

Improvement of Man in Body and Mind.

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Mr. President:

I am confident that
in marshalling before you the facts
which bear on the "improvement of
man in body and mind," I shall
not be compelled to depart from
the principles so often discussed in
the meetings of this association.
For let me say at the outset that
there is not a single means applied
to the improvement of the lower
animals, whether it be the effect of
food, climate, shelter, treatment.

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• exercise or inheritance, that cannot be applied, with tenfold complexity, to that highest of mundane creatures, the human being. And however great the desire we feel to secure the highest excellence in our domestic animals, the supreme question overtopping all the rest, is how to attain the highest excellence in ourselves, our children, and our race. For our intense interest in man, in his origin, his growth, his triumphs, his progress towards the perfection which he never can reach, pales all other interests as the rising sun

- pales the stars. The most-promi-
nent influences under which the
race advances or degenerates, are
indeed matters of common knowl-
edge. That extremes of climate
dwarf both body and mind, that
neither the frigid nor the torrid
zones produce the finest speci-
mens of manhood, that miser-
able and scanty food will, if
continued through generations,
beget a permanent physical and
mental leanness, that excessive
labor and excessive idleness are

- alike brutalizing, that man everywhere takes his physical and mental character from his surroundings, his yearnings, his struggles, his faith and his worship, and then transmits that character, good or bad, to his offspring.
- are propositions the truth of which, I opine, very few will venture to question.

But the object of this lecture is not to dwell on these principles in general but to show, if possible, with the clearness of

- Sunlight, the special minuteness with which they apply to the "improvement of man in body and mind", and I will predict, Mr. President, that nothing will be found in the discussion, that can startle our religious convictions or offend the purest taste.
- For all the means by which humanity struggles upward from want to plenty, from passion to principle, from earth towards heaven, are, in the final analysis, only the laws of the Creator through

- which his creatures may reach their highest growth and development.

Beginning with the laws of inheritance and their effect on the condition of man, we say, in the first place, that not one of the elements, whether material or mental, that constitute the body or the soul, is a thing of accident. On the contrary every organ, every fibre even of this physical form, and every faculty, feeling and impulse of this thinking self, has no solitary existence but is simply a link in an un-

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- broken chain of descent, a gift⁷ from our ancestors near or remote, to be improved by us a few short years and then bequeathed to our posterity. We may each of us, indeed, modify the growth of self and prune it into symmetry but its original character we cannot control. That
 - comes to us by lineal descent bearing the countless effects of a thousand lives that lie ~~in long per-~~ ⁱⁿ ~~spect~~ ^{spect}ive behind us, and, in ~~us~~ ^{us} it is only an instance of the perpetual renewal by which the
 - earth is peopled and the immu-

- Merable generations come and go. "Man", says Emerson, "is physically and mentally a thing of shreds and patches borrowed unequally from good and bad ancestors and a misfit from the start." It is one of the purposes of a genuine life, I add, to reduce this patchwork to a harmony of color and texture, to give to it by true living and genuine effort, the qualities of beauty and strength and then to pass it on.
- But those who have

- studied the principles of heredity as applied to races of animals, will hardly be surprised to learn the extreme minuteness with which they act in the human family. Not only does the European, the Caucasian, the Malay or the North American Indian transmit, with unerring certainty, through the generations its own type but all the peculiarities of the tribes, or nationalities into which each of them is divided, are perpetuated by pure

- Descent. The nobler form and the higher intelligence that distinguish man from the brute, the characteristics that mark his race, his Country man, his family, together with the special traits of mind and particularities of figure and feature by which we recognize him, as Peter or Joseph, or Thomas, are all bequeathed through paternity to the generations that follow. So that, if our individual acquirements of muscle and mind and all the

- defects and diseases which we have originated by excess or exposure, were subtracted, the residue would have its exact counter-parts in the lineage from which we sprung. And these original inherited proclivities ^{which} whether mental or physical, form the basis of individual character, will be found to have been most numerous in one or both the immediate parents, less numerous in any one of the grandparents, decreasing as we go backward until finally they run entirely out in some remote ancestor, leaving only

- the characteristics of nationality, race and species. The reasons are obvious. The first one lies in the fact that the number of our progenitors doubles as we step backward, giving to each of us two parents, four grand-parents, eight great-grand-parents, sixteen great great grand-parents and so on until the inherited qualities that converge in one of us, diverge behind us until they are lost by minute division. The second reason is revealed in the fact that
- Acquired qualities or powers in

- Each parent constantly tends to modify or ~~supplant~~ the inherited ones and are themselves liable to be transmitted to the child. Of course this implied uniformity of transmission is varied beyond measure by reversion wherein the transmitted peculiarity lies latent in one generation to reappear in the next, and by prepotence wherein is found some powerful ancestor who, to the exclusion of others, projects himself, so to speak, down through the generations.

- that follow him.

But we must not pursue the intricacies of herudity so far as to forget our main purpose which is to show, by a few striking examples, that every power, characteristic, ^{quality} or habit that cleaves to us as individuals, is naturally reproduced in our children so that every parent lives again in his offspring and that consequently the first and most vital step in the improvement, in body and mind, of the generations that follow us, lies in the improvement of ourselves.

But let us scrutinize this

- Marvellous power of self-reproduction with a little more minuteness of detail. Glance first at the parts and organs of the body. We all know with what uniformity in families the color of the eyes; complexion and hair is derived from one or both the parents. If both the father and mother agree in the color of these features, there will result a like agreement in the features of the children, but when the father is dark and the mother light or vice-versa, there will be exhibited

- A curious and interesting variety of blondes and brunettes among the little ones. We have indeed an occasional instance of an urchin who differs from both his parents in the matter of complexion and who consequently must find his prototype in a black-eyed or blue-eyed grand-parent. Very rarely will there be seen such a mingling of these elements that the same person will display the dark hair and skin of one parent and the blue eyes of the other.
- The nose also furnishes

- is ample testimony to the persistency of an inherited type. Special forms of it - from the aquiline to the pug, have been passed on by lineal descent down through successive generations. The famous Bourbon nose was a family
- appendage projecting into space, which was bequeathed by father to son with more certainty than the royal honors and the royal authority which belonged to the name. Some years ago while
- attending a Teachers' Convention

- I found myself sitting beside a gentleman - a book-agent - whose face terminated in a proboscis so astounding that I could not but regard it with amazement. Some months after I was introduced to a man with the identical face crowned with that identical organ. I at once asked "if I had not met him in Michigan" to which he replied "No. I have a brother there, a book agent whom I am said to resemble." In like manner the length

- size and shape of the hands, their plumpness or leanness, the length of the arm, the breadth of the shoulders and indeed the whole body from sole to crown, are all minutely subject to the laws of descent.

- But the marvellous exactness with which physical peculiarities are wont to reappear in succeeding generations, is revealed most strikingly in the transmission of diseases, malformations and other defects.

- Left-handed parents have sometimes bequeathed this peculiarity to some of their offspring. Everybody knows that a host of chronic ailments and maladies are propagated by descent. That dreadful scourge tubercular consumption as carried down from generation to generation in the family line, is a marked example. Gout, rheumatism, the scrofulous taint, are legacies received through the ancestral lineage. Palsy.

- apoplexy. Epilepsy. Show a strong hereditary tendency. Periodical maladies, heart-disease, sick-head-aches, and the whole legion of nervous disorders, are the terrible evils which "flesh is heir to." Dr. Holland describes an instance of hereditary corpulency whose heirs produced death to four individuals in two generations.

But the most remarkable fact in hereditary ailments is the precision with which vicial defects are handed down from parent to child. I have myself

- Taken note of many instances of near-sightedness which were certainly inherited. Dr. Townshend is near-sighted and so is his daughter. Dr. Beaumont of Michigan was near-sighted and three of his children have a similar defect. One of our college graduates could not distinguish red as a color and neither as he informed me could his mother. Dr. Holland affirms that he knew two parents who were squint-eyed and every one of six children were squint-eyed like wise. The same author gives us

- An instance wherein five children went blind from aneuriosis, a disease which was the fatal gift, by transmission, of a remote ancestor, who lost her sight by the same ^{cause} disease. You are acquainted with the fact that in Mutes their misfortune is frequently repeated in their children. The same liability to transmission holds with all the human deformities.

Mr. Sproule declares in the British Medical Journal that a hare lip with a cleft palate, had been hereditary in his

- family for more than a century.
The faces of Charles V. of Spain.
Philip his son, and other members
of the Royal family, were remark-
able for a projection of the lower
jaw which amounted almost to
a monstrosity. Judge Stacy of
Leumuck, Mich. a former ac-
quaintance of mine and a lawyer
of considerable distinction, has
club feet and deformed hands
with only two fingers all of which
he has transmitted to three sons
now men grown. An only daughter
has however escaped the deformity.

- With this array of convincing facts and with innumerable instances before our own eyes, how can we avoid the conclusion that all there is permanently in the human physique, of strength or weakness, health or disease, beauty or deformity, is, even in the minutest particulars, subject to the all embracing law that "like begets like".

And we shall inevitably reach a similar conclusion when we consider the qualities and faculties of mind. That the special instincts

- habits and degrees of intelligence which belong to the lower animals, run in family lines, is past all question. Not only are the small size, graceful form, and black and tan, of the rat-terrier matters of inheritance but his remarkable proclivity for killing rats, is inherited also. The ferocity of the bull dog, the sagacity of the shepherd dog, the pointer, the setter and the spaniel, each in its particular line, are the transmissible characteristics of the breeds. I once brought home for a Christmas present to a small boy, a diminutive

3 weeks old

- Black and tan. Whenever anybody scratched the carpet near him, he would instantly become alert with attention, showing, with erect ears and flaming eyes, that, as a future rat killer, he "meant-business."

Now there is abundant evidence - evidence which is constantly accumulating, that all the mental faculties, feelings, traits, habits, passions and appetites whose endless permutations in the human being goes to make up individual character, are as liable to transmission as the organs of

- the body or the features of the face. Individual mind whether sluggish or active, strong or weak, guided by passion or by principle, is, in its fundamental characteristics, both gained and given by descent. In a sense far wider than that applied to the race course it is beyond all cavil that "Blood will tell". Strong earnest workers whose intellectual grip never relaxes, will, under the law that "like produces like", bequeath their tenacity of purpose as a legacy to their

- posterity. While weakness, vacillation and instability are exposed, under the same law, to like perpetuation. It is in this sense that "if the father eat sour grapes the teeth of the children shall be set on edge." It is in this sense also that the divine lawgiver "visits the iniquities of the fathers upon the children unto the third and fourth generations of them that hate him", and it is through the silent and ceaseless working of the hereditary tendency, that

treachery and Cruelty, Drunkenness,
 Blood thirstiness, ~~and~~ remorseless
 hate, and every shade of vice that
 deforms human character, run
 in family lines and are propaga-
 ted without stint. We all know that
 fierce family feuds which crop
 out in many a bloody encounter,
 are handed down from father to
 son in the south, and that,
 since the plantation is desolate
 and worthless, the only real be-
 quest which, in a thousand cases,
 the planter can make to his sons

- and his daughter is his maddening hereditary hatred ^{he bears to the} of the Yankee.

Glancing at the illustrations of heredity furnished by Savage tribes still left on the earth, we find it a matter of history, that their peculiar ferocities, their indifference to human suffering and utter selfishness, are ancestral traits which cling to their lineage. And it is equally true that, in the contrasting condition of civilized life, we find ^{that} all the varieties of intellectual power are

the fruits which hang on the branches of a genealogical tree. Galton, a distinguished English writer, has published a book on "Hereditary Genius" in which he shows that nearly all the illustrious men the world has produced, belonged to families whose members were more or less famous for natural gifts. The grandfather of Macaulay, the brilliant essayist, was a preacher of surpassing eloquence - his father Zachary, a very able, lucid and rapid writer -

- his uncle, Colin Macaulay, on the father's side, was, though a soldier, a wonder of literary ability; and indeed the whole family were remarkable for brilliancy. The father of John Stuart Mill, the eminent philosopher and political writer, was himself a distinguished historian. The father of Mrs. Trollope whose book on America we still remember, was an able preacher. Her son, Anthony Trollope, ^{was} ~~as~~ a novelist whose books everybody reads and his son a successful miscellaneous writer. Charles Darwin, author of the Darwinian Theory, descended from a long line

- of ancestors who were all distinguished for their attainments in kindred branches of Knowledge. His sons also show, with marvellous uniformity, their possession of the same ancestral intellect. Indeed the number of Darwins in five consecutive generations that won world wide reputations in Natural History, is a matter for wonder. The Bachs of Germany were a musical family extending through two centuries and containing more than twenty eminent musicians, and a host of less distinguished ones.

Thus we see that if each individual should,
by a life of idleness and vices,
belittle and degrade the traits of excellence he ~~has~~
inherits from his sire and bequeaths to his son society
would degenerate and soon lapse into barbarism.

While on the other hand, if every parent should,
by a life of virtue and effort,
increase the sum total of ~~of~~ good qualities and
sound organs derived from his ancestors and descending
to his children, then ^{would} society ~~would~~ rapidly ascend to the
highest condition and civilization reach its final acme.