

Special training of physically and mentally feeble Children: five lectures

Publication/Creation

1913

Persistent URL

<https://wellcomecollection.org/works/y67tdtbk>

License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution, Non-commercial license.

Non-commercial use includes private study, academic research, teaching, and other activities that are not primarily intended for, or directed towards, commercial advantage or private monetary compensation. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

Resumé of Lecture ~~III~~ I

The difference between normal and abnormal children engaged our attention at our last meeting & I pointed out that while a normal child has all his senses about him & knows how to use them, an abnormal child is deficient of one or more (as deaf or blind) or uses them all imperfectly (as imbecile ^{knowing up to this point}). Eyes have they, but they see not: Ears have they, but they hear not; neither speak they with their mouths. Imperfection of the same kind though less marked is seen in backward & mentally feeble children. I showed how feebleness & defect of mind are often associated with feebleness & defect of body, & stated that a knowledge of the signs of the latter is useful in judging of the former. Inquiring then what John Locke quaintly calls the "clay cottage" of the mind, we note first the make & development of the body. First we remarked the characteristic deviations from the normal in the shapes of heads, in standing Microcephalic, hydrocephalic, &

Principles of Training
Lecture I

7.5.13

2
Defect (it may be also by some correlated
physical infirmity) are incapacitated from
following the ordinary school curriculum.

There is a close connexion between the
physical & the mental condition of
children (& for that matter of grown people
also); & we may often learn something
of Educational fitness by observing the
external characteristics of the individual.
It has been said that you cannot make
a little piece out of a sword case; & Educators
will in vain expect to find a fitting receptacle
for the precious treasures of knowledge in
a coarse badly-formed & badly-finished
bodily organism. The child alert in mind
is usually also alert in body; whilst the
one of sluggish temperament not only moves
slowly, but thinks slowly. A bright child
ought to have - & if judiciously fed - usually
has ^{a face full of expression} a bright clear complexion, clear fast
eyes, features of fine proportion, & well-formed
ears: his head should be of sufficient size
(not less than 20 inches in circumference), of

3

Symmetrical shape, with well developed
 forehead, & joined head on a back bone
 vertically set as the foundation of a trunk
 from which issue well-built, straight-set
 limbs. ~~But the unknown~~ The muscles are firm
 & the body generally wellurnished; & its
 movements are well under the control of
 the will. This of course is ^{the way say} ~~the ideal~~ standard.
 But ^{practically} ~~of course~~ we shall not expect to find
 perfection in ^{any} ~~one~~ person, & the ideal I have
 described admits of deviations here or
 there without involving ^{absolute} ~~abnormality~~. But
 where the deviations are so marked as to
 involve a decided departure from the
 average, whether in make & development
 of body, in deficiency of healthy activity,
 or in uncontrolled irregular movement,
 we shall almost certainly find some
 departure from the average ^{physical} ~~physical~~ condition.
 In other words we shall have to deal with
 not only bodily but mental abnormality.

Take for example the case of imperfect
 make & defective development. The child

with occasionally undersized head (meaning
 it may be less than 15 inches in circumference) & forehead
 narrow forehead tapering to the vertex
 is an instance of extreme imperfection during
 fetal life, & necessarily denoting such a
 want of mental power as to constitute
 idiocy - ^{Shad Brown - Chelmsford} Another case in which the head
 is not very small but there is a want of
 development of the body generally, the skin
 rough, the legs obliquely placed, the legs
 & tongue coarse, the hands clumsy looking
 with thumb for fingers, shows the physical
 signs of defective development, quite
 inconsistent with normal mental activity.
 The third case is one in which the head
 is abnormally enlarged from what is
 properly known as water on the brain
 in infancy: here we have bulk enough to
 to spare, but for manifestation of mental
 quality comes as well as quantity, & action.
 The enlarged skull there is but a small
 quantity of ^{organic} brain matter, which is hampered
 by excessive thickness of investing membranes

Tongue
 deep furrowed
 non

5 1/2 x 12
 648
 20) 3240
 2

is ~~unusually~~ ^{interesting & instructive}: children being below
the ~~pro-~~ of ordinary children of corresponding ages at 5
4 ft by 12; at 10 by 2, at 15 by 3; the weight at 5 by 16 2 lbs, at
10 by 6 lbs, at 15 by 8 lbs.

Children deficient in healthy activity
of body are ~~sometimes~~ ^{mostly} ill nourished, though
the opposite extreme of over nourishment
may (as in the case of the fat boy in ^{of Dickens} ~~Richardson~~)
prevalence to body & mental weakness.
Sometimes however we may come across a
type such as Charles Dickens has sketched
in the character of little Paul Dombey -
precocious prematurely old (or as they are
often called, "old fashioned") children -
This is the description of Paul at 5 years
of age. "There was something wan and
wistful in his small face - He was
childish & sportive enough at times - but
he had a strange, old-fashioned, thoughtful
look at other times of sitting brooding in
his miniature arm-chair, when he looked
& talked like one of those Combe beards in
the Fairy Tales, who at a hundred & fifty or
two-hundred years of age, fantastically
represent the children for whom they have

been substituted". But perhaps the most striking example of children deficient in healthy activity are the class of Cretins in whom both bodily & mental functions are performed at a very largely slow rate. Of late years it has been found that such children's slowness depends upon the absence of a gland in the neck called the Thyroid, the secretion of which mixing in the blood current is essential to ^{metabolism} body change & to brain activity. By experimental processes it has been ascertained that where the gland is absent, & the children consequently suffer from cretinism, that which is wanting in the system may be supplied by the ingestion (i.e. the administration either by the mouth or by injection into the blood current) of the corresponding gland of the sheep, or of its extract. The change ensuing is little short of miraculous. The child whose growth has been stunted begins Normal

Case of man of 40.

9
8
apparently to grow - I have known a case
in which there was a gain of bone 4 inches
in 12 months - & at the same time the
intellectual powers - previously locked up -
(not in Alabaster like the lady in Comus)
but in the watery tissues which encumber
the action of the brain - are gradually set
free. To such extent is this the case that
a ^{crucious} ~~man~~ ^{boy of 17} patient, formerly under my care
at the Royal Albert Hospital, Lancaster,
with all the characteristics of idiocy,
was converted by a course of Thyroid
treatment in 1893 into a fairly bright
active boy, & the last I heard of him
was that he was attending one of the
Board Schools in Manchester, though in
the infant department, owing to the
disadvantage of intellectual life lost
prior to ^{thyroid} treatment, which was then
unknown. One notable point about this
class is that their mental as well as
bodily activity seems to be dependent upon
the permanent administration of any salt

Cretin
Children admitted to the school classes
only on understanding that they
shall undergo thyroid treatment.

Microk
in
babies

9
of a small quantity of thyroid gland.
With another class of children we
find an excess of movement; not that
~~healthy~~ ^{shaking} exuberance of exercise which we
find in all healthy young animals, but
a tendency to twitches & spasms, & it may
be to a constant purposeless action of
certain muscles independent of the will.
The former we find most frequently in the
class of nervous children, who are not
necessarily intellectually backward but
are prone to mental breakdown if not
taught with discretion: Chorea (St Vitus'
dance) & Epilepsy ^{may} to apt to occur with
such. The latter (purposeless repetitions
of movements, technically called athetosis)
are seen mostly with children who have
suffered from some form of paralysis in
infancy. Such children are ~~usually~~ ^{frequently}
disabled on one side of the body, & some-
times the features are distorted, so that
the child appears less intelligent than
it really is. There is however usually

Wood carver - John Berg.
Chapin Kaper - W. G. G. G. G.

All regulated actions

Petersen p. 6 -

- + +

10
Considerable manifestation of will-power
with this class, so that by use of
appropriate exercises, irregular move-
ments may be gradually overcome, & I
have known cases originally unable to
grasp a pen or pencil ultimately become
good writers & draftsmen.
The thing indeed is welcome, but the ~~fact~~ ^{fact} is weak.
I must now say a few words about
inherited peculiarities. Of course the
subject of heredity is too vast & compli-
cated ~~for~~ ^{for} us to do more than glance
at, but it is so potent a factor in
mental organization that we must not
overlook it entirely. To you ^{who are} ~~as~~ teachers
it will be of interest, & may be of practical
importance, to know something of the
family antecedents of your pupils. If
a good tree cannot bring forth with fruit,
neither can a corrupt tree bring forth
good fruit; it is ~~certain~~ ^{not less true} that parentage
has much to do with the character of the
offspring. If you were to ask me what
in my opinion is the most frequent cause

11

of mental defect ^{in children} ~~with persons~~ people I
should unhesitatingly say "ill-assorted
marriages". In this ~~20th~~ ^{21st} century,
whatever may have been the case in the
earlier ages of the world's history, it is
certain that there are ^{some} persons so
degenerate that they ought not to marry
at all; while there are many others with
a taint in their blood who must not ally
themselves with persons similarly tainted,
or the consequences in the next generation
will be disastrous. People "with nerves"
for instance should seek partners of the
opposite temperament, even though they
be slow & phlegmatic. Nature indeed
seems to set up an attraction between
opposites, but the artificial conditions of
modern life tend in the contrary direction.
Highly nervous people, & those predisposed
by inheritance to nervous diseases, frequently
intermarry, & the consequence is that their
children are born with nervous systems
so unstable that they will break down at

the least strain. There are the children
 who have fits when birth, who
 develop Epilepsy & Chorea (St Vitus'
 dance) as they grow up, & who later
 become "cranks" & qualify for Lunatic
 Asylums. They are not necessarily dull
 at school: sometimes they are ^{moderately} precocious;
 but they are unreliable pupils, apt to
 break down when in times of trial, as under
 the excitement of examination. We shall
 have more to say by & by of the "large signs"
 by which they may be ^{distinguished} spotted. I mention
 them now only ^{by way of} ~~as~~ exemplification of
 inherited peculiarities. In an analysis
 of the causes of idiosyncrasy & inborn ⁱⁿ
 2380 cases, ^{under cover of which I have found} ~~of which I have found~~ 13 each & I found
 a family history of mental or nervous ⁽²⁵⁾
 defect in no less than 41 per cent. Another
 potent parental cause was a predisposi-
 tion to consumptive disease, this figuring in
 28.31 per cent of one cases. Intemperance
 (alcoholic) in parents is no doubt in
 too many cases a determining cause of
 abnormality in their ^{children} ~~offspring~~

inferiority of offspring both mental & physically, but not according to our experience in such predominant proportion as some have stated, one figures giving only a percentage of 16 as compared with those just mentioned. ~~Remains to be determined whether~~ The marriage of Cousins is very properly looked on with suspicion by cautious persons, because where any common family weakness exists (themselves) there are few families not free from such weaknesses. It may be expected to be intensified in the offspring. One states that there however only a little over 14 per cent of defective children who are the offspring of consanguineous marriage. Parents are naturally loth to avow any hereditary condition accounting for mental deficiency or peculiarity, & are apt to ascribe a fit, a fall or a freeze - (either to mother or child) - as the cause of the abnormality when its true origin dates much farther back. There are no doubts

Explain growth of brain &
of brain cells - and how some
to grow by thickened membranes -

Diagram of Brain

Accidents & falls on the head tho. often
are also real causes - & hopefulness ^{unwarranted} _{reason}
born with degree of injury -
Case of girl who fell on head -
afterwards married.

144
A certain number of cases whose brains
have been damaged by some inflammation
in early life, & consequently not perfectly.
These are unfortunately as a rule less
hopeful of improvement than those dating
from birth, & as Dr. Langdon Down has said
~~that~~ the prospect of improvement is,
contrary to what is so often thought, inversely
as the child is, namely, fair to look upon,
& wise. The reason is that there is
more hope (within certain limits) of
an imperfectly developed brain being
expanded by educational methods than
in the case with a damaged brain.

Defect
of
nutrition
Apart from actual defects of
brain formation or brain structure
there is another physical cause for
locally or abnormal brain action. It
will be readily understood that the
activity of brain cells upon which
mental action depends is due not
only to the cell itself, but to the substance
from which the brain derives its nourish.

of the hungry man
is an angry man

On the
way

The hungry
to the angry
man

(or angry
to the hungry
man)

Defects
of
Health.
Impure
blood
&
action
or
come

-ment, that is to say the blood in which
it is bathed. If the blood be poor in
quality, as it is in ^{insufficiently} fed children
the brain cells are not duly ^{for} stimulated
& processes of thought - even of memory -
cannot be properly performed. We are all
of us familiar with the feeling that when
starved from want of food we are utterly
unable to think out any thing at all. ^{mental}
Indeed we often find very simple operations
beyond our power. So with the poor child
who comes to school without breakfast or
with a very insufficient one, the morning
lessons, which should be done with least
effort, often prove exhausting; & it has
been truly said that "over-pressure" ^{not infrequently} localized
is sometimes the consequence of under feeding.
Again when the blood is impure, as occurs
when the child has been sleeping in an
overcrowded room (so often unfortunately
the case with the poor), excess of carbonic
acid (or rather of effete material not removed
in that form) renders the circulation

16
The ventral and lateral wings
In the morning lessons
Sluggish, & there is a tendency to stupidity
if not to actual stupor. Of course ill-
-health, especially when accompanied
with pain, interferes with vigorous mental
action & power of application; & the
sleeplessness, & tendency to night terrors,
too common with ^{high} nervous children, will
lead to exhaustion of the brain interfer-
-ing with study. This of course ^{is seen} occurs
in a marked degree in Epileptics after
the occurrence of fits.

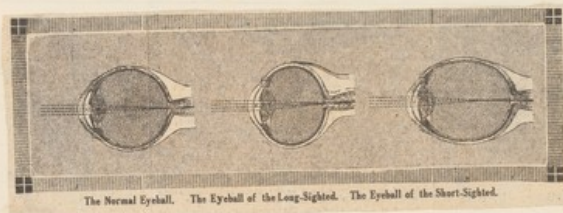
In the enquiry on the Mental & Physical Condition of Childhood (based upon an examination of 100,000 children seen from 1888 to 1894 in Elementary Schools & in & around London by Dr. Warner & his colleagues) it was found that children badly made were ^{generally} also to be badly nourished, no less than 75 p.c. of the boys & 74.6 of girls under 10 of "low nutrition" having been also noted as being defective in development.

Cheate's observations -

Defects of Senses

17

Defects of hearing & of sight are sometimes overlooked as causes of mental dulness. The ordinary teaching voice should, in the absence of interruptions, be heard at a distance of 60 feet in a room of fair acoustic properties, & those hard of hearing within this range should be especially examined. Sometimes a running at the ear will betray the cause of deafness, which of course requires medical attention; but a still commoner cause, & one not so readily ascertained, is accumulation of wax in the ear. This latter can be removed by syringing with warm water & the deafness then disappears. A considerable number of school children have slight degrees of deafness: Thus a German aurist (Lohr) found 35 per cent of the pupils in the St. Elizabeth Schools, & a French aurist (Moussy) found 17 per cent of those at Bredeau. More or less deaf in one or both ears - As in London special provision is made for teaching the deaf & the well but of course be troubled with pronounced cases of deafness: it is well however to be on the look out for minor degrees of deafness, or being confused with, mental dulness.



18

Eye strain is a not uncommon cause of inability to keep up with the rest of the class, & consequently of backwardness. A child with average sight ought to be able to read the smallest type on the sheet I show you (Snellen's types) placed in a good light at a distance of 20 feet. I need not go into the principles upon which these graded types are constructed: it will suffice to say that the refractive system of the eye is so arranged that the images of objects at a ^{long} distance of 20 feet fall upon the ~~retina~~ ^{retina} with almost parallel rays, so that there is no effort to view an object at that distance. If however the eye desires to look at an object within 20 feet of it, then it has to accommodate, that is bring its focusing mechanism into play, altering the shape of the lens according to the nearness of the object. While doing so, the eye makes a distinct effort & is not at rest. The smaller & nearer the object the greater

14

The strain. From too prolonged use of the eye on near objects - such as reading & writing especially of minute character - the eye becomes overstrained & gives way at its weakest point - i.e. near the entrance of the optic nerve. The eye begins to bulge behind & thus becomes longer in its axis but short sighted. Another opposite defect not infrequently met with in feeble minded children is that called (rather confusingly) "long sightedness" or more correctly hypermetropia which results in the image being focused behind the retina, & only a blurred impression being perceived. In children, however, with this infirmity the power of accommodation is so active that by constantly bringing it into play they can see clearly both objects at a distance & near at hand. The eye muscles are however never at repose, & this state of unrest produces pain in or behind the eye - Eye strain - & often also head-ache accompanying. It

Nystagmus


Chlorian oscillation (from side to side) of the eyeballs is sometimes noticed, & unless corrected there is a tendency to move the head when looking laterally at an object instead of moving the eyeballs themselves. The eye defects referred to are of course matters for attention by an eye surgeon who will know how to remedy long & short sight by appropriate glasses.

Myopia
of
nerves
+
muscles

We have already referred to some of the curious nervous movements and muscular incapacities common to the feeble-minded class. If we refer to them again it is only to observe that there is a decided connection between defects in bodily development & irregular nervous action, no less than 46 per cent of the former showing abnormal nervous signs, according to the statistics of Dr. Warner. Abnormal nervous signs are according to this authority indications of abnormal mental condition. They consist of movements & of postures; & Dr. Warner

Maintains that in both movements and postures we see processes of the brain - (whether accompanied by consciousness or not) revealing themselves through the action of the nerve-muscular system - "Finger twitching" for instance is a sign of an over mobile nerve system, while "insufficiency of activity in the nerve centres" is indicated by the so-called "weak hand posture" Subograms Rocking movement.

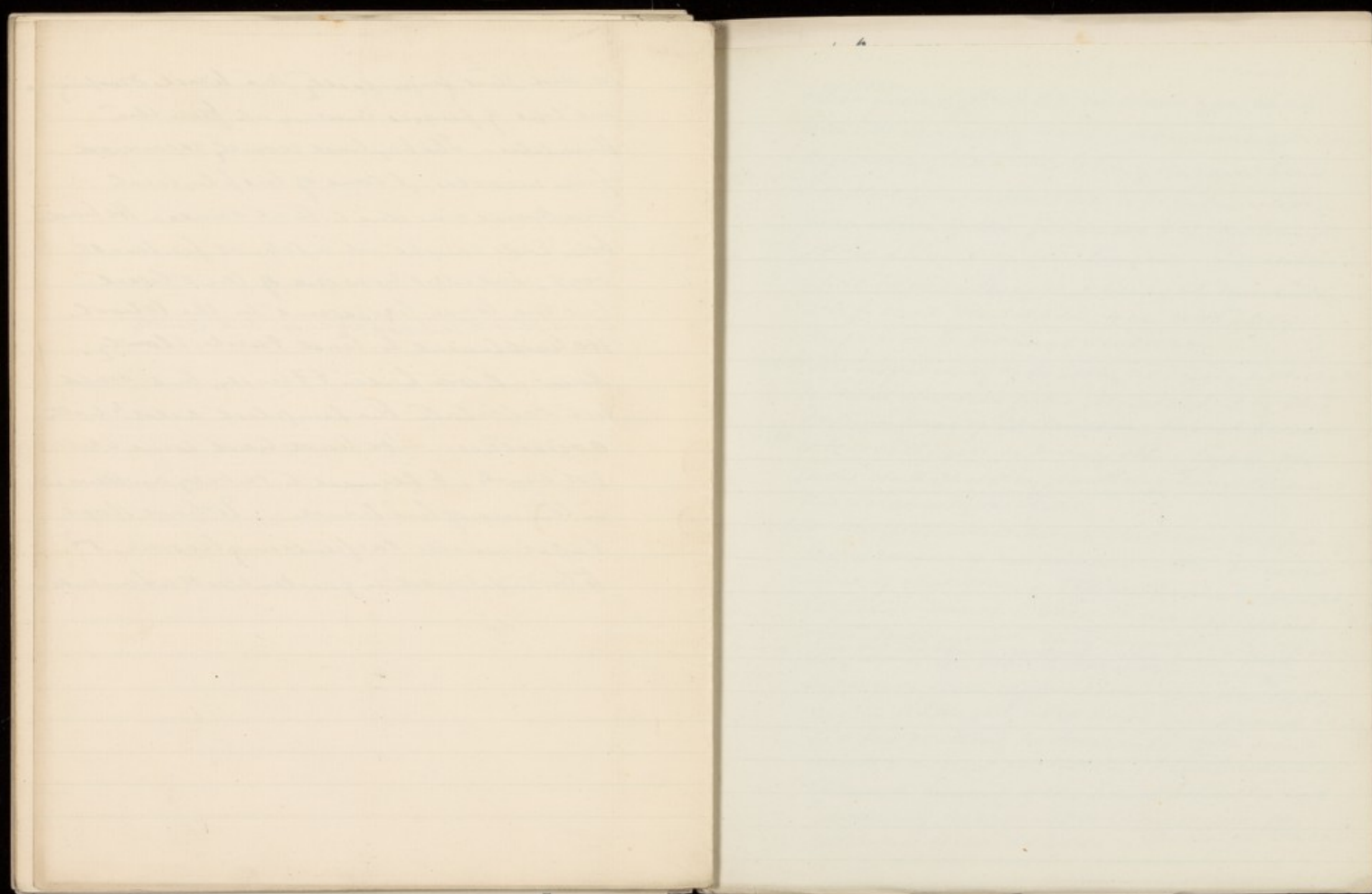
There is no doubt that much may be learnt as to a child's intellectual condition ^{Look at the child in good light both front & profile} - ^{deduce by observing the facial expression} "Is there a vacant gaze, fixed or staring, or a want of changeableness?" Such defective expression would argue dulness or stupidity. If we look at the forehead we shall see in some cases not the smooth brow of healthy happy childhood but the careworn creases of premature age, furrowed now transversely with horizontal lines, now with vertical lines "knitting the brow". This is apt to be taken brain

Asking him to stand ^{face to the}
 window I noticed his body was 



Selected from my experience with idiots
 & imbeciles: various degrees of the same
 kind of defect are here conveyed - the
 feeble-minded. I was consulted recently
 last, looking aged & undressed female 5 ft. 6 in.
 about 4 ft. 6 in. with a head measuring
 just over 12 inches - consequently much
 below the average, which with a normal
 child should approach 21. Passing one's
 fingers down the middle of the forehead one
 felt a ridge somewhat angular, which
 denoted a defect of development of the
 front part of the brain which was, like the
 forehead itself abnormally narrow in the
 region most concerned in intellectual
 operations. Opening his mouth ~~the~~ I found
 the palate high & narrow, i.e. its contour
 instead of being like a horse shoe rather
 resembled a Gothic arch. The limbs were
 thin & there was a want of tone about the
 muscles, & the habitual posture was with
 shoulders back & body curved forward
 from the loins. Asked to hold his arms
 out with back of the hands up, we found

he did this imperfectly, the hands drooping
the tips of fingers coming up from the
kneecaps. The boy had recently recovered
from measles, & some of his physical
weakness was due to that cause. He had
been well taught at a school for small
boys, but was now one of the oldest
but the least proficient in the school.
~~could speak moderately well, but slowly.~~
He had learnt to read fairly & slowly.
Knew a little Latin & French, but could
not calculate the simplest arith. with
correctness. He had had some Greek
not much, & seemed to be very awkward
in the use of his hands. To have stood
& afterwards carpentering lessons, &
to be employed in garden work in summer.



Benjamin's such cases. (Show series)
by contrast. Here let me warn you that
want of symmetry does not necessarily betoken
deficiency, nor does a long narrow head of
I called your attention to peculiarities in
formation of the features & of the hands
of the skin & of the tongue. I mentioned
that both in height & weight mentally-
deficient children are notably
inferior to normal children.

2 (6) The deficiency of healthy activity noticeable
in mind children was illustrated by the
extreme case of Extremism, the most frequent
in lesser degree in many other types of
intellectually children, lacking tenderness
& consequently activity.

3 (6) We next considered children suffering
from excess of movement - the nervous
class of children - & the one prone to Epilepsy
& St. Vitus Dance; also those afflicted
with movements they cannot help, though
they are then best to overcome them. These
sufferers from affections of paralytic
nature. I might also have mentioned the
to & fro rocking movements often seen in
weak minded children, & the backward
& forward passing of the hand before the eyes
producing pleasurable impressions of
alternate light & shade. The idiot's vacant
stare & meaningless gaze also belongs to
the same order of impossible movements.

Points in Special Training of Physically and
Mentally Feeble Children.

Sect. I. Mentally feeble children usually also
 physically feeble. Undersized. Less vitality
 (See Tables) More prone to disease. e.g. constitutional
 - humors - Scrophula. Tubercle - exanthemata -
 also nervous affections of various kinds - e.g. epilepsy
 & forms of paralysis & of chorea - Badly-made body
 generally also a badly nourished body. Defect of sight
 & of hearing more frequent than with children of average
 intelligence. Mutual interaction. Case of blind boy.
 Abnormal Constⁿ of blood sometimes a cause. e.g.
 anaemia, absence of thyroid secretion (cretinism), abnormal
^{nutrition} ^{circulation}.
 Insufficiency of judicious feeding, hygienic sur-
 -roundings, ^{cleanliness} warm clothing & in many cases tonics
 Cod Liver oil, medicine &c. Surgical interference.
 * Question of separate schooling for crippled (case),
 epileptic, feeble minded children. Neuroses & dual condition
 Principles upon which feeble minded children
 must be taught. Wild boy. Sequins early efforts.
 System set forth in book. Training of Touch.

of sight, of hearing, of taste & smell, of
muscular system, of speech. Training of
powers of observation, of attention, of imitation.
Caution against abuse of last.

In annual training used to promote mental development as well as dignity. Kindergarten & other productive occupations of special value. Employments practically irreversible & fulfilling. - Mutilated children. - Importance of judicious recreation. - Substitutes used to be taught to play. Must not be allowed to loaf. - Cultivation of moral sense & social instincts (impossible in so-called "moral subcultures"). Defects of temper - ^{physical training} (nerve storms) - Incurable habits. - ^{Mental Short System} Property of punishment. - Enforcement of Golden Rule. ^{Type "O" can} Love is the fulfilling of the Law.

F. M. Children deteriorate if left alone -
Lack of spontaneity - of picking up knowledge
Picture cabinet - Bread kneading - Paper folding
Paper weaving - Mat planting - String work (Lacework)
Knot work - Wool - Hooping - Basket making - Mat.
Weaving - Weaving - Sewing - Quilting - Sewing

Lecture II.

Lecture II.

You will remember that in the first lecture I called your attention to various physical signs belonging to mental abnormalities in school children — (recapitulation) — : we now pass to a consideration of some of the abnormal mental states especially noticeable in children whom we may call defective. To a large extent we may consider these mental states merely as exaggerations of conditions with which every practical teacher is familiar in ordinary school children; but whereas they are temporary & transient with the latter, they are constitutional and consequently constantly present (until by appropriate training corrected) with those to whom these efforts are addressed. The want of power of attention & of continuity of thought which I have noted in the syllabus as the first topic for consideration is not confined to hundreds of children. It

Diagram -
Brain & Nerves

2

The young infant ^{produced} we may say it is the normal condition. Every mother knows that for many weeks baby's powers - (at first ~~small powers~~ ^{powers} ~~are~~ ^{are} ~~very~~ ^{very} ~~limited~~ ^{limited} ~~to~~ ^{to} ~~such~~ ^{such} ~~processes~~ ^{processes} as ~~minutely~~ ^{minutely} ~~to~~ ^{to} its nutrition. There is however a certain outflow of nervous energy from the brain & nervous spinal centres to the muscles, & if we observe narrowly, we shall find that there are frequent minute movements of the muscles taking place independently of those which result in obvious movements of the limbs. By & by ^{Microkinesis} the child's eyes, which have ^{been} ~~previously~~ ^{previously} ~~wandering~~ ^{wandering} to & fro in an aimless sort of way, are brought to bear upon some thing bright, perhaps the light of a candle: it "takes notice" for the first time, in fact makes an effort to fix its attention. In doing this the ~~hither currents~~ ^{hither currents} ~~previously~~ ^{previously} ~~wandering~~ ^{wandering} in every direction are turned into a definite channel, & if we make the observation

Per column
 of
 Similar & Dissimilar
 Resemblances & Differences }

We shall find that the minute muscular
 movements just referred to, ^{lead} ~~have~~ for the
 time being suspended. As the child
 advances it takes notice of the bright-
 eyes of its mother or nurse looking by fixed
 on it, & after a while seeks to compare
 its tactile impressions of surrounding
 objects ^{gained by its exploring fingers} with what it sees. Thus by
 degrees the senses of touch and of sight
 are exercised in a definite way, and
 pleasant contacts & agreeable sights
 are discriminated from those which are
 unpleasant & disagreeable. In a similar
 way sounds - i.e. sensations through the
 ear - are contrasted with each other.
 The voice of the mother (associated with
 pleasant impressions passing through the
 other senses - e.g. taste & touch) - being
 welcome, that of a stranger being often
 the occasion of alarm from its being
 unfamiliar. ~~Thenceby~~ After a while
 a discriminative selection of sights
 & of sounds is made: a child looks

49

at those things which are bright or highly
coloured, passing over those that are
less stimulating to its optic nerves, and
listening to the soothing tones of its
mother's voice to the exclusion of sounds
which may be louder but are less familiar.
This means that the child is gradually
acquiring the power of attention and of
a ^{degree of} continuity of thought, but it will usually
only exercise ^{these faculties} ~~them~~ in a direction personally
agreeable. A further stage in evolution
is to experience pleasure in the appro-
-bation of those whom it has learned
to like, ~~so that~~ ^{so that} it becomes agreeable
to ^{use its} ~~use~~ its powers so as to please others,
and as imitation is ^{one of the} the sincerest ^{of ways} flattery,
often in a mode which reproaches
what it has seen those others do.
I must not further pursue the traces
of psychological development: the
hints I have given will suffice to
enable us to realize ^{roughly} ~~where~~ the imper-
fection of the defective child in matters

+ The idiot indeed is not up to the
standard of the normal baby.

In this case

- Inattention = change in brain tissue itself
or in condⁿ of blood supply - temporary
sometimes, as when blood is poor from
want of food, or overloaded with
digestive products immediately after
a meal.

5
+ Requiring attention & continuity of
thought. In the backward child the
condition at school age often approxi-
mates to that of the young infant. Through
defect of structure ^{development of} or of functional activity
of its brain, or on the other hand, ~~of~~
Through ill-regulated & tumultuous
action of the nervous centres, one
of two conditions results. I. There
is a ^{lack of the manifestation of nerve energy} deficiency of nervous currents
flowing out to the organs on the surface
of the body, be they sense organs or
muscles, consequently the child is not
properly in rapport with surrounding
objects, & he cannot pay attention to
them until these currents are reinforced.
This is more particularly the case
with feeble children badly formed or
badly nourished. II. There may be
no lack of nervous force as evidenced
by currents flowing from the central
organs to the surface of the body, but
these currents come ^{in a spasmodic sort of way} ~~irregularly~~ ^{irregularly} ~~sometimes~~
in an irregular spasmodic sort of way
at one time

It must be remembered, ^{that} ~~that~~ ^{the} brain must be free from
 T 20. Hence attention ^{to} ~~the~~ ^{the} brain must be free from
 previous impressions & clear for new ones.
 It is with trains of thought as with
 railway trains: slow traffic must be
 shunted to clear line for express

* Otherwise we may find we are
 engaged in the thankless task of
 leading the horse to the water with
 the result that we cannot make
 him drink. And it must not be
 forgotten ^{as far as possible} that ^{attention} depends
 upon the cutting off ^{of} ^{of} impressions
 made on the senses by extraneous
 objects, & Guggenbuhl is said to have
 secured the attention of his ^{obedient} ^{and} ^{any} ^{of} ^{his} ^{children} pupils
 by taking them into a darkened room,
 & writing on the blackboard with
 phosphorus letters of fire! The sun!

6
 Sometimes ^{at another} ^{in excess} ^{sometimes} in defect, and
 consequently there are irregular impulses
 which interfere with definite mental
 action in ^{a single} ^{direction} ^{to} ^{with} ^{to} ^{with}
 attention & continuity of thought. Such
 is the case with the highly nervous
 child, who may be brought in certain
 directions but yet is an unsatisfactory
 pupil because he appears to be thinking
 of too many things at once - we shall
 later refer to the proper treatment of these
 two classes of children in view of their
 infirmities - I will only now say that
 in efforts to improve the powers of ^{attention} ^{of} ^{attention}
 we must remember that ^{attractiveness} ^{of} ^{the} ^{objects} ^{upon} ^{which} ^{it} ^{is} ^{brought}
 to exercise it is of prime importance,
 & that in promoting ^{continuity} ^{of} ^{thought} a main consideration is the
 interesting character of its subject matter.
 Another abnormal condition commonly
 found with mentally feeble children is
 slow response: there is also in many

Casespecularity of speech. The slow response may proceed from simple inattention: in that case the impression to be made upon the child has to be strengthened by a direct appeal to it; or it may be, as in the case of the Cretin children I described to you in the last lecture, that all the functions both physical & mental are performed at a slow rate, so that it takes time for the message to travel to the child's brain & for the response to come from it. I had ^{Cretin} a child under ^{at home with me} who if anything funny were said to her con-
-tinued to look serious for about half a minute & then a smile could be seen
(Slight wave of expression of joke)
gradually appearing on her countenance spreading gradually over her
features & playing very much at her
corners. They would talk to her just as if she understood
nothing. Quite a different phenomenon ^{of personality}
is experienced with some children who
when a question is addressed to them
simply repeat it in a parrot like way,
not attempting an answer. This proceeds
The Echoist holds echoes
a horrible one

from a sort of mental tic, simple
imitation being easier than the effort
to respond. The speech we meet with
many deviations from the normal from
inability to hear ^{more than 2 or 3}
simple labial sounds to ^{stand for} ~~standing~~ ^{standing} levels
of articulation, such as a staccato utterance
or a persistent infantile drawl.

Memory may be generally weak, or
deficient in some directions not in others.
It consists of course in the power to
recall impressions previously made
through the senses, & as a rule the more
intense the impression, the more lasting
the memory. I cannot go into the physio-
-physiological explanation of memory, but
we may say that it depends upon certain
adjustments of the human brain cells in
relation to each other, & that the
integrity & activity of certain brain cells
seem to be essential to the memory of
certain subjects. If the brain be
generally well developed we may find

Carroll
Cape
#1

11

of children so deficient in nervous energy as to seem listless and apathetic to all around them. Such children are often ill formed & ill nourished: of lax fibre & phlegmatic disposition. I have known extreme cases of this type amongst idiots & imbeciles so apathetic as ~~carelessly~~ to submit with the utmost indifference to the extraction of teeth, & not to wince when exposed to the too fierce heat of the fire, so that they ^{submit to the greatest} ~~would~~ actually allow their skins to blister without complaint. ^{the body of which that class not except the few} In the bombardment of bean bags which with this class formed a peculiar school discipline, they would at first not raise their hands to protect their faces from the missiles, but after a little stimulation would stop & catch the bean bag, & ultimately pick it up, & throw it back again. From the physical side there is in such cases an indication for nutritious feeding and tonic.

treatment, & from the teacher's ^{own} ~~extra~~ expenditure of energy sufficient to stir up the sluggish nature of the pupil.

Quite a contrast with this class is the case of the nervous irritable child. Morbidly restless & hyper sensitive he is never still, & requires certainly a separate desk, & it may be an entire class to himself, for he will seriously interfere with the peace of his companions. Furtive pinching & biting, sometimes more open attacks upon his neighbors, demand great vigilance necessary: books & papers will also be in peril and ink will be copiously effused. Sometimes there are imaginary or inadequate causes of offence: sometimes the frank avowal is doubtless that the child attacks his neighbor simply because "he does not like him". The curious phenomenon of a chain of irritability is sometimes observed amongst nervous children in unbeciling argument thus A strikes B, B

† It must not be forgotten that nervous irritability is sometimes the result of fatigue - of a temporarily exhausted nervous system. Convulsions may be caused by loss of blood (as well as by the ^{hyperaemia} of phlebotomy): so nervous irritability may be produced by a deficiency of nutrition in the nervous tissue. Physical discomfort such as gastric disturbances - to say nothing of tooth ache & neuralgia may also be the cause of irritability.

12
Strikes C, & C breaks a window! If you ask A why he struck B he will tell you he doesn't like him; B will say he doesn't know why he struck C, and C will say he broke the window because B hit him - The moral is don't if you can help it put nervous irritability children together in ~~the~~ class: they often seem to have a sort of affinity for each other, & are liable to congregate unless prevented. Mentally they are not without ability, but they should not be kept too close to book work: their nervous irritability should be worked off by frequent physical exercises, & manual training will help to methodise their movements.

Another step brings us to Emotional & Physiological conditions. In this class, as in the last, the deficiency is in the power of self control, or as I may call it from the physiological stand-point, inhibitory power. To explain

What I mean I shall lead you into
a small digression upon the ^{action of the} nervous
system. You all know that if any
part of the body is irritated there is
a tendency to withdraw it from the source
of irritation. This action is often auto-
matic, i.e. it occurs independent of a
conscious exercise of the will. If we
tickle the sole of a person in a deep
sleep the foot will be drawn away
independently of any ^{conscious} brain action; &
the ^{legs of the} placid frog will try to brush
away any irritating substance applied
to its limb. This is what is called
a reflex action: it may however be
"inhibited", that is to say, prevented
temporarily, by the agency of the higher
part of the nervous system put into motion
by the will. The school boy caught on
the hand - a ^{form} of punishment
almost obsolete & ^{now reserved as a punishment for} confined to the upper
classes of society - does not flinch
because he sends into his arm a current

to counteract the natural tendency to
 draw the hand away: this is an example
 of inhibitory action. Similarly there is
 a controlling power exerted by the
 well-regulated mind over the emotions,
 which for one purpose we may describe
 as the instinctive feelings, whether of
 pleasure or pain, which arise from
 sensations & surroundings. Love, Fear,
 anger, ^{affection, pity} are examples of the emotions and
 it is the aim of the educator to repress
 some and develop others, according to
 the child's ^{temperament} peculiarities. But where the
 will power is exceptionally weak as in
 the case of feeble minded children, the
 emotions are apt to run riot: it would
 seem in ~~some~~ ^{these} ~~cases~~ ^{some} that emotional
 states are ^{often} dependent on disturbances
 of animal functions, such as digestion,
 circulation &c. We know how with
 normal adults an independent supper will
 induce digestive trouble with terrible strain
 of emotions, or give rise in nervous children

There are ~~usually~~ ^{usually} warning symptoms such as asymmetrical postures, twisting of limbs, & what is most characteristic to be certain quivering of the eyelids - Trotter's! More frequent in the female sex - (Hager)

the child's waking with a scream - 46
to what are called night-terrors. The
morbid suggestions from the irritated
physiocal organs are not controlled by
the sleeping brain: something similar
occurs when ^{the brain power is} deficient or
impaired, & so feeble-minded children
are prone to ^{uncontrolled} emotional outbreaks. The
outburst may be caused by a very inade-
-quate cause, but once started is not
easily controlled. Sometimes it assumes
the form of an unreasoning terror, sometimes
of an unwelcome ^{recurrence of} affection: in other cases
fits of crying or of laughing - (it is some-
^{times a loss of} times a loss of ^{control} ^{last} ^{power}) - disturb the
child. Such emotional storms are apt
to spread in a class, & one emotional
child when about to break down, should
be removed from his companions & treated
with a kind firmness apart. #

Some children are unfortunately so constituted that they have no social instincts, no sympathy with others: Their instincts are ~~entirely~~ ^{merely} selfish - ^{some are}

I think ^{that} Dr. Warner ^{who} has ^{stated} somewhere
said that "lying is in some cases
dependent on over brain-activity,
not trained to precision"; & I have
myself remarked that in some
nervous children the brain is in a
state of confusion: statements are
made half-hazard, & a child may
be blamed for untruthfulness when
his fault is really nothing more than
want of exact thought & brain
(disorder/ence).

worse than this, such instincts as they possess are derived from the lower animal nature - As an old clerical friend of mine used to say in discussing the sad case of his scapegrace son, they seem to be born with a double dose of original sin. And that such children are found in the Special classes as well as in the Institutions for Imbeciles with which I am more familiar I gather from Mr. Burgwin's ^{an early report of} ~~first~~ ^{or} ~~second~~ ^{or} ~~third~~ ^{or} ~~fourth~~ ^{or} ~~fifth~~ ^{or} ~~sixth~~ ^{or} ~~seventh~~ ^{or} ~~eighth~~ ^{or} ~~ninth~~ ^{or} ~~tenth~~ ^{or} ~~eleventh~~ ^{or} ~~twelfth~~ ^{or} ~~thirteenth~~ ^{or} ~~fourteenth~~ ^{or} ~~fifteenth~~ ^{or} ~~sixteenth~~ ^{or} ~~seventeenth~~ ^{or} ~~eighteenth~~ ^{or} ~~nineteenth~~ ^{or} ~~twentieth~~ ^{or} ~~twenty-first~~ ^{or} ~~twenty-second~~ ^{or} ~~twenty-third~~ ^{or} ~~twenty-fourth~~ ^{or} ~~twenty-fifth~~ ^{or} ~~twenty-sixth~~ ^{or} ~~twenty-seventh~~ ^{or} ~~twenty-eighth~~ ^{or} ~~twenty-ninth~~ ^{or} ~~thirtieth~~ ^{or} ~~thirty-first~~ ^{or} ~~thirty-second~~ ^{or} ~~thirty-third~~ ^{or} ~~thirty-fourth~~ ^{or} ~~thirty-fifth~~ ^{or} ~~thirty-sixth~~ ^{or} ~~thirty-seventh~~ ^{or} ~~thirty-eighth~~ ^{or} ~~thirty-ninth~~ ^{or} ~~fortieth~~ ^{or} ~~forty-first~~ ^{or} ~~forty-second~~ ^{or} ~~forty-third~~ ^{or} ~~forty-fourth~~ ^{or} ~~forty-fifth~~ ^{or} ~~forty-sixth~~ ^{or} ~~forty-seventh~~ ^{or} ~~forty-eighth~~ ^{or} ~~forty-ninth~~ ^{or} ~~fiftieth~~ ^{or} ~~fifty-first~~ ^{or} ~~fifty-second~~ ^{or} ~~fifty-third~~ ^{or} ~~fifty-fourth~~ ^{or} ~~fifty-fifth~~ ^{or} ~~fifty-sixth~~ ^{or} ~~fifty-seventh~~ ^{or} ~~fifty-eighth~~ ^{or} ~~fifty-ninth~~ ^{or} ~~sixtieth~~ ^{or} ~~sixty-first~~ ^{or} ~~sixty-second~~ ^{or} ~~sixty-third~~ ^{or} ~~sixty-fourth~~ ^{or} ~~sixty-fifth~~ ^{or} ~~sixty-sixth~~ ^{or} ~~sixty-seventh~~ ^{or} ~~sixty-eighth~~ ^{or} ~~sixty-ninth~~ ^{or} ~~seventieth~~ ^{or} ~~seventy-first~~ ^{or} ~~seventy-second~~ ^{or} ~~seventy-third~~ ^{or} ~~seventy-fourth~~ ^{or} ~~seventy-fifth~~ ^{or} ~~seventy-sixth~~ ^{or} ~~seventy-seventh~~ ^{or} ~~seventy-eighth~~ ^{or} ~~seventy-ninth~~ ^{or} ~~eightieth~~ ^{or} ~~eighty-first~~ ^{or} ~~eighty-second~~ ^{or} ~~eighty-third~~ ^{or} ~~eighty-fourth~~ ^{or} ~~eighty-fifth~~ ^{or} ~~eighty-sixth~~ ^{or} ~~eighty-seventh~~ ^{or} ~~eighty-eighth~~ ^{or} ~~eighty-ninth~~ ^{or} ~~ninetieth~~ ^{or} ~~ninety-first~~ ^{or} ~~ninety-second~~ ^{or} ~~ninety-third~~ ^{or} ~~ninety-fourth~~ ^{or} ~~ninety-fifth~~ ^{or} ~~ninety-sixth~~ ^{or} ~~ninety-seventh~~ ^{or} ~~ninety-eighth~~ ^{or} ~~ninety-ninth~~ ^{or} ~~one hundred~~ ^{or} ~~one hundred and one~~ ^{or} ~~one hundred and two~~ ^{or} ~~one hundred and three~~ ^{or} ~~one hundred and four~~ ^{or} ~~one hundred and five~~ ^{or} ~~one hundred and six~~ ^{or} ~~one hundred and seven~~ ^{or} ~~one hundred and eight~~ ^{or} ~~one hundred and nine~~ ^{or} ~~one hundred and ten~~ ^{or} ~~one hundred and eleven~~ ^{or} ~~one hundred and twelve~~ ^{or} ~~one hundred and thirteen~~ ^{or} ~~one hundred and fourteen~~ ^{or} ~~one hundred and fifteen~~ ^{or} ~~one hundred and sixteen~~ ^{or} ~~one hundred and seventeen~~ ^{or} ~~one hundred and eighteen~~ ^{or} ~~one hundred and nineteen~~ ^{or} ~~one hundred and twenty~~ ^{or} ~~one hundred and twenty-one~~ ^{or} ~~one hundred and twenty-two~~ ^{or} ~~one hundred and twenty-three~~ ^{or} ~~one hundred and twenty-four~~ ^{or} ~~one hundred and twenty-five~~ ^{or} ~~one hundred and twenty-six~~ ^{or} ~~one hundred and twenty-seven~~ ^{or} ~~one hundred and twenty-eight~~ ^{or} ~~one hundred and twenty-nine~~ ^{or} ~~one hundred and thirty~~ ^{or} ~~one hundred and thirty-one~~ ^{or} ~~one hundred and thirty-two~~ ^{or} ~~one hundred and thirty-three~~ ^{or} ~~one hundred and thirty-four~~ ^{or} ~~one hundred and thirty-five~~ ^{or} ~~one hundred and thirty-six~~ ^{or} ~~one hundred and thirty-seven~~ ^{or} ~~one hundred and thirty-eight~~ ^{or} ~~one hundred and thirty-nine~~ ^{or} ~~one hundred and forty~~ ^{or} ~~one hundred and forty-one~~ ^{or} ~~one hundred and forty-two~~ ^{or} ~~one hundred and forty-three~~ ^{or} ~~one hundred and forty-four~~ ^{or} ~~one hundred and forty-five~~ ^{or} ~~one hundred and forty-six~~ ^{or} ~~one hundred and forty-seven~~ ^{or} ~~one hundred and forty-eight~~ ^{or} ~~one hundred and forty-nine~~ ^{or} ~~one hundred and fifty~~ ^{or} ~~one hundred and fifty-one~~ ^{or} ~~one hundred and fifty-two~~ ^{or} ~~one hundred and fifty-three~~ ^{or} ~~one hundred and fifty-four~~ ^{or} ~~one hundred and fifty-five~~ ^{or} ~~one hundred and fifty-six~~ ^{or} ~~one hundred and fifty-seven~~ ^{or} ~~one hundred and fifty-eight~~ ^{or} ~~one hundred and fifty-nine~~ ^{or} ~~one hundred and sixty~~ ^{or} ~~one hundred and sixty-one~~ ^{or} ~~one hundred and sixty-two~~ ^{or} ~~one hundred and sixty-three~~ ^{or} ~~one hundred and sixty-four~~ ^{or} ~~one hundred and sixty-five~~ ^{or} ~~one hundred and sixty-six~~ ^{or} ~~one hundred and sixty-seven~~ ^{or} ~~one hundred and sixty-eight~~ ^{or} ~~one hundred and sixty-nine~~ ^{or} ~~one hundred and seventy~~ ^{or} ~~one hundred and seventy-one~~ ^{or} ~~one hundred and seventy-two~~ ^{or} ~~one hundred and seventy-three~~ ^{or} ~~one hundred and seventy-four~~ ^{or} ~~one hundred and seventy-five~~ ^{or} ~~one hundred and seventy-six~~ ^{or} ~~one hundred and seventy-seven~~ ^{or} ~~one hundred and seventy-eight~~ ^{or} ~~one hundred and seventy-nine~~ ^{or} ~~one hundred and eighty~~ ^{or} ~~one hundred and eighty-one~~ ^{or} ~~one hundred and eighty-two~~ ^{or} ~~one hundred and eighty-three~~ ^{or} ~~one hundred and eighty-four~~ ^{or} ~~one hundred and eighty-five~~ ^{or} ~~one hundred and eighty-six~~ ^{or} ~~one hundred and eighty-seven~~ ^{or} ~~one hundred and eighty-eight~~ ^{or} ~~one hundred and eighty-nine~~ ^{or} ~~one hundred and ninety~~ ^{or} ~~one hundred and ninety-one~~ ^{or} ~~one hundred and ninety-two~~ ^{or} ~~one hundred and ninety-three~~ ^{or} ~~one hundred and ninety-four~~ ^{or} ~~one hundred and ninety-five~~ ^{or} ~~one hundred and ninety-six~~ ^{or} ~~one hundred and ninety-seven~~ ^{or} ~~one hundred and ninety-eight~~ ^{or} ~~one hundred and ninety-nine~~ ^{or} ~~two hundred~~ ^{or} ~~two hundred and one~~ ^{or} ~~two hundred and two~~ ^{or} ~~two hundred and three~~ ^{or} ~~two hundred and four~~ ^{or} ~~two hundred and five~~ ^{or} ~~two hundred and six~~ ^{or} ~~two hundred and seven~~ ^{or} ~~two hundred and eight~~ ^{or} ~~two hundred and nine~~ ^{or} ~~two hundred and ten~~ ^{or} ~~two hundred and eleven~~ ^{or} ~~two hundred and twelve~~ ^{or} ~~two hundred and thirteen~~ ^{or} ~~two hundred and fourteen~~ ^{or} ~~two hundred and fifteen~~ ^{or} ~~two hundred and sixteen~~ ^{or} ~~two hundred and seventeen~~ ^{or} ~~two hundred and eighteen~~ ^{or} ~~two hundred and nineteen~~ ^{or} ~~two hundred and twenty~~ ^{or} ~~two hundred and twenty-one~~ ^{or} ~~two hundred and twenty-two~~ ^{or} ~~two hundred and twenty-three~~ ^{or} ~~two hundred and twenty-four~~ ^{or} ~~two hundred and twenty-five~~ ^{or} ~~two hundred and twenty-six~~ ^{or} ~~two hundred and twenty-seven~~ ^{or} ~~two hundred and twenty-eight~~ ^{or} ~~two hundred and twenty-nine~~ ^{or} ~~two hundred and thirty~~ ^{or} ~~two hundred and thirty-one~~ ^{or} ~~two hundred and thirty-two~~ ^{or} ~~two hundred and thirty-three~~ ^{or} ~~two hundred and thirty-four~~ ^{or} ~~two hundred and thirty-five~~ ^{or}

I think ^{from a} halting moral nature we
pass to the consideration of halting

† It is best to give a child time to
 fill his lungs & "pull himself
 together", that is to say to tell him
 to stop speaking & make a fresh
 start, rather than to urge him on
 when agitated. With a stammerer
 you may often see other signs of
 irregular nervous action, such as
 wrinkling of the forehead & brow, &
 a sort of spasm of the lips & look
 producing a shivering sort of expression.

18
 Speech, commonly described under the
 terms Stammering & Stuttering. This defect
 is by no means confined to feeble minded
 children, but as it often goes with debility
 of general health, it is more common with
 children of highly nervous parents than
 with others. It may be useful to know on
 what it depends. Essentially it arises
 from spasm, i.e. irregular action of
 the muscles uncontrolled by the will, either
 in connection with the mouth, the windpipe
 (larynx) or the lungs. The difficulty
 occurs most with explosive consonants
 (p, b, d, t, g, k), but is not confined to
 these. The precaution to keep the lungs
 well filled & to speak slowly & deliber-
 -ately is serviceable; persons who stut-
 ter in casual conversation, are nevertheless
 able to sing & to speak in public without
 displaying their infirmity. Nervousness
 is both a cause & a consequence of stammering.
 It is much more frequent with boys than girls.
 Another spasmodic affection of
 the muscles, chiefly noticeable in the face

limbs, though occurring also in other parts of the body, is not uncommon with school children of nervous parentage, especially when ^{running down} in general health. ^{I mean, say,} Chorea, as it is often called, St. Vitus Dance

^{Chorea of the limbs} It consists of extraordinary twitches of various groups of muscles which the child cannot control: it may begin ^{with} simply with fidgety movements of the fingers, a shuffling of one foot, or a jerky movement of the head. ~~For~~

^(growing, ~~base~~ ^{base} ~~resting~~ ^{resting} to) These may be taken to be mere twitches, if the child furnished for what it cannot help, but soon more marked symptoms such as recurrent grimaces affecting at first one side of the face, curious twistings of the arms, or contortions of the body generally, with an inability to use the fingers of the affected side for any definite purpose, make it clear that the case is one of disease.

The movements become more grotesque, (the efforts to pick up a pin, for example,

being painful to witness; indeed the ailment has not inaptly been designated "infirmity of the muscles". It requires of course ^{appropriate} medical treatment, but from the teacher's point of view it is desirable to be able to recognize the threatening of its oncoming, for "prevention is better than cure". On this subject I may quote some judicious remarks of Dr. Oskar von Senger who was a teacher as follows:

"When school-children (especially girls between 7 & 12, or thereabouts) alter in temper, work less well & less willingly than usual, get slovenly, in a word degenerate mentally & bodily, inquire of the mother as to the home conduct & temper. Ask particularly how the child sleeps, whether she complains of headache (or limb ache), & whether her food is sufficient."

The best index of muscular infirmity leading to St. Vitus' Dance is the hand. Bid the child hold up both hands open, with extended arms, the palms

21

Towards you. If that is done steadily with both hands upright & both alike, no finger or thumb quivering, no falling back of either hand, nothing to choke between the position of the two, you may feel safe as to the absence of chorea, & to confirm this test you may place the child's palms on your ^{chest}, noticing whether there are any tremors of fingers & thumb. If however from the existence of nerve signs you conclude that chorea is threatening, the parents should be ^{recommended} ~~advised~~ to obtain medical advice, and meanwhile there should be no attempt to force the child to learn. Dr. Sturges gives a painful example of 5 cases of what he calls "School-bred" chorea in which the unfortunate children had been kept at their ordinary school work in spite of morbid restlessness the significance of which had not been understood. Choreia is 3 times as common with girls as with boys, owing to the greater mobility of the nervous system of the former. Cases

know let a few more chairs get experiment under running 22

North weak brained children we must
 especially guard against fatigue - with
 any mental effort there is a certain
 consumption of brain tissue: that is to
 say the brain cells set into action after a
 time become exhausted & refuse to act
 until ^{rejuvenated} refreshed by rest & refreshment
 derived from the blood current. With
 defective children the mental effort
 is sometimes out of all proportion to the
 result achieved: I have seen several
 broods of perspiration stand on the forehead
 of an imbecile trying for the first time
 to write a copy (tongue hanging out also)
 It will be understood that such children
 must not be kept too long at one subject
 or exhaustion of certain tracts of the brain
 will ensue; but by varying the lessons
 at short intervals, relief results, and
 it is important that ^{effort} mental exertion should
 be alternated with physical exercise. "By
 passing from object lesson to a singing lesson the
 centres of vision are put into comparative rest while
 other centres - the auditory & vocal - which have
 been recuperating - are called into play" ^{July 1894}
 "so to let the vocal & auditory & manual work" ²³²

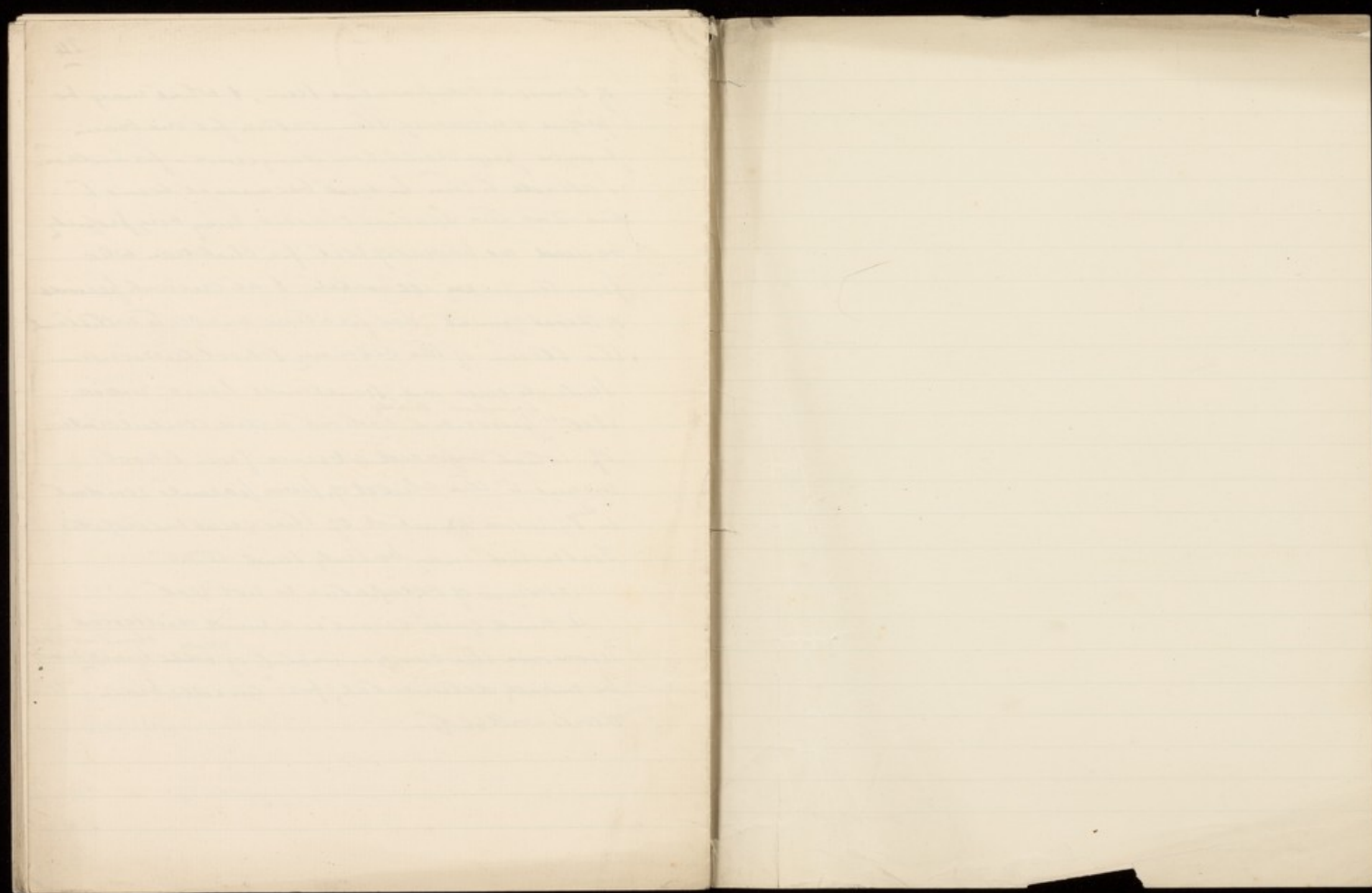
Bell
boney
run
down
with
collar

Afterwards on one day

in brownish ink

23

The circulation of the blood through the brain is ^{known to be} ~~sometimes~~ faulty, with feeble - ~~muscular~~ children, & they are more liable to headache than others. I referred to the so called 'school-headache' in the last lecture, explaining that one of its signs is a relaxed ^{condition} of the under-lid, with knitted brow & wrinkled forehead; & we should be on the look out for such signs in the case of our pupils. If in spite of such danger signals the brain continues to be over-stimulated one of two events may happen: either a state of block may ensue in which the brain circulation is disordered, & the brain cells do not get their due nourishment, or on the other hand ^{serious} inflammatory changes may occur. In either case we should expect to find complaints of headache, & ^{very many} years ago when payments by results were in force Sir James Crickton-Brown asserted that more than $\frac{1}{3}$ of the children attending ^{elementary} schools in London suffered from school headache. Over-stimulation is



Shew

Lecture III

—

Syllabus. Classification of school-children
in view of their infirmities. Believed not
only to teachers themselves but to bright
children of separating those with marked
infirmities for special instruction - as appears
in the Board School system. Idiots, imbeciles
mentally feeble (or feeble minded) 3 degrees of
comparison of mental deficiency. Not defined
as those who from birth or from an early age have
lacked normal intelligence - thus separating from
those for whom dumb also both for & for.
Aspirant classes & schools for feeble-minded
in Germany in 1880 in Brunswick; others were
in most of the large cities - also in Denmark &
Norway. (Kilmer's Report). In England more noted
for R. Report 1889. London Board School classes 1889.
Mildly-feeble (Schwachen-befähigte) & mental
deficient - instruction quantity. When considering extent
physical signs of defectiveness of head so serious -
persons & children children (and blind & deaf) of
total darkness. Classified to children (British)
classified of defective children. Results in Germany

Lecture III

From the consideration of abnormal
physical & mental conditions found
in school children we now pass to the
practical question of classification in
view of the infirmities displayed. It
is undoubtedly of great importance not
only to the children themselves but to
the normal children under instruction that
pupils who from mental or physical defect
are so much below the average in intelligence
or activity as to interfere with the general
progress of those of average ability should
be separately classified. In the ratio of
teachers to pupils in public elementary
schools, there is but little of any margin
for exclusive attention to be devoted to
exceptional children; ^{in view of} and the methods
essential for the latter would not be
appropriate to the ordinary pupils. It
seems to me, therefore, that assuming it is
the duty of one educational authorities
to provide for the instruction of all children

of school age, it is sound economy - (the
paying of the (charitable) aspect
of the subject) - to arrange for such as
are incapable of profiting by the ordinary
curriculum a special course of training
adapted to individual ^{peculiarities}.
This of course involves a ^{larger} ^{staff} ^{than} ⁱⁿ ^{the} ^{ordinary} ^{school}, for
adapting training to individual
peculiarities means much personal
attention, and even for subjects which
can be taught in class, the groups will
be comparatively small ^{in order to} ^{obtain individual}
focus attention. All this involves
expenditure of energy on the part of the
teacher & of money on the part of the
Ratepayer, ^{or} ^{the} ^{State} ^{or} ^{the} ^{local} ^{authorities}, but considering that the
deficient child will if untrained remain
dependent, & may not improbably
become delinquent, so as to be a permanent
charge to the community for maintenance
either in the work house or the prison, it seems
worth while to spend something in the

endeavour to prevent his deterioration,
I use the term deterioration advisedly for
an untrained feeble-minded child does
not as is sometimes popularly supposed
either stand still without retrogression or
spontaneously get brighter as he grows
older, or at a critical age ^{as is often said} such as forty
take a turn for the better, but ^{on the contrary} with advancing
years, fall more & more hopelessly behind
his comrades in age, by whom he is ^{in consequence} often made
the butt of thoughtless jokes & jibes. Thus without
mental cultivation an anti-social feeling
grows out of his solitariness
~~gradually~~ ^{gradually} ~~becomes~~ ^{becomes} ~~and is~~ ^{and is} ~~gradually~~ ^{gradually}
assumed ^{by} ~~by~~ ^{by} ~~his~~ ^{his} ~~animal~~ ^{animal} ~~passions~~ ^{passions} ~~developed~~ ^{developed}
with age, dangerous consequences often
result to the community. On the other
hand with appropriate training the child
is taught ^{exercise some power of control} to make the best use of the
faculties ^{at} ~~at~~ ^{possessed} ~~possessed~~, to employ his time
pleasantly, if not profitably, in some
manual occupation, & to take an interest
in what is going on in the world around
him, in which he feels that he has some
part to play, even if it be but a minor one,
or in theatrical parlance merely ~~that~~ ^{that} ~~of~~ ^{of} ~~the~~ ^{the} ~~surface~~ ^{surface}.

Definitions in M D Bell

14
In the syllabus ~~have distributed~~
you will find named an ascending
series of defectives, viz. idiots,
imbeciles, mentally feeble or feeble-minded,
feeble-minded & dull children, nervous
& irritable children, children handicapped
by physical infirmities, sensory & muscular
defects. A few words must suffice to
explain what is meant by these terms.
To begin at the bottom of the ladder we
may describe idiots & imbeciles as those
who from birth or from an early age
have lacked normal intelligence - the
former in an extreme degree, the latter
in a degree less marked, but still
showing decided disability to acquire
knowledge in the ordinary manner or
to conduct themselves in a manner befitting
their age. For both these classes provision
is made in the Institutions commonly
known as Asylums for Idiots, but which
are really in addition Boarding Schools
for imbecile children; & at some of these

I may not have had the opportunity of
visiting such an establishment as I may
not be out of place for me briefly to
describe what you would see at ^{the} ~~an~~ ^{London}
~~at Parkwood or at the Institution built~~
~~of Colchester - Harcourt - or Danvers~~
~~which I am personally more fortunate:~~
~~The Royal Albert Edgmont at Lancaster - At~~
~~these buildings are on breezy, healthy sites,~~
~~surrounded by considerable~~
~~estates allowing ample room for the exercise~~
~~of the patients & for the employment of such~~
~~as can be taught to work on the land. At~~
~~Parnith the establishment consists of a number~~
~~of more or less detached blocks, connected~~
~~with a central administrative building;~~
~~adjoining which are the school rooms: at~~
~~Parkwood & Lancaster the main building~~
~~is divided into a number of departments for~~
~~different classes of patients. In one of these~~
~~we should find those who are most helpless~~
~~& hopeless: most of them deformed in body~~
~~as well as defective in mind: unable to~~
~~free themselves or to attend to the calls of~~

^{Many}
 nature: ~~most of them~~ unable to walk or
 to talk, or to understand even the
 simplest conversation: These are typical
 "idiots", isolated as the word implies
 (idiot = a private individual) ~~from~~ by their
 infirmities from ordinary human intercourse,
 cut off ~~from~~ so far as they are personally
 concerned, from the fellowship of humanity.
~~Not only from the fellowship of humanity~~
~~we should~~ For these little can be done
~~than~~ beyond feeding them & keeping them
 as clean as circumstances will permit, &
 the more that can be expected is some
 improvement in habits at the reward of
 studious attention on the part of the nurses.
 Happily such sad cases are in a minority
 in the Institution, or life therein would
 be intolerable: in other departments
 we shall see various grades of children
 capable of more or less improvement under
 appropriate instruction. The ability to
 speak has been by some suggested as the
 line mark between the idiot and the

how soon 7

indecible class. The test is not an infallible one but excluding deaf-mutes, & taking into account that sometimes defect of speech is due to malformations such as cleft palate or localized brain defects (as in the class of partially paralyzed children I referred to in a former lecture), it is helpful as bearing a pretty constant relation to intelligence. Accompanying them the indecible pupils to these classrooms we shall see that efforts both for physical improvement & mental enlivenment are well made by a staff of painstaking teachers. That the lessons range from the simplest matters of training such as the bean-bag throwing & catching referred to in my last lecture to the 3Rs, with a considerable amount of varied occupation, serviceable for fixing the attention & training the hands to useful industry. Games of various kinds are taught in workshops to the boys who show sufficient ability, & many are employed in the farm & garden work; while the girls sew,

For a lovely Sonnet
it is a case of
Lamb & head of the perfect
late in the
West Kensington & Brompton.

self in domestic work, & often render
 valuable aid in the laundry & kitchen.
 The mention of the last class reminds me
 that not the least essential element of success
 in the training of idiots & imbeciles is due
distinction; & this, together with such medical
 care as may be considered necessary by the
 superintending physician, & the influence
 of healthy & wholesome surroundings, is an
 advantage which children have when in
 institutions, but too frequently lack at home.
 The distinction between ^{the term} imbecile - which I
 need hardly say means "weak in mind" - or
 "mentally feeble" or "feeble minded" is not
 very ^{strongly} well defined. In my opinion the
 difference is merely one of ~~the~~ ^{the} degree, &
 not of kind; just as grades of idiocy
 as they become less marked shade into the
 lower grades of imbecility, so do the higher
 grades of imbecility assume the character
 of feeble-mindedness or as I personally
 prefer to call it, ^{the term} mental feebleness, in order
 to avoid confusion with the comprehensive use
 of the former term by American authors.
 (Murch Schoolboy)

In the Hydriotes I have distributed ^{names} for
half price. An ascending series of defectives,
viz. idiots, imbeciles, mentally feeble
(or feeble-minded) & partly idiotic & dull
children, nervous & intractable children,
children handicapped by physical
imperfections, sensory & motor nerve defects
&c. &c. We sometimes hear "feeble-minded
children" spoken of as a sort of general
discovery, but those who have read the
early history of the Effats in England
more than 60 years ago for the amelioration
of mentally-deficient children recognize
the fact that not only idiots & imbeciles
but those suffering from minor degrees
of juvenile mental infirmity ^{from considerable} have engaged
the attention of writers on the subject
both in this country & abroad. Séguin's
Classic Treatise on the Moral, Medical,
& Educational Treatment of Idiots (published
in 1846) also includes in its scope
as set forth on the last page other backward
children, or children retarded in development.

agitated with involuntary movements,
 (stuttering) ^{stuttering}, unable but not deaf, Stammerers
 &c." Of children of the latter type he gives
 several examples in the body of his work.
 It would appear, however, that apart
 from provision made for such children in
 institutions receiving Idiots & Imbeciles,
 known in America as Schools for Feeble-
 minded Children, & though ^{originally} designated in
 this country "Asylums for Idiots" really
 more or less educational in character,
 no special effort was made for the
 separate instruction of mentally exceptional
 children above the idiot level, until the
 institution, about the year 1888, of what
 was called an auxiliary class (Hilfs-Klasse)
 in connection with the Municipal School
 of Brunswick. Similar classes or special
 schools were subsequently established in
 connection with the public elementary
 schools of Cologne, Düsseldorf, Grefeld,
 Gera, Dresden, Leipzig &c.; & at Cologne
 there are now two special schools with an

118
Aggregate attendance of 300 pupils, while
the Brunswick classes contain more than
100. In Norway also special classes have
been carried on for many years in connection
with the public schools of Christiania &
of Bergen; & in Copenhagen there is an
excellent school for feeble minded children
forming part of the chain of institutions
for defectives established by Dr. Koller.

It has been remarked that in England
new notions are slowly taken up, but
when the utility & practicability of a
scheme has been demonstrated it is
carried out with more vigour & efficiency
than elsewhere. So it has been with the
movement for the separate classification
& instruction of mentally feeble &
other exceptional children. Some twenty years
ago a Royal Commission (headed
by Lord Egerton of Tatton) made a
voluminous inquiry into the necessities of
(provision for) the Blind, Deaf, Imbecile
& other classes who could not be brought

under the scope of the general scheme of
 Elementary Education. Evidence was given
 by the ^{then} ~~respected~~ Vice-Chairman of the Board ^(F. D. Young) 1888
 as to the insufficiency of the arrangements
 then in vogue for ~~mentally~~ ^{physically} defective
 pupils in the London Schools; he owned
 that such were not being educated at all,
 & that it was not possible under the
 then arrangements of Board Schools to
 give them the special education they
 required. This was in 1888; & in their
 Report issued in the following year the
 Commissioners recommended that with
 regard to ~~mentally~~ ^{physically} defective children they
 should be separated from ordinary
 children in public elementary schools, &
 that the attention of School authorities
 be particularly directed to this object.
 On March 5th 1891 the London School
 Board considered (at the instance of
 G. H. B. 1891) & considered the advisability
 of carrying out this recommendation. &
 the result was the Establishment, in that

£ 10. £ 12 in day cab.
£ 25. £ 40 in roadster

122

Leicester

Classes as

following year of "Schools for Special Instruction" - & you will notice the considerable vagueness of their title - "for children who by reason of physical or mental defects, could not properly be taught in the ordinary standards or by ordinary methods." How under the able superintendence of Mrs. Burleigh these classes have increased in number & efficiency until to-day there are more than 80 children in different parts of the Metropolitan South. An aggregate attendance of 1000 children, you will not require to be told by me; but from my position as an outsider, with some experience of similar work, let me say that the results appear highly satisfactory. That over 90 children should have been fitted by special instruction to ^{themselves} take their place amongst the ordinary scholars is a notable achievement - & that ~~which~~ ^{the} ~~children~~ ^{so} ~~of~~ ^{perfectly} other pupils should have been so trained as to go through so ~~careless~~ ^{careless} as to be indistinguishable

from ordinary school children is attributed
to the trouble expended by the teachers.
The brilliancy of the results seems to have
been made the occasion by some critics
to suggest that ^{who had made much progress} some of the children were
not properly separated from the ordinary
school children ^{were on foot for 9 or 10 ft.} and placed in special
classes, & it may be said in reply
to you to know that preceding the same
allegation was ^{often} made ^{those who did not} with reference
to some of the more strikingly successful
cases at the Royal College of Surgeons, though
these admissions was only on the solemn
certificate of idiosyncrasy or imbecility by an independent
medical man. ^{Provisionally} The fact remained that
in both cases progress had been impracticable
in the ordinary school: it had been remarkable
in the special school: surely it is not proper
to reflect on the competence of the ordinary
teacher, when the explanation is to be found
in the fact that there was a certain
abnormality in the pupil requiring further
development & special modes of instruction.

14

Just as children who ought properly
to be called idiots are often called
imbeciles out of consideration for the
susceptibility of their parents, so are
the feeble-minded by a euphemism.
Sometimes designated ^{by the term} 'feebly-gifted'; as
a concession to the feelings of friends.
This term (I think) is made in Germany;
it having been mentioned in a conference
at Frankfurt in the Auxiliary classes
that in one city (Hassau) it had been
necessary to change the name of the
classes which had been originally
~~designated for Idiots~~, first to classes
for weak-minded (Schwach Sinnige),
& then to classes for children feebly-gifted
(Schwach begabte). This is very much
a matter of sentiment to distinguish
without a difference. I mention the
term because it is the one used in the
'Scientific Report on the Mental & Physical
Condⁿ of Children' lately published
as an equivalent of feeble-minded, &c.

is there defined as designating children who are distinctly deficient in mental power but might not be certified as imbeciles. Another group called in the Catalogue "Children mentally exceptional" include those whose mental feebleness is in the moral direction rather than the intellectual.

Mental dullness is rather an indefinite state quantity, & children are called ^{by teachers} "dull" if decidedly below ^{of normal or that normal} the average ⁱⁿ ability for school work. When together with dullness remarked by the teacher there exist some of the signs of physical or nervous abnormality described in previous lectures, such as imperfect development especially of the head, faulty nutrition, & perhaps irregular nervous instruments, there will be ^{90%} reason to consider the advisability of removing the child from the ordinary school to the special classes.

Morose & irritable children suffering from such conditions as I described in my

Resumé of Lecture II.

After having given you certain instances of extraordinary mechanical memory, I began my last lecture by pointing out the danger of a mere one-sided development of mind, & the too exclusive cultivation of a single faculty to the detriment of a due balance of intelligence. I may add that in some mentally-deficient people such gifts as they have are apt to be in unpractical directions, & as the mother of a patient once said of her son "he is perfectly sensible about everything that is of no earthly use to him." "Learning by rote" (without understanding of the subject matter) is usually to be discouraged in feeble minded children, & a knowledge of things, not of mere names, is the one thing useful. I give instances of little harmless saprophytes, & pointing out that in some cases there existed a want of common sense; & in delicate cases the brain should not be overloading the fire - & the sluggish nature has to be aroused.

Then I spoke of the nervous, irritable child
pointing out that nervous irritability is sometimes
the result of fatigue, of over-feeding & exhausted
nervous system. I pointed out that nervous
children shd for obvious reasons not be placed in
continging in class, & that relief is to be sought in
physical & manual exercises - not book-work.
A word was said about emotional storms,
& the need of cultivating inhibitory (reining in)
powers - (said school boy) Cultivation of will powers
indicated. Perverted habits - absence of
social inhibitions (alluring) - bying sometimes
from physical defect, sometimes fear, over-excitement
of brain undrained to excess. Stammering
& stuttering - depends on spasm of glottis etc.
Chorea - St Vitus Dance - symptoms of it
in different stages. Touching of fingers & etc.
- if continuance of hand always has pressure -
School boy "chorea" (Sturges). Fatigue specially
to be guarded against in weak brained children.
Lessons must be short & varied - Cluttering
brain & nerve tracts to be decreased in them.
Headache due to some irregularity of cerebral
of blood in brain - Danger of over-stimulating
weak brains. Signs of over-excitement.
Marechal's Hero of the "mighty Alibi"
taught "not too well but too well" - Need of
rest & recreation - absence of occupation
(Judge's notion of rest) rest less.

2

School

admission
subla

2. Time

1890

of H. H. H. H. H.

es ob

of ch

1892

1864

56.2 p

Massachusetts

6292

634

Συνολο

18

18

Chen

School-children - Govt. of faculty of attention
fr. babyhood. Cond. of fr. 18. child like
that of baby or worse. Importance of
interestment of pupil in the lessons,
& of interesting character of lessons & their
up continuity of thought.

How defective & imperfect of speech.
Illustrated in case of Crabbe - with fr. 18. child
own memory weak, or deficient in some
directions not in others. Case of Nicholas
Cook, of Perpetual Calender, of Scotland
of Bradshaw, & of Cad. numbers. Danger
of precocity in one direction. Wassail son
Morgan died at 35. At 3 he had kept school
1766-1770. At 4 he composed
letters with his sister of 8. At 5 he
wrote verses & played on violin. At 6 he
played in public. At 6 he went on violin (his
instrument) At 7 he came to England & composed
a symphony. At 12 he composed an Opera.
At 14 he wrote over 100 of memory the music
of Allegri's Miserere etc. he heard at Rome
& was made a Canon & composed
throughout the Opera of Michael etc. at London
After composing a Requiem he died in 1798

Illustrations for Lecture I.

Brain - Diagram of -
 Cast of Normal
 ? - Microcephalic

Contours Normal -
 Microcephalic
 Hands - Form - Mongol -
 Hyposphalic -
 Tables of comparative
 weights & heights
 Cretins -
 Cretinosis -
 ? Table of Cases -
 Brain Cells -
 Test Tubes (Lachman's)
 Diagram of Eyes -
 Plucking hand
 Forefinger eye -
 Asymmetry of face
 Cataracts -

16
 last lecture - I mean those suffering
 from morbid excitability, emotional or
 hysterical conditions, & the occurrence
 of chorea & I may add of Epilepsy - are
 unsuitable for association with normal
 children & for the ^{best} general discipline
 applicable to the latter - As the
 conditions are often temporary, and
 though dependent on inherent predis-
 positions, are brought to a head (so to say)
 by ^{whereas in many cases inappropriate} ~~inappropriate~~ schooling, it seems to
 me that the special classes (in which
 the curriculum is more elastic) may
 be very serviceable for children showing
 such tendencies. The discrimination of
 such cases is a matter ^{showing nervous symptoms} requiring some
 medical experience, but the teacher may
 very properly urge on the parent the
 necessity of seeking medical advice, or
 bring to the notice of the proper school
 authorities the evidence that in a particular
 case the curriculum of the ordinary school
 curriculum is excessive.

In the class of children handicapped by physical infirmities, sensory or muscular defects, I include those who are crippled, maimed, deformed or paralyzed to such an extent as to be at a disadvantage in the ordinary school. Some of these cases, I know, are sent to the special classes where they receive the special consideration these infirmities demand, but there is not necessarily with such marked mental defect; I suppose that in the evolution of the school system we may expect to see ~~special~~ ^{special} centers for cripples, & as exists in Berlin an omnibus service for getting the children from home to school & back again.

So much for the various classes of children who may send contingents to the special classes - we shall find that when we review the material collected it will need to be sorted out & dealt with in a variety of ways.

Let me read to you the experience of the
Director of Auxiliary classes at Christiania
where they have been in operation since
1874. He says

pupil. The children attending these classes may be divided
into four categories, viz. :-

- I. Those who after two or three years' special teaching can
be brought back into the ordinary school.
- II. Those who continue in these classes, can be brought
to confirmation, - *which is Scandinavian countries sometimes*
- III. Those for whom these classes are found insufficient.
Such, after being tried for a time, are sent to special imbecile
institutions.
- IV. The utterly ineducable, who, after full trial, are dis-
missed to their homes.

*perhaps a
retention of
the child in
the school
is a waste of
time*

I presume that a similar experience has
been arrived at in London, Special classes,
but I do not myself see the necessity of
waiting very long to determine which
should be sent to imbecile institutions.
The idiot who is incapable of instruction
is of course out of place in Special
classes, & the imbecile who cannot be
taught ^{to benefit} his right hand from his left, or
hold many hands his hat, or to use them
for any useful purpose, should certainly
be sent to Denmark, if the parents can be
persuaded to consent to his going *for* home.

14

This content often constitutes the diffi-
-culty & I suppose the Teachers of
the Special classes are bound to do
the best they can with the material
sent to them. As a matter of fact the
children will, after a little experience, be
readily divisible into three sets: 1. Those
so low in the scale of intelligence that no
improvement can reasonably be expected.
2. Those who do not at first appear hopeful
but exhibit ^{perceptible} ~~marked~~ ^{marked} progress in one
direction or another very often in manual
work though not in the 3 R's (3) Those
who under special care at once brighten
up showing that though unfitted for
the ordinary conditions of school life,
they have latent ability. Class 1. Should
of course be eliminated as soon as oppor-
-tunity offers, & Classes 2 & 3 will be quite
sufficient to engage the energy & ingenuity
of the Teachers. Of course a consideration
of the extent of the abnormal conditions
both physical & mental set forth in
Lectures I & II should be helpful in the class room.

The beneficial influence of regulated exercise not only in skill but in manual training is sometimes shown in a marked degree in children suffering from that curious involuntary wriggling motion of the fingers which I have called Atetosis. Such children not being destitute of will power will from repeated practice learn to hold dumb-bells steadily & to go through prescribed movements: then to catch the bar-bell thrown to them; and finally to adjust the movements of their fingers so as to grasp a pen or pencil in an effective way, so that they ultimately learn to write with a good firm hand & to draw effectively, for they often display considerable graphic ability. Even when one hand is partially paralyzed good may often be done by inducing the patient to try to use it ~~to~~ as far as he can - boxes acquired undo - it gathers strength by exercise - (Parker)

The more practical the physical training exercises adapted to the several infirmities can be made the better for entitling the attention & sustaining the interest of the pupil. As has been well remarked by Froebel - "In primary education, the Doing, the Thing Done, the Teaching & the Learning must, in every case, rest on actual fact - on real existence, so that the mental intelligence incessantly showing upwards in single things, as in its general career, may thereby expand & develop the life-giving creative power of the pupils according to the measure of their strength and ability, their talents & desires." It follows that as soon as the muscles have been disciplined by drill they should be employed in some obviously useful way: thus manual training in the Kindergarten employment comes in, there leading on to what is ordinarily known as industrial training. There is

however need for caution in this practical
land of ours that the ^{amount} work ~~done~~ is
turned out is not to be ^{regarded as} the measure of
the value of such instruction, & it cannot
be too frequently impressed upon the
minds of Teachers (Horn 1843) that
Manual Training is resorted to not
merely for the training of the hands
but through them also for the training
of the mental faculties. (In of children's
Residing at Special classes, Pockel Street).

The Faculty of Imitation. The
importance of this faculty in education,
generally, & more especially in the training
of feeble-minded children, can hardly
be overestimated. In every system
of education however it seems to me
that it is necessary to guard against
a child's spontaneity & individuality
being crushed out by too rigid an
insistence on doing as he sees others
do, or even following too closely the
ideal example of a good Teacher. On

the other hand the natural tendency to
 imitation - stronger perhaps in a child
 of feeble than in one of ordinary intelligence -
 must be constantly borne in mind.
 "The imitative repetition of another's
 observed movement involves an association
 between the appearance or sight of the
 movement & its actual performance" (Gall) &
 thus, in the first instance at any rate
 strengthens power of attention. But
 oft-repeated imitative movements have
 a tendency to become automatic, & to
 be done mechanically without thought -
 as in military drill - E.g. soldiers carrying
 round their arms & positions from barracks & kitchen -
 & when they have reached that stage are
 of little use in eliciting intelligence. Hence
 the need for varying physical exercises
 for educational purposes, & not going
 on with the same set (as has been the
 fashion in some schools) from 4 years & up
 to 14 years & up. Moreover exercises which
 have lost their freshness are often done

in a careless, casual way, something the very object for which they were designed. Unconscious imitation is of course a great factor in the development of the normal child, & so far as its feeble powers of observation allow, of the mentally-feeble child also. Hence the importance of a feeble-minded child not being thrown too much with children worse than itself - a drawback in large institutions for mentally-deficient children, though (as far as may be) counteracted by careful classification. Some maintain that feeble-minded children are better trained in association with normal children, but on the other hand the influence of example on the latter must be duly considered, & experience shows that better progress is made when feeble-minded children are taught in competition with each other, than when excluded from imitation by the hopeless drawback that a backward child soon becomes conscious of when taught with brighter children.

This is a very old manuscript, and the text is written in a cursive hand. The paper is aged and discolored, with some staining and a small hole near the top right corner. The text is written in a cursive hand, and the ink is faded. The text is written in a cursive hand, and the ink is faded. The text is written in a cursive hand, and the ink is faded.

Lecture III. Recapitulation

Classification of School children in view of their Infirmities - Pupils decidedly below the average of ordinary scholars either in intelligence or acting hinder the others, & get no good themselves, as they require individual attention & special methods of instruction, for wh. there is no opportunity in the ordinary school. Extra expenditure for staff &c. in special classes justified by preventing deterioration of feeble-minded child & his becoming permanently dependent, & perhaps delinquent. I wrote Dub. mentally feeble & feeble gifted do not differ in kind but in degree, but amount of defect, as well as home condⁿ, will solve the question whether they are best adapted for training at an Instⁿ or in special classes at a day school. I quote a hurried sketch of a so called Idiot asylum showing that it is also an educ^d Instⁿ. Advantages & disadvantages of asylum treat^t & home educⁿ respecting - home the educⁿ of

Objects in going backwards & forwards to school
small classes - if habitually permit - the small class
often preferable - Special schools at London
West Kensington, Birmingham, Brighton &c. in
Germany, Norway, Sweden & Denmark.
Children suffering from mental dulness
nervous & imbecile children. (Cripples & who
may become dull from enforced isolation.)
Results in Norway & Germany - ^{Norway} 120 - 30000
^{Germany} 5 sent to other schools

Legends of Physiological Education
Physi. Educ. of the senses must precede
Psych. Educ. of the mind. If we let the whole
of an organ we let make it perform its
function - The organs of sensation being
within our reach & those of thought one of it.
The former are the first we can let in action.
- Children with defects of movement.
Dull-inactive mind. Nervous disturbances
Dumb bells. Ball bats &c. Useful for growing
child self-control & strengthening
loose joints -

1. The first thing I noticed when I stepped
out of the plane was the cold. The air was
sharp and clean. The sun was low in the sky,
casting a golden glow over the landscape.
The fields were a mix of green and brown,
and the trees were mostly bare. It was a
quiet scene, almost desolate. I had heard
that the weather was bad, but it was perfect.
I had come to the right place at the right
time. The first night was a blur of
activity. I had to get everything set up
before the sun went down. The stars were
bright and clear. It was a beautiful sight.
I had never seen anything like this before.

2. The second thing I noticed was the
people. They were all so friendly and
welcoming. I had heard that the people
were rude, but they were the opposite.
They were kind and helpful. I had
never been to a place like this before.
The food was delicious. I had heard
that the food was bad, but it was
perfect. I had come to the right place
at the right time. The first night was
a blur of activity. I had to get
everything set up before the sun went
down. The stars were bright and clear.
It was a beautiful sight. I had never
seen anything like this before.

THE PRINCIPLES AND TREATMENT OF TRAINING
OF THE
DEFECTIVE CHILD

by

G.E. Shuttleworth, B.A., M.D., &c.

Hon. Consulting Physician and formerly Medical Superintendent,
Royal Albert Institution for the Feeble-minded, Lancaster;
and Medical Officer to "Special Schools," Willesden Education
Committee, etc., etc.

In the five lectures which I have been requested to give to an audience consisting mainly of Nurses and Teachers, I propose to lay before you as briefly as possible some of the physiological principles which underlie the training of Mentally-Defective ~~children~~ and other abnormal children. In the opening lecture it will be well to consider the question:- What is a normal and what an abnormal (or defective) child? In a general way we may say that from the point of view of the educator the normal child is one who has all his senses about him, and knows how to use them; whereas the abnormal child is deficient of one or more of his senses (as in the case of Blind and Deaf), or else as in the case of the Feeble-minded child he uses them imperfectly, or in other words owing to the defective constitution of his brain and its nervous connections, his intellectual functions are but imperfectly performed. Leaving out of consideration, for our present purpose, the case of the Blind and Deaf (who for educational purposes are provided for in a category ^{devote our attention} apart), we propose to ~~consider~~ ^{devote our attention} to those who by reason of brain or nerve defect, (it may be also by some correlated physical infirmity) are incapacitated from following the ordinary school curriculum.

There is a close connection between the physical and the mental conditions of children (and for that matter of grown

people also); and we may often learn something of educational fitness by observing the external characteristics of the individual. The child alert in mind is usually also alert in body; whilst the one of sluggish temperament, not only moves slowly, but thinks slowly. A bright child ought to have - and if judiciously fed - usually has a bright clear complexion, a face full of expression, steadfast eyes, features of fair proportion, and well formed ears: his head should be of sufficient size (20 inches or thereabouts in circumference) of symmetrical shape, with well developed forehead, and poised erect on a backbone vertically set as the foundation of a trunk from which issue well knit shapely limbs. The muscles are firm and the body generally well nourished; and its movements are well under the control of the will. Such indeed may be said to be an ideal standard, and practically we shall not expect to find perfection in any one person, but the ideal admits of deviation here and there without involving definite abnormality. But where the deviations are so marked as to involve a decided departure from the average, whether in make and development of body, in deficiency of healthy activity, or in unrestrained irregular movement, we shall almost certainly find some departure from the normal mental condition.

Take for example the case of imperfect make and defective development. The child with excessively under-sized head (measuring it may be no more than 15 inches in circumference), and narrow forehead, tapering to the vertex, is an instance of extreme imperfection dating from birth, and necessarily denoting such a want of mental power as to constitute a form of idiocy, designated microcephaly. Another case in which the head is not very small, but there is want of development - perhaps one may say, want of finish - of the body generally, the skin rough, the eyes obliquely placed, the lips and tongue coarse, the hands spade-shaped with stumpy fingers, shows physical indications of defective development quite inconsistent with the normal mental activity, and this is the type known as Mongoloid. The third

case is one in which the head is abnormally enlarged by what is popularly "known as water on the brain": here we have bulk enough and to spare, but for manifestation of mind quality counts as well as quantity, and in this instance there is but little active brain matter, though excessive thickness of investing membrane, due to inflammatory processes. This is an example of the Hydrocephalic type. Such cases are of course extreme, and denote idiocy or imbecility, but minor degrees of the same kind of peculiarity are met with amongst merely feeble-minded children.

In another class of cases a deficiency of healthy activity is noticeable, perhaps the most striking examples are those called Cretins in whom, both body and mental functions are performed at a singularly slow rate.

THE PRINCIPLES AND TREATMENT OF TRAINING
OF THE
DEFECTIVE CHILD

by

G.E. Shuttleworth, B.A., M.D., &c.

Hon. Consulting Physician and formerly Medical Superintendent,
Royal Albert Institution for the Feeble-minded, Lancaster;
and Medical Officer to "Special Schools," Willesden Education
Committee, etc., etc.

In the five lectures which I have been requested to give to an audience consisting mainly of Nurses and Teachers, I propose to lay before you as briefly as possible some of the physiological principles which underlie the training of Mentally-Defective ~~children~~ and other abnormal children. In the opening lecture it will be well to consider the question:- What is a normal and what an abnormal (or defective) child? In a general way we may say that from the point of view of the educator the normal child is one who has all his senses about him, and knows how to use them; whereas the abnormal child is deficient of one or more of his senses (as in the case of Blind and Deaf), or else as in the case of the Feeble-minded child he uses them imperfectly, or in other words owing to the defective constitution of his brain and its nervous connections, his intellectual functions are but imperfectly performed. Leaving out of consideration, for our present purpose, the case of the Blind and Deaf (who for educational purposes are provided for in a category ^{devote our attention} apart), we propose to ~~consider~~ consider those who by reason of brain or nerve defect, (it may be also by some correlated physical infirmity) are incapacitated from following the ordinary school curriculum.

There is a close connection between the physical and the mental conditions of children (and for that matter of grown

people also); and we may often learn something of educational fitness by observing the external characteristics of the individual. The child alert in mind is usually also alert in body; whilst the one of sluggish temperament, not only moves slowly, but thinks slowly. A bright child ought to have - and if judiciously fed - usually has a bright clear complexion, a face full of expression, steadfast eyes, features of fair proportion, and well formed ears: his head should be of sufficient size (20 inches or thereabouts in circumference) of symmetrical shape, with well developed forehead, and poised erect on a backbone vertically set as the foundation of a trunk from which issue well knit shapely limbs. The muscles are firm and the body generally well nourished; and its movements are well under the control of the will. Such indeed may be said to be an ideal standard, and practically we shall not expect to find perfection in any one person, but the ideal admits of deviation here and there without involving definite abnormality. But where the deviations are so marked as to involve a decided departure from the average, whether in make and development of body, in deficiency of healthy activity, or in unrestrained irregular movement, we shall almost certainly find some departure from the normal mental condition.

Take for example the case of imperfect make and defective development. The child with excessively under-sized head (measuring it may be no more than 15 inches in circumference), and narrow forehead, tapering to the vertex, is an instance of extreme imperfection dating from birth, and necessarily denoting such a want of mental power as to constitute a form of idiocy, designated microcephaly. Another case in which the head is not very small, but there is want of development - perhaps one may say, want of finish - of the body generally, the skin rough, the eyes obliquely placed, the lips and tongue coarse, the hands spade-shaped with stumpy fingers, shows physical indications of defective development quite inconsistent with the normal mental activity, and this is the type known as Mongoloid. The third

case is one in which the head is abnormally enlarged by what is popularly "known as water on the brain": here we have bulk enough and to spare, but for manifestation of mind quality counts as well as quantity, and in this instance there is but little active brain matter, though excessive thickness of investing membrane, due to inflammatory processes. This is an example of the Hydrocephalic type. Such cases are of course extreme, and denote idiocy or imbecility, but minor degrees of the same kind of peculiarity are met with amongst merely feeble-minded children.

In another class of cases a deficiency of healthy activity is noticeable, perhaps the most striking examples are those called Cretins in whom, both body and mental functions are performed at a singularly slow rate.

THE PRINCIPLES AND TREATMENT OF TRAINING
OF THE
DEFECTIVE CHILD

by

G.E. Shuttleworth, B.A., M.D., &c.

Hon. Consulting Physician and formerly Medical Superintendent,
Royal Albert Institution for the Feeble-minded, Lancaster;
and Medical Officer to "Special Schools," Willesden Education
Committee, etc., etc.

In the five lectures which I have been requested to give to an audience consisting mainly of Nurses and Teachers, I propose to lay before you as briefly as possible some of the physiological principles which underlie the training of Mentally-Defective ~~children~~ and other abnormal children. In the opening lecture it will be well to consider the question:- What is a normal and what an abnormal (or defective) child? In a general way we may say that from the point of view of the educator the normal child is one who has all his senses about him, and knows how to use them; whereas the abnormal child is deficient of one or more of his senses (as in the case of Blind and Deaf), or else as in the case of the Feeble-minded child he uses them imperfectly, or in other words owing to the defective constitution of his brain and its nervous connections, his intellectual functions are but imperfectly performed. Leaving out of consideration, for our present purpose, the case of the Blind and Deaf (who for educational purposes are provided for in a category apart), we propose to ^{devote our atten-} ~~consider~~ tion to those who by reason of brain or nerve defect, (it may be also by some correlated physical infirmity) are incapacitated from following the ordinary school curriculum.

There is a close connection between the physical and the mental conditions of children (and for that matter of grown

people also); and we may often learn something of educational fitness by observing the external characteristics of the individual. The child alert in mind is usually also alert in body; whilst the one of sluggish temperament, not only moves slowly, but thinks slowly. A bright child ought to have - and if judiciously fed - usually has a bright clear complexion, a face full of expression, steadfast eyes, features of fair proportion, and well formed ears: his head should be of sufficient size (20 inches or thereabouts in circumference) of symmetrical shape, with well developed forehead, and poised erect on a backbone vertically set as the foundation of a trunk from which issue well knit shapely limbs. The muscles are firm and the body generally well nourished; and its movements are well under the control of the will. Such indeed may be said to be an ideal standard, and practically we shall not expect to find perfection in any one person, but the ideal admits of deviation here and there without involving definite abnormality. But where the deviations are so marked as to involve a decided departure from the average, whether in make and development of body, in deficiency of healthy activity, or in unrestrained irregular movement, we shall almost certainly find some departure from the normal mental condition.

Take for example the case of imperfect make and defective development. The child with excessively under-sized head (measuring it may be no more than 15 inches in circumference), and narrow forehead, tapering to the vertex, is an instance of extreme imperfection dating from birth, and necessarily denoting such a want of mental power as to constitute a form of idiocy, designated microcephaly. Another case in which the head is not very small, but there is want of development - perhaps one may say, want of finish - of the body generally, the skin rough, the eyes obliquely placed, the lips and tongue coarse, the hands spade-shaped with stumpy fingers, shows physical indications of defective development quite inconsistent with the normal mental activity, and this is the type known as Mongoloid. The third

case is one in which the head is abnormally enlarged by what is popularly "known as water on the brain": here we have bulk enough and to spare, but for manifestation of mind quality counts as well as quantity, and in this instance there is but little active brain matter, though excessive thickness of investing membrane, due to inflammatory processes. This is an example of the Hydrocephalic type. Such cases are of course extreme, and denote idiocy or imbecility, but minor degrees of the same kind of peculiarity are met with amongst merely feeble-minded children.

In another class of cases a deficiency of healthy activity is noticeable, perhaps the most striking examples are those called Cretins in whom, both body and mental functions are performed at a singularly slow rate.

THE PRINCIPLES AND TREATMENT OF TRAINING
OF THE
DEFECTIVE CHILD

by

G.E. Shuttleworth, B.A., M.D., &c.

Hon. Consulting Physician and formerly Medical Superintendent,
Royal Albert Institution for the Feeble-minded, Lancaster;
and Medical Officer to "Special Schools," Willesden Education
Committee, etc., etc.

In the five lectures which I have been requested to give to an audience consisting mainly of Nurses and Teachers, I propose to lay before you as briefly as possible some of the physiological principles which underlie the training of Mentally-Defective ~~children~~ and other abnormal children. In the opening lecture it will be well to consider the question:- What is a normal and what an abnormal (or defective) child? In a general way we may say that from the point of view of the educator the normal child is one who has all his senses about him, and knows how to use them; whereas the abnormal child is deficient of one or more of his senses (as in the case of Blind and Deaf), or else as in the case of the Feeble-minded child he uses them imperfectly, or in other words owing to the defective constitution of his brain and its nervous connections, his intellectual functions are but imperfectly performed. Leaving out of consideration, for our present purpose, the case of the Blind and Deaf (who for educational purposes are provided for in a category apart), we propose to ^{devote our atten-} consider ~~consider~~ tion to those who by reason of brain or nerve defect, (it may be also by some correlated physical infirmity) are incapacitated from following the ordinary school curriculum.

There is a close connection between the physical and the mental conditions of children (and for that matter of grown

people also); and we may often learn something of educational fitness by observing the external characteristics of the individual. The child alert in mind is usually also alert in body; whilst the one of sluggish temperament, not only moves slowly, but thinks slowly. A bright child ought to have - and if judiciously fed - usually has a bright clear complexion, a face full of expression, steadfast eyes, features of fair proportion, and well formed ears: his head should be of sufficient size (20 inches or thereabouts in circumference) of symmetrical shape, with well developed forehead, and poised erect on a backbone vertically set as the foundation of a trunk from which issue well knit shapely limbs. The muscles are firm and the body generally well nourished; and its movements are well under the control of the will. Such indeed may be said to be an ideal standard, and practically we shall not expect to find perfection in any one person, but the ideal admits of deviation here and there without involving definite abnormality. But where the deviations are so marked as to involve a decided departure from the average, whether in make and development of body, in deficiency of healthy activity, or in unrestrained irregular movement, we shall almost certainly find some departure from the normal mental condition.

Take for example the case of imperfect make and defective development. The child with excessively under-sized head (measuring it may be no more than 15 inches in circumference), and narrow forehead, tapering to the vertex, is an instance of extreme imperfection dating from birth, and necessarily denoting such a want of mental power as to constitute a form of idiocy, designated microcephaly. Another case in which the head is not very small, but there is want of development - perhaps one may say, want of finish - of the body generally, the skin rough, the eyes obliquely placed, the lips and tongue coarse, the hands spade-shaped with stumpy fingers, shows physical indications of defective development quite inconsistent with the normal mental activity, and this is the type known as Mongoloid. The third

case is one in which the head is abnormally enlarged by what is popularly "known as water on the brain": here we have bulk enough and to spare, but for manifestation of mind quality counts as well as quantity, and in this instance there is but little active brain matter, though excessive thickness of investing membrane, due to inflammatory processes. This is an example of the Hydrocephalic type. Such cases are of course extreme, and denote idiocy or imbecility, but minor degrees of the same kind of peculiarity are met with amongst merely feeble-minded children.

In another class of cases a deficiency of healthy activity is noticeable, perhaps the most striking examples are those called Cretins in whom, both body and mental functions are performed at a singularly slow rate.

Lecture IV

Read
Moses 287-

Resumé of Lecture IV.

You will remember that our last lecture dealt with some of the causes & accompanying elements of mental feebleness; and that in the first place I laid considerable stress upon the influence of heredity. I pointed out that heredity (including influences from within) and environment (comprising influences from without) are the two great factors of the form & fashion of our lives. In the case of mentally deficient & including feeble minded & backward children I said that ancestry has much to answer for; that ill-assorted marriages (ill-assorted that is from the physiological point of view) are the most pregnant cause of degeneracy in the offspring. I pointed out the danger of intensification of a temperament - nervous, phlegmatic etc - common to both parents; & that the marriage of consins possessing common family characteristics is to be deprecated. Quoting statistics I showed how frequently there is a consanguine limit to the

family history of feeble-minded
children: not infrequently epilepsy or
low rheumatism in one generation leads to
mental infirmity in another. Alcoholic
intemperance is no doubt a frequent factor
in the causation of degeneracy of offspring,
but amongst better class people at least, by
no means a preponderating cause. Many
children who appear all right at birth
are born with unstable nervous systems apt
to break down from fits in teething or from
some other crisis of development; or infantile
diseases may produce inflammation of brain
symptoms with such. Parents know an instinctive
dislike to acknowledging defect dating from
birth & are apt to assign as cause a fall, a
fit or a fright, when the true cause is really
more remote. As Dr. Langdon Down said "the
prospect of improvement is contrary to what
is so often thought, inversely as the child is
conspicuously defective from its birth, so that the
history of congenital defect should not
usually be discouraging - of course certain

border-line cases of mental infirmity from
accident (eg falls on the head) are met with
& these when but slight are often hopeful for recovery.
The influence of defects of nutrition was illustrated
by our own experience of temporary mental incapacity
when faint from hunger, & of the marked dullness
of school children who have slept in the fork alone.
- of one of a crowded element? We considered also
briefly states of ill-health - such as rheumatism, & fevers.
then we - continuing to talk of mental degeneration.

Quoting from the Lectures of Dr. Warren I
showed how frequently in school children defects
of bodily make co-exist with defects of nutrition:
i.e. that it is difficult to fatten an ill-made body.
I gave a few hints about defects of sight & of
hearing which sometimes cause a child to be
wrongly suspected of mental dullness, & giving
further hints as to their detection. In a later
lecture - with regard to infirmities of the
nervous & muscular systems I stated that
irregular nervous action is more common in
children of poor physical development than
in others, & I referred to the views of Dr. Warren

That abnormal nerve signs are indications of abnormal mental conditions, these so-called abnormal nerve signs being observed in irregular movements & postures betokening irregular brain processes. Those desiring further informⁿ on this subject should obtain a little book by B. W. Turner called "The Children: how to study them" 2nd Ed.

In conclusion we noticed the signs of abnormal mental action in relation to facial expression, referring to the premature wrinkled brow & forehead, the baggy lower eyelid, the one sided droop of the features, specially noticeable in the mouth, the lividness of nose & mouth sometimes met with in backward & mentally feeble children, giving the description of a typical case.

Lecture IV. Recapitulation

Importance of sense of touch in evolution of sense impressions: precedence with ordinary infant. Importance of cultivating it in two pathological cases. Toys. Tactile object lessons. Mental lessons. Defect of sensitiveness from abnormal condⁿ of skin. Bean-bags. Excess of sensitiveness. Grasping objects: Peg board. ^{from} the boards & rope ladder, bridge ladder. Tactile impressions of smoothness, roughness, hardness, softness &c., of heat & cold by hot, cold water &c. Stupe to be forced by leaden eye, bright objects &c. Discrimination of colour. Defects of hearing not so common as defects of attention. Taste & smell. Exercise in discrimination of salt & sugar - coffee & sugar &c. Deprived habits - swallowing green glass. Sense impressions & perception. Appreciation of an apple by the eye involves putting together various sensations of sight, touch & taste.

Observations of differences & of resemblances
behave not to be taught instead of thought.
Words only the signs of ideas: not the
ideas themselves.

Defects of Speech. Speech a complex function involving co-ordination of many nervous tracts. Many muscular movements.

Lack of flesh often means lack of ^{structure or a lack of firmness of} bone.
Not always powder. Oral dress required.

not always present. Oral check required
 Defect of adjacent organs of speech
 in some cases tendency to use them -
 various factors - mental, physical, &

in Sanskrit. ^{Effects of different organs of speech -}
Voiced. Labials - dentals. gutturals.
Syllables composed of Consonant followed

by vowel repeated - furnished.
La-la. La-la-
g. Mamma. Oudda Babba kanna ke
upper lip

8 Attractive hummer
Baba black obs. 12. Dubay Dubay dock

imitation of cries of animals useful
moo & ewe

Value of manual training as a means
of mental development - Satisfaction

child of productive work. Taken as an
intrinsic value - kindergarten occupies

to get a technical training - gives opportunity
but in one thing this technical discipline.

Macrae is bony.

Kindergarten work - on a large
scale - but neglecting mental
improvements.

Clay modelling & coloring.

Wood work. Sticks.

All work & no play
makes Jack a dull boy.
8 lines on 15th 20

Montessori System
Seguin's maxims.

Lecture IV.

Having in the last lecture set forth
some of the principles of physiological
education specially applicable to the
case of exceptional children, we now
proceed to consider some of their practical
applications.

We have pointed out that the approach
to the intelligence of the child - especially
the mentally deficient child - is through
the avenue of the senses. In the natural
evolution of these in the normal child
it is the sense of touch that takes precedence
of all others; it is by tactile impressions
that the newborn infant first takes
cognizance of things around him, and
when at a later period he begins to use
his eyes his visual impressions are com-
pared with, & corrected by, those of touch.
Without asserting that this logical
sequence is always to be recognized in
the abnormally developed child it
is well for us to note the importance
(in view of its relations to mental activity)

Stimuli to brain cause growth of brain
Involuntary & trained nervous, blindfolded as you a flail /
of cultivating the sense of touch, which in
the ordinary educational system is apt
to be "crowded out" by lessons conveyed
through the eye & ear. The toys in which
young children most delight are those
that give the greatest scope for the
exercise of this sense - those which they
can handle freely; & the fact that things
offered to a child ^{as a toy} so often find their way
to its mouth is a further exemplification
of the child's desire to acquire knowledge
by the tactile sense, the lips & tongue being
especially ~~sensitive~~ ^{sensitive} in these terminations of a
sensitive character. In practice, of course,
the sense of touch is cultivated incidentally
in object lessons, in bead work, in tying
knots for macramé, & even in holding the
pencil & crayon; but it is important, in the
case of abnormal children especially, to bear
in mind the fact that the apparatus
of touch may be defective, that there may
be want of sensitiveness owing to the skin
being excessively coarse & thick (as well

Mongols) or (per contra) sensation may be
 too acute, as in highly nervous children,
 so that ^{it is} ~~that~~ ^{insufficient} ~~time is not given for an accurate~~
^{deformed} ~~impression~~. In my experience amongst
 those I have known, children who seemed
 to regard the stimulation of teeth with ^{indifference} ~~not~~ ^{pleasure}
 & who would pass their fingers through
 the highest gas again & again, proving
 that the hand could not not inwardly
 dread the fire: you will not wonder
 that the sensibility of such required to
 be roused by the bombardment of bean-bags
 to which I have more than once alluded.
 On the other hand there were those who
 would flinch at the least touch, & drop
 from their fingers objects placed in them
 as if they were red-hot; & these required
 to be reassured & coaxed to pick up the
 dropped object, much as a shying horse
 has to be led up to the thing that has
 terrified it. Touch & feeling are naturally
 cultivated along with the use of the
 muscles. The pupil ought to be taught to

Indeed
 1/
 312

Bridge 1.

Rope ladder

In the nursery, no toys are better for the purpose than wooden bricks, which exercise the sensibility of the skin to pressure, its local discrimination, & finally the muscular sense (force)

grasp firmly: if he cannot do so spontaneously, another hand should envelope his & close it forcibly upon an object. If he can grasp but is fable or unwilling to hold on, put him on the steps such as the bridge ladder of the gymnasium, ^{to be taken} of a ladder, & let him hold on to two himself. Rude acquisitions of the muscles are taught first: then finer ones. ^{At the same time, no toys are better for the purpose than wooden balls.} In school the gifts of the kindergarten, not only looked at but handled, are useful in promoting sensibility; & the teacher should cause the pupil to feel, as well as see, the rounded outline of the sphere, & contrast it with the angular character of the cube; and to note the difference in resistance of the wooden ball - hard - & of the ball made of wool or worsted - soft. Tactile impressions of smoothness, as those of glazed stoneware or polished wood should be contrasted with the rough feeling of coarse clothing or sand paper. Sensation of heat & cold should also be contrasted. ^{of the child may be made to observe} the cold, smooth or flake, & evaporative ^{warm} feel of wood, clothing &c.

† If the teacher doesn't log in like
this

As eye to threaten or command
it is incredible that any rate there
shall be something in the eye that
compels attention.

It may also be exercised in such discrimination
by clothing the fingers in robes of
varying temperature. ^{such as silk, cotton, wool} used to
suffering temperature. ^{not in cold ways}
Go further in suggesting experiments
in testing & exercising the sense of touch,
for every judicious teacher will have
at command any number of safe devices
for this purpose so long as the necessity
is pointed out for using object lessons
in the way I have described. When dealing
of co-ordination I shall have something
more to say as to appliances useful for
children who cannot use their fingers
for accuracy on account of spasmodic
or other involuntary movements.

The sense of sight is only second in importance to that of touch. I have already referred ^{to my first lecture} to some of the eye defects which are not uncommon in school children, & interfere with their progress in class: I mean short sight, & so-called long sight (hypermetropia) which is often associated with eye strain. I refer to it again to recommend to you a book which would on these we shall treat of more in detail in a future lecture.

+ see previous page

It is of course to some extent a medical matter
the subject by Dr. Fiedemann called
the School Teacher's Ophthalmic Guide,
& which being provided with a sheet of
test type with simple instructions may,
I think, be very serviceable in schools.
Of course ocular defects must be dealt
with by the oculist. The Teacher's
function is to train for observing purposes
the vacant or vagrant eyes of the pupil.
The power of the eye in influencing
inferior natures has long been noted:
+ the eye like hand to threaten or command
or any other to control the pupil's attention
is indeed a great advantage. The Teacher
+ the sign quantity has it in his hand
English - the main instrument in fixing
the regard is the regard: in other words
the wandering eye of the pupil is brought
to attention by the ^{the eye} gaze of the instructor.
The gleaming eyeball no doubt attracts
the young child, & the effort is heightened
by glasses; glistening objects such as the
silenced globes used for the Christmas
trees are in the same way serviceable; &

Imagination

looking into a Kaleidoscope (a toy less
seen now than formerly) is to some children
an attractive exercise of sight. Bright
colours are usually admired by many of
feeble children; & colour blindness is
not of frequent occurrence amongst this
class. ~~it was then~~ there were few cases
of it proportionately amongst the more
intelligent & imbeciles at Lancaster than
amongst the pupils of a Quaker School
at Kendal. Discrimination of colour
should be exercised by getting the children
to match pieces of coloured card board;
by the arrangement of colour-cubes; or
by colouring simple chequer designs
with different coloured crayons. The
perforated pictures of the Kindergarten
variegated
designs in bead or woodwork, & in the
arrangement of ^{papers} files are useful for this
purpose. The discrimination of colour
is the first thing to be learnt: the
names of the various colours or shades
will be learnt subsequently.

wholesome. Like the hysterical girl
imprisoned by Ben Jonson.

She can crunch

A sack of small coal, eat by one time & have
soup, ashes, loam, & has a dainty vision
of the green sickness. ~~to form~~

It will seem that in some instances
the senses are blunted, & impressions
are only made on them by strong (what
usually) impressions which would be
insufficient to ordinary persons. The
teacher therefore must be on his guard
against the deficient pupil eating
garbage - & who knows an idiot
display a "peculiar taste for literature"
by devouring his book, cover & all -
For social purposes it is worth while
to try to reclaim perverted tastes, &
distinctions may be increased by offering
other pupil substances of similar
appearance such as salt & taste sugar
to be distinguished by taste, ground
coffee & snuff to be distinguished by smell.
& also & ginger bread to be distinguished by taste.

It is of course from the Scientific point of view interesting to test each sense separately, but for the teacher's purpose they are best taken in the practical connection which they bear to each other in every day life -

Illustration of perception given in one of the papers -

10
As Sally says. These impressions are the alphabet by which we spell out the objects presented to us. In order to grasp or apprehend those objects these letters must be put together & form the meaning of words. Thus the apprehension of an apple by the eye involves the putting together of various sensations of sight touch & taste. This is the manner in which it is known as perception. It is the office of the Teacher to induce the pupil to see, touch & if needs be taste for himself, & he will then be happy in the way to think for himself. Objects to be of use for defective children must be given in a very practical & physiological manner. The knowledge of names must not be confounded with the knowledge of things. The definite observation of the child must be fostered by making him note the points of difference & of resemblance of different objects, & thus he will be come gradually in rapport with

his surroundings. The mere knowledge
of names must never be confounded
with the knowledge of things. Words
are indeed the marks or signs of ideas,
but they are merely labels, ^{or signs, not}
carrying with them ideas of the things or objects
which they refer to. Those whose
observing powers have not been cultivated

This brings me to a consideration of
 the defects of speech common in the
 mentally defective class - Defect of
 articulation, ^{in the form of} the greater number of those
 who remain silent do not speak, simply
 because they have no ideas to express -
 The only way to teach such to speak is to
 cultivate their perceptive faculties, &
 as their mental activity increases words
 will gradually come. Of course there
 are exceptions: I have known ^{perfectly} ~~uneducated~~
 children with a fair stock of ideas who
 could not utter a word & on the other
 hand those who could speak volubly
 but appeared to have few ideas. It must
 be borne in mind however that speech

12
Though it comes to most of us intuitively
without conscious effort is really a
very complex function, requiring co-ordi-
-nation of a great many muscles, as
well as the integrity of numerous nerve
centers & tracts. Just as the gait of
numerous defective children is due
to the peculiar form imperfect co-ordi-
-nation of the leg muscles, so is the
speech likely to be defective from the
faulty action of the muscles engaged
in vocalization & articulation. We
cannot expect the openmouthed, dribbling
child to pronounce words other than in
a sloshy sort of style, & as we ascend in
the scale of intelligence we find various
degrees of articulation, which we may
do much to correct by lip & tongue
gymnastics, ^{for example} such as opening & closing the
mouth so as to bring the teeth together;
putting out the tongue, drawing it to the
right & to the left, & touching it with the
teeth of the upper & lower jaw respectively.
(Local lips may be pulled up by holding
some paper tinge to)

As a rule ~~consonant~~ syllables con-
 sisting of a consonant followed by a ^{vowel} are best tackled first. Labial
 sounds that precede all others. Single
 syllables are less easily ^{pronounced} repeated than
 repeated syllables, & we notice in baby
 language constant reduplications of
 simple sounds, such as "mum ma" "lola"
 "ta-ta". The child deficient in ^{utterance} speech should therefore be exercised
 in simple re-duplicated consonant
 sounds followed by the open vowel (a/
 (eh) - A schedule of speaking exercises
 based on these principles was many
 years ago drawn up, for the use of the
 teachers at the R. H. L. Hospital, & has
 been reprinted in my book. Further than
 repetitive phonetic such as "mum-ma" is
 coupled with the name of a common
 object (mat. man), of a part of the
 body (mouth) & of part of the dress
 (waist), written / beginning with the same
 consonant sound; & so on throughout the series.

of Labials, linguals, labio-dentals, &
 gutturals. ~~Adverbs~~ - There is also a
 table of vowel sounds & examples. But
 it must be remembered that with
 mentally deficient children ^{very} few are able
 to sustain their interest, & mechanical
 exercises in speaking are apt to fail unless
 brightened up by interest. The naming of
 objects in well chosen pictures, & of the
 child's own surroundings, & the imitation of
 the characteristic cries of animals are some
 of the best means of making a start with speech.
 A child will learn to repeat sounds read
 by a teacher from a table, though he will
 scarcely respond to the question "What
 does the cow say?" "No" or "What does
 pussy say?"
 I think any child who has been
 to the hospital is often a sleeping beauty to
 French, & our old friends the Nursery Rhymes
 are to alluring him in with happy, sunny
 good examples of useful repetition of sounds,
 such as "ba ba black sheep &c." "Sweet
 honey do do do" on the important note

musical plays in the training of feeble-minded children, whether for assisting articulation, improving & regulating muscular activity, or generally brightening up the mind faculties & helping to impart cheerfulness. Instrumental accompaniment like an immense advantage, & a piano is not a luxury but a necessity in the equipment of a special class.

It has been well said that feeble-minded children learn more with their hands than with their head. Hence the importance of training the fingers to definite employment, & of removing obstacles to their ordinary use. For the class who suffer from involuntary movements of the fingers - such as I have previously alluded to under the name tetters - we find it useful to employ the peg-board a board perforated with holes into which the child has to drop nails, taken from a box: another exercise

of fine adjustment is to stick pins into
the throats of a penmanship covered with
spotted material. Another ^{of the fingers} exercise
used to be instructions for children
in the placing of appropriate pieces of
wood of different sizes & shapes into
their appropriate cavities is to that use
called size & form boards. ^{Domino board} I must
confess however that though I have
used them I am not much in love with
these mechanical ^{clever} contrivances, or
it is better to use for finger lessons
something a little more interesting
such as picture perforating, placing
together the parts of dissected animals,
or arranging picture cubes, ^{which} which will
interest & help to fix the attention
as well as exercise the fingers. The
practical bearing of finger exercises
^{if they are presented as, well as the educational activity} should be borne in mind & they should
more be allowed to degenerate
into a more mechanical drudgery.
The occupations of the kindergarten

modified & suit the real uses of its
firmly form attractive & serviceable
S. Preliminaries to handicrafts. Paper -
weaving for example is an excellent
preparation for the more prosaic industry
of stocking weaving, other preliminaries used
for perforated pictures will serve as
an introduction to the Cobble's work.
Useful as are the kindergarden accounts
for training the fingers, & through them,
the intelligence, the actual products
of child labour in the way of bead necklaces,
variegated paper mats, pretty models etc.
have a distinct value in stimulating
further effort, as "Something accomplished,
something done" is as satisfactory to
the feeble minded child as to others;
much should be made of his
achievement, as an encouragement
to future application. In the presence
of these ~~children~~ ^{merchandise} ^{& of the mother or social}
~~children~~, whose laziness is generally impending
but ~~very employment~~ ^{very little} & ~~writing up~~
~~national note book~~ ^{national note book} ^{note book}

Voted as my present audience to the 18
 I need a change of the kindergarten ^{idea of the}
 very little as to ^{make suggestions}
 nothing of the sort ^{for} suitable occupations
 for children in the ~~class~~ ^{the kindergarten} class. I wish
 say the more ^{the better} the better, not only
 to provide for individual peculiarities,
 but to prevent dull occupations
 becoming, by too much repetition, merely
 mechanical. which will of course
 detract from the value of the employ.
 must be an exercise of the intelligence.
 It is in fact in relation to mental
 development that the choice of
 occupations should be made. Hence
 the value of those that admit of
 discrimination in the choice of colored
 materials ^{arrangement of patterns} &c. - Special aptitudes
 should of course be observed & utilized.
 On the other hand one sided develop-
 -ment of the mind in an exclusive
 way must be guarded against. ^{Special}
^{but a special one should moreover be put in not feared}
 The question of the best mode
 of employment of deficient children,
 in relation to their maintenance has
 of course to be seriously considered. In

turns the choice of occupations is
 necessarily limited to a few simple
 handicrafts that can be carried on under
 the parent eye such as cobbling, tailoring,
 firewood cutting, basket or door mat
 making. Imbecile boys are often "horsey"
 in their tastes - the swiftly moving sled
 is attractive to them from infancy - and
 they may sometimes usefully be employed
 as helpers in stables. In the country they
 have a congenial & healthy scope of
 occupation in connection with a farm or
 garden: the care of animals is often
 faithfully attended to by such, & the
 feeding of pigs, cows, horses &c is as
 regularly done by them as by the average
 idiotic. Weeding, hoeing, barrowing &c
 are also efficiently done by boys trained
 to this sort of work. Girls may be taught
 laundry work, or usefully employed in
 subordinate situations in domestic service,
 where they will have the benefit of a
 certain amount of kind supervision.

Loops
 Animals
 the
 forward

Garden

In movements of drill the principles of imitation which is so important a factor in Education generally, & especially in that of mentally-feeble children, deserve to be noticed. The term is popularly used for the adoption of any movement, feeling or peculiarities of thought from others. As related to action it is employed with the same reference to action. Any imitative movement is meant one which is called forth directly by the sight of that movement as performed by another. Thus it is an imitative action when a child jumps in response to another's jump (18 months), or to ~~imitate~~^{copy} its teacher's hand in saying ta-ta, imitating the motion of the mother (2 or 3 years). This is unconscious imitation which later develops into conscious imitation - often arising from sympathetic feeling. ~~And~~ The range of imitation gradually grows. These forms of movement are imitated. The child's tendency to imitate those about him is a very important and to

the development of his will. A child
thrown with other children learning qualities
to walk them up alone, because they advance.
- Care of teaching children in class, with
good leaders. Faculty of imitation
varies much with different children:
in mongol class developed & dominating.
For feeble minded children command
should be associated with example,
so that imitation as well as authority
shall have its full scope.

or shuffling away into corners is completely
should be discouraged as not infrequently
tending to evil practices

Moral Training. If good moral
training be a prime constituent in every
system of Education, it is especially so
in the case of mentally deficient children.
Not that the mentally feeble child is
by nature morally worse than the
ordinary child, but his weakness makes
him more pliable, & an evil example
not to say precept may in his case be
efficiently injurious. When inhibitive
impulse is weakened either from
disease or from original defect, the
lower animal nature is apt to assert
itself in the most objectionable words,
if not deeds. Great care therefore is
necessary by all in charge of such cases
to be choice in their language as well as
correct in their conduct; for imitation is
characteristic of the class. Good examples
as well as wholesome precepts, must therefore
be regarded as of the utmost importance.

27
 The law of moral training must be love,
 which will alone break down the wall
 of partition between the solitary inmate
 or ^{poorly minded} ~~inmate~~ & his fellows, & make him feel
 obligations towards his fellow cells, that to some extent lay
 a responsible number of the community.
 With such it is a unpleasant time that
 "force is no remedy": the only effectual
 constraint is that of affection. This
 does not imply however that ^{constant} firmness is
 not to be exercised: it would indeed
 be impossible to maintain discipline
 without it. A system of rewards and
 punishments, ^{as with other children} modified to as to adapt
 themselves to the peculiarities of particular
 cases, ^{is almost} ~~is~~ necessary with this class ~~as~~
 with others. With some, withholding
 commendation, which is often eagerly
 desired, will suffice: with others the
 "corner" is a powerful argument, or standing
 up on a seat is his grace enough. "Corporal
 punishment is rarely beneficial": yet there
 are cases where pain wanting inflicted &
 others is appropriately visited by means
 of being ~~clapped~~ or even ~~down~~ ~~broken~~ under

inflicted on the offender. In Institution life it is often found that an appeal to the mind is best made through the stomach, as by stopping of feeding, or stopping or something food forward to the stomach sugar in the days of fasting. Not only must the punishment fit the crime, but in order to make the desired impression, it should follow ^{the offence} as quickly as possible.

Unfortunately there is a small class of ^{morally retarded} exceptional children who seem to be wanting not so much in intelligence as in moral sense. It is a question how far punishment is beneficial to such for although it may call forth professions of penitence for the time, it seems to have no permanently deterrent effect. From the physical side the ^{unlike} ~~character~~ of conduct seems to be almost of the nature of epilepsy, & may sometimes be treated better by medical than by moral means. ** Periodical Epilepsy **

Notwithstanding such exceptional cases, the weak-minded person must by no

means be encouraged in the habit, - but
 too easily taken up with dangerous
 consequences - that because he is not
 quite like others he is therefore ^{not} ~~less~~
 responsible for his actions. I do not
 here propose to enter upon a discussion
 of the religious teaching of the abnormal
 child, I will only say that defect of
 intelligence does not usually imply
 absence of religious feeling, which
 indeed I have seen wonderfully developed
 with but feeble mental power. But so far
 as morals are concerned it should be
 constantly pointed out that harm,
 followed by punishment, inevitably
 results from evil doing, & that the
 only safe rule of conduct is the "Golden Rule"
 "as ye would that men should do to you
 do ye also to them likewise" -

Hand and Eye.

Vol. 6. JUNE 15, 1898. No. 69 (New Series).

All Contributions to this Journal should be sent to the Editor, c/o O. Newman & Co., 84, Newman Street, London, W.

We do not hold ourselves responsible for the opinions expressed by our contributors.

Rejected MSS. cannot be returned unless postage be prepaid; and unless special arrangements are made the Publishers reserve to themselves the copyright of articles that appear in the Journal.

MSS. and communications for the current month's issue must reach the Editor not later than the 1st of the month.

All communications should be written on foolscap paper in ink, and on one side only. MSS. should be folded, and not rolled.

HAND AND EYE is the medium of communication between the members of (1) FROEBEL SOCIETY, (2) THE SLOYD ASSOCIATION OF GREAT BRITAIN AND IRELAND, (3) EDUCATIONAL HANDWORK UNION, (4) THE SLOYD ASSOCIATION FOR SCOTLAND.

All rights reserved.

The Education of Mentally-Deficient Children.

By G. E. SHUTTLEWORTH, B.A., M.D., etc.,
Ancaster House, Richmond Hill.

(Medical Examiner of Defective Children under the London School Board,
formerly Medical Superintendent of the Royal Albert Asylum for Imbeciles,
Lancaster.)

VIII.

It has been well said that "feeble-minded children learn more with their hands than with their head." Hence the importance not only of training the fingers to useful employment, but also of removing any obstacles that may exist to their orderly use. From the physiological standpoint we have seen that stimulation from the periphery tends, during the plastic period of youth, to the development of connected cerebral cells; so that, in that sense, finger training promotes brain development. In some cases in which lack of co-ordination exists (athetosis, for example), certain preliminary exercises, such as those of the *peg-board* mentioned in the last paper, or the finger drill formulated in Dr. Warner's recent work,* may be serviceable; but the more productive such exercises can be made of tangible results, the more acceptable they will be to the child, and thus comes in the paramount importance in the education of mentally-deficient children of manual training of a practical character. Not that the intrinsic value of the

* "The Study of Children and their School Training."—Macmillan.

child's productions is to be regarded as the test of success: it is rather the suitability of the successive steps in the process to fix the child's interest and to definitely exercise groups of muscles, that should be taken into account. String-work (*Macramé*) for example, is educationally useful because it fixes the pupil's attention, exercises the fine adjustments of the fingers, and strengthens not only the muscles but the will;—for tying knots *tight* is a moral as well as a mechanical exercise. The fringes and the more elaborate patterns produced from various coloured strings are of course results of some value in themselves for the decoration of brackets and mantel-borders, and as "something attempted, something done," serve to encourage the child to fresh effort. A word of caution may not be inappropriate with regard to what Dr. Kerr, Medical Superintendent to the Bradford School Board, designates "spurious result" work,* such as minute pricking for "embossing" and too fine needlework, which, injudiciously enforced, tend to overstrain of eyes and nerves. Threading of extremely fine beads may be placed under the same category. But bearing in mind the necessity of individual adaptation in view of special infirmities, there are among the occupations of the Kindergarten several which seem particularly suitable as an introduction to industrial work. Mat-weaving for instance, besides being a valuable exercise to the hand and eye, when a pattern has to be followed, is a useful introduction to the prosaic but frequently called-for practice of darning. Picture perforating, when carried on with due regard to avoidance of overstrain, will aid the boy who is an adept with the "pricker," subsequently to work with the cobbler's awl. Clay-modelling imparts, in an attractive manner, elementary ideas of form, size and plasticity, and stimulates the tactile sense and the inventive faculty. From clay-modelling an idea of pastry making and bread moulding may be evolved. A practical teacher will know how to make the best use of Kindergarten occupations so as to give sufficient variety and prevent the practice of them becoming, by too frequent repetition, merely mechanical, for it is the mind and not only the fingers that must be exercised. Wood-work of a simple character is excellent training for the mentally-deficient child as for others; and a course of Danish Sloyd, in which knives are not necessary to make the series of models, is a good stepping-stone thereto. Chip-carving is also easily acquired by mentally-deficient children; and as has been previously remarked, some who originally suffered from involuntary movements of the fingers (*athetosis*) have become exceptionally skilful wood carvers. A remarkable instance of this was shown in the work of a patient of the Royal Albert Asylum, lately exhibited at the "Arts and Crafts" Exhibition, at Lancaster, of which we are enabled, by the courtesy of the proprietors of *The House*, to give an illustration.

*"School Hygiene" (Howard Medal Essay) Dr. James Kerr, Royal Statistical Society, 1897.

Handicrafts are being met for sale -

The question of the kind of employment that the child is likely to follow in after-life to earn a living, deserves careful consideration in relation to the training of those mentally deficient. For



(By permission of the Editor of *The House*.)

country children—boys especially—there are various out-door employments in connection with the garden and farm, which may be resorted to, and under kindly supervision satisfactorily accomplished. Hay-making, harvesting, gathering of vegetables and fruit, weeding among crops, the feeding of cattle, and even milking of cows, are samples of work done by imbeciles in institutions; and in America we hear of stock farms run to a considerable extent by the labour of the feeble-minded. In Norway and other Scandinavian countries, girls as well as boys have a share in these out-door pursuits. But in the case of town populations, of course the choice of occupations is limited to a few simple handicrafts, such as cobbling, tailoring, brush and basket making, mat making and firewood cutting, which can be carried on under the friendly eye of the parent, or of some small tradesman who will exercise the needful supervision and give a nominal wage in return for the products of the lad's labour. Imbecile boys are often "horsey" in their tastes—the swiftly-moving steed is attractive to them from infancy—and some are employed usefully as helpers in stables. Love for animals should be fostered in the course of school training; and lessons as to the avoidance of cruelty—it may be from want of thought—are very necessary. Some feeble-minded lads have special aptitudes, and these should be utilised as far as practicable in remunerative directions: thus occasionally one meets with skill in wood carving,

Handicrafts are being met for sale -

Handicrafts are being met for sale -

in designing, or in parqueterie work which should be turned to the best account. Even printing is profitably carried on in some imbecile institutions. The discipline of the army has proved advantageous to several youths brought up in institutions for the feeble-minded; and, given sufficient physical strength and intelligence, such a career seems to be not unsuitable.

With girls the varieties of occupation are less numerous, consisting principally of sewing, laundry, kitchen and house work, to which, perhaps, may be added fancy basket making and bookbinding; and the need of kindly supervision is still greater than in the case of boys. The establishment in recent years of small working homes for girls, where they may be sheltered and suitably employed during the perilous period of adolescence, is of extreme value in rendering permanent the benefit gained by school education.

It may be well to put in a word of caution as to guarding against over fatigue; for some children of feeble intellect, if set to work at something of a purely mechanical character, such for example as turning the handle of a machine, will continue to do so untold to stop. Of course "all work and no play" will make Jack even a duller boy than before; and ample time for rest and recreation must be allowed.

Time allowed for recreation, must, however, not be regarded as a time for loafing. The great educational value of play is in the case of normal children universally recognised; and this fact has been utilised by Froebel in his Kindergarten games. Mentally-deficient children usually lack the quickness of thought and action necessary for the playground games of ordinary children, and need some co-ordination from the superior intelligence of a teacher to enable them to play such concerted games as rounders, cricket, etc. But combinations in play should be encouraged, and supervision in the playground is as necessary as elsewhere. Indeed, owing to the tendency of some feeble-minded children to fall into bad habits, there are special reasons why they should not be lost sight of in the playground and its offices.

Good moral training is of course a prime essential of all education worthy of the name, and in the case of those mentally defective, it is more than ordinarily necessary. The mentally-feeble child is weak of will; and his weakness renders him particularly prone to be influenced by evil suggestions and examples. It is a humiliating reflection on poor humanity that whenever inhibitory nerve power—that which gives self-control—is diminished either from disease (as in insanity) or from original mental defect, the lower nature is apt to assert itself in objectionable words and ways. The greatest care therefore is necessary on the part of those in charge of such cases to be choice in their language as well as correct in their conduct; for imitateness is strong in weak minds. Good examples, as well as wholesome precepts, must indeed be regarded as of the utmost importance.

The main-spring of moral training must be love. "Force is no remedy" with the mentally-deficient child: such a one must be coaxed rather than coerced. Influence is gained by winning the child's affection, rather than by severe measures; at the same time there must be consistent firmness, and respect for authority must be enforced. Some system of rewards and punishments is, indeed, needful to maintain discipline with these as with other pupils; but in applying them individual peculiarities have to be considered. With some, the mere withholding of approbation, often eagerly looked for, will suffice; with others, standing in a corner or mounted on a form will be felt as a disgrace. In institution life the temporary deprivation of some favourite finery, or of some appreciated dietary delicacy, will be effectual; or detention from an anticipated treat will make an impression. Corporal punishment is rarely admissible. Yet there may be cases where the wanton infliction of suffering on others is best visited by practically demonstrating to the child's own feelings, the objectionable character of pain. Cruelty must be checked by stern repressive measures, but the child's mind must be informed as to the effect of ill-treatment, either of companions or of the domestic animals; for with children ignorance rather than intention is often accountable for acts of seeming inhumanity. In all cases the punishment must be made to "fit the crime," and follow the offence as quickly as possible.

Unfortunately there is a small class of exceptional children (previously referred to as moral imbeciles) who seem to be wanting not so much in intelligence as in power of self-control. Evil impulses appear to come to such—it may be periodically—much as the nervous disturbance which we call epilepsy attacks others; indeed an American writer has referred to these as cases of "psychical epilepsy." In such cases ordinary disciplinary measures seem to be of no avail, for although punishment may call forth protestations of penitence, no lasting impression is made. The permanent isolation of such cases seems indeed to be the only practical method of dealing with them, and the appropriate treatment is medical rather than moral.

Notwithstanding such exceptional cases, it may be laid down as a general rule that the mentally-deficient child must not be encouraged in the view that because he is not quite like others, he is less responsible for his actions. Such an idea may with advancing years be taken up with dangerous consequences, and although allowances must of course be made by others for peculiarities of conduct, it is not well that the pupil himself should be permitted to grow up with the notion that he is privileged to do wrong with impunity.

Mental deficiency does not necessarily imply insusceptibility to religious feeling, but into this aspect of the subject we do not propose to enter. So far as morals are concerned it should be consistently pointed out that harm, followed by punishment, inevitably results, in the long run, from evil-doing; and that the only safe line of conduct is that prescribed by the Golden Rule: "As ye would that men should do to you, do ye also to them likewise."

The Modern Aspects of Nature Teaching.

By FRANCIS J. ROWBOTHAM.

I.

THOUGH much has been done of late to place the value of observation lessons on a healthier basis and bestow increased attention to Nature Teaching, it is of not unfrequent occurrence to be confronted with the remark, "Of what possible use can it be for my children to learn about plants and insects? In these times, when the struggle for existence grows daily more severe, knowledge of this kind to be worth acquiring must have some practical end in view. My children will have to work for their living, and no time can be spared for dilettante studies." Lest some such thought should arise, let us hasten to say that, be its demerits what they may, this paper has been written in no spirit of dilettanteism, but in downright earnestness; not because we had something to say that might serve to fill up the small amount of leisure which remains in the all too-full life of the child at the present day, and thus only add to the burden which the child-brain has to sustain; but solely because in our love for thoroughness, and our belief that the study of Nature undertaken in earnest cannot fail to exercise the most important influence upon the mental training of the child, we consider that there are strong reasons for maintaining that science—and especially a science which calls into healthy action the powers of observation and reasoning, and the teaching of which is founded upon the wide and sound basis of endeavouring to assist the child-mind in the expression of its own ideas of what it sees—should form an integral portion of the educational training of every child. And especially is reference made in this connection to the invaluable factors and opportunities which are included in a carefully thought out system of home-training.

How many failures might we not trace to a lack of the spirit of enquiry, that essence of practicality which has helped to make our great men what they are! "Find out" was the answer hurled at us in our school days; and if a youngster fails to take the lesson to heart then, and to keep on applying it after he has left school, he may discover only too late why it is that the boy who rudely baffled his early endeavours to obtain knowledge at second-hand now fills a high position in life's greater school, whilst he who deemed the pertinacious enquirer into everything a boor because he declined to part with his self-earned knowledge gratis, would be glad, perhaps, to obtain his recommendation to a clerkship in the department in which he stands at the head.

Is this an exaggerated illustration of the importance of fostering the true spirit of enquiry in our children whilst they are yet under the

Hand and Eye.

Vol. 6.

MAY 15, 1898.

No. 68 (New Series).

All Contributions to this Journal should be sent to the Editor, c/o O. Newman & Co., 84, Newman Street, London, W.

We do not hold ourselves responsible for the opinions expressed by our contributors.

Rejected MSS. cannot be returned unless postage be prepaid; and unless special arrangements are made the Publishers reserve to themselves the copyright of articles that appear in the Journal.

MSS. and communications for the current month's issue must reach the Editor not later than the 1st of the month.

All communications should be written on foolscap paper in ink, and on one side only.

MSS. should be folded, and not rolled.

HAND AND EYE is the medium of communication between the members of (1) FROEBEL SOCIETY, (2) THE SLOYD ASSOCIATION OF GREAT BRITAIN AND IRELAND, (3) EDUCATIONAL HANDWORK UNION, (4) THE SLOYD ASSOCIATION FOR SCOTLAND.

All rights reserved.

The Education of Mentally-Deficient Children.

By G. E. SHUTTLEWORTH, B.A., M.D., etc.,
Ancaster House, Richmond Hill.

(Formerly Medical Superintendent of the Royal Albert Asylum for Imbeciles, Lancaster.)

VII.

HAVING in previous papers set forth the principles of physiological education specially applicable to mentally-deficient children, we now proceed to consider some of their practical applications.

We have seen that the approach to the intellect is necessarily through the avenue of the senses; and in the mentally-feeble child the latter are frequently abnormal in function. Our first step, therefore, must be so to drill and discipline the sense organs as to make them capable of orderly action.

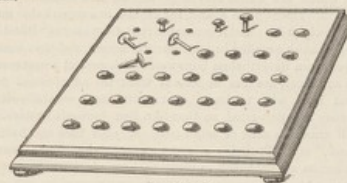
Take first that primitive sense from which all the other special senses have been evolved, and which we may designate, in proportion to the degree of its activity, common sensation, tactile sensibility, or the more definite sense of touch. In the low-grade idiot we shall often find a notable dulness of sensation, sometimes dependent on a coarse condition of the integument in which the nerve endings are distributed, sometimes on a low tension of nerve force, so that impressions on the surface are imperfectly received or transmitted. Children of this class will pass their fingers through a gas flame

without flinching, and will endure extraction of teeth as if they enjoyed it! With the morbidly nervous child an opposite condition prevails, viz.: a hypersensitiveness of the surface and a consequent shrinking from contacts before they have left a definite impression. Such a child will let drop an article presented to him as if it were red-hot, not allowing time for cognizance to be taken of its character. It is obvious that different methods of dealing with these two classes of defective children are called for: in the first case, sensitiveness has to be cultivated; in the second case, disciplined. For both purposes, however, what may be called tactile object lessons are of service. The gifts of the Kindergarten may be utilised for this purpose, the contrasting roundness of the sphere and angularity of the cube being studied not only with the eye, but with the hand. The soft yielding character of the woollen ball is compared with the hardness and resistance of the sphere of wood. The smoothness of satin may be contrasted with the roughness of sandpaper: the cold hardness of marble or iron with the warm resilience of velvet pile. A judicious teacher whose attention is directed to the necessity of exercising the tactile sense will have no lack of material at hand for the purpose, bead threading, macramé work, paper folding, and the elementary steps in manual training offering excellent opportunities. In the nursery the favourite toys are those which offer the most scope for the exercise of the tactile sense; indeed the child's wooden bricks form a valuable educational exercise. Perception of heat and cold may be cultivated by dipping the fingers successively into hot and cold water; or by giving the child phials filled with hot or cold water to grasp.

Grasping is, indeed, a difficulty with some deficient children, and it may be said that in practice sensation is to a large extent cultivated in conjunction with muscular action. If the child cannot firmly close his hand upon an object, a friendly hand, outside his own, may help him to do so. Holding on to a trapeze bar or a bridge ladder, with a modicum of support so as to give confidence but not to interfere with the child's voluntary action, is another expedient for helping the muscular and tactile sense. As a rule coarser muscular adjustments are more easily acquired than those of the finer kind; and consequently disciplinary movements of the arm should precede those of the hand and fingers. In the case of the involuntary movements affecting the latter, which we have previously referred to under the name "*athetosis*," it is remarkable how much benefit results from exercises of increasing difficulty, successively with *form-boards*, *peg-boards*, and such minute manipulations as the arranging of pins in pattern on a pincushion.

The "bombardment of bean-bags" (to which reference has already been made) is a useful expedient to arouse the sensitiveness of

apathetic children. Clapping the hands in time to music is not without its use in stimulating not only capillary circulation, but as a consequence increasing surface sensibility. The morbidly nervous child requires to be tactfully treated, and like the shying horse to be gently made familiar with the object which has scared it. Over-sensitiveness of the hand may be diminished by coarse contacts, such as those involved in gardening operations, or needlework on rough material.



PEG BOARD.

The cultivation of the sense of sight is from the point of view of the educator of the feeble-minded hardly less important than that of the sense of touch. Of many defective children it may truly be said, "Eyes have they, but they see not." In some cases there is an oscillatory movement of the eyeballs which interferes with definite vision: in others the range of vision is restricted by imperfection of the eye-movements. In both cases eye drill is useful: the pupil should be exercised in looking upwards and downwards, and on either side, without moving the head. This may be made attractive by employing glittering objects, such as the silvered globes used for Christmas-trees, for the purpose of guiding the eyes. The most effective instrument, however, in influencing the eye movements of the pupil is the eye of the instructor. If the latter does not require, like Mars, "an eye to threaten or command," it is essential there should be something in her gaze to coax, not to say, compel attention.

Bright colours have a special attraction for feeble-minded folk; and the old-fashioned kaleidoscope has distinct educational value with such. Discrimination of colours should be exercised by getting the children to put various-coloured balls into cups of corresponding colour; to arrange colour-cubes with the face upwards corresponding to the colour shown by the teacher; by matching wools, coloured discs of cardboard, etc., and by colouring with crayon chequer-designs after a set pattern. Designs in coloured tiles, and in bead or woolwork are a further development. In the training of feeble-minded children it must be remembered that the power of discrimination of colour is what must be first cultivated: the naming of the various colours comes afterwards.

Hearing appears to be deficient in many feeble-minded children, though on more careful investigation it will be found that the real deficiency is not in audition, but in the power of sustained listening. To correct this they need to have something attractive to listen to. Fortunately music has a special charm for this class, and words set to music will impress them, when mere words are of no effect. Consequently we find the training of the ear advanced by singing exercises, which are useful also in promoting articulation. Rhythm, whether in movement or in sound, influences, in a remarkable manner, minds of a lowly order; and it is notable that some idiots ("Blind Tom" for example) have excelled in instrumental music, and that some who cannot speak can nevertheless hum tunes with perfect correctness.

Taste and smell are less important from the educational point of view; but it is well to know that with some mentally-deficient children they are perverted, so that like Ben Jonson's hysterical girl, "they will crunch a sack of small coal, eat your lime and hair, soap, ashes, loam," etc. Probably in some cases where things unsavoury and malodorous are preferred to those that are more wholesome, there is a blunting of these senses, and satisfying impressions can only be made on them by strong and pungent substances which the ordinary person would designate "naughty." The moral is that the teacher of a feeble-minded class must be alert to the possibility of some of the pupils picking up and eating garbage. I have even known an idiot display a peculiar "taste for literature" by devouring his reading book, cover and all! An extraordinary acuteness of smell has occasionally been observed in mentally-deficient children, and one formerly under my care would discriminate the clothing of individual fellow-pupils (when kept in the wardrobe) by this sense alone. It may be well to test and exercise power of discrimination by taste and smell by offering to the pupil substances of similar appearance, such as salt and loaf sugar, or coffee and pepper, to be so distinguished.

It is interesting from the scientific point of view to test each sense separately, but for the teacher's purpose they are best taken in the practical connection which they bear to each other in every-day life. Professor Sully well remarks that "sense impressions are the alphabet by which we spell out the objects presented to us. In order to grasp or apprehend those objects, these letters must be put together after the manner of words. Thus the apprehension of an apple by the eye involves the putting together of various sensations of sight, touch and taste. This is the mind's own work, and is known as perception." It should be the aim of the teacher to induce the feeble-minded pupil to see, touch and (if needs be) taste for himself, and so put him on the road to think for himself. Object lessons to be of service to such need to be given in a very practical and personal way: to be adapted to the capacity of the individual pupil and to be

(so to say) brought home to him. The knowledge of names must not be substituted for the knowledge of things: names are at best labels which may convey but a very imperfect notion of what they designate.

A brief consideration of some of the defects of speech commonly found in mentally-deficient children must close this paper. The majority of this class speak badly, but comparatively few are mute because they cannot hear. In a certain number of cases malformations of the mouth, such as cleft palate, inordinate size of tongue, throat troubles, etc., interfere with clearness of utterance; but feeble-minded children who do not speak at all are usually silent because they have no ideas to express. The way to teach such to speak is to cultivate their perceptive faculties, and as their mental activity increases, words will gradually come. Of course there are exceptions; occasionally one meets with imbeciles with congenital damage of their cerebral speech-centres, who cannot utter a word, though evidently possessing ideas which they express by gesture, sometimes graphically. It must be remembered that speech, though it comes to most of us intuitively and without conscious effort, is really a very complex function requiring the integrity of numerous nerve centres and tracts, and the co-ordination of many muscles. Just as the gait of deficient children is apt to be peculiar, owing to faulty co-ordination of the leg muscles, so may we expect their speech to be imperfect from want of harmonious action of the muscles engaged in vocalisation and articulation. The loose-lipped drivelling idiot will (if he speaks at all) splutter rather than articulate; and as we ascend in the scale of intelligence we shall find that errors in the use of various parts of the articulatory apparatus require to be recognised and remedied. A system of lip and tongue gymnastics is of use in teaching the child to close its mouth, to bring its teeth together, to place the tip of its tongue in contiguity with definite regions of its upper or lower jaw, and to protrude it in various directions as shown by the instructor. To press with the lips a penholder or some small cylindrical object is a good exercise in keeping the mouth firmly closed, and preventing the careless escape of saliva. "Open mouthedness" is a somewhat conspicuous sign of imbecility, which it is worth while to correct as far as possible. It frequently arises from the habit of not breathing through the nose, sometimes merely a habit, but in other cases due to growths obstructing the air passages behind the nose (*adenoids*) which may be removed by the surgeon. A scheme of breathing drill, to ensure the child filling and emptying the chest, may be of considerable value in connection with articulation, as well as improve the child's general health.

In teaching articulation, syllables composed of a consonant followed by a vowel should be first tackled, and nasal and labial sounds should precede all others. Single syllables are less easily pronounced than

simple reduplications, such as "ma-ma," "la-la," "dad-da," "ta-ta," etc. The deficient child should therefore be first exercised in such reduplications with the open vowel *(a)* and other vowel sounds may be afterwards substituted. Whenever sufficiently simple names of objects can be introduced, speech will become a matter of interest to the child, and it is well for the teacher to have at hand a table * containing such simple names of objects constantly available for illustration, as will cover the field of articulation. Of course pictures will come in usefully in this connection, and will enliven the articulation exercises, which must never be allowed to become merely mechanical. In children fond of animals, the imitation of their cries sometimes forms a stepping stone to speech, and the child who will not make definite sound at the bidding of the teacher, will volunteer such information as that the cow says "moo," and pussy "meow," from which rudimentary attempts a language may gradually be built up. How music may serve as an aid to articulate speech has already been remarked; and nonsense nursery rhymes containing repetitions of monosyllabic sounds are not without value.

* See appendix C, "Mentally-Deficient Children."—(Shuttleworth.)

H. K. Lewis, General

My Experience in connection with Manual Training in
Elementary Schools.

A paper read by T. G. Rooper, Esq., at the Conference on Manual Training held at the Society of Arts on April 14th.

It was about the year 1880 that I first turned my attention to manual training in Elementary schools. Mr. Forster's Education Act had been in operation for some ten years, and the results of the educational system which grew out of it was giving rise to some discontent. Mr. M. Arnold told us that abroad the children were taught to be more human than in England, and directed our attention to Germany. In company with many others I paid several visits to various parts of Germany and Austria, and was able to endorse the opinion that Germany was the educationists' El Dorado. For all those who were intent upon promoting the intellectual progress of the people it was a mine of gold. Yet to my surprise I found the authorities in various towns and states far from satisfied with their own achievements. There was much discontent abroad as at home, but for a different reason. The complaint abroad was that the intelligence developed did not reveal itself in the fingers, and it was believed that in consequence a fair share of the world's material prosperity was withheld from a people whose educational system was one-sided and bookish.

The Principles of
Physiological Education, as illustrated
in the Training of the Sense of Touch.

We have Psychological Education
 in connexion with the Training of Teachers. It is
 possible that in the minds of some there may
 be a measure of obscurity as to the meaning of the
 term, & therefore a little time may properly be
 spent in the discussion of the subject. On the
 present occasion I will endeavour to elucidate
 it from a few illustrations with regard to the
 Training of the Senta of Teachers.

5. Seguin, the great apostle of the pedagogical
Method of Education defines it as ^{more} simply
"Educating the mind through perceptions, instead
of by pre-arranged reasonings (new facts p. 100)
When we speak to the reason of an ordinary child
with our reason, he receives but an, more or less
correct, ^{perhaps imperfectly}, but still his mind
is ^{more} ^{correctly} ^{permeated} ^{through} ^{ideas}
Ex. Wand. 1st. This is water. A normal
child understands, as well what is meant by the
idea to one hand has given rise to the understanding of the

How different however is it with the said? the
brain addresses itself to the mind, fixed so
to say in an immovable locus, never lighted by passion.
This explains why it was impossible to educate
savants, as long as Education was simply a
process of transposition of ideas from one
mind to another.

But bringing to bear on the subject the principles
of physiology, which setting aside the scholastic
distinctions of mind & matter regard all the
manifestations of life - (i.e. both bodily & mental
activities) - as dependent on the
functions of the health & proper ^{the} organs of
the physical organism, we may assume
that

1. If we could take hold of an organ we should
be able to make it produce its function,
the efficiency of the function being of course
dependent upon the integrity of the organ.
2. The organs of sensation being within our reach,
& those of thought out of it, the former are
the point that we can set in action.

Ward's Test Case p. 41. "New Facts"

From these two considerations we arrive
at the conclusion, which forms the basis
of the physiological method of Education,
"that education of the senses must precede
the education of the mind."
This indeed may be regarded as the fundamental
doctrine of the Physiological mode of Education.
It should speak with clearness & understanding what
"we learn by the education of the senses?"
Should it not be described as first exercising
& training the substances to bring out fully
as possible the activity of their functions?
The sense of touch, for instance, must be so
exercised as to bring home to the mind
experimentally, first the sense of resistance
in quality & texture which would hardness
cannot properly be expressed; then the differing
qualities of that resistance, which makes
an object hard or soft, rough or smooth, &c.
heavy & light &c. A child who by the
exercise of the sense of touch can discriminate
such qualities in objects placed before him

has opened up an important avenue whereby information may be conveyed to the blind.

It is important to be remembered that Education through the senses is not the same thing as the education of the senses themselves. Herein Exercises differ from sense training lessons. ^{or lessons} Exercises in the physiological mode the Observation of objects will be regarded as subservient to the training of the senses, the primary aim being physical development, the secondary knowledge. In other words, objects must be directed to the development of the senses, rather than the senses to the knowledge of the information of the intellect. Kindergarten lessons again differ from sense training. Similarly Kindergarten lessons, as to their more correctly the use of the kindergarten gifts, are valuable in the education of children in proportion as the principles just enumerated are borne in mind. The curved cube which forms Gift I may be used for training the sense of touch in the perception of smooth surfaces, sharp corners &c on. They are useful moreover in the training of the hand, which is, of course, excellence, the organ of touch.

If for instance I take into my hand this glass ball there are 3 classes of sensation which contact with it produces -

Secondly there is the particular impression
of its surface - smoothness

There is more ^{improvement} in ~~use~~ of perfumery by what I know that this glass ball weighs heavier than will be the case with a wooden one of corresponding size.

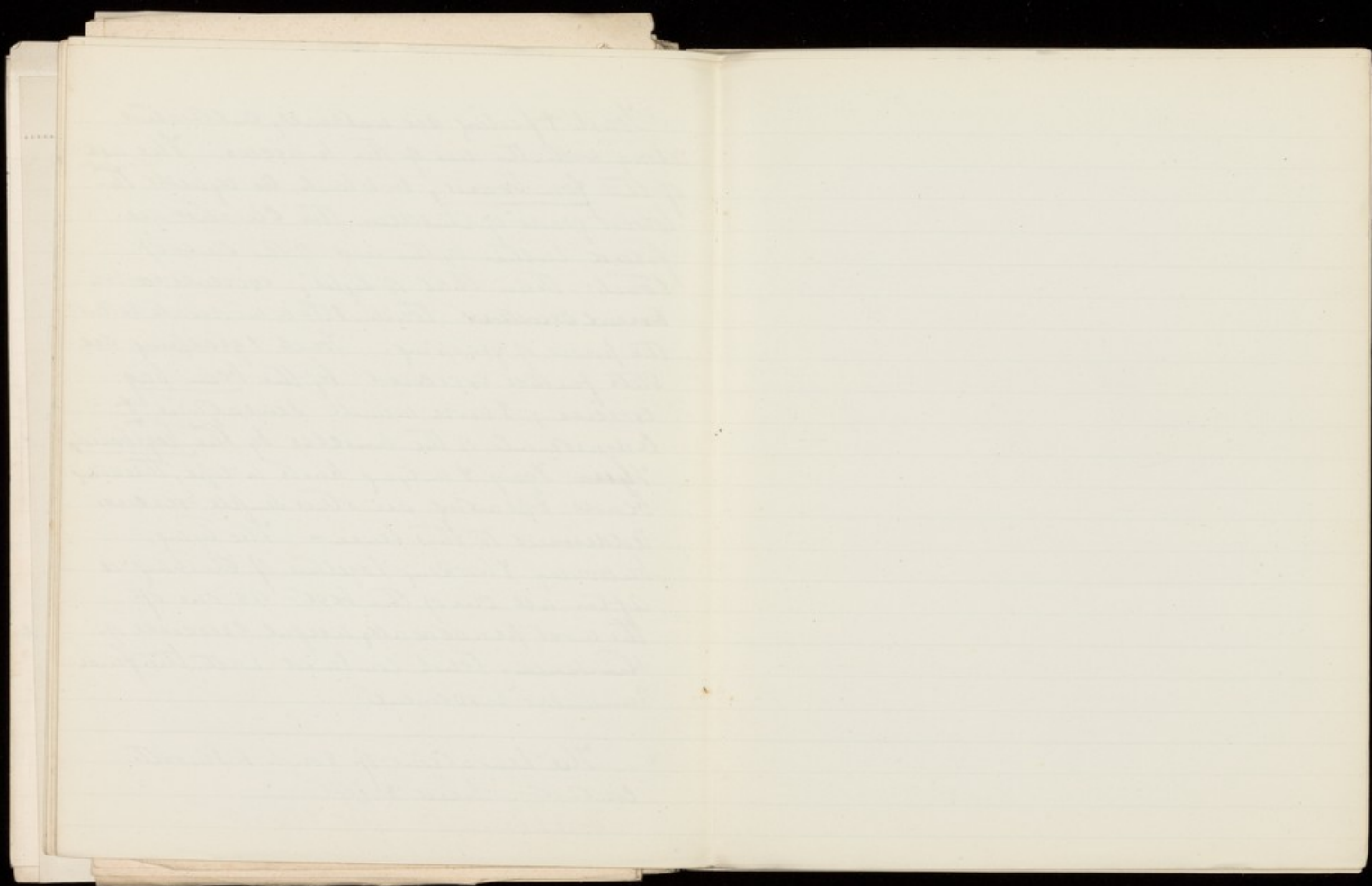
or there may be on the other hand a loss of
sensitivity interfering with the correct functioning of
the brain. or (c) the nervous system may be
in proper order they may fail to conduct to
the center of consciousness. Impressions made
on the eye, or (c) finally, the central
intelligence may be so deficient as to fail
to develop any definite perception to these
stimulations. Impressions - Vague sensations
are not changed into definite perceptions.

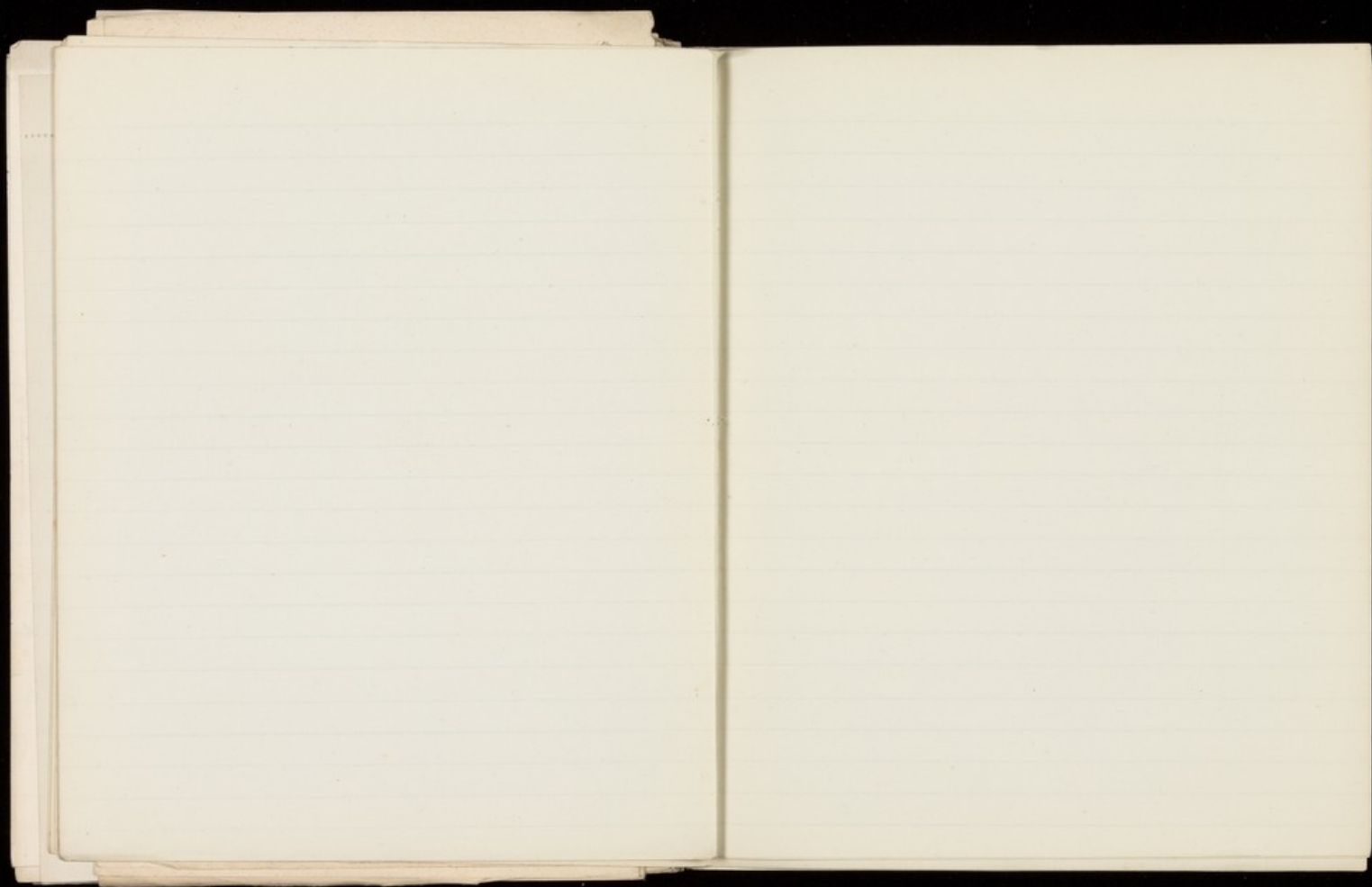
2 Exercise the organs to develop the functions

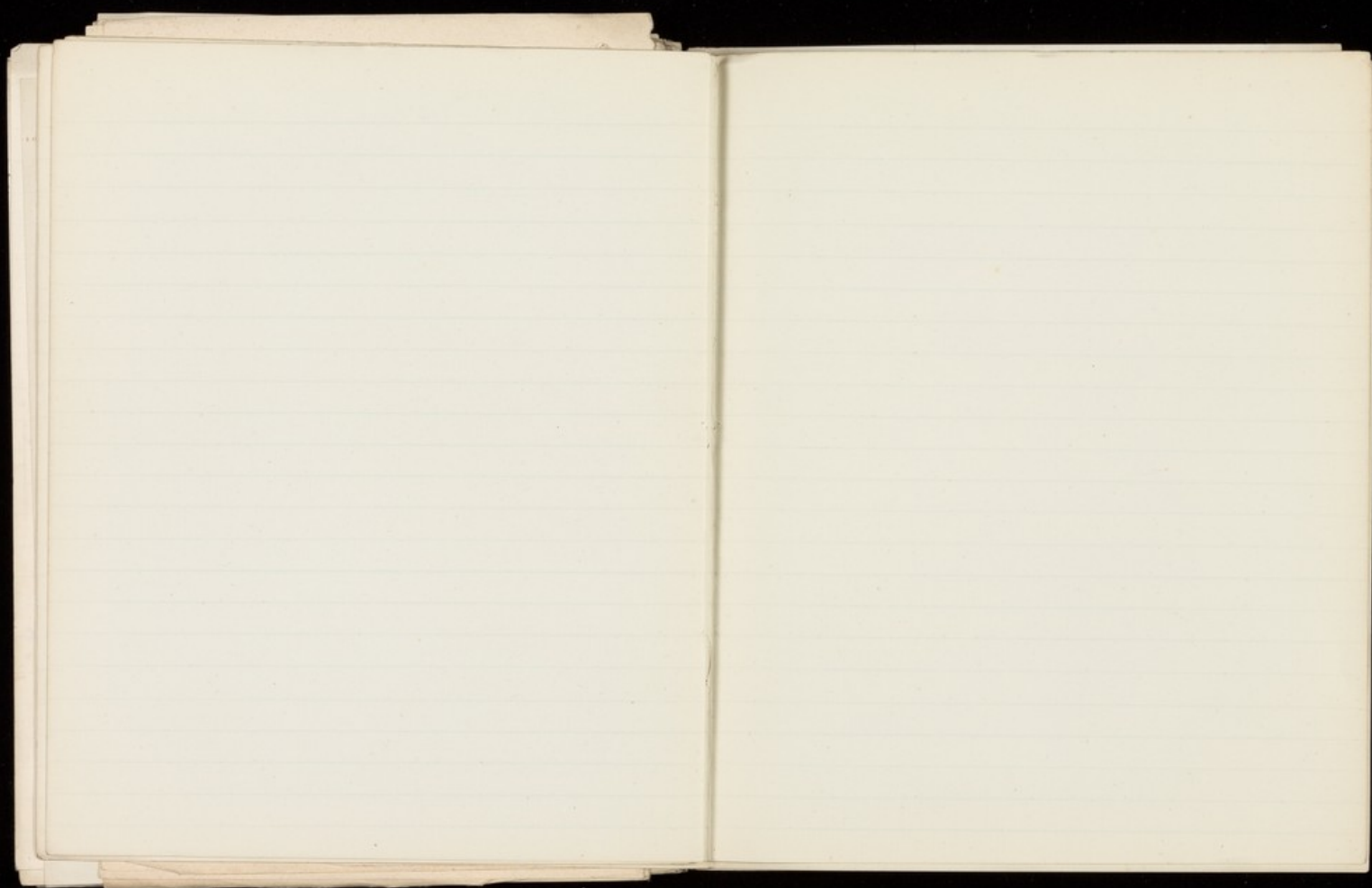
Let us take the training of the hand as the readiest means of illustrating the training of the House of Lords.

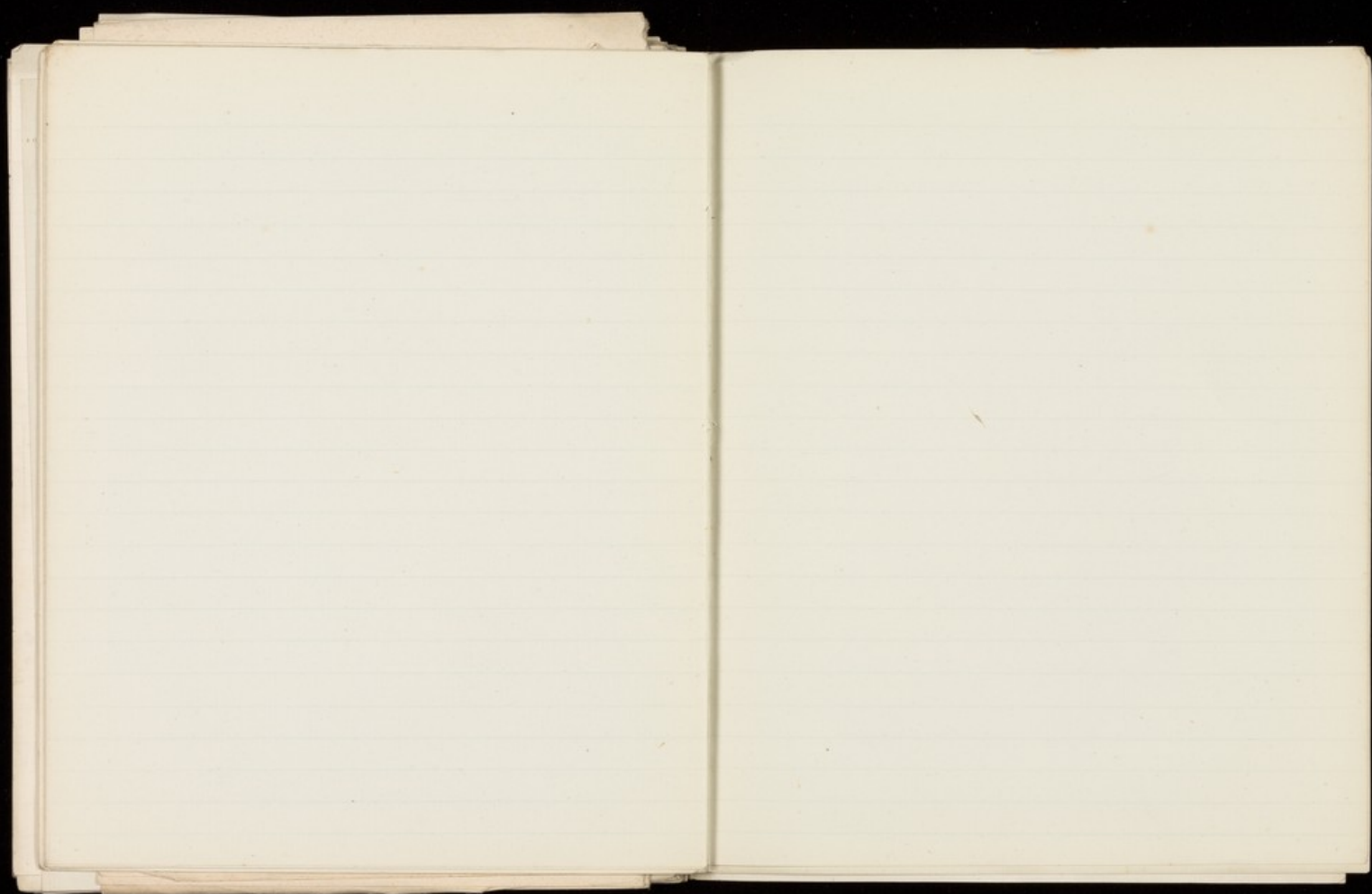
Touch & feeling are naturally cultivated along with the use of the muscles. The use of the form board, in which as regards the lowest grade of children the carities are filled rather by the aid of the sense of touch than that of sight, exercises in both ~~direct & indirect~~ touch. It to a moderate extent the power of grasping. Touch & grasping are still further exercised by the bean bag exercise; & more minute sensations & adjustments of the muscles by the peg-board ~~exercise~~ ^{exercise} & tying & untying knots in rope, threading beads & painting are other simple exercises addressed to this sense. The tying, buttoning & hooking together of clothing is after all one of the best as one of the most practically useful exercises of ~~the sense~~ touch combined with the fine muscular movements.

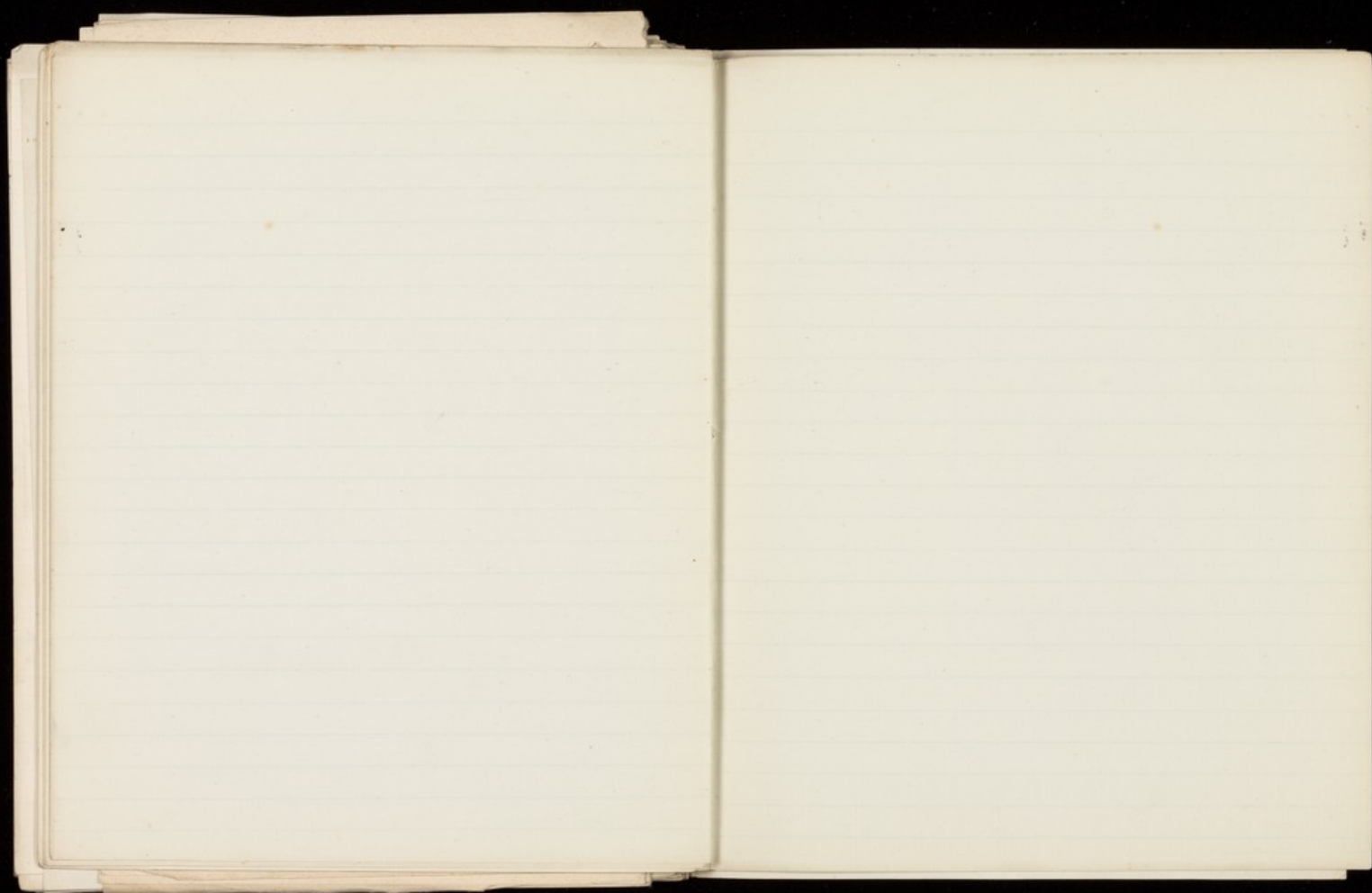
The sensations of rough & smooth contact. hard & soft.
hard & smooth. soft & smooth
hot & cold &c

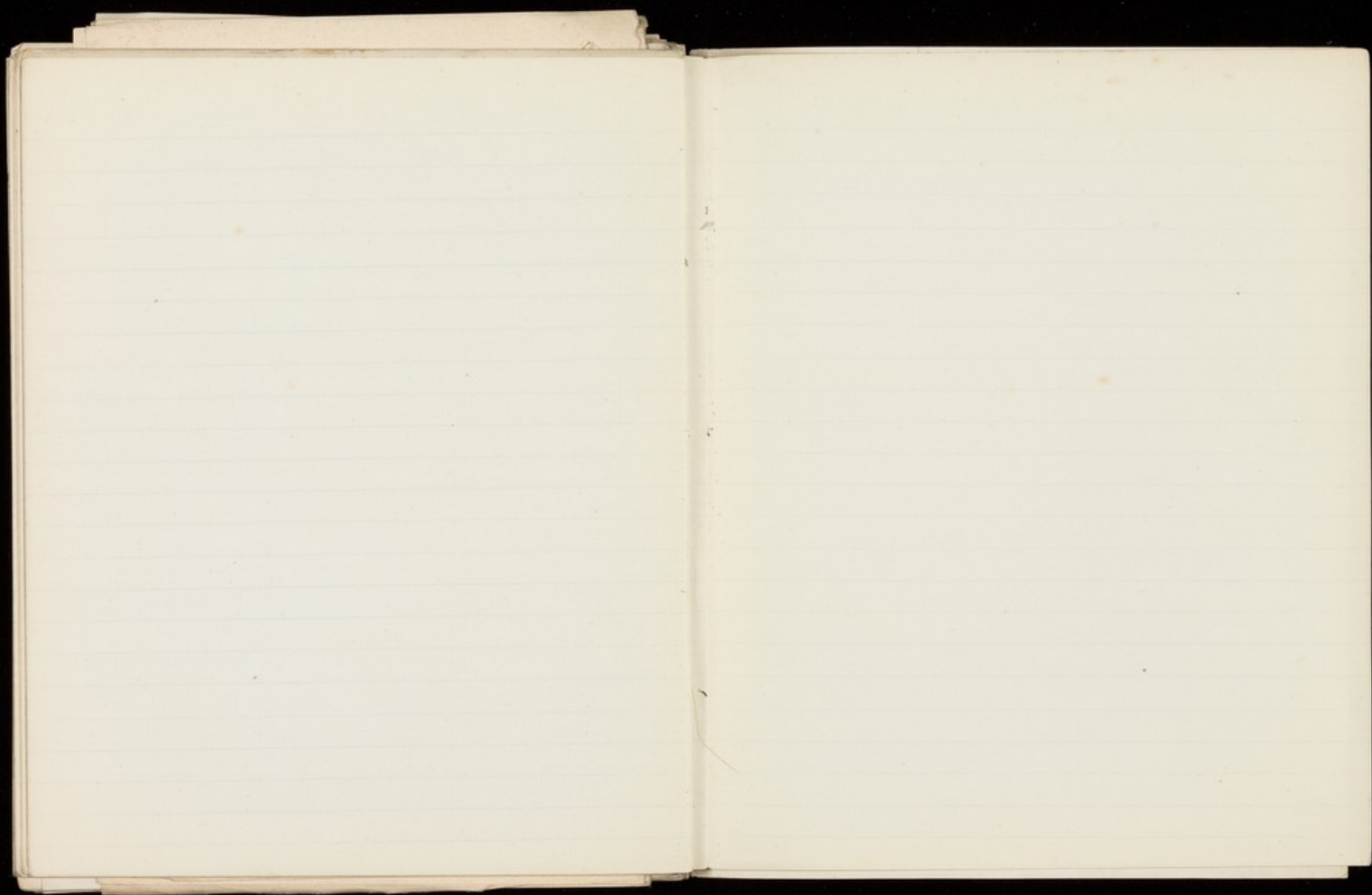


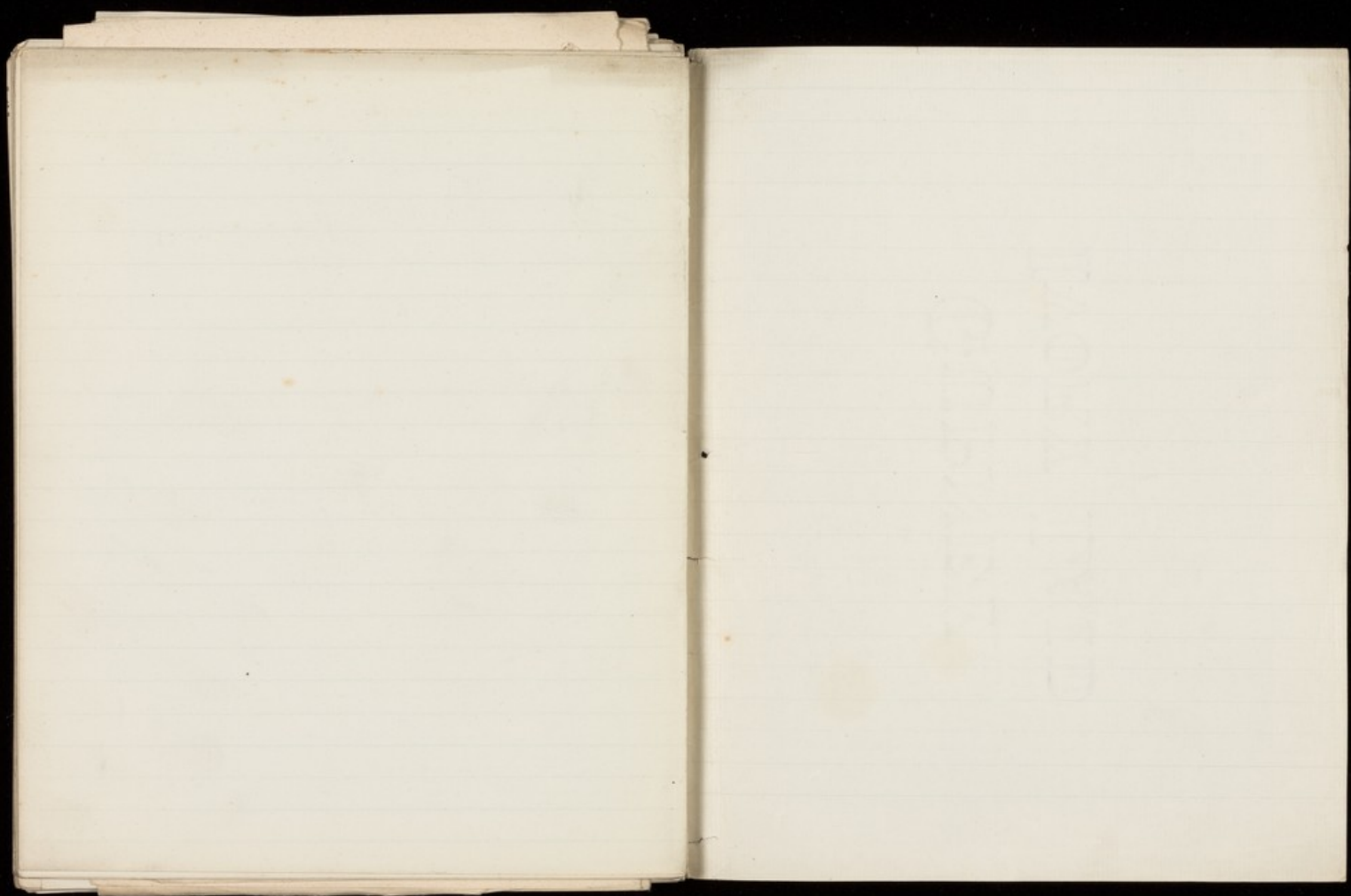


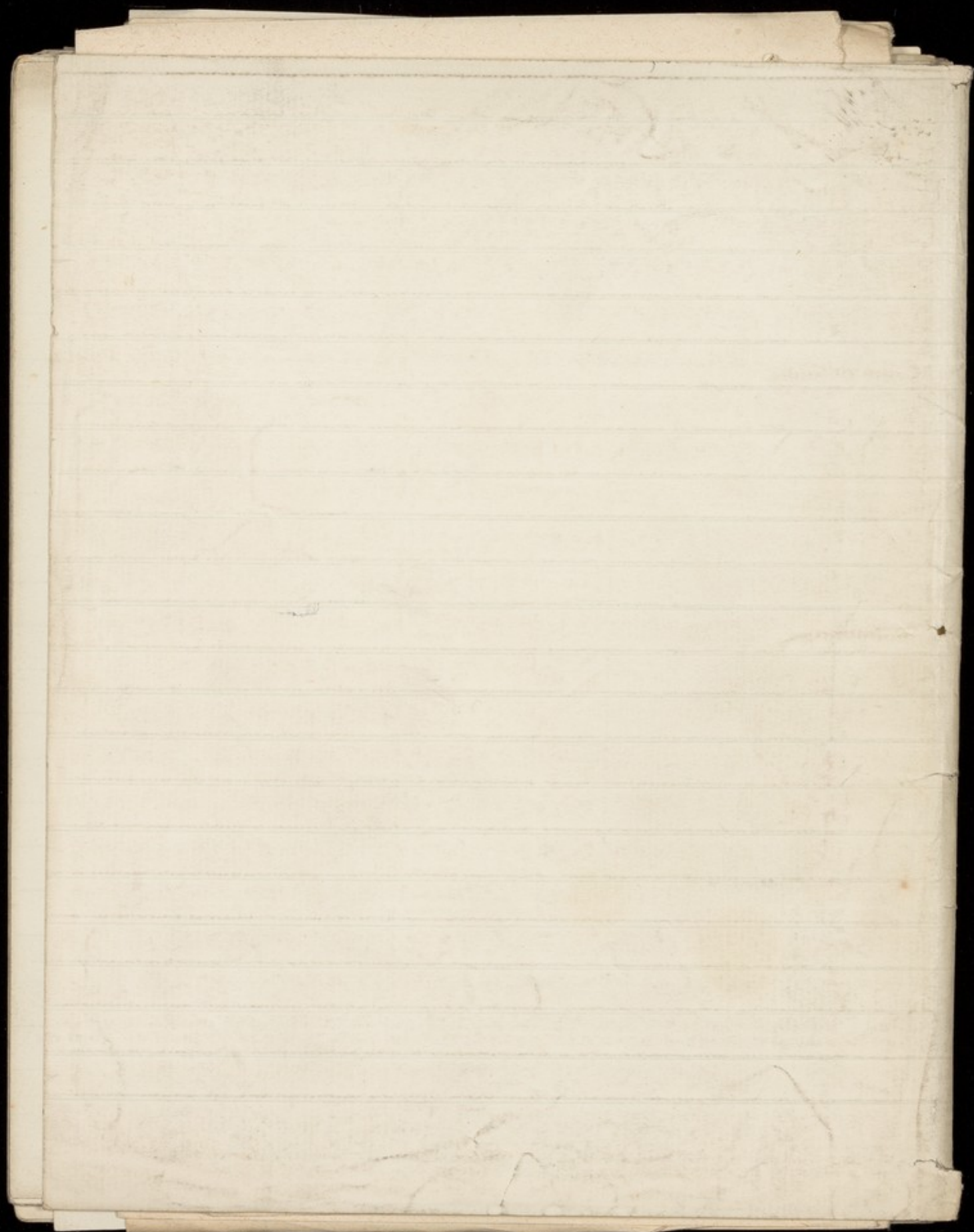












Lecture V.

Abstract of Lecture (X) 5

A good hint as to management of feeble minded children is best expressed as they fall within "Teacher's promise". Proper feeding of real importance, mental aptness being dependant also, physical vigor - for children often suffer from low nutrition - not only quantity but quality of food important, this last often overlooked by teachers & parents. Mental work often the result of intestinal work. Clothing should be ^{clean} water. Inculcation of cleanliness necessary action of them important. Kid's head looking after & frequent opportunities of relief to avoid accident. Some prone to diarrhoea. Peculiarities of disposition & infirmities of temper. "Anger often direct outcome of physical pain". Those who have had inflamm^y disorders of brain & tongue often subject to twitches & intense headaches - sometimes hiccoughs of stomach - etc. must be looked on as infirmities to be controlled by gentle means but not the calling for punishment. Great caution req^d with children who at any time have suffered

Lecture V.

In treating of the general management of feeble-minded children, we shall refer only to such measures as may fall within the teacher's province, or with regard to which she may legitimately influence the parents. Proper feeding is of course of great importance in fitting such children for educational processes, mental aptness being greatly dependent upon physical vigour, & I have already called your attention to the fact that children of defective development are, even when well fed, more apt to suffer than others from a low state of nutrition. If it be desirable for charitable agencies to aid in the feeding of ordinary school children in the way of free breakfasts or dinners it would seem that such assistance is especially called for in the case of the weaklings who so often find their way to the special classes. It is

(What has been collected)

no use to preach the gospel of fatness to
 the impoverished parent, yet it is a fact
 that mental improvement depends very
 materially upon the body being adequately
 nourished. ^{In the lower classes of society} The mothers of this generation
 are unfortunately too apt to spend their pocket
 money in that which justifieth not, & to
 cook what they buy in a manner which
 does not bring out its ^{best} nutritive properties -
 a fault which I trust will be remedied in
 the next by the domestic economy &
 cooking lessons which girls now get at school.
 In the meantime the teacher must point
 out the ^{importance of} necessity for the feeble child ^{having} of
 a plain nutritious diet so far as it can
 be obtained. e.g. good wholesome porridge
 for breakfast instead of tea & sugar. ^{not after having dinner} The sugar is a ^{superfluous element}
 the necessity of the feeble child being
 warmly clothed in view of the sluggish
 circulation of the blood (as is especially
 witnessed in the Mongol type by ^{protrusion}
 to blue hands & chilled extremities) is
 another point to be borne in mind, & lastly
 (For the child with malformations heart & cyanosis)

Holy cleanliness is next to Godliness!

They should however not be allowed
to abrade themselves too long
or evil may result.

3
The distribution in cold weather to this
class of children of woollen ^{knives} or
Comfyers is a most useful charity.

The inculcation of cleanliness, both as
regards person & personal habits, to say
nothing of clothing, is of vast importance.
The proper action of the skin, which is apt
to become clogged & consequently offensive,
in the feeble child, ought to be encouraged
by frequent abutions & rubbing, & by
occasional warm baths. Such children
have often imperfect control over their boring
functions, & require regular & frequent
opportunities of relief: it must therefore be
taken however to see that such opportunities
are not abused for nefarious practices,
as unfortunately sometimes happens. It
may be well to know that children of
the mongrel type are specially prone to
a form of mucous diarrhoea, & that such attacks
may sometimes occur from this cause; but
of course nubby habits must be in every
way discouraged.

Peculiarities of disposition & infirmities
of temper can only be detected where the
nervous system is abnormal, and
allowances must be made accordingly.
It must be remembered too that as
Sully states is the case with the normal
infant, "anger is ^{primarily} the direct
outcome of physical pain". We should
therefore be on the look out, where much
irritability is manifested, for indications
of digestive disorder or other bodily
discomfort; we should bear in
mind that abnormal children are
more subject than others to recurrent
headaches, & that when they have
suffered from inflammatory brain
disorders in infancy there may be
a tendency to specific irritation of
the cerebral membranes, as in the
hydrocephalic type, which may
become serious if disregarded. When
it is known that children have
suffered from fits, any unusual

restlessness and irritability may be considered as warning notes. Merely backward children are, like ordinary infants, prone to passionate outbursts out of all proportion to the intensity & violence to the apparent exciting cause - outbursts which July "in these stormy violence & their complete mastery of the mind for the time being are almost like the maniacal ebullitions of the insane. There is indeed such a thing as juvenile insanity, in which blind impulses to destroy property, to bite companions, or to set fire to premises may be developed at a very early age - even at 2 or 3 years - but these are far from the transient outbursts I have alluded to. Many cases may be explained by the child's mental shortightedness (so to say), that is to say his being carried away by the emotions ^{of the moment} without the modifying influence of experience and

reflection. Such child has to be
 considered. It is for the teacher to
 supply as far as practicable in such
 cases what is lacking in the child, &
 when the storm has subsided to point
 out & illustrate ^{determent} by examples the foolishness
 & foolishness of such outbreaks. Happily
 these outbreaks are usually of a very
 fugitive character, & sometimes they
 may be averted if the symptoms of
 nervous irritation which herald their
 approach are noticed sufficiently early.
 Some change in the child's position in
 school, or some diversion of his thoughts
 or a change of route
 even by goodhumoured banter will often
 change the aspect of things from storm
 to sunshine. With emotional children
 whose nervous system is ill balanced,
 changes of mood take place with surprising rapidity
 & it is almost a chance whether a nervous
 outburst terminates in a cry or a laugh.
 Of course as Education advances every means
 must be taken to strengthen the child's
 power of self-control, or as these powers

called it in physiological ^{and higher} ~~the~~ ^{the} inhibitory functions of ~~the~~ ^{the} nerve centres ~~system~~.

I must now offer a few remarks on the observation of health in school children, & important as this is for all teachers it is doubly so for those who like ~~you~~ ^{you} have the care of children ^{as they are} feeble in mind ^{who are} more frequently than ^{it is} ~~very~~ ^{the} feeble in body also.

Children require Special classes you will no doubt have to deal with Scrofulous children, with sickly children, with anemic children, with sore-eyed children, with those who suffer from chills & from various forms of skin disease; & a few words as to the characteristics of each of these may be of service.

Of Scrofula, called also Struma or King's wit, the most marked characteristic is enlarged glands, which sometimes form abscesses & leave scars, noticeable more particularly about the neck. A Scrofulous

11

Child is always delicate in every way as
 the Scrofulous Constitution offers Con.
 - Special accommodation for ^{any morbid} ~~the tubercle~~
^{that may be present about especially about glottis}
 & cold in a Scrofulous person
 may lead to consumption: diarrhoea may
 become consumption of the bowels; and
 even irritation around a decayed tooth
 may lead to a swollen gland in the
 neck. For the best remedies are liniments
 & good food; but some good
 may be done by the administration of
 cod liver oil & ^{the best} Compound of Phosphorus
 of iron & lime known as Parrish's Chemical
Food. It has been said that two-thirds
 or more of the idiot class are of Scrofulous
 Constitution, & I have no doubt it is
 a very considerable factor of feeble-mindedness.
Rickets is a constitutional disease
 of childhood, chiefly caused by improper
 feeding during infancy - often by giving
 babies starchy mixtures instead of milk
 foods. Rickets chiefly shows itself
 by large joints - especially the wrists - &
 notably enlarged

The eyes
generally, ^{if the} inside of the eyelids
~~is often~~ ^{is often} with an unnatural glistening look
about the eyeballs - The face has sometimes
a death aspect: in advanced cases it
is waxey looking - This condition is due
to the deficiency of red blood corpuscles,
the blood being ~~unusually~~ thin and
watery & lacking ⁱⁿ the quantities necessary
to nourish the tissues - Consequently ~~the~~
persons suffering from it are apt to fall
away in flesh, & to show signs of
general debility, being easily tired
with ~~only~~ ^{slight} exertion. Anemia
occurs more frequently with ^{adults} ~~adults~~ - 126.16 -
but it is seen also in children who are
have recently suffered from exhausting
illnesses - Sometimes after measles,
whooping cough or scarlet fever - The liability
to fatigue must be remembered in the teaching
of such cases. Iron which has to do with
the construction of the red corpuscles is
the appropriate remedy - with of course
good food & good air -

Children with sore eyes or Lacrylids
are usually ill nourished, often scrofulous
or anaemic. Suffering aside the more severe
affections of the eye which entail attendance
from school under the care of an ophthalmic
surgeon, it is well for the teacher to be
on the look out for a blood shot condition
of the surface of the eye which may be due
^{but more often cases are accompanied by}
to the effects of violence, ~~as they are~~ ^{the result of} violent
^{& may be accompanied by} ~~inflammation~~ ^{conjunctivitis,}
ocular inflammation from cold etc. In either
case the eyes should be allowed rest. In
delicate children an inflamed condition
of the margin of the eyelids (especially
the lower) is not uncommon from ~~these~~
^{tends sometimes to} ~~be called~~ ^(so-called)
similar causes, & if the discharge therefore
become mucous the child should not be
allowed to attend school as the affection
is contagious. In some cases, especially in
children of Irish ^{Irish} parentage, may be seen a
very disfiguring chronic condition of the
eyelids in which there is intense redness
of the lower lid which is thickened & shows
a number of little sazo-like granules.

13
inequalities in its substance. Such lids
are very apt to "matter" & are intensely
contagious. So common have "Chronic
granular" eyelids become in some of the
poorer districts schools of the metropolis,
that it was found necessary some years
ago to set up an entirely distinct estab-
-lishment for the separate education of
low-eyed pauper children apart from the others.

^{also called Malabarism School}
Children with feeble circulations
& inactive skins are much liable to the
diseases of fingers & toes & various lumps
other to skin diseases, which are mostly
of parasitic origin. There are two especially
which on account of their highly contagious
nature all teachers should be on their
guard against: I mean Ringworm &
Itch (Scabies). Ringworm is due to a
sort of fungus growth which invades &
displaces its nourishment from the super-
ficial layers of the skin. It is found on
all parts of the body but it is not difficult
to eradicate by the application of acetic
acid or iodine except when seated on the

hair scalp. Here the fungus penetrates
more deeply as it follows the hairs to
their roots in the deep hair sacs or
follicles. Unfortunately applications
superficially applied will not
penetrate as deeply as will the growing
pushing fungus: hence the obstinacy
of ringworm of the head, & the protracted
character of the treatment necessary
for its complete cure. ^{uninformed} ~~unfortunate~~
parents are apt to overlook the ailment,
to say it is mere scurfiness, or to apply
some ^{doubtful} domestic remedy, such as washing with
without consulting a doctor; & I regret to
say that even doctors sometimes think
they have cured ringworm when it is
still active. Ringworm is not in its early
stage characterized by the circular bald
patches which form so plain a criterion
later; but if the child has several patches
from which the hairs easily break off &
leaves as may be seen with a magnifying
glass ^{fragments} of hair broken at different lengths.
The affection is undoubtedly ringworm.

Obe
to
the
finger
doubt

15
No case of ringworm however slight, which
is not under medical treatment, should
be allowed to associate with other children
in class: with due precautions & the use
of an ointment cap, the education of the poor
child need not however be suspended
for the entire period of treatment which
sometimes lasts for years - X ray -

Scabies (which the doctors call Scabies)
is marked by intense irritation, and
the appearance of tiny blisters & pustules,
especially on the inner aspect of the joints
& between the fingers. It is caused from the
passage of the minute insect called the
"Acarus scabiei" which forms colonies
upon the human skin, the female laying
eggs in burrows beneath the skin, the
male running about on the ^{surface} of the skin.
It is caused by sulphurous acid frequently
applied, but the disinfection of the
clothes must also be carefully attended
to. Of course a child suffering from this
very contagious complaint must be

16
temporarily excluded from school until
certified as cured & the clothes disinfected.

Sore heads are not infrequently con-
-nected with the presence of Vermin in
the hair, & a "sore head" should always
be closely criticised, as the chances are
that there will be something calculating
about it.

Any rash on the skin unless satis-
-factory explained, should induce
acute apprehension. Of course when it
is known that any epidemic ^{already} prevalent
is present, more than usual caution
will be necessary, & unusual somnolence,
stupidity, shivering or sickness should
be regarded as probable indications
of oncoming disorder. Running at the
eyes & nose, with cough & sneezing, often
somnolence, will warn of measles. Any
complaint of sore throat, especially when
accompanied with head ache & vomiting,
& the best part of symptoms and intense sore throat
may indicate scarlet fever & diphtheria.
A paroxysmal cough followed by vomiting

Wondered at if fits occasionally occur
in such children though not reported to
be Epileptic. The patient falls suddenly,
Sometimes giving a loud cry first; the
thumbs are thrust in on the palms of
the hands, & there are convulsive move-
ments of the limbs & the head & face.
Sometimes the tongue is bitten so that
there is blood & froth about the mouth.
^{When you have to look to it}
Protect the patient from injuring himself -
for instance if he falls near a clock or
fender take care that he does not knock
himself in his convulsions
but convulsed limbs; but first of all
loosen all tight clothing, especially
about the neck. Having placed the
patient comfortably on the floor, a small
cushion under the head, you can but
wait for the fit to stop, & you may
comfort yourself by the reflection that
the attack looks more dangerous than
it really is, the intense congestion of
the face, & constriction of the features,
giving place to a pallidity & relaxation
which ^{to} the uninitiated may seem to
belong to death, though in fact they
become very gradually fatal.

Sometimes the child has warning of the
coming of a fit (^{typing or making light sound})
on coming of a fit (aura), & struggling with
cold water the back of the neck, rubbing the
hands may be tried; or if the head be
suddenly thrown back a fit may supervening
there, be avoided by drawing the chin forward
till it rests on the chest. Some fits
of an epilepticiform character are very transient
a glazed look ^{with pallor of countenance}, passing over the pupils, who
may perhaps drop his book, but he will
not sink half fall, & in a minute or two
he will be all right again. (partic. moral)

Fainting fits are of course due to an insufficient supply of blood to the brain. They occur in children who are anæmic or who have feeble circulation. The remedy is to bring the brain to a lower level than the heart, so that the force of gravity is in favour of, & not in opposition to, the pumping power of that organ: ~~to~~ therefore lay the child on his back on the floor, placing some hard pad under the shoulders, or if the child cannot be

being indicated from the class it will suffice to press the head down to the level of the knees as the child is in the sitting posture.

Hysteria is most frequent in growing girls over 12 & takes many forms. It shows itself first in nervous excitability, sometimes by persistent laughing succeeded by crying, & in bad cases by clenched hands, grinding teeth, & peculiar contortions of the body. Such cases generally show a characteristic quivering movement of the eyelids, & although apparently unconscious are not really so, always taking care (unlike the epileptic) to fall in a comfortable place. The remedy is first to convince that the patient can if she likes pull herself together again, an argument that may be reinforced by the liberal affusion of cold water, which if necessary it may be ^{theatrical} necessary shall be used boiling. Defecant will power is at the bottom of all hysterical fits. These emotional children are congregated they are apt to spread by imitation. Too much hysterics

7/2
26

Falls may or may not be serious matters
 They may give rise to lacerations, dislocations, ^(amplified)
 fractures, or if, on the head to concussion, ^{or even}
 or even compression of the brain. A slight ^{slightly}
 one of the ankle may temporarily be bound up ^{up}
 with a handkerchief dipped in cold water,
 & if judiciously done immediately, this will
 often prevent unnecessary swelling. Dis-
 locations may be distinguished from
 fractures by the fact that in the former
 the injured limb cannot be freely moved.
 In the latter it can be too freely moved,
 that is to say it can be bent at a place
 where it is supposed when it is bone (also pain),
 where a joint does not exist. In the
 former case no harm will result from
 waiting for the doctor, so you can leave
 a dislocation alone: in the latter a
 simple fracture, that is a break of bone
 not penetrating the skin, may be converted
 into the far more serious injury - compound
 fracture, where the skin is pierced by the
 broken bone. Some restraining apparatus
 must therefore be used to keep the limb

Symptoms
 of
 Concussion
 &
 Compression

in proper position until the doctor has
 it (as it is called *brexit*); & the object
 of the First Aid Course of the R.F.A. is to
 give specific instruction in the various
 circumstances of accidents which lead to this
^{Splinters made by Copybooks,}
~~to the accident.~~ ^{inches, flowers, brown eggs etc.}
 The bone of the skull is occasionally broken,
 & fracture of the skull is a serious matter
 owing to its delicate contents; but happily
 nature has provided ^{her} with good hard -
 -not to say thick skulls which require
 a ^{considerable} ~~great deal~~ of force to break them. It
 must be borne in mind however that a
 child falling upon his head may ^{fracture} ~~break~~
 not the top of the skull, but the base (by
 what is called contrecoup) & heavy bleeding
 from the eyes ~~commonly~~ ^{occasionally} ~~is~~ ^{may} be a serious
 concern. Fortunately children's skulls are
 more elastic than those of adults, & their
 brains being softer, they are apt to suffer
 from what is called concussion, the brain
 cells being all shaken up, & unconsciousness
 sometimes followed by loss of memory,
 vomiting. All you can do is to keep the
 child lying comfortably in a ~~stretched~~ ^{stretched} ~~position~~
 till the Dr. comes

* Burns from hot water tubes may be relieved by applying quickly a linen cloth soaked in a saturated solⁿ of bicarbonate of soda, with gentle pressure & turning.

24
23
Nose bleeding is constitutional with some delicate children - especially the Anemic class - & is an annoying incident in school. Don't let the victim be taken by a companion to the lavatory & have his head ^{inconspicuously} shoved under the bench, as has been too commonly done, but he should rather sit ^{up} in a chair, with his head ^{Orice if it can be got} thrown back, while cold water is ^{applied to} the nostril, & to the nape of the neck. Some-
times lifting the arm above the head will check the bleeding, & if it is found that the bleeding all comes from one nostril pressure on that nostril with the finger will often suffice.

Burns are hard to keep in check in your class-rooms, as they are ^{usually} heated without open fires, but it is well for you to know that in such an accident the greatest difficulty is to exclude the air. If a girl falls fire to her skirt, pull her down from behind, & smother the fire by enveloping her in a rug or carpet; if the body be burnt, cut away the

clothing, regardless of expense, so as to avoid
fading; & dress the burnt surface with Carbor
oil - a mixture of kerosene - or if you can't
get that, use any oil, or any other similar material.
Get them any oil, or loose ball cotton wool of
padding

The wounded children sometimes give trouble by stuffing foreign bodies like beads, fragments of slate pencil or into their ears or nose, or may become very impatient from the pain of some fly or other irritating substance accidentally lodged in the eye. In the latter case they should not be allowed to rub it in all sorts of directions, but in judicious & ~~deliberate~~ blows of the back with a fan or gentle rolling of the eye towards its inner angle will often serve to dislodge the offending substance. If not you may have to insert the upper eyelid by pressing on it with a pencil case, & pulling it gently upwards by the lashes, & then the speck can usually be seen & removed by the corner of a pocket handkerchief. If there remain much irritation a drop of castor oil, or a cold compress over the eye will remove it.

From the nostril a bead may be removed, if it can be seen, by a pair of tweezers or will be into a loop of ^{No.} ~~hook~~ ^{hook} such instrument. ^{However} ~~possibly~~ ^{times} be introduced into the passage of the Ear, but syringing with warm water will usually cause the foreign body to be washed out. Sometimes a child gets into a state of suffocation by involuntarily drawing towards the opening of the Windpipe (Larynx) such a substance as a cherry stone or a marble, & the Teacher must then try to wash down it with his finger pushed as far as possible down the child's throat. This will do no harm, & if vomiting be excited, so much the better as that tends to dislodge the offending fragment. As however suffocation may ensue if the substance be not promptly removed, a doctor should be at once sent for, & told for what purpose he is wanted, as the only chance for restoring the child may be by the operation of Tracheotomy.

one or two principles may be laid down at starting,
but two or three words. They are. Keep as
far as practicable everything in its highest
state of purity, not only the fittings as free
as possible from dust, but the air as
fresh as may be without making the
School rooms too cold. It is necessary
to remember that such children as fresh
~~we have been considering~~
~~this way to the Special classes~~ require
a ^{supply of} ample fresh air, for their abnormal
bodily states - sometimes even such odorous
emissions
such persons & that diaphanous substances are
apt to render the air impure & ^{impregnate} ^{with} ^{the} ^{excess} ^{of} ^{the} ^{light}
usually than a corresponding number
of normal children, while at the same
time the temperature should not
be allowed to fall below 60° as those
who have feeble circulation are more
prone than others to suffer from cold.
I know all these matters, as well as
the heating & lighting of class-rooms,
2-2 the form of desks & the direction of the light
have been carefully considered by the
proper
School board authorities, & it is only
necessary for you who have the

Herodotus - Genl. principle that
like produces like a good tree be.
Figs & thistles

General rule in vegetable kingdom
More complex in animal kingdom.

Germ & spasm cells.

Variations, mutation, atavism.

Theories of heredity

1 Lamarckian 15

2 Darwinian

3 Weismann

3 Mendelian 119

Royal Commission on origin of
feeble-mindedness p. 30.

Shuttleworth p. 30

Engelmann 87.

Personnel for defectives

Chronologically

1. Probable Inst. Candidate.
2. - - - - - Reformed.
3. Special Agents.
4. Colonies.

State Smith

and other information of
the State of New York
in the year 1880
at the annual meeting of the
Legislature at Albany
January 1st 1881
The sum of the
appended to the
State of New York
and other information of
the State of New York
in the year 1880
at the annual meeting of the
Legislature at Albany
January 1st 1881

Society may do much to improve
the hygienic surroundings of the
poorer classes of our population,
& Engenius may by eloquent enlighten
our people as to the importance
of care in choice of partners and
may be in abating the present evil,
but after all the mentally affected
will be ever with us, inconvertible
though the degree of ^{and would it then} ~~stupidity~~ ^{stupidity}
may be a whatever may be the
the cause of heredity & Engenius
let us not forget the teaching
of the Divine Master (John 9)
when his disciples asked "in to
the man blind at his birth" "Master
who did sin this man or his parents
that he was born blind?" Jesus
answered "Neither hath this man
sinned nor his parents but that the
wonders of God are?" he made
Man of us to be born."

5

action of the will," he proceeds to divide all cases into two principal classes, those of profound and those of superficial idiocy. The basis of the treatment which he proposes is in the main identical with that which in later works he described under the designation of *physiological education*. Starting with the axiom that "The education of the senses must precede the education of the mind," he argues that the true physiological method of tuition for persons whose nervous system is imperfectly developed is (i) "to exercise the (imperfect) organs so as to develop their functions," and (ii), "to train the functions so as to develop the (imperfect) organs." Ingenious devices are described whereby the organs of the senses may be methodically exercised, and cases are given in minute detail in which such exercises have been adapted to special incapacities.

It may be of interest to note that the present year is the jubilee of the date of publication of Séguin's classic work, which may be termed the Magna Charta of the emancipation of the imbecile from the thralldom of ignorance and neglect. It is fitting that in this country, at least, the jubilee year has been marked by onward progress in benevolent efforts in favour of the mentally-feeble class. Two societies, having this object, have recently been inaugurated; and for the first time a scheme of systematic training for teachers of "feeble-minded" children has been

5

action of the will," he proceeds to divide all cases into two principal classes, those of profound and those of superficial idiocy. The basis of the treatment which he proposes is in the main identical with that which in later works he described under the designation of *physiological education*. Starting with the axiom that "The education of the senses must precede the education of the mind," he argues that the true physiological method of tuition for persons whose nervous system is imperfectly developed is (i) "to exercise the (imperfect) organs so as to develop their functions," and (ii), "to train the functions so as to develop the (imperfect) organs." Ingenious devices are described whereby the organs of the senses may be methodically exercised, and cases are given in minute detail in which such exercises have been adapted to special incapacities.

It may be of interest to note that the present year is the jubilee of the date of publication of Séguin's classic work, which may be termed the Magna Charta of the emancipation of the imbecile from the thralldom of ignorance and neglect. It is fitting that in this country, at least, the jubilee year has been marked by onward progress in benevolent efforts in favour of the mentally-feeble class. Two societies, having this object, have recently been inaugurated; and for the first time a scheme of systematic training for teachers of "feeble-minded" children has been

from fits. Tremulous outbreaks of terror
due often to mental shortightedness, not
being able to take a sufficiently wide view of things
from want of experience - Nervousness. periodic
insanity? Emotional children require tact
on part of teacher to stem the tide of emotion.
Direct the current of thought. Try to strengthen
power of control & inhibitory power -
Observation of health? Scrophulous children
rickety children (improper feeding) ^{Susp. 301. due death. drink} ^{lax}
joints, curved long bones. (scrophulous?)
Chronic children. Sore eyes - precautions
needed. Skin diseases. Rashes. Fits.
Epilepsie. Fainting & hysterical

