three months and one week.

PUBLIC SCHOOL BOYS.													TRUANT SCHOOL BOYS.												
SMALL.					MIDDLE.				LARGE.				SMALL.				MIDDLE.				LARGE.				
Age.	No. Obs.	Mean Weight.	Gain in Weight, lbs.	Gain in Height, in.	No. Obs.	Mean Weight.	Gain in Weight, lbs.	Gain in Height, in.	No. Obs.	Mean Weight.	Gain in Weight, lbs.	Gain in Height, in.	No. Obs.	Mean Weight.	Gain in Weight, lbs.	Gain in Height, in.	No. Obs.	Mean Weight.	Gain in Weight, lbs.	Gain in Height, in.	No. Obs.	Mean Weight.	Gain in Weight, lbs.	Gain in Height, in.	
9	18	56	1.32	.91	18	62	2.01	1.21	18	68	1.47	1.22	7	53	1.46	.53	7	56	2.06	.64	7	61	2.33	.87	
10	25	58	.75	1.32	25	63	.53	.98	26	74	.20	.70	6	60	.70	.78	6	63	2.91	.51	6	76	3.00	.49	
11	31	62	.51	.91	32	72	.97	.96	32	78	.94	.99	9	62	4.19	.76	10	68	2.42	.36	10	82	1.47	.53	
12	32	68	1.26	.81	33	75	1.31	1.11	32	88	2.36	1.15	14	65	1.89	.71	13	72	1.44	.72	13	81	3.83	.96	
13	29	73	1.31	1.08	28	81	1.28	1.14	28	93	1.66	1.24	13	70	1.32	.48	13	81	3.16	.68	13	92	4.22	.92	
14	23	78	1.82	.98	22	91	2.17	1.11	22	113	2.41	1.57	5	73	1.93	.71	5	89	2.55	1.02	4	99	4.43	3.18	
15	8	90	2.47	.98	9	101	1.77	1.99	9	119	4.10	1.44	-	-	-	-	5	95	1.75	.95	-	-	-	-	

The results of the second series of determinations furnish additional evidence to the proposition that the truant suffers from arrested development. It has already been stated that the truant group gained more in weight and less in height during the three months than the public school growth. (Chart III.) What do these facts mean?

In interpreting these facts two things must be borne in mind: first, the physical condition of the boy before entering school; second, the treatment received at the truant schools.

From their own testimony I find that out of 160 boys only four returned directly home from school. Of the 156 that deserted both home and school, 13% went to other towns, returning home only when exhausted from fatigue and hunger, or brought back per force. Of those that remained in their own town, a portion loafed on the streets and bunked out until caught, some committed petty offenses and were immediately arrested, several sought whatever places of amusement the season of the year offered, which has already been mentioned. Every truant is brought into a justice court, from which he receives his commitment to the school—an experience not calculated to whet appetites or favor digestion.

To this may well be added the testimony of the officials of the truant schools.

One superintendent says: "Every boy that has entered this school (over two hundred) comes hungry, dirty, ragged and never free from vermin. As a consequence of these things his digestive organs are out of order, his blood poor in quality, and his nervous system under constant strain."

Another testifies "that their home comforts and influences are often of the poorest sort, making directly against the better impulses of the boy." On the other hand those who have deserted the better class of homes, shut themselves off from the immediate supplies of life, so that hunger, dirt and rags soon overtake them. Another says: "You will notice that after we have got the effects of cigarettes out of their systems, they have increased in weight rapidly."

The truant schools are models of sensible hygienic conditions. A serious effort is made to have the truant receive the full measure of these benefits. Food is abundant, well and regularly served. Regularity of habits are enforced. Hours of work, study and recreation suitable to the boys' strength and needs are provided. The situation is this: An organism more or less exhausted through lack of nutrition, unwanted acts committed by itself and others, and by fear, is suddenly transferred to an environment rationally planned to meet all its needs. Under such circumstances what ought one expect the organism to do?

The facts found concerning the truants urge the answer: that it fleshens rapidly but develops very slowly. Additional evidence is given from the following consideration: 33 boys who had spent 8.7 months in the school before the first measurement, gained an average of 2.02 pounds per boy, and .77 of an inch in height during 3 months and 1 week. (See Table VI.) The ratio of the gain in weight to the gain in height being 2.62, while 41 boys who had spent on an average 2 months in the school before the first measurement, gained an average of 4.31 lbs. per boy and .53 of an inch in height—the ratio of the gain in weight to gain in height being 8.13. The average age of each group is 11 years. In short the rate of the increase in weight and height over the period already specified, is dependent on the time in which the boys have remained in the school. The longer they remain the more nearly does their rate of growth approximate that of the public school boys.

It appears as if nature is profiting by the experience gained during

the adverse periods of the organism by laying up a superabundance of food supply at the very first opportunity. The organism becomes a sort of repository for food stuffs; but being assured that the crisis has passed, that the desert is crossed, she directs her energies to the more normal and higher processes of nutrition.

Bearing in mind the physical condition of the boy before entering the school, the sensible hygienic conditions of the schools, the dependence of the ratio of increase of weight to height to the time they remain in the school—the longer they remain the more nearly normal the ratio becomes, and also the exceeding susceptibility of the changes in weight to seasons of the year,¹ temperature and the like, are we not justified in interpreting the excessive gain in weight of the truant over the public school boy as an expression of the poor physical condition of the former responding readily to a superior environment?

What explanation is to be given to the fact that the increase-height curve of the truant falls below the increase-height curve of the public school boy? Doubtless there is a partial explanation in the fact that the period of maximum increase in weight for a given individual is not coincident with maximum increase in height. The very careful work of Malling-Hansen² on this subject shows that the body weight of boys from 9 to 15 passes through three yearly periods, a maximal, a middle and a minimal period, and that likewise there are three yearly periods in the increase in height. The maximal period for weight-growth begins in August and ends the middle of December, while the maximal period increase in height extends from the last of March to the middle of August. Schmid-Monnad³ finds likewise three yearly periods of growth in weight. The maximal period extends from August to October, middle from November to January, and minimal from February to July.

The point urged here is that variations of increase in weight occur in the normal development of the child, and that increase in weight and height are not concomitant processes for the individual. So that it appears that the small increase in height of the truants during this particular period may be partially due to the excessive gain in weight. But there is still another consideration, which is more conclusive, since it is in harmony with the general laws of growth. Porter⁴ has shown that "the comparative rate of growth of dull, mediocre and precocious children of the same sex is the same at all ages from 7 to 16 inclusive." The results of the present investigation show that the law holds true, with two exceptions, viz., at the ages 10 and 11.

The weights of each of the several ages were arranged in a continuous series, after the fashion of Galton,⁵ beginning with the smallest weight and ending in the largest. These series were each divided into three equal groups denominated, *small*, *middle* and *large*. (See Table VII.) A comparison of the averages of the increase in height of the three groups shows that the *heavier* the boy, the *greater the increase in height* for all ages except 10 in the public school group, and 10 and 11 in the truant group. The law, then, is, disregarding exceptions, the heavier the child of any age between 9 and 15 the greater the increase in height over a given period. Now, if one connects with this law the fact that the public school boy is heavier than the truant of the same age, the reason for the greater increase in height of the former over

¹ Weir Mitchell: *Fat and Blood*, p. 19.

² Malling-Hansen: *Perioden im Gewicht der Kinder und der Sonnenwärme*. Copenhagen, 1886.

³ Schmid Monnad: *Zeit. f. Schul. pfl.* No. 6, 1896, p. 318.

⁴ Porter: *Trans. of the Acad. Sci. of St. Louis*, 1893.

⁵ Galton: *Natural Inheritance*.

the latter is quite apparent, and it also furnishes additional evidence of the arrested development of the truant.

CONCLUSIONS.

Pedagogical. If the results of this investigation emphasizes any one group of facts more than another, it is the intense fondness for outdoor activities and a spread-out, diffused universal interest in man and nature on the part of the child. Running away and truancy are forcible protests against the narrow and artificial methods of the school room, a rebellion against suppressed activity and a denial of free outdoor life. Cannot pedagogy take a more practical account of these great fundamental instincts and activities? In this connection it is worthy of mention that the boys of the truant and reform schools of this State, that are provided with manual training and plenty of muscular exercise, have no desire to escape from these schools. The instructor of Sloyd in the Lyman Reform School,¹ says: "During the year not a boy belonging to the Sloyd classes has attempted to escape from the school." This is all the more instructive when it is remembered that 4.8% of the 144 boys of that school did escape during the school year 1895-96. One superintendent says: "They take the greatest interest and delight in owning and cultivating a truck patch or garden." In two of the truant schools book instruction occupies but 3 hours during the day. The rest of the day is given up to manual training, in-door and out-door work and play. The principals informed the writer that many of these boys returned to the public schools ahead of the grade corresponding to their age. They had gained a grade.

The observations and conclusions of Richardson² are instructive at this point—he says: "It may be stated generally that the psychological limits of the capacity of attention and of profitable mental labor is about one-half the common school time of children, and that beyond that limit instruction is profitless. The following is one of the several illustrations cited by Richardson in support of his proposition: "In one large establishment, containing about six hundred children, half girls and half boys, the means of industrial occupation were gained for the girls before any were obtained for the boys. The girls were, therefore, put upon half-time tuition, *i. e.*, their time of book instruction was reduced from 36 hours to 18 hours per week, given on the alternate days of their industrial occupation, the boys remaining at full school time of 36 hours per week—the teaching being the same, and the same system and by the same teachers. . . . On the periodical examination of this school, surprise was expressed by the inspector at finding how much more alert, mentally, the girls were than the boys, and how much advanced in book attainments. Subsequently industrial occupation was found for the boys, when their time of book instruction was reduced from 36 hours a week to 18; and after a while the boys were proud, upon examination, to have obtained their previous relative position, which was in advance of the girls. The chief circumstances effecting this result, as respect the boys, was the introduction of active bodily exercise, the naval and the military drill, and the reduction of the duration of the school teaching to within what appears to me to be the psychological limits of the capacity of voluntary attention."

Every one admits that our instruction should begin just where we find the child. In fact it *must* begin there if we would teach. But where and what is the child world? Of what is it composed? To

¹ Second Annual Report Lyman and Industrial Schools, 1896.

² Richardson, B. W.: National Health, pp. 99-104.

get acquainted with the psychic world of animals biologists study their activities, their desires, their fears, etc. Can we do any better in getting acquainted with child life than to follow the example of the biologist? If pedagogy adopts such tactics what disposition must it make of the activities, interests, desires, emotions, etc., expressed by the child in the present investigation? Has fondness for water, for fields and woods, for plays and activities, *not supervised*, the period of focusing down of interests, of forming attachments for certain objects and persons, the period of lying, stealing, and hardness, and of checking up in physical development any lessons for pedagogy? Are we instructed by an active child saying: "I disliked to go to school *every* day," or "It was too fine out doors to stay in school," or "I disliked to stay in school *five* hours," or "I liked the fire drill," or "It was *hard* for me at home and at school," or, "I liked the gymnastics at school?" The large per cent. of truants defective in sight and hearing is a fact that urges most strongly the necessity of teachers having a definite knowledge, gained by actual tests, of the strength of these most illuminating "windows of the soul." There should be no excuse for the modern teacher's guessing and blundering over such matters when a little time, with very simple apparatus, would yield sufficient data for intelligent action.

Sociological. The intimate correlation between the child's home comforts and its emotional and ethical life suggests some very fundamental questions concerning the connection between property and good citizenship.

Renewed emphasis is given to the old old fact that the wholesome influence of the home rests solely on the physical and mental vigor and integrity of the parent. The fact that so many of the truants (98%) do not return home, exchanging readily its comforts for hunger, bunking out, stealing, breaking and entering, and the like, indicate two things, first that their homes have a minimal attractiveness and power over their lives, and second, that their moral sense, self-respect and ambition are greatly wanting, since they abandon themselves so readily to more primitive forms of civilization. Morrison¹ says: "In very early life unadaptability to social surroundings usually shows itself in the shape of truancy, vagrancy, wandering habits, in short a disposition to revert to the nomadic stage of civilization. The greater the demand made by society on the child, such as the demand in the present century that he shall regularly attend an elementary school, the more clearly is the extent of the nomadic instinct brought to light. Of course, in all cases where parental supervision is of an efficient character, the wandering impulse is usually corrected and extinguished, but when there is little or no parental supervision, a child of nomadic tendencies is apt to be picked up by the police as a vagrant." Interpreted biologically, and in accord with the assumptions and experimental evidence already brought forward, either the metabolic rate of the organism is not keyed to respond advantageously to the increasing stimuli of its environment, or a portion of the stimuli necessary to support the rate of metabolism is absent, the former being due, doubtless, to heredity, the latter to insufficient nutrition; but in either case the organism moves half instinctively half purposely about for conditions in attune with its rate of metabolism or for conditions necessary to support that rate that is essential to well being.

Psychological. What does such an investigation contribute to the psychologist? To the writer it seems his gain depends largely upon his point of view.

¹ Morrison: *Juvenile Offenders*, p. 58.

Every geologist of repute, since Lyell, defends the thesis that the present geological forces are the same in kind as those that brought our earth out of primeval chaos and made it possible for organic existence. The modern geologist observes carefully the operation of pressure, heat and cold, wind and rain on our present land forms, and from the facts here gained explains the processes of mountain, plain and valley building; in short, traces out the causes that have produced the manifold land forms of earth. This is practically the view and method that guides the investigation of the genetic psychologist. Observe, for a while at least, those forces which we have reason to believe have from the beginning of organic life been instrumental in differentiating the activities of the psyche, that have impressed upon the soul some of its deepest instincts and tendencies.

The results of this article, surveyed with these general notions in mind, are more suggestive than otherwise to the psychologist. A few of the more prominent suggestions and problems are here given.

The discarding foot and head dress and garments by the little runaways (case 9, II, group of runaways) is certainly suggestive of an effort, blind of course, to realize the conditions enjoyed by primitive man in chase and flight. The intense longing and fondness of the child for out doors and water is in excess of any desire that might have been formed out of individual experience. The various forms of shelter enjoyed at present, even the very best, are so recent in the history of the race, that to the child, and even to the adult, are not entirely free from caginess. The behavior of animals in captivity is an interesting background to this subject. The differentiation of the water psychoses has gone on continuously since the beginning of life. In fact the whole of the anatomical ground plan, and much of the details of the vertebrate series were worked out while life still moved in a water medium. But even after migrating to the land, it has ever been compelled to make daily visits to bodies of water. For primitive man to wander too far from streams of water was to suffer, if not to perish from thirst. He sought streams for their fish, lay in ambush along their banks to capture animals that came to slack their thirst. Early travellers and wandering tribes cast their tents beside a stream of water. In modern times many of the ills of man are relieved by a great variety of water cures. Certain forms of madness are detected by pouring water before the unfortunate. In view of all these things should we wonder at the water psychosis so pronounced in childhood?

The peculiar mental and bodily state induced by the sudden loss of direction and the sudden realization of being alone, while running away, may have some connection with that sense of helplessness and defencelessness that comes over all gregarious creatures when suddenly separated from their companions or natural protectors. The lost cry note of the chick, the turkey, the wild goose, the behavior of the dog when lost from his master, the distress of the horse at the separation from a mate, all testify to the profound effect that loneliness has even on lower creatures. The child, which a moment before had no regard for home, companions, or any fear of whatever obstacles it might meet, is suddenly transformed into a timid, inactive, powerless creature. Volition is gone, movements are without precision. There is a folding up, a shrinkage of the soul in the presence of an unknown and unfriendly environment.

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L. W. K.