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WHAT A FATHER SHOULD TELL HIS LITTLE BOY

BY

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Book Three in a Series which tells the story of THE MYSTERIES OF LIFE in simple, plain words.

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My Dear Boy:—I want to give you to keep as your own, a little book which you are now old enough to read and understand. You may have many books given to you in the future as in the past, but you will never have another book given to you by anybody which you will find more interesting than this one, and there are very few books out of which a boy can obtain more real knowledge that will be of benefit to him all through his life. This little volume contains some information that will not only be of interest to you, but will also give you a correct idea of many things, about which, if you were left to find them

out for yourself, you might find it hard to understand and might soon come to wrong and harmful conclusions.

You will find, my boy, in the pages which follow the answer to a question which has often puzzled your little brain—one which you have asked several times in one form or another—"Where Did I Come From?" At those times I considered you still too young to be told, but now you have arrived at the age, when I think you will be able to understand what is said in these pages, and therefore I am giving you the means of finding out correctly that which you have been so eager to know.

Long before I was a little boy even, there was a very wise father who told this Story of Life to his little boy. When he had grown up to be a man

and had several little boys of his own about your age, he in turn told to his boys this wonderful story, and as he saw how much good it did the little fellows, and how glad they were to be told of these intimate things by their own father, he conceived the idea of putting the story in a little book in the form of the same friendly talks in which his father had told it to him, so that a great many boys could have the book and read for themselves the answer to the great question which they all come to ask sooner or later.

It is, I think, best for you to learn about these things now, for what you learn truthfully in this way will help you later to avoid the evil influences of companions who may have learned these facts from more ignorant and less fortunate boys and in a dis-

tasteful way. With this little volume to refer to and the knowledge that you may come to father for further explanation if you cannot quite understand, you need never be troubled by false ideas about any of these things.

I have brought you up so far, my boy, to be truthful, honest and honorable, and to be square with yourself in every possible way. I would consider myself a poor kind of a father, if, after having trained you so carefully in these things, I did not give you the benefit of the knowledge which you will find in these printed pages, and I give you this little book now while you are still too young to have learned its contents from other sources.

It will give you a proper idea of this subject and I think you will wish to adopt its ideas and suggestions for

your own. If you do that, you cannot make a mistake.

Here you will find told a great deal about the life that is in this little body of yours. Every boy has wondered what life is and where life comes from. As you grow older you will find that there are two great mysteries about our lives, which we are never able to fully understand. One is the Origin of Life and the other is Death. Both of them go together in our thoughts as great unsolved problems. But we can learn by careful study enough about the origin of life to understand that God put us into the world for a great purpose, which must be accomplished before the other great mystery, Death, closes around us, and some of the things which we can do in childhood as well as later in life to help God in his great purpose,

are to be clean, healthy, strong, manly

and pure.

When you have read and understand this story, you will see the great good which will come to you by forming the habits of being clean and pure both in your mind and body. Perhaps you will also learn that father only means to help you reach the high purpose for which God put you into the world, when he tries to correct your faults and instructs you in habits of cleanliness and other matters. Little boys are apt to think that fathers and mothers are sometimes too strict with them, but you will soon understand that it is only their great love and their earnest desire to see you grow up to be a strong, healthy and manly man, that makes them so anxious about you and so strict in guiding you aright.

Everything we do in the world should have for its object the thought of making us better boys and girls and afterwards men and women. There are many things which a boy likes to do which are apt to injure both his physical and mental growth. Your father realizes that you are as yet quite too young to know always what is good for you, and what is not. Father has some faults which he knows about. If I can so guide you through life as to remove these faults and improve your good qualities, I will have done a wonderful thing for you. But you must learn to help and I think you will when you have read the story.

My father gave me one of these books when I was just your age, and when I had read it and he had answered the many questions which I

had asked, I felt very much like helping him all I could in bringing me up with correct ideas and habits.

Your little body is a very wonderful machine, my boy, and it will keep on growing more wonderful as you grow older. The same is true of your brain. If you will only take care of your body and brain, and do the things which you can to help them grow, and learn to avoid the things which might injure or weaken them, you will grow up to be a strong and healthy man, and that is the most desirable ambition you can have, because with a strong and healthy body and brain, nothing you undertake will be impossible.

I would like you to take this book and read it very carefully. The author has tried to write it all down in words that are plain to every boy. If

there is anything about it which puzzles you and which you do not understand, do not make the mistake of asking your boy friends, but come to your father and ask him. He has been through the same thing and found great good in coming to his father with the questions which puzzled him. That is what fathers are for.

My Dear Boy:—To-night we are to begin to look for the answer to your great question, "Where Did I Come From?" It is right that you should have your answer to this oft-repeated question, for you are now at the age when you can understand it, if we go about it in the right way and learn the story step by step. I shall try to tell it to you in simple words so that you will understand it, but as it is a long story and as there are many things to be learned before we can come to the real answer, it will take us several evenings.

To begin with, we must go back to the time when God made the world to the time when he made the rocks, the mountains, the sun, moon and stars, the soil, and had put the water

in the lakes, rivers and oceans. God made all of these things first. They are called inorganic objects, which means "without life," so they are the things in the world which have no life. They do not die and for that reason do not have to be replaced. Man sometimes changes the location and form of some of these objects, but even when he digs the coal out of the mine and puts it into the furnace and burns it, none of it is actually destroyed. A part of it becomes smoke and gas and other parts become ashes, but all of the things which helped it to be coal are still in existence. It remains as a part of the "without life" matter which was originally created.

When God had created all of these inorganic things and had made the world ready for them, he began to cre-

ate the different kinds of living things which we find in the world. These are called organic objects—or objects with life. First he made the trees, the bushes, the grass, the vegetables which grow in the garden, the flowers and all other kinds of growing things. This class of life makes up what we call the vegetable kingdom and is the kind of life which has in general no feeling and cannot move about. It has none of what we call the five senses, for it cannot feel, see, hear, taste or smell. It has life and that is all and is the simplest kind of life.

When this life had been made, God was ready to create the other kinds of life—the fishes, the birds, cats, dogs, cows, horses and all the other forms of animal life, both domestic and wild. To this branch of living things he gave the powers of sight,

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feeling, hearing, smell and taste. Not all of the life in this class can do all of these things. Some of the lowest kinds of animal life, such as the clams and oysters which belong to the fish family, cannot see, hear, taste or smell. They only feel. Others can do more of these things, and a great many possess all of these senses.

After all of the other kinds of life had been created God made man and gave him other powers which help him to be the ruler over all of these other living things, which was what

God intended.

But when God put these living objects on the earth he gave them the power to live only for a time. In other words each kind of life must die, and to make it unnecessary for Him to keep on creating new life each time to take the place of that which

died, God worked out a very perfect plan by which each kind of life can reproduce other life just like its own. This plan is very valuable for people in the world. We use the vegetables which grow, and kill a great many of the different animals to supply us with food. If there were no way to cause these things to grow up again, all of the vegetables and all of the fishes and other animals which are good to eat would soon be gone, and all of the people would starve because they would not have anything to eat.

The way this works out in God's great plan is this: He put into each of the things in the world which has life, the power to cause other things to grow of the same kind as itself, and this power is called Reproductive Power. This gives each kind of life the power to bring other specimens of

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the same form of life into the world, and each kind of life can do this without any help from any other life. All of the trees and flowers and all of the fishes and other animals would reproduce themselves without any help from man. Man only takes advantage of his greater power to make the vegetables grow where they will be convenient to the kitchen and market, and the animals which he wants to use as food, in some handy place where he does not have to hunt for them every time he wants something to eat. This he does only with the domestic animals, such as the cows, sheep, hens, etc. When he wants some of the wild animals he must still go out and hunt for them in their wild state. makes some of these animals help him do his work, and kills the wild animals and birds which are good to eat

to supply himself and his family with food, but he cannot make either the vegetables or animals grow. They make themselves grow, as you will learn when you have heard the story.

Another point to remember is that each kind of life has the power to reproduce only its own kind of life. If you plant a hickory nut, you will soon have a young hickory tree which will, in a few years, grow up strong and bear other hickory nuts. You might plant the hickory nut where there are only oak trees, but the tree which grows from the hickory nut you plant, will never look like an acorn tree and it will never bear anything but hickory nuts. The leaves of the young tree will be exactly the color and shape of those on the tree from which the nut you planted came and the nuts will have the same flavor.

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Oak trees, walnuts, chestnuts and hickory trees will grow side by side. They get their food out of the same soil. Even the grass under the trees gets its food out of the same soil as the different kinds of trees, but it is always true that each kind of living thing in the vegetable kingdom will only grow other things just like itself, and never do these trees or plants grow up to be like some other kind of tree or plant.

Baby trees and baby plants are always exactly like their fathers and mothers. Yes! they have fathers and mothers, too. Not the same kind of father and mother which you have exactly, but they do have them. Perhaps it will be plainer to you if I say that these trees and plants have father and mother natures, for you have been so used to thinking of fa-

thers and mothers as people, that this

might puzzle you too much.

These father and mother natures are something which you cannot see always, but all living things in the world have them, and it is these natures in the different kinds of living things which enable them to reproduce themselves. All of the trees and plants and flowers in the vegetable kingdom and all of the fishes, birds and animals in the animal kingdom have these mother and father natures.

That is quite a new idea for you, is it not? I think it will be a good place to close our story for this evening, to give you time to think about it.

To-morrow evening I shall try to tell you about the mother and father natures in the vegetable kingdom the trees, plants and flowers—and we shall then see how they reproduce

themselves and what it is that enables them to do this. We can obtain a great deal of knowledge by studying

the plants and flowers.

We shall have to pay careful attention to the various steps in our story if we are to get a plain answer to your great question. We have, however, talked quite enough this evening and I should like you to remember what we have learned so far.

My Dear Boy:—I shall try and tell you clearly this evening how the little baby plants and trees come into the world, so that you will understand this much of the great plan which God arranged when he gave his living objects the power to cause other things

like themselves to grow.

When spring comes, and it is time to plant the garden and the flowers, you have seen father and mother put into the ground, the little things which you know are called seeds. These seeds contain the little baby plants which will come to life if planted in the ground, from which they obtain the warmth and moisture which is necessary to make them sprout and grow. To understand this we must find out how the seeds are formed by

the mother and father natures and that is what I shall try and explain

to you to-night.

The power in plants to reproduce life is contained in the blossom or flower. You may have thought that the flowers of plants and trees were only for the purpose of presenting something beautiful to look at and delightful to smell, but the real reason for the flower is the great purpose of the whole life of the plant—to develop a seed, which, if planted, will produce a little baby plant. Since, however, the purpose of the plant is so great, it is only natural that it should express itself in the form of the beautiful blossoms which we so much enjoy. The power to form a perfect seed is in the blossom. If you pick a flower to pieces you will find a definite plan in its construction. The

colors and leaves and the shape of all flowers vary, but the things which make it a perfect flower must always be there. The colored petals are called the crown. When you pull off the crown, you discover a number of little green leaves which help to hold the petals in place. These are known as the calyx. Within the crown you will find a number of little stems which grow to the colored petals. These are the stamens. Each of these little stems is hollow at the top, and inside, if you open one of them, you will find a fine powder. This is the pollen. This pollen is the father nature of the plant. In what is called the calyx, which is what is left after we have picked off the petals, we find the mother nature of our plant. It consists of a long stem called the ovary and this contains the seeds of

the plant. In order to form perfect seeds, the kind that will grow when planted, these seeds in the ovary of the plant must be made fertile, or in other words receive the life-giving principle from the father nature or pollen. When the flower is at the proper age, or in full bloom, some of this powder called the pollen, passes down into the ovary and fertilizes the seeds, and the seeds thus get the touch which makes them perfect. In plants of this kind the father and mother natures are found in the same flower. Then there are other plants in which the two natures are found in different parts of the same plant. I will tell you about one of these, which is the plant from which we get our corn on the cob, or "roasting ears," as many boys and girls call them.

You know what the corn plant looks

like. It is a tall plant which seems very high when you are in the cornfield and look up. Really it is generally only six or seven feet high. If you were to go into a cornfield when the roasting ears are ready to pick, you would see the ears of corn growing out of the side of the plant. They are covered with husks and out of the ends of the husks hang a bunch of brown silk threads which we call corn silk. Only this much of the corn plant is brought to market. If you look up at the top of the plant, however, you will see what you know to be a corn tassel growing at the very top of the plant. This is the blossom. The blossom in this case contains the pollen or life-giving powder. In the corn plant the blossom or tassel contains the father nature and the ear of corn contains the mother nature.

The husks are to protect the grains of corn on the cob inside and keep them tender. If you were to examine one of these roasting ears when it has just begun to form on the side of the stalk, you would not find any kernels of corn on the little cob at all. You would find only little places to mark where each of the grains expects to grow, but you could tell how many grains of corn are expected to grow on the cob by counting the number of silk threads which surround the cob and stick out over the end. There is a thread of this silk for each grain of corn that is to grow on the cob. Each grain of corn must be fed some of the pollen which must come from the tassel or father nature, and if this occurs the grains will each grow, if not disturbed, into large, juicy kernels, which, if left to ripen

until yellow and hard, will, if planted, produce other cornstalks. These will in their turn yield other "corn on the cob."

Man uses the seed of the corn plant as food for himself and his animals very largely and by taking advantage of this beautiful plan of reproduction, he plants great fields of it year after

year.

When the little kernels of corn are ready to grow, the tassel at the top is in bloom and when the wind blows the tassel, the pollen is shaken down and falls on the ends of the silk which stick out of the end of the ear. Then each thread carries some of the powder down to the little grain of corn under the husks at the other end of the thread, and thus the grain of corn secures the life-giving power to grow into a ripe seed. This is an illustra-

tion of the kind of plant in which the father and mother natures are located on different parts of the same

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There are, too, plants and trees in which these two separate natures are on different trees or plants of the same kind. Sometimes they grow side by side very close together. Sometimes they are in the same field, but very often at great distances from each other. In some cases they are even miles apart. In these cases, the pollen from the father nature must also touch the mother nature in order to produce a perfect seed. You will, of course, wonder how this is possible and I will try to make it clear to you. In these cases, the flowers of the father and mother natures grow on separate plants or trees; the pollen of the father nature on one plant or tree

and the ovary of the mother nature on another. Then the wind blows and carries the pollen from the father blossom to the mother blossom and a perfect seed grows. In many cases the bees and other insects do this part of the work, although they do not do it for the purpose of uniting the father and mother natures, but only accidentally, as they fly from blossom to blossom in searching for the honey which is their food. In doing this the busy bee will go all over the father blossom and take away all the honey he can get. His legs will thus be covered with this powder or pollen, although he does not know it. He visits all of the flowers he sees in his flight and sooner or later comes to a mother blossom of the same kind of a plant from which he got the pollen on his legs, and in this way quite acciden-

tally fertilizes the seed which is in the ovary of the mother blossom.

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It is a wonderful thing, too, that the pollen from the father nature of one kind of a plant will not fertilize the mother blossom of another kind of a plant. In other words, if a bee carrying pollen on his legs from a hickory tree, visits a mother blossom of the acorn tree, the pollen would not have any effect on the ovary of the mother acorn blossom, but would still have its effect on the first mother blossom of the hickory tree which he visited.

This is how life is produced in the vegetable kingdom, my boy. These living things have no feeling, nor any of the other senses, but even in their simple lives they are always true to their natures. This is a wise plan on God's part which man may take advantage of, because it enables him to

direct and control the growth of the kinds of fruits and vegetables which he needs for food, and the flowers he wants to beautify his home. Thus he can plant seeds of wheat and know beforehand that wheat will grow, for the seed never makes any mistakes, and always grows up into a plant or tree that is exactly like its parents in looks and in the kinds of blossoms and seeds which it will produce when it is old enough.

In order that a seed may grow it must be put into the ground—not too near the surface and not too deep either. If it is planted too deep, the sun will not have a chance to warm into life the little plant which is all folded up inside of the seed. It must not be planted too near the surface either or it might be disturbed, or perhaps parched by too much heat from

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the sun. When planted properly the sun and earth will always warm its little being into life, and it bursts the outside covering of its little home and begins to push its head up to where it can see the sun and grow by its warmth. At the same time it begins to send its roots down into the ground, for through its roots it secures the food and moisture which enable it to grow into a big plant. The baby plant is soon able to take care of itself.

I think that is enough for this evening about this big subject. You find it interesting, do you not? By tomorrow night we shall be ready to learn something about this wonderful story as it applies to another kind of life which we call the animal kingdom.

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My Dear Boy:—The further we go in our story, the more interesting it becomes and the more we can appreciate the wonderful plan which God devised in giving his living objects the power to reproduce life each after its own kind. All through our study, however, we shall see that the father and mother natures are necessary to the reproduction of life of every kind.

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To-night we are to begin the study of the animal kingdom. The first point to bear in mind is that in the animal kingdom the father and mother natures are in almost all cases separated. When we were studying the life of plants we saw that the father and mother natures were sometimes united in the same flower, some-

times on different parts of the same plant and in other cases on different plants of the same species, often miles apart, and that in such cases, since trees and plants cannot move about, it was given more or less to the chance of wind or other circumstance to bring the two natures together and produce a perfect seed.

In the case of animals, there are also a few of the lower orders of life, in which the father and mother natures are united in the same living object. This occurs in the oyster and clam families, which have none of the five senses except that of feeling, and are considered among the lowest forms of animal life.

In other forms of animal life in this class, however, which is known as the cold-blooded animals, the father and mother natures are separated and in

different bodies, and as we approach the higher forms of life in this kingdom, we find always a greater difference in the father and mother natures, so far as their appearance is concerned. These natures are well defined and are known as male and female. From now on in our study we shall sometimes speak of the natures in these terms—male and female. The father nature is in the male and the mother nature is in the female animal.

Another change is that the little thing which we called the seed in our study of the plants, is called the egg in the animal kingdom. They really mean the same thing, but when hereafter you hear anyone speak of eggs, you will know that they belong to the animal world and that seeds always come from the vegetable kingdom.

You know, therefore, that fish have eggs, otherwise they could not reproduce themselves. You will recognize the eggs of the fish family in the "roe" which are eaten as food. Not all fish eggs are used as food by man, but the roe or eggs of the shad, which is the best known in this connection,

are a very popular delicacy.

In the fish world the eggs are produced or formed in the body of the female fish. A single roe will contain a great many eggs—so many that you could not count them—for each tiny little round speck in the roe is one egg, and will produce a little fish under favorable conditions. These countless eggs form in the body of the female fish in the winter. When spring comes, and it is time for them to be hatched out, all of the fish swim away from the deep water where they spend

their time in the winter, to the bays and other places where the water is shallow and warm, and here the female fish expel the eggs from their bodies into the shallow water, where the sun can warm them and hatch out the little fish. The male fish accompanies the female fish on this journey, for when the eggs are laid in the water it is time for the male to do his part of the work, which is to fertilize the eggs. To do this, he swims over the eggs as they float about in the water and distributes over them from his body, a fluid which is very much like the raw white of a hen's egg and contains the life-giving principle, which, coming in contact with them, makes it possible for the sun and water to awaken the life in them and hatch out the baby fishes.

When the tiny baby fishes are born

out of these eggs, which process takes only a few days, they never see their parents, for the grown male and female fish have already gone away and do not care or know anything about their children. The male and female fish, you see, do not act like other fathers and mothers which you know, and they do not need to, because as soon as a baby fish is brought into the world, he is able to find the food which he needs to help him develop and grow, and does not need anyone to teach him how to hunt for it or how to take care of himself in other ways. In fact, it is a part of the plan in the reproduction of life among the fishes that some of them shall be used as food by the other kinds of fish which live in the water. If this were not so there would soon be so many fish that all of the oceans and lakes and

rivers in the world would not hold them. A single female fish will lay millions of eggs in a year, and if they all developed into baby fish and then grew to be large fish, there would be

far too many.

As I told you at the beginning of this talk about the fish family, this order in the animal world, which includes also the frogs and the turtles, belongs to the cold-blooded animals. They have only some of the senses which higher animals possess. They have feeling, and some of them can see and hear, but many of them, especially those which live at the bottom of the ocean, cannot see or hear, and many of the lower forms of the fish family cannot even swim.

We learn by studying the fish family that their powers for reproducing life are adapted to the needs of their

little ones. The lives of fish are limited. They are born to eat and swim about in the water, to become food for man and other fish, and then they die. Their babies are able to take care of themselves as soon as they are born and therefore their parents do not have to look after them, and in fact never know them as their children even if they do see them.

But when we begin to study the lives of the other animals, for which we are now ready, we find that the babies have to be looked after. They must be taught how to search for food, and the kinds that are good for them. They must be taught the habits of their kind of life. The higher you go in the story of life in the animal world, the greater are the dangers which surround the little baby animals, and the longer is the time

needed to teach them and train them in the habits of their kind. And this you will also learn, as we go further along in the story. The higher the order of animal life the less able are the baby animals to take care of themselves when they are born, and as the story develops and you begin to understand it, step by step, you will see how God arranged this wonderful plan, and gave to man, who is the highest order of animal life, a brain and intelligence so that he could rule over all of the other creatures and make them do his will.

As you study the story you will find it grow more interesting in every step. To-morrow evening we will have another one of our little talks and will learn how this plan is worked out in the family of our feathered friends.

My Dear Boy:—I promised to tell you in our little talk to-night about the next step in this wonderful story in the reproduction of life and explain to you where the young birds come from. By the bird family we mean not only the robins, sparrows and canaries, but also the hens and ducks and geese and all of that large and interesting class of life which we sometimes call our feathered friends. The task of the father and mother birds in raising their families is much more difficult than any we have considered thus far, because they have a great deal more to do and it takes up a greater part of their time. Besides hatching out the eggs they must care for their babies for several weeks after they come out of the egg. The

babies must be taught how and what to eat, and in fact, must be fed by the father and mother birds for several weeks before they are strong enough to learn to fly and hunt their own food. There are many kinds of food in the woods for birds, consisting of berries and insects. Many of these berries are not good to eat even for birds and the birds soon learn to tell the good from the bad. Hunters have been known sometimes to get lost in the big woods, and in addition to being worried about getting out, they must live on what they find or else they will starve. Some of these berries which grow wild are bad for man as well as for birds, and a wise hunter in such a predicament will not touch them, if he does not know all about them, until he sees the birds eating them. When he sees the birds do

this, he knows that they will not hurt him either.

We learned last night that the baby fish did not need to be taught to swim or hunt its food as it could do these things as soon as it was born, but the little birds must be taught how to fly and hop about. When they are born they are too weak to do either. They must learn how to watch out for other creatures who are their enemies and who try to catch them.

The bird family is a higher order of animals than the fish family. They belong to the class of warm-blooded animals, and the birds have most of the five senses. Like all animal life, that which represents the power to reproduce life in the bird family is contained in the eggs of birds. Here, too, the eggs are formed in the body of the female or mother bird, but they

are laid in a nest, which the father and mother bird have built together. This is the first case of real homebuilding which we come to in our study. Not only are the eggs formed in the body of the female bird and fertilized by the father, but the parents must, before they can start the family going, make a well-protected place to bring them into the world. The eggs of the bird family are covered with a thin hard shell. They are of various colors, sizes and shapes. One who has made a study of the different birds' eggs can tell by looking at an egg just what species of a bird laid it, and the kind of a bird which will come out of it when it is hatched.

What boy has not climbed into a tree at some time or other in his life and peeped into a bird's nest which he has discovered? At least every boy

who has spent any time at all in the country in the spring has done this. When you had climbed near to the nest, you saw the mother bird fly away from it and light on a limb near by, where she made a great fuss and a lot of noise while she watched you. You may not have thought that the mother bird was worried at what she feared you might do to injure her family. But at any rate, if you discovered such a nest you took your peep, and if you were not a heartless and cruel boy, you did not disturb the nest or the eggs either, but tried to remember only which tree the nest was in, and you made up your mind to come back and take another peep some day. Then perhaps the next time you came you found, instead of half a dozen eggs, that there were six very uglylooking little things, which you

thought, of course, were little birds, but which did not look like birds at all, because they were thin and weak and did not have any feathers. A little later, if you came again, you saw that the little ones began to look more and more like birds and if you watched the nest daily, you saw the father and mother birds very busy all the time. First one of them would fly away and bring back food for the little ones, which it would put into their open mouths, and then the other one would go on the hunt for worms and other choice morsels of bird food also. Later on you could see the father and mother teaching the little ones to fly, and when they had learned to do so. and had been taught how to hunt for their own food and also how to hide and fly away when their enemies were about, all the little birds flew away

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and the old ones likewise disappeared and abandoned their nest.

This is the manner in which birds and all other members of the feathery family are brought into the world.

You will remember how I told you in one of our talks that as we came nearer to the higher forms of animal life, the plan changed somewhat, and that the babies of the higher life took longer and longer to develop to the point where they could take care of themselves, until we reached the human family which is the highest form of life on earth.

The birds are a good deal higher than the fish family. It takes only a few days and no parental care to hatch out the fish and the little baby fish is able to take care of himself at once. In the bird family it takes several weeks and much patient care by

the parent birds to hatch out the eggs, and it is several weeks more before the baby birds can take care of themselves. A little later you will see that it takes a good many years to bring up a boy to maturity and that he is a constant source of worry to his father and mother, whose only thought is to develop him so that he is a good, strong, healthy and honest man, and when they have done that, father and mother are well repaid for all of their worry and care.

But, in order to bring their babies into the world, the father and mother birds must keep the eggs warm. This is another important change to remember. When we studied the plants, we found that when a perfect seed had been produced and planted under proper conditions, the warmth of the earth and sun would bring the

seed to life. The plants merely developed the seed and it was left for man or some other force of nature to place it where it would grow. Then we came to the fishes, and found that the mother fish laid the eggs herself in a place which she chose as a good spot where the warmth of the sun and water would hatch them out. In other words, fishes go a little further than the plants towards reproducing themselves, by depositing the eggs in a place which they themselves select. but it is still left to other forces of nature to awaken the life which is in the egg and bring it forth. Now when we come to study the birds, however, we find that they not only select the place for building the nest in which the babies are born, but also supply the warmth from their own bodies which is necessary to awaken life in the eggs,

and they then also must take care of the babies after they come out into the world.

Did you know that there is a small quantity of air and food within the egg which is put there just for the purpose of giving the little baby bird something to live on and to breathe with, while he is pecking his way out? The next time you have boiled eggs for breakfast, ask papa to take off all of the shell and you look for a hollow place at one of the sides or a flat place on the end. You will find it somewhere. Do you know what causes that? I will tell you. It is the air which is put inside of the egg when it is formed, so that the little chicken can breathe from the time it comes to life within the egg, until it becomes strong enough to break the shell, which it does with its

little beak, and come out into the world. There is also food within the egg to help him live. Now when the egg is boiled, this air within the shell, which would have been used by the little chicken, if the egg had been "set to hatch" instead of being cooked for food, begins to fight for its space and pushes the boiling egg back and forms this hollow or flat place.

I have told you this in closing our little talk to-night, because the reason for the air and food within the egg is closely connected with the answer to your big question which we shall come to in our next talk, when we shall study the next order of animals, the

mammals.

My Dear Boy:—To-night we are to study still another class of animals in the progress of our story, a class in which the little baby animal comes to life a long time before it is ready to be brought into the world and must be fed during a period of several months. A little chicken needs only enough air and food to gain the strength which it must have to peck its way out of the shell, but the baby animals which we shall learn about this evening, begin to live months before they are born and they require a great deal of food and air during this time. This class of animals includes the dogs, horses, cats, cows and all of the other animals that you see in the Zoo and those which live in the woods. They are called "mammals." This is a word

which means the same as "mamma" and indicates an animal which must be fed from the body of the mother, even after it is brought into the world. These animals live on the milk which they obtain from the mother's breast. In this class of animals, the eggs, instead of being laid in a nest or any place else, are retained in the body of the female animal after being fertilized by the male animal, so that after the life within the egg is awakened, the baby animal can secure its supply of food and air from within the body of the mother. In the mother's body Nature has arranged a wonderful little home in which the baby animal is all folded up in the tiny little egg just as the little baby bird is enfolded in the bird's egg. The mother's body supplies the warmth, which is necessary to stir the life of the little animal

in the egg, just as the parents' bodies supplied it in the bird egg. With the bird family it only requires a few hours for the tiny little bird to gain sufficient strength to peck its way out into the world, but the animal baby lives a long time in the little nest in the mother's body, and needs food and air to help it grow strong before it is ready to come out. At first the egg is very small. It is so small in fact that it cannot be seen without a powerful magnifying glass. This is also true of the very small germ of life which is contributed by the father animal, which is also needed in this kind of life to make the egg perfect.

After a period varying from a few months to a year, when the little baby animal has gained sufficient strength to begin its life in the outside world, it comes out of its mother's body.

Then begins the great task of the father and mother animals to develop the strength of the little one to the point where it can take care of itself. This also takes from a few weeks to a number of months, during which time the baby animal continues to secure its food from the body of the mother. There are other reasons why the egg of the mammal animal should be retained within the body of the mother, besides the great necessity of food and air which the baby animal needs before it is born. These animals have a great many enemies. They devour each other and are always in great danger of their lives from stronger and wilder animals of the same class. If their eggs had to be laid in nests and sat upon to keep them warm like bird's eggs, the mother animal would always be in danger of having herself

and her nest, too, destroyed. Carrying the egg within her body enables her to move about from place to place and protect the baby animal. The great reason, however, for this plan is to supply food and air for the baby animal so that it may grow strong and healthy before it comes out into the world.

After the time of its birth, the baby animal must be fed, as I have said before, from the body of the female animal, until it is strong enough to eat the food which other animals of the same kind eat. It must also, like the birds, be taught how to find its nourishment and the kinds which are good and which are bad; it must learn the habits of its kind and also how to hide and escape from its enemies. This is the period of infancy.

Men, women and children belong to

the "mammal" class of animals. The babies of the human family are the most helpless of all infants. The babies of the great majority of this class, such as the horses, can stand up on their legs within a few hours after they are born. It takes the human baby a number of months to become strong enough to stand up on its legs. A baby horse can also walk within a few hours, but human babies do not learn to walk until they are more than a year old.

It seems very strange that this should be so, but it is none the less true, and because the human baby must learn so many different things before it is able to take care of itself, it is therefore necessary that it should take longer. The human baby has a brain which takes a long time to grow, and if a baby could walk,

for instance, before its brain had developed, it would only get into trouble because it would not be able to control itself.

And so, my boy, we have come naturally to the answer to your great question: "Where Did I Come From?" We have studied the interesting story of the reproduction of life. We have seen that all life comes from a seed or egg. We have followed the story in its various changes in the different orders of life, until we found that the people on the earth are the highest forms of animals. And therefore, mother and father and you and all of us came from the egg of the human animal.

At first you were such a tiny little egg, that even if you had been where we could see you, it would have taken a magnifying glass to discover you.

Tiny little things like that are easily lost, and as you were even then precious to us, God put you in the little room or nest in mother's body. Mother's body kept you warm and soon you began to grow, and after a good many weeks the warmth of her body awakened your life and you commenced to knock on the wall of your little room, and then mother knew that you were alive, although it made her feel very uncomfortable when you tried to stretch your little arms and legs and turn over. For nine months you lived in this little room in mother's body, breathing through her lungs and nourished by her blood. Mother was very careful to eat only such food during this time as would make sure that you would be certain to become a strong and healthy baby. When you had been in

there for nine months, the door of your little room opened one day and you came out into the world. When you tried to breathe for the first time all by yourself, your lungs filled with air and you began to cry lustily. This made mother and father very happy. and then the nurse came and told me you were a boy. You see we never know until a baby is born whether it is to be a boy or a girl. You are therefore a part of mother's very own nature. But you must not forget that you are a part of me also. When you were at first all folded up inside of the tiny little egg, father gave it the touch of power which only fathers can give and made it possible for your little life to be awakened.

You can see from this, my boy, what it is that makes fathers and mothers love their children so. It is

because their children are a part of their own bodies. It is very wonderful to think that father and mother can unite their natures and have you come out into the big world after a long time with your beautiful body and a soul, which God has supplied as his gift to you.

We shall never be able to understand all of the mysteries of this wonderful story of the reproduction of life, but we can see so much beauty in what we do understand that we should try to grow up and live our lives with a great reverence for this power and for the God who gave it to us.

My Dear Boy:—It is true that we have now learned what we set out to learn when we began our interesting talks about the reproduction of life and we might stop, but I would not consider myself the right kind of a father, if I did not now go on and point out to you some of the valuable things to be learned from this story of reproduction, any more than I would think I had done my duty by you, if I had not told you what you have now learned.

You now understand why it is that fathers and mothers are so fond of their children, but we shall have to go on with our studies before we can understand why it is that fathers and mothers are so anxious about the habits which their children form;

about the way they obey; and many other things, and I think perhaps if we talk about some of these other matters a little in connection with our story, you will come to see how all of this anxiety and care on the part of father and mother is exercised in the hope that you will grow up to be the kind of a man that God intended you to be.

When I first told you about the plants, the fishes and the birds and also the animals, I told you that each kind of life had the power to reproduce itself. Also that man was given his brain and superior intelligence in order that he might rule wisely over the living things which we find about us.

In studying the other kinds of life to see what we could learn, man has discovered ways and means by

which here and there he can improve the conditions under which plants and animals live, and by experimenting in mixing the pollen of one plant with that of another similar plant has found out that they can be made to produce life under such conditions and in such form that it is an improvement in both quality and looks over what that kind of plants once were.

For instance, the first apple that was found on the earth was the wild crab-apple, which is small, sour and gnarly and not good to the taste. Man in his studying and experimenting has succeeded in developing all of the different varieties of apples which we find in the world to-day from the original sour crab-apple. After he had developed the first few varieties he kept on experimenting,

planting them in different kinds of soil, and feeding them with different kinds of fertilizer, and every little while he would get a new one that was different from the two parent apples from which it was developed, but in certain ways like both of them.

He found that he could do this also with the flowers in the world. He discovered in some way how to make a plant that had produced only single flowers grow double blossoms and also in many cases how to make plants change the colors of the flowers which they bore. There was a time in the world when there was only one kind of rose—the little yellow Scotch rose—but we have them to-day in many sizes and colors and there are hundreds of different roses. The same is true of the family of pansies.

Man could not change a rose to a

carnation, or make peaches grow on apple trees, as that would be against the law of nature, which allows roses to grow only on rosebushes and peaches only on peach trees, but he has learned to treat a rose bush in some way that when the flowers come in bloom they are double flowers and not single, and that the many colors of roses are developed from what was originally a yellow flower. He has made the carnation one of the beautiful double flowers of the world, from a plant which grew single flowers.

But man has not had to confine himself to the vegetable kingdom in order to show the results of his superior brain and intelligence. He has improved the breeds of dogs, horses, cows and many of the other animals. A great many men are engaged in the business of raising horses and cattle.

Some of them raise race horses and a man who knows his business can by study and scientific deductions tell beforehand, that if he unites a male horse of one fast breed with the female horse of another fast breed, he will produce a young horse, which if properly brought up will be able to run faster than either of the parents and perhaps even faster than any other horse that has ever lived. Other men raise draft horses and so study to combine qualities which they find in one breed with the qualities which they see in another that they can produce a horse that will, when grown, be able to pull a heavier load than either its father or mother.

But man has been able to do more for himself in this matter than for any of the other animals. When man was first put on the earth he did not

differ so very much from some of the other animals in a great many of the habits of his life. He was different in some ways, but not to the extent that he is now. He always had a brain and intelligence and could move about on his two legs and carry his body erect. but he did not at first live much differently from the other animals, making caves and dens do for his shelter. He soon set about, however, to improve his condition and habits and surround himself with more comforts. He always had the home instinct and wanted company, so the people on the earth grew into the habit of living near each other, and then they began to build cities and towns, and finally all forms of houses, schools and churches, and he soon learned how to make some of the animals about him help him do these things. This is

what we call becoming civilized. There are still in some far parts of the world people who are not civilized, and those we call savages, for they live a good deal like the other animals. But even these people, whose brains are only slightly developed, have learned to use them in such a way that they are a great deal higher in their development than the animals around them. Everything that man does to improve the things over which he rules and has control, is done only with the idea of improving the condition of the human race still further. That is really the great purpose of our being put here. We are each and everyone of us expected to do our part in the improvement work. I am expected to so teach you to take care of your body and brain, that you will, when you grow up, be a better man

than I am, and your children, if you ever have any, should be better than

you will be.

Children are very much like their fathers and mothers in many things. This you have already noticed. In looks they are like either the father or mother and sometimes resemble both of them. The eyes of the child will be the same color as the eyes of one of the parents; so will the hair. In other ways the children are found to have a combination of the qualities of the father and mother—some of the good and bad qualities of each. If either of the parents has a physical or mental weakness, the child is apt to have some weakness in his body or mind. If one of the parents has a weak heart or lungs, the children, unless they are watched over very carefully and taught to do many things

which will strengthen the muscles of the chest and keep the heart in good condition, may very readily acquire either or both of these serious conditions. In qualities of the mind, if either of the parents has a mental sickness, or an unsound mind, or very frequently, if some member of the family has at some time or other shown a trace of mental sickness, the children are quite likely to have weak minds and may develop a much more serious mental condition.

I hope you see what I mean, my boy. For instance, you look very much like your mother. You have the same color of hair and eyes, and although your head is shaped like mine, you should grow up to be a better-looking man than I am. Your hands are very much like mine. You have a quick temper which you get

from me also, while your love of music comes from your mother. You are honest and honorable so far as I know, but you should never take to yourself any great credit for this, because your parents are honest and honorable. When you see a bad boy, do not always condemn him, but pity his misfortune. He may be a child of criminal parents or one who has inherited criminal tendencies from some former generation. If only honest and honorable people had children there would soon be no crooks and wicked criminals in the world.

These tendencies, good and bad, which are thus passed from the parents to the child are called hereditary tendencies. Most of the bad tendencies, however, of both body and mind can be so watched and looked after in the little child, that by the

time it has grown up no trace of them can be found, and that is the object of all of the care which parents take with their children. To develop all of their good qualities and discourage the bad ones so that they will be better in these respects than their parents. If a child has certain bad traits and the father and mother do not succeed in discouraging their development, they will become worse in the child and crowd out some of the good qualities. Therefore when father and mother endeavor to teach you to try to control your temper, you will know that we are only trying to chase out one of the bad qualities which you inherited from me. On the other hand, when I talk to you about taking plenty of exercise, and especially about taking deep breaths, it is only because I do not wish you to develop any weakness

in your lungs, of which there is a slight trace in your mother's family. You see, my boy, the people in the world are constantly trying to make the world better. Some of them have wrong ideas of how to do this and fail. The object of the race is to produce men and women who are stronger and more accomplished. The only way to get results is to begin with the babies and children. If all of the children in the world to-day could be only honest, pure, good and healthy, all of the men and women they will grow up to be would be honest, pure, good and healthy, because, if everyone were clean and healthy, the diseases we have about us now would not find anybody they could take hold of. From this you can see how very valuable little children are in the world. Little boys like yourself will grow up to be

the fathers of the next generation and your children are likely to have the same faults which you have in both mind and body, as well as the good qualities of which you have a great

many now.

Since what I have told you is true, my boy, you can see that you to-day represent just what the life of your father and mother has been before you, and in fact in a sense the life of your grandparents. So far as your body is concerned you are now strong and healthy. You must be proud of it without boasting, for there are many boys and girls who are not so fortunate as you. But you must not abuse this body, for that is the easiest way to ruin yourself. In another talk I shall warn you of some of the temptations you must avoid, particularly concerning some habits which many

boys have been known to practice and which always bring great trouble and worry to them and to every one who knows them.

My Dear Boy:—A pure, strong, healthy man is the most admired of all the things in the world. It is one great ambition which I wish you to have for yourself. Such a man will surely succeed in life because he will be equipped with the kind of brains which will help him succeed where others fail. But above all, he will have a happy disposition and a contented mind and that is to be more desired than business success.

Above all, I wish you might train yourself to think only pure, clean thoughts. You may be thrown in with playmates who indulge in vulgar conversations, tell bad stories or even carry indecent pictures about with them or read bad books. You cannot avoid the evil influence of these things

unless you begin early in life to exercise self-control. You know what is good and what is bad in such cases. I do not wish you to think of me as preaching to you when I talk to you on these subjects, for I only want you to realize and understand that I wish you to be so much of a man that I would like to have you be your own judge on matters of this kind while you are yet a boy. I would like to say this, however: No boy can listen to vulgar conversation or bad stories. look upon impure pictures or read bad books, without having them make a little room for themselves in his mind, and such impressions, even though slight, will make it just that much more difficult for him to resist real temptations when they do come, as they surely will.

There is a very old but a very true

saying—"You cannot touch pitch and not be defiled." So much about a clean mind. I know you have a good brain and can tell the difference between right and wrong. You have a conscience and you will not be liable to make mistakes if you will always be square with your conscience.

There are two habits, which may not seem to have such direct bearing on the subject of this little book as some of the other talks, and which most boys like to make up their own minds about. I refer to the use of to-bacco and alcohol. Most boys have been talked to by their fathers and mothers about these habits which are common among men and tolerated. Boys generally regard these talks as lectures, pure and simple. Very often a father who smokes and drinks will talk to his boy and warn him against

these habits, and it is only natural that such a boy should wonder why his father does not himself quit what he calls these "dangerous habits," if they are really as injurious as he tries to show. Such a father is not to be blamed too much by his boy, because the father has acquired in these habits that which even the strongest men find great difficulty in shaking off. Tobacco and alcohol make great changes in the human structure in certain respects, and when either or both of these habits become fixed in a man, his system craves them to such an extent that it is practically impossible for him to quit, much as he may want to do so; and when such a father talks to his boy he talks from the heart, more than the other father who knows only by hearsay the bad effects of these habits, although he is equally

anxious to keep his boy from forming them either as a boy or as a man.

The indulgence in alcohol and tobacco has a very decided effect on the physical powers of both men and boys, in connection with the subject of which these talks of ours treat, however, and my duty to you would not be complete if I did not say something about them before completing our confidential talks.

You must be your own judge as to what you will do about these habits when you grow up. If I had the power to control you in these matters, or to put it still another way, if I had my wish, I would ask that you leave tobacco and liquor alone. They are expensive and unclean to a certain degree and the great majority of men who indulge in either regret the day they learned them. They have, how-

ever, also a decided effect on the vi-

tality of those who indulge.

Now as to your body. You can do many things to build up your physical strength so that you will be strong all over. By taking care of it and developing it you can build up each part of your body so that to all intents and purposes you will be a perfect physical specimen—the noblest work of nature. Every function of your body is more or less dependent upon all of the others. You have, no doubt, often heard the saying, "A chain is no stronger than its weakest link." Do you see what that means? In a chain of say one hundred links, ninetynine of them may be able to stand the test of the greatest strain which can be put upon them. If the other one link is weak in any spot, it will not stand the same amount of strain, and

so the whole chain is only as strong as that one weak link. So it is with your body. You are only as strong as your weakest organ. The human body is the most wonderful machine in the world. You can put it to the most trying tests and it can stand them, if you are strong all over. You can even abuse it and Nature will in most cases herself mend the hurt.

One of the greatest things to learn in giving your body a chance to develop to its best strength is the method of keeping it clean both inside and out. We talk of this in one of our evening chats, but I think you know why the bath is necessary.

I need hardly say anything further about exercise, because boys naturally get enough of that, but I would caution you never to get over the habit of exercising all of the muscles of your

body when you cease to be a boy and become a man. There are few things more good to look upon than welldeveloped muscles. It shows the strength that is in the man. Some games exercise only a part of these muscles, however, and you should vary the games you play so as to bring all of the muscles of your body into action. You know how you naturally feel when you wake up in the morning. You feel like stretching your arms and legs and you do it. It sends the blood circulating to your finger and toe tips so that you wake up all over. To keep your entire body strong so that each organ shall be as fit as the other you should exercise all of your muscles regularly.

In the spring, after you have played your first game of ball of the season, you wake up in the morning

sore all over. Do you know why? Only because you stretched a lot of muscles during that first game of the year which you had not used for a long time and every one of them is crying out because you suddenly gave them a lot of work to do, when you had not asked them to do a thing for weeks or months. If you could give all of your muscles only a little exercise every day, winter and summer, you would keep them all in fine condition and you would find yourself constantly growing stronger every day. The muscles on your arms, shoulders, back and legs would soon begin to grow and develop to look like those of the strong men we see occasionally, and this would be true of not only the muscles on the outside of your body, but also those on the inside—the muscles which control the

supply of blood for your stomach, liver and all other organs; and when you give them all the right kind of exercise, they develop the strength to withstand the attacks of disease and other troubles.

I would like you to understand why it is good to get into the habit of taking plenty of sleep—at least ten hours out of every twenty-four. A growing boy with a brain like yours, needs that much sleep in order to secure the strength and vigor in his body which that kind of a brain demands, and when I tell you that the sleep you get before midnight is better for you than the kind you get between that hour and next morning, you will understand that your father and mother have only your precious health and strength in mind when we suggest bedtime at eight o'clock.

You can also help your mind in its growth. Exercise the mind by giving it pure, good thoughts to work upon. Read only good books. When you are older you will find your brain enjoying the things which you taught it to enjoy. If you do not learn to love good books when you are young, you will not be able to enjoy them when you are old. There is an old saying: "The boy is father to the man." It is true in every sense. You will be the kind of a man in every way that your boyhood and manhood prepare you to be. A leopard cannot change its spots. Neither can a mature man change either his character or his disposition. He will always turn out to be the kind of a man his boyhood and young manhood fitted him for, and the beauty of it is, my boy, that if you have the right idea in boyhood and

young manhood, you are never likely to go wrong when you become a man.

I am telling you here these things which you already know, in order to recall again to your mind the relation it has to the study of the interesting subject which we have now gone over very carefully together. The great mission of man on earth and the greatest joy and happiness he can derive from his short life here is to have the knowledge that he has done something worth while for others, and for those others who will be here after he is gone. You are as yet a little too young to appreciate why this should be so, for many boys feel naturally that the greatest thing in the world is to get something for themselves.

The greatest thing a man can do for those who are dependent upon him here is to surround them with the

things which will keep them healthy—then they will be comfortable and happy, and the best inheritance a father can give to his children is a sound mind in a strong body, free from a tendency to weakness in any way, and that, my boy, is my object with you.

My Dear Boy:—You are not too young to have me say to you now that you were put into the world by God and given to us, so that you might grow up to be a strong, healthy and pure man and some day have children of your own. That is man's great

purpose in the world.

It takes a long time to grow up to be a man. Until you reach the age of thirteen to fifteen years you will continue to be a boy, and the changes in your body which will make a man of you will not really be noticeable until then. These changes begin to occur when you are seven or eight years old, but the great change which makes a man out of the boy, begins to take place at from thirteen to fifteen years. It takes all of the years of boyhood to

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prepare your body for this great change, and your boyhood should be devoted to building up a foundation of health and strength, which will help you to stand the trials that come when these changes do occur. Therefore I wish to tell you why it is necessary for a young boy to form correct habits in the care of his body, so that he will develop into a strong man. A perfect development will be the source of great comfort and happiness.

It is very important that a boy should learn when young the importance of cleanliness of his body. Also, how important it is to learn to stand, sit and walk correctly. Above all, he should learn how to exercise his muscles.

You put food into your stomach in order that your bodily organs which

are given you for that purpose will have material out of which to make rich blood, to build up your muscles, nerves and bones. You should be careful not to abuse your stomach by putting into it food that is not good, or you will injure it and suffer great pain from indigestion. A weak stomach will weaken every other organ in your body, and that is why we have always been so careful about everything you eat. Even now your stomach is not strong enough to take care of some of the kinds of food which older people can digest and enjoy without harm to themselves and with great benefit to their strength, while if you ate it you would have indigestion.

Now, not all of the food which you put into your stomach is made into blood. Only certain parts of it are

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good for this, and so there is a great deal of waste in the food we eat. If we go back to our "roasting ear" I can illustrate this to you. On the outside of each grain of corn is a shiny hull, which is a good deal like the shell of a hen's egg as far as its real purpose is concerned. It is put there to protect the elements which are in the grain of corn and which make it the perfect seed of the corn plant. That is also what the shell of the egg is for, but when we eat eggs we first remove the shell. It is impossible to do this with the shell of the grain of corn, and so we put the whole grain into our mouths when we eat the corn. The hull is of no value as food and the body must discard it. So it is with a great many of our articles of food. Many of them contain matter for which the body has no use and this

is thrown off and discarded as waste.

This waste is part solid and part liquid. The fluid waste is passed out of the body through the kidneys and the solid waste generally through the bowels, but only a part of it is passed off in this way. By far the largest amount of this waste matter from your body is thrown off through the pores of your skin every twenty-four hours. It is constantly being expelled through these pores day and night. If this waste ratter which comes out through your pores were retained in the body, it would very soon poison your whole system and you would be very sick and perhaps die. It is very bad to allow the waste which comes out in this way to remain on the outside of your body and that is why you should take at least a sponge bath

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every day. This should be done as regularly as passing off the waste matter which is expelled through the bladder and rectum. No child, or man or woman either, can enjoy perfect health, and be all that nature intended, unless these functions of the body are looked after regularly. The daily bath will give you a clear skin and a bright eye. If you neglect these functions you will not only become ill, but your skin will become muddy and blotched.

You know, of course, how carefully I have tried to teach you about the importance of moving your bowels every day. I shall try to show you why neglect of this function brings on bad health and permanent injury.

You know that when the cook starts the fire in the kitchen range in the morning, she shakes down the ashes

first and empties the ashpan. Then she puts in the coal and opens the dampers and the fire burns and breakfast is soon ready. If she did not shake down the ashes the fire would not burn even if she put on the coal and opened the dampers, and she would soon also find the inside of the grate and range ruined. The reason for this is that you cannot get a good draft of air to consume the fuel or produce the heat so long as the range is clogged up by ashes or waste matter and the same thing is true of your little body. If you do not remove the waste matter from your body regularly, the fuel, which is the food you take into your stomach, cannot be properly consumed or made into blood unless the waste is removed from the bowels. Your whole system becomes clogged up, so that you be-100

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come very sick, and you cannot treat your body in this way very long without damaging the whole inside.

I have tried to tell you of the importance of standing correctly—erect and looking everyone squarely in the face. Beware of the habit of standing constantly on one foot. This will cause your whole body to become twisted out of shape. You can see how this might easily be so. The result of this position in standing is to crowd your internal organs out of place. We know that children who always sit in a stooped position in school or at other places soon become round-shouldered and misshapen and their lungs cannot grow strong and fulfill their whole function. Sitting in this way they cannot take the deep breaths which are needed to fill all parts of their lungs. You know that

if you were to carry your arm in a sling, or bound close to your side day and night for a few weeks, it would become weak and helpless when you discarded the sling or loosened it. You could not lift anything with it. The arm would soon lose its shape and if you kept it there it would wither. So it is with your lungs. You must use all there is of them or they will become weak and unable to do their work properly and thus become liable to contract disease.

To sit in school with one elbow constantly on your desk tends to produce a decided one-sidedness and a similar weakness, and you must be very careful how you let your body become deformed in this way, as a crooked development on the outside means a crowding and deformity of the organs on the inside, and this is likely to

cause one of the many bodily troubles which people are subject to and which are accompanied with great pain and

suffering.

Every organ of your body is sacred and should be protected from all forms of abuse. Many of them are so delicate and sensitive that they cannot be abused without injury. You would not put your finger in your eye, because you know that would hurt and you might make yourself blind, because the eye is such a delicate organ. Your reproductive organs are much more delicate and likely to be injured. These organs are not apt to be injured except by wilful abuse on your part, because nature has placed them where they will be better protected from all natural causes of injury than your eyes.

There is a very bad habit or prac-

tice that boys sometimes get into, which is the result of handling the reproductive organs, but it is certain to bring great pain and suffering in later life and the harmful effects become apparent almost at once. No boy who is brought up with the proper idea of these and their sacred purpose will permit himself to abuse them, but sometimes even innocent boys are tempted to form the habit through playmates, and I wish therefore to tell you about some of the harmful effects that it has on the bodies and minds of those who are unfortunate enough to practice the habit. It is called "self-abuse" and is known also as the solitary vice, because those who practice it soon find that their guilty conscience causes them to prefer to be alone rather than where other people are.

The permanent results are always weakness, headaches, backaches, loss of appetite, pale cheeks, listlessness and lack of ambition. As if that were not enough, it causes loss of memory and may injure the mind permanently in many other ways. It is a very sad misfortune for any boy to form this habit and its effects are not easily cured. But any boy who like yourself has early developed ideas of purity, and has been brought up as you have to regard the body which contains the soul as something to be kept pure and clean, and all the organs as sacred, will find no great temptation, if any, to form this harmful habit. Should you, however, be tempted, my boy, come direct to your father and tell him.

What I have told you about the habits which show themselves in the

form of defect in our bodies, applies also to our thoughts. Impure and vicious thoughts work not only permanent injury to our minds, but also leave their marks upon the face and other parts of the body. If your mind is troubled, you have no appetite and your unhappiness shows in

your face and in your posture.

Your thoughts and habits are helping you to-day to make the face which you will wear when you are a full-grown man and which you will take with you to your grave. Pure thoughts and good habits, both in living and conduct, will help you to grow up to be a fine-looking man. Men are naturally intended to be good-looking, and where we see those who are not, it is either because their thoughts and habits have marred their looks, or, perhaps it may be that their fathers

and mothers, or some of their ancestors, by the kind of lives they led, made it impossible for them to be such.

There is a great deal to learn in learning to be a pure, healthy and strong boy and man. We are so important to the world that we cannot give ourselves over entirely to the pleasure of having fun. Boys even at your age must begin to bear in mind the great purpose for which they are brought into the world, for you have often thought, I am sure, of the time when you would be a full-grown man. It is a glorious age to reach, if you have had the good fortune to have a mother and father who know how to teach you in boyhood the things which you need to know, and prepare you in time for what you must know in order to grow up to be the kind of a man that we want you to be.

My mother used to have a general rule which she repeated often to me. It is a sure guide for both boys and girls, by which they may always distinguish the good from the bad in the things which boys and girls are apt to want to do. Here it is:

"Never listen to any talk or story which you would not want father and mother to hear; never read any book or look at any pictures which you would hesitate to show to mother and father; never do anything which you would not want us to see you doing."

In so far as other things are concerned, I think you can safely follow your conscience. If you will always act square with your conscience you will not go wrong, for you will never be off of the path which leads to purity, honesty and right.

My Dear Boy:—So long as you have been with us you have been a little boy—a child in fact. Soon you will come to the age where you will be a young man and begin to feel the changes within your body which take you from boyhood toward manhood, and it is of these changes I wish to tell you to-night in order that you may understand what is going on inside of that fine, strong body of yours when you feel those new emotions and strange ideas.

When we first began to study this interesting subject, I told you that in dealing with this story you would find that the higher the form of animal life, the longer it takes the young animal to develop to full maturity both before and after birth. Of course we

learned long ago that man is the most highly developed of all animals, and I wish to tell you to-night more about some of the changes the boy goes through from the time he is born until he becomes a man, and as you have always been a good specimen of a boy baby and give promise of becoming a fine man at maturity, we will talk about yourself.

When you were born, a few years ago, father and mother had given you the best that was in them as a foundation upon which to build, and you came to us out of your little home in mother's body, a perfectly healthy baby, but like all other babies, perfectly helpless and still dependent upon your mother for your food and drink. Pretty soon you began to develop some teeth and you were taught to take other food than that which

mother could give you from her breast. Then you were "weaned" and taught to eat like other children, although you could not even then eat all of the things which mother and father ate, but had special dishes prepared for you. This was done to give your digestive system a chance to develop so that it would be strong and sturdy. It was many months before you learned to walk and just about as long before you could talk. So it is with a good many of the powers that go to make up what we call a mature man.

These various powers are given to a boy as he begins to find use for them, but in such a way that he can develop them to their full strength gradually. There are certain powers which a boy needs during his boyhood and these are given him early in life. Then

there are other powers and qualifications which he would have no use for as a boy, but which he needs very much as a man, and these do not begin to develop in him until he is a young man, and are not fully developed until he is a full-grown man. These are, too, the powers and qualifications of which a man has a perfect right to

be most proud.

A boy is a boy until he reaches the age of from thirteen to fifteen years. From then on until he reaches the age of about twenty-three he is in the stage of young manhood, at which time he should be fully developed as far as his physical side is concerned. During this period, from boyhood to young manhood, certain changes occur in your body—both inside and out. Some changes which are to prepare your body gradually for the coming

great change start as early as seven or eight years, but the great change does not take place until you are thirteen

to fifteen years old.

Previous to the beginning of this age, the tastes and mental traits of boys and girls are very much alike, but at this age you will begin to feel certain changes and notice others on the outside of your body. This is known as the "age of puberty." At this time you will experience new and strange feelings of an emotional nature. The age of puberty in plants would be marked by the age at which the plant begins to bear flowers. The exact age at which this great change takes place varies from eleven to twenty years, according to the climate, conditions and race. In hot tropical countries it occurs nearer the age of eleven and in some of the

countries of the cold frozen North it occurs at the age of twenty or thereabouts. It also varies slightly with different people in the same climate, according to the state of the health The most marked of and habits. these changes which you will notice, come at the beginning of this period, but are not all completed until you reach full maturity. It is very important that you should understand the meaning of these new feelings and experiences, as you are subject to many new temptations during this time, and an injury to the reproductive system at this period is of more serious and far-reaching consquences than at almost any other time.

When you reach the age of puberty you will notice other signs besides those which take place in the reproductive organs. You will begin to

grow more rapidly; your shoulders broaden and your chest gets deeper; your voice will drop and become deeper and stronger; your skin will become a little tougher and very soon your beard will begin to grow; later on your wisdom teeth will begin to appear; soft hair will grow on various parts of your body. This is known as the awkward age in boys. While your voice is changing you will sometimes find it will break in the middle of a word and it will be part deep and mannish and part shrill and boyish. You will be more sensitive and bashful than usual. You will receive new sensations and develop new desires which you may not understand. You will commence to think of girls as girls, whereas you have always thought of them only as playmates. You will during this time be very ir-

ritable and contrary, and feel like be-

ing disobedient and unruly.

I have told you briefly of these impending changes to-night, my boy, in order that you may understand what is going on when they occur. When that times comes you will be entering the most critical period of your entire life. I would like to help you avoid the dangers which surround you at this time. It is then that you must learn to exercise your willpower and self-control, which I know you possess. In all of the trials which you will encounter at this period of your life, come to your father and tell him how you feel, and he will know how to help you over the rough places, for he has had the same experiences and is anxious to have you grow up to be "every inch a man," and will be glad of your coming to him.

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