

G O D,
THE SOUL, AND A FUTURE
STATE.

A TWOFOLD POPULAR TREATISE.

BY
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SECOND THOUSAND.

London:
HODDER AND STOUGHTON,
27, PATERNOSTER ROW.
MDCCCLXXIII.

141. m. 154.

Watson and Hazell, Printers, London and Aylesbury.

TO
SAMUEL MORLEY, Esq., M.P.,
WHOSE NAME IS SYNONYMOUS
WITH CHRISTIAN GOODNESS AND PHILANTHROPY,
THIS VOLUME IS
MOST RESPECTFULLY AND GRATEFULLY
INSCRIBED BY
THE AUTHOR.

September, 1873.

P R E F A C E.

WHEN my Popular View of the Historical Evidences for the Truth of Christianity—which I entitled “The Bridge of History over the Gulf of Time”—was published in July, 1871, I said—“If the sample of my lecturing which I now publish meets with acceptance, I may try to put the rest—all as yet only spoken—into writing for publication.” The fact that “The Bridge of History” is now in its 8th thousand warrants me in presenting another sample of my lecturing to the public.

A few words of explanation, as to its form. I have preserved, in a great degree, the precise words which were spoken—the ease and familiarity of the public talker—as in the “Bridge of History;” but I have deemed it necessary to put what I said into a bookish form for readers : to divide what was said into sections, and put titles to them. I judge the

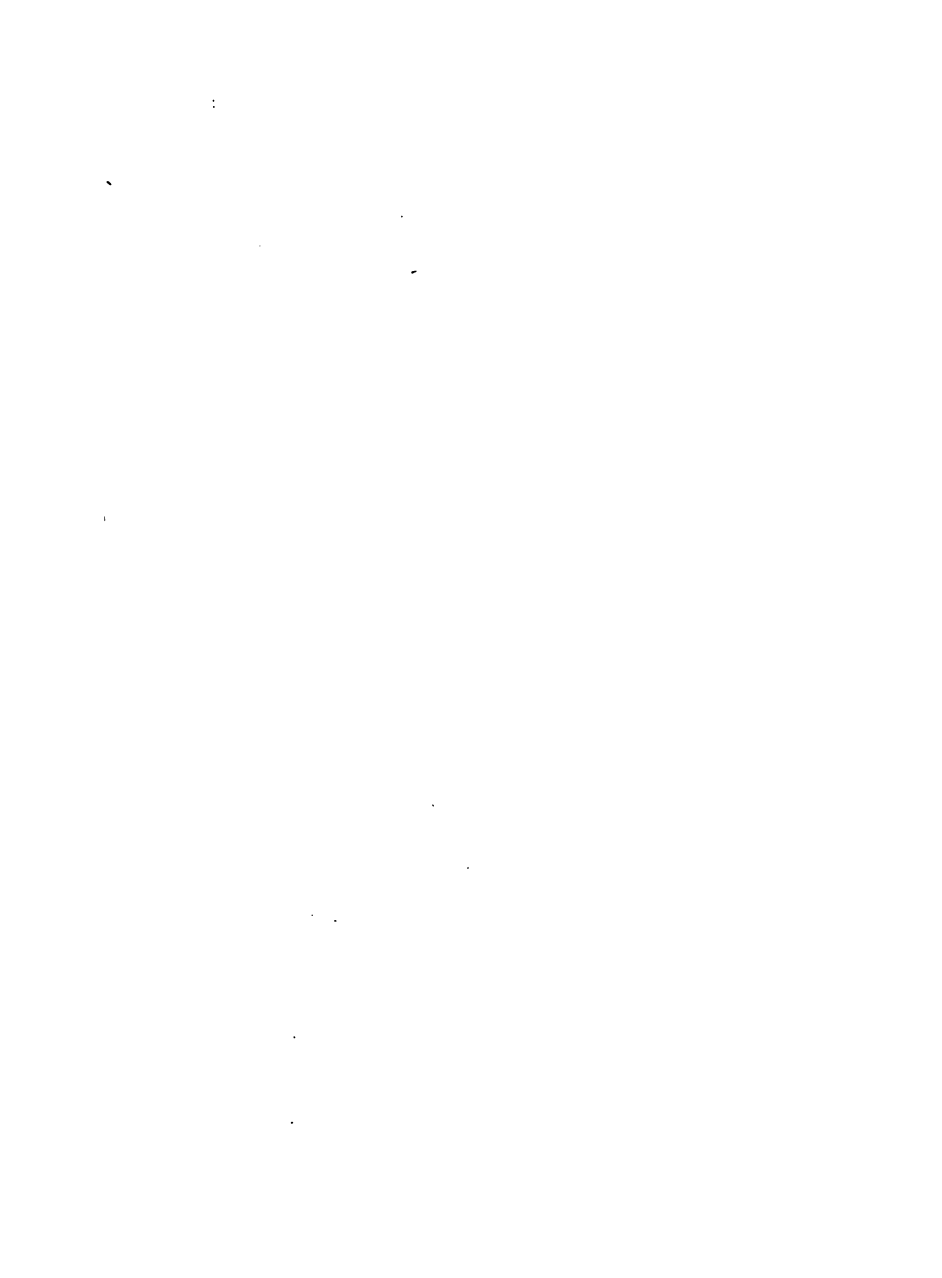
book will be thus more easily read, and form the better introduction to the reading of larger and more complete treatises.

This volume comprises the words that have formed three or four lectures ; but I have entitled it a *Twofold* Treatise, for reasons that will be obvious to the reader.

CONTAINING,

I. THE COMBINED ARGUMENT FOR THE
BEING AND ATTRIBUTES OF GOD :

II. THE ARGUMENT FOR MAN'S SPIRIT-
UAL NATURE, AND FOR A FUTURE
STATE.



I.

THE COMBINED ARGUMENT

FOR THE

BEING AND ATTRIBUTES OF GOD.

A POPULAR TREATISE,

DESIGNED AS AN INTRODUCTION TO THE READING OF

SAMUEL CLARKE, PALEY, BUTLER, GILLESPIE,

ETC.



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THE COMBINED ARGUMENT

FOR THE

BEING AND ATTRIBUTES OF GOD.

I.

MAN, AND HIS BURTHEN OF MYSTERY.

BACON calls Man "the Interpreter of Nature." Yet Man finds much around him in Nature which he cannot interpret : much that he cannot understand. We comprehend nothing. We only apprehend things : even the things of which we know most.

MYSTERY surrounds us, everywhere, in Nature. We may truly say that we move, walk, breathe, amid mystery. And this ever-present consciousness of mystery renders man uneasy. He does not like it. And because he feels it to be irksome he makes awkward and foolish attempts to get out of it. It is this irksome sense of mystery which leads men into so many strange fancies.

One man tells you that he has discovered the nature of something that was never understood

before ; and then he presents you with some wild theory that causes you to scan his face, and look very closely into his eyes to see if they do not reveal the fact that he is insane. Another man will triumphantly assure you that he can easily see through a difficulty which has puzzled mankind for ages—though you tell him that he might as well assure you that he can see through a stone wall. And when he displays his reasons, and you shew him that they are no reasons at all—that he is illogical altogether—he returns you a sage shake of the head, and gives you to understand that he is convinced, if you are not. He decides and determines to abide by his bad logic, rather than take up again his old burden of Mystery, and carry it as wearisomely as before.

Sometimes men reach a more pernicious and ruinous extreme. They imagine that they can break their bondage to Mystery by boldly disowning it.

“I have done with all mysteries,” said a working man who was a sceptic, to me one day : “I have done with all mysteries. I found they all sprung out of priestcraft ; and so I have ceased to believe in mysteries altogether.”

You are a man of mature years,—said I to him, —and you ought to know what you are talking about ; but I fear you don't. Try to think a little—will you ? If you have ceased to believe in

mysteries, you have ceased to believe in your own existence.

“How d’ye make that out?” he asked.

Tell us what Existence is, I answered; you say you have ceased to believe in mysteries. What *is* existence? Can you tell us? You are compelled to answer, as all men are, that you do not know: it is *a mystery*.

He simply opened his mouth, and stared, but could not answer one word—for he saw his folly at once. But I feared that he might relapse into it, and so I followed up the lesson.

You do not believe in mysteries! I repeated: my friend, you believe in thousands of mysteries, and cannot help yourself. It would require a longer time than I or any other person could reckon to name all the mysteries in which men are compelled to believe.

What is Light? You believe, and we all believe, in its existence; but none of us know what it is. Newton’s theory that it is subtle particles of matter proceeding from the sun was opposed by Hooke and Huygens, who espoused the theory of Descartes, that it proceeds from undulations in the ether of the universe; and the undulatory theory is now in full favour with our moderns—but no one can affirm that he knows what light is. Yet you believe in the existence of light. Men would deem you mad if you did not.

What is Life?—Existence, as I termed it before. What is animal life? No one can tell us: although the most scrutinizing minds have eagerly sought to know. What is vegetable life? We do not know. You put two seeds into the ground. The one grows, the other does not. "Because it was a dead seed, sir," says the gardener. "Pray, Mr. Gardener, what is a live seed?" you ask him. "I don't know, sir," he answers. And the most important fact is that nobody can tell him.

Why does the loadstone attract iron? Not a man that ever lived can tell us. Why does it not attract gold, or silver, or copper, or lead, or tin, or zinc, or any other metal? We have no answers to such questions. They, each and all, belong to the measureless catalogue of mystery.

Why does the magnetic needle point to the pole? Put it back to the west, or some other point of the compass, and let it go again. See how it reverts to the north, as if it were a live thing! Why is it? You are answerless; and so are we all.

Yonder is that wire carried on wooden poles, for miles, across the country. Nay, but they have stretched it across the Atlantic Ocean, with its gut-a-percha tubing. What is the wire fastened to at this end? To the galvanic trough, as it is called, after Galvani, its inventor. And what is there in the trough? Slices of copper and zinc,

or silver and zinc, at short distances. Nought beside? Yes; stay, and you will see them put pieces of stone blue vitriol, or sulphuric acid, into it; and then they will pour in cold water. And what can we do with that wire fastened to that galvanic trough? Despatch a message through it, at the rate of one hundred and ninety thousand miles in a "tick-tack" of the pendulum, or second of time. WHY? You will receive no answer, though you could shout that monosyllable till it rang over every continent of the earth and isle of the sea.

Why cannot you perform the same wondrous operation with a piece of catgut, instead of the wire? or, with a piece of common pack-thread? I do not know, and therefore cannot tell you. Will men ever be able to perform the operation with either? Perhaps they may: I cannot tell; and I know of no one who could enable me to answer.

Put a piece of loaf sugar into this glass of water. The sugar is opaque, as we say, you cannot see through it. Wait a while. You cannot see the sugar now, and the water is as clear as it was before you put the sugar into it. Why—how—has the sugar become invisible? Not a philosopher in the world can tell you.

Suppose we had a basin here with aqua-fortis, or nitric acid, in it. Throw a silver shilling, or

half-crown piece, into it. Wait a while. The silver is now gone from your sight, and the liquid is as clear as it was before you put the silver into it. Why—how—has the silver become invisible? Not a philosopher in the world can tell you.

Yet the silver is there still ; there, in the nitric acid, and some chemist might tell you he could get it out by putting another metal into the acid for which the silver had a strong affinity. “What *is* affinity?” you ask him. “I do not know,” he replies ; “I am compelled to use words of some sort.”

Thus, my friend, one might go on till “noon of night,” and not exhaust the vast catalogue of mystery. Never say again that you have ceased to believe in mysteries.

I hope the sceptical working man remembered the short lesson I strove to impress upon him, and did not return to the utterance of such folly.

II.

MAN, AND HIS STANDING-GROUND OF CERTAINTY.

I HAVE said we have an ever-present consciousness of Mystery; but we have also a perfect consciousness of CERTAINTY. Let us state it to ourselves: each for himself: thus:—

I AM. I KNOW THAT I EXIST. I am sure of it. I do not need it proving. I am conscious of it. I am a conscious, intelligent, individual, personal existence.

I do not doubt that I am in the region of CERTAINTY when I make this statement to myself.

A disciple of David Hume may tell me that I cannot logically prove to others that I exist; but that does not destroy my own consciousness that I do exist. If I were to be so irrational as to doubt my own existence, the mental act of doubting would prove to myself that I exist. Some people make very light of the logical value of Descartes' position: *Cogito ergo sum*; "I think, therefore I am;" but it is very sound ratiocination for all that.

A disciple of Spinoza may tell me that he and I

are "each a part of the All;" and suggest that my individuality is doubtful; but I reply that I know nothing about being "a part of the All," and I am conscious that I am Myself, and not part of another.

A disciple of more modern philosophers may assure me that all my knowledge is "conditioned," and, therefore, imperfect and often uncertain; but I go back to my perfect consciousness of existence, and declare that I am not uncertain about that.

I repeat, that I am a conscious, intelligent, individual, personal existence.

Now, existence—conscious, intelligent, individual, personal existence—has either always been, or it began to be. But my own conscious, intelligent, individual, personal existence has not always been. I have not always existed. I must, therefore, have begun to be. But that which begins to be must have a cause of its existence; while that which has always been, and never began to be, exists by the necessity of its own existence.

I have not always existed, yet something must always have existed; have existed by the necessity of its own existence. Why? Because, if there ever had been no existence there would be no existence still. Wherefore? Because Nothing cannot make Something: cannot create, originate, or cause to exist, Something. Therefore, necessarily,

SOMETHING HAS ALWAYS EXISTED. No one

who hears me doubts this. Every one feels as sure of it as he does of his own existence. I never met an Atheist who questioned it. I never heard of one who doubted it. We are all agreed about it. Our standing-ground of CERTAINTY is thus enlarged. We are conscious and certain of our own existence ; and sure that something has always existed. Now let us see if we cannot enlarge our standing-ground still more.

You remember that each of us were supposed to begin with these first words of certainty : " I am : I know that I exist." But we may go on to say more. We may go on to say :—

" I know that I exist *here* ; and I know that I have existed *elsewhere* ; and I know that I have existed *somewhere else beside*. I know that there is somewhere else besides where I am, and somewhere else still ; I know that there is *Everywhere*, because I cannot conceive the possibility of the contrary.

Some of you that hear me may know that the illustrious transcendental philosopher, Immanuel Kant, declares that duration and space are *not* certainties : they are only "Forms of the Intellect." I profess to you that such affirmations are beyond my poor comprehension. I fall back again on my own consciousness, and declare that I am, and have been, and that there is *reality* in the extension around me.

I say *reality*. For I mean that the extension exists whether I be thinking of it or not—although some of the old schoolmen debated the paradox that extension did not exist otherwise than in our own conception. Professor Huxley, I regret to say, revives the ancient folly. Listen to this sentence from what he calls his Lay Sermons.

“It is wholly inconceivable that what we call extension should exist independently of such consciousness as our own. Whether, notwithstanding such inconceivability, it does exist or not, is a point on which I offer no opinion!”

Nor will we *offer an opinion*, friends. We will enact no such imbecility. We will go on to *affirm*—what I am sure the greater number of us *can* affirm from clear conviction—that extension exists independently of our conception: that there is *Everywhere*, because we cannot conceive the possibility of the contrary.

Does any one entertain a lingering thought that he can affirm that there is *not* Everywhere? Then, do you affirm that there is Nowhere? Where is *that*? If you could point it out it would be Somewhere. There is no Nowhere: there never was Nowhere: there cannot be Nowhere.

Are you still inclined to dispute the truth that there is Everywhere? Try it then. Get, in your imagination, to the bounds of this globe. But there is somewhere else still. Speed, in your

imagination, millions of millions of miles, for millions of years. But there is somewhere else still. If not—what is there? *Somewhere else still*. You cannot conceive the possibility of the contrary.

THERE IS EVERYWHERE. We may now call our standing-ground of certainty a still more enlarged ground. We are conscious and certain that we exist, we are sure that something has always existed, and we are sure that there is everywhere.

Can we not go on again to enlarge our standing-ground of certainty? Can we not go on to affirm that—*something has always existed everywhere?*

“I must be allowed to question that,” says one; “I feel as sure as I do of my own existence that something has always existed. And I feel equally sure that there is Everywhere. But I do not see it to be so certain and clear that Something has always existed Everywhere. Is it not possible and likely that Nothing has always existed in some part of Everywhere?”

What *is* Nothing? You cannot conceive of the existence of Nothing, if you try. There is no Nothing. There never was Nothing. There never can be Nothing.

Yet, suppose we were to grant you the possible existence of Nothing—remember that, if you think you have a right to affirm that in some one point of Everywhere Nothing has always existed,—

every one of your neighbours, and all the people in the world have an equal right to affirm the like of any other points of Everywhere ; and it also follows that they have an equal right to affirm the like of every point of Everywhere.

But that would only be a round-about way of affirming that Nothing has always existed. Now, you cannot stultify yourself by coming to the conclusion that Nothing has always existed—Nothing, which has no existence ; for you feel as sure as you do of your own existence that something has always existed. And, since Nothing has never existed and therefore has never existed anywhere, it must be true that SOMETHING HAS ALWAYS EXISTED EVERYWHERE. We are thus standing on a still more enlarged ground of CERTAINTY.

But, furthermore, when we affirm that Something has always existed Everywhere, we mean, *in every point of Everywhere*. So that the Something which has always existed Everywhere is not separated into parts by lines of demarcation. It has no parts or divisions, any more than it has boundaries. It is *Individual*. It is ONE.

Neither has the Something which has always existed Everywhere *motion such as men affirm of Matter*. It does not need to move from some one point of Everywhere to some other point of Everywhere : it is already *in every point of Everywhere*. It is ONE.

III.

OUR CERTAINTY OF THE EXISTENCE AND PERFECT
ATTRIBUTES OF GOD.

NOW, let us call to mind that we—each of us—were supposed to affirm, a little while ago, “I have not always existed: I must therefore have begun to be: but that which begins to be must have a cause of its existence.”

In tracing the cause of our existence we cannot stop at the first man—nor even at the first ascidian—though a disciple of Mr. Darwin might insist on it, ever so strongly. We must go back, necessarily, to that which has always existed—as the original cause of our existence: to the *One Something which has always existed everywhere*.

And now let us think what we can further affirm. We each began by affirming “I am a conscious, intelligent, individual, personal existence.” We have already seen that the original cause of our existence is *individual*, is ONE. And ought we not, individually, to affirm, with equal confidence, that we are expressing a CERTAINTY—that the One

Original Cause of our existence—the Eternal, Everywhere-present One—is conscious and intelligent?

That which is unconscious and unintelligent cannot will, and cannot act intelligently. It cannot, therefore, be the cause of the existence of that which is conscious and intelligent. Nor can consciousness and intelligence grow out of or ‘develope’ themselves out of that which is unconscious and unintelligent—for they cannot act before they exist.

It is as positive a truth to our understandings, as it is that a triangle is not a circle—that that which is unconscious and unintelligent cannot be the cause of our existence, which is conscious and intelligent. We, therefore, can affirm, with confidence, that we are expressing a CERTAINTY—that the One, Original, Eternal, Everywhere-present Cause of our existence is conscious and intelligent.

The personality of the One, Eternal Cause of our existence follows from the fact of His being conscious and intelligent, for every conscious intelligent individual is a Person.

We have now reached the certainty of the existence of the One, Original, Eternal, Everywhere-present, Conscious, Intelligent, Personal Cause of our own existence.

We perceive, at once, that this Intelligent, One, Original Cause of our existence must be All In-

telligent, since whatever exists that is intelligent must have its original source in HIM.

We also perceive, at once, that HE must be all-powerful, since whatever exists that has power must have its original source in HIM.

Let us, then, one and all, devoutly acknowledge that we owe our existence to the One, Necessarily-existent, Uncaused, Eternal, Infinite, Omniscient, Almighty, Personal Being, whom men reverence, and call GOD.

One other thought : a thought which we must ponder upon at greater length, after a time:—

The fact that we, ourselves, have a moral nature—a sense, consciousness, and discernment of right and wrong, goodness and wickedness—lead us, at once, also to affirm, what we perceive necessarily follows, that He who is the Uncaused Cause of our existence must also have a Moral Nature. But our moral nature is imperfect, because our intelligence and power are imperfect. God's moral nature must be perfect, because His intelligence and power are, alike, perfect. He must be perfectly good and holy. There cannot be a motive, or reason, for His being evil, since all being depends on Him, and nothing can exist which is opposed to His holiness and goodness, unless His sovereign will permits it to exist.

IV.

A FEW NECESSARY WORDS, IN PASSING FROM THE
FIRST ARGUMENT TO THE SECOND.

THUS far, my friends, I have been endeavouring to conduct you—with such humble skill as I can command, and as rapidly as possible, consistent with clearness—through that grand "ARGUMENT A PRIORI," as it was named a long time ago, by thinkers who, as some think now, named it improperly; that grand argument which has been treated lightly by some who were either too shallow to think at all, or too impatient to think it out; but which such immortal thinkers as Ralph Cudworth, and John Howe, and Samuel Clarke, and John Locke, thought irrefragable; and which the acute and logical mind of William Honyman Gillespie has most skilfully reconstructed and perfected, in our own day.

I have not striven to present the Argument a-Priori, to you, either in the exact terms, or after the exact method, of any one of the five great thinkers and writers just named. I have tried to

set it before you as simply as possible ; and must intreat those of you who wish to become thoroughly and soundly acquainted with it to study the masterly work of Mr. Gillespie, entitled "The Argument, *a Priori*, for the Being and Attributes of the Lord God, the Absolute One, and First Cause."

Let me now proceed to say that there are THREE LEADING ARGUMENTS FOR THE EXISTENCE OF DEITY.

The First is that which I have striven to lay before you, in as concise a form as possible, the *Argument a Priori*, or, as some prefer to call it, the Metaphysical Argument.

The Second is that which was called the *Argument a Posteriori*, by those who gave a Latin name to the First Argument. Boyle and Bentley, and their contemporaries styled it "The Doctrine of Final Causes." Since the production of the "Natural Theology" of Paley it has usually been called "The Design Argument."

The Third leading Argument for the Existence and Attributes of Deity is the *Moral Argument*. This argument is founded on the fact of man's moral nature.

In the order of our enquiry—our survey of the reality and extent of that standing-ground for the Mind which we have called CERTAINTY—we must pass from our consideration of the value of the

First Argument to consider the value of the Second. That is to say, we must pass into an entirely new region of enquiry.

Hitherto we have been employed with our own consciousness and, chiefly, with abstract reasonings. We have to pass, now, to the outward: to the objects of our senses.

We will not imitate the false phrasology of Professor Bain, in his so-called "Mental and Moral Science." He talks of our "*consciousness* of a tree, a river, a constellation." Any man of the commonest powers of reflection knows that we have no such *consciousness*. I am conscious of my own existence—conscious that I have the power of perception, of reasoning, of memory, of imitation, and so on. And so I am conscious that I perceive forms; and I may have learned to call some of these forms a tree, a river, a constellation—a horse, a house, a half-crown. But I have no "consciousness of a tree, a river, a constellation;" neither am I conscious of a horse, a house, or a half-crown.

One would imagine that some of the "Thinkers of the Age" are disposed to use words in any foolish kind of novel way, if it will lead foolish people to admire their originality. You and I, friends, will not find any of these novel applications of words help us in our thinking. We had better try to *preserve* the purity of our English tongue, as an

instrument for enabling us clearly, truly, and explicitly to express our thoughts.

We have to pass, I say, now, to the outward. We possess bodies—organised material frames—which convey to us the sense of pain when they are injured ; and, by which, we perceive that we are surrounded by material objects with which we have to do. Our region of observation will be new. Hitherto we have had no concern with Matter. Our concern will, now, be especially with it.

Let us go on, then, to consider for ourselves the value of the DESIGN ARGUMENT.

V.

MISAPPREHENSIONS REMOVED ; AND THE DESIGN
ARGUMENT CLEARLY STATED.

THE plain, manly, common-sense manner in which Paley stated the Design Argument to English readers was pronounced, by the most intelligent men of his own and the succeeding time, to be a complete triumph. It was deemed to be so skilful an exposition of the argument that the crowd would receive it as something neither to be doubted nor controverted. Yet, in addressing the crowd—I mean numbers of working-men collected together—it has often been my painful lot to hear this plain, manly, common-sense argument not only questioned, but treated with scorn.

“We have had plenty of old Paley’s stuff!” has been the rough language of working men, when I have commenced to treat the Design Argument in their hearing. “You need not come here to tell us aught about that. There is nought worth consideration in his book. He calls his argument ‘the Argument from Experience,’ and all his followers give it the same name. But it is *not*

‘the Argument from Experience.’ When you have laid your foundation in experience, you do not build upon it. You erect your building upon assumption—not upon experience.

“You begin by telling us that we know by experience that Men design and contrive; and *that* is so true and evident that Paley need not have spent so much time, in the beginning of his book, in describing the parts of a watch so minutely, in affirming that it is full of evidence of design and contrivance, and that no one could examine it without discerning that it is composed of parts framed and put together for a purpose; and, finally, that the evident design in the watch shows it had a designer or contriver, who, we know by experience, must be an intelligent person.

“Paley need not have done all this, because we know *by experience* that watches are designed and contrived. We see it with our own eyes. It is *experience*, sure enough. We need no argument to prove it to us. We know it by our senses.

“Then you leave the watch, and point to the stars over our heads, to the flowers at our feet, and to the bones, and joints, and muscles, and other parts of our own bodies, and to the bodies of the animals, and ask us to call what we see ‘the phenomena, or appearances, of design and contrivance,’ and then to reason it out that the Great Personal Designer of all these exists—whom you

call GOD. But, WHERE is He? We cannot see Him designing and contriving, as we can see Man designing and contriving—for we cannot see Him at all. It is all an assumption on your part that such a Being exists. Your argument is *not* the argument from experience! Your Design Argument is worth nothing!”

I hope the greater number of my hearers have, instantly, perceived the blunder—the mistake—made in such a speech as that which I have just rehearsed, and which I have listened to, in substance, very often.

MEN do not know that watches are designed and contrived *by their senses*. They do *not* “see watches designed and contrived with their own eyes.” We cannot “see Man designing and contriving.” None of you ever saw any man design or contrive—for you cannot see any man think. Design, or contrivance, is an act of the mind: it is not perceptible by the senses.

We never saw God design or contrive, and we never saw man design or contrive, and we never shall.

“Then, why do you call your Design Argument the Argument from Experience?” demands the man who made the mistake.

The answer is—*because we reason from our own experience*. Each of us, as a conscious, intelligent, individual, personal existence, can design and contrive how certain parts, or pieces, of matter

can be put together for a purpose. And, each of us, as a conscious, intelligent, individual, personal existence, can use our organized bodies more or less, to move the said parts, or pieces, of matter, and to put them together for a purpose. So, when we see other men moulding pieces of matter into shapes, and fitting them together, we reason, from our own experience of our own mind's procedure—we reason by Analogy—that the men we see are using their intelligence and will,—are designing and contriving—while we perceive them so acting.

And, if we come within sight of a machine, *and do not see the maker of it*, yet, when we examine it, and ascertain that it is evidently composed of parts framed and put together for a purpose, we reason from our own experience—we reason by Analogy—that the parts have been put together by a conscious, intelligent person, or under his direction as designer and contriver. We do not need to see the person who contrives. We could not see him designing or contriving, even if we saw him acting. We know, by the constitution and experience of our own minds, that whatsoever is evidently composed of parts put together for a purpose indicates a contriver, and a contriver must be an intelligent person.

Be it observed that we never talk of design or contrivance, except with regard to something evidently composed of parts put together for a

purpose. If two persons were walking along a foot-path and conversing very earnestly together, and, in the midst of their earnest conversation, one of them were to stoop down and take up a loose handful of sand, and go on conversing as earnestly as before, and scattering the loose grains of sand till they were all gone, his companion would not be likely to turn to him, and say, "What a beautiful design you have just now executed ! what an admirable contrivance you have just now effected with the sand !" His companion could but laugh and regard it as a joke, if any such observations were made ; for the companion had no purpose in scattering the sand : it was an act of "absence of mind," as we say.

But if the two persons walking along the foot-path suddenly stumbled on a mouse-trap, yet, plain and vulgar a thing as a mouse-trap is, there would, most likely, be some thoughts of design or contrivance raised in the mind of one or other of the two persons finding it. One of them might express surprise that the mouse-trap was found there, at such a distance from any human habitation ; and the other might suggest that it had been thrown away because it was worn out. "It cannot be so," the other might observe, "look how perfect the spring is !" And, his companion having examined it, the two persons would agree that the said mouse-trap was "a well-contrived thing."

Did they see the mouse-trap made? No: nor had either of them, we will suppose, seen a mouse-trap made. Did any of you whom I am now addressing ever see a mouse-trap made? I have never seen one made; and, I presume, the great majority of us, in this room to-night, have never seen one made. Yet, we are each and all sure that a mouse-trap is contrived, or composed of parts put together for a purpose. How are we sure? By personal experience. We, each of us know that, as plain and simple a machine as a mouse-trap is, we could not snatch up a few bits of wood and metal, and suddenly put them together so as to make a mouse-trap, without contrivance.

Now, if the two persons walking together, and conversing, found a watch—(Paley's own example)—in the foot-way, instead of a mousetrap, there would be much more thought in the finders about design and contrivance, than there was when they found the mouse-trap. Why? Because the watch is composed of more parts than a mouse-trap: it is more complicated, takes more thoughtful examining, and answers a higher purpose. Indeed, it would not be easy to name any instrument constructed by man that answers a higher purpose than a watch. An instrument to tell time with exactness. We feel sure that civilization would soon retrograde if we had no means of knowing time with exactness. Machinery, and our great

system of the "Division of Labour," would soon stand still, or disappear.

Let us suppose one of the persons finding the watch to be sceptical. What would be the tone of *his* observations, as the other spoke of the contrivances in the watch, the wheels, the spring, the regulator, the hour and minute hands?

"You are one of Paley's disciples, I hear," says the sceptic; "but his book proves nothing to me. You are talking of design and contrivance in the watch, but then we see watches made. It is a very different affair when you come to look at Nature."

"I have never seen a watch made," says the other, "nor did I ever see any part of a watch made, or ever see one put together."

"Then you do not absolutely *know* that the watch is designed or contrived," asserts the sceptic: "you only believe what you have been told."

"What!" exclaims the other; "do you tell me that I do not know something unless I have seen it? My friend, you must be talking without thinking. If all our knowledge were limited to eyesight we should have precious little; nay, if you included hearing, touching, tasting, and smelling, likewise, our knowledge would be very limited. Testimony is a far larger source of our knowledge than is perception by our senses. And then there is reasoning by Analogy, or arguing that this must be so-and-so

because that is so-and-so. Now, making use of reasoning by Analogy, I think I can show you without any difficulty, that I *know* that a watch has had a personal designer and contriver. Will you answer me one question?"

"Twenty, if you like," says the sceptic.

"Thank you!" says the other; "Do you not perceive that this watch is evidently composed of parts framed and put together for a purpose? What is the reason that you are silent? You said you would answer my question. Do you feel you are caught, and don't like to answer? You might as well reply. You know that your own watch answers the great purpose of telling time. You would not deny that the parts of it were framed and put together for that purpose, although you did not see it made or put together. And, as you see this watch is 'going,' as we say, and is evidently composed of good materials well put together, you ought not to deny that it is evidently composed of parts framed and put together for a purpose—like your own watch. You dare not say it is *not*."

"Well—not exactly that," says the sceptic.

"Then you might as well say *it is*," rejoins the other. "Now listen to me, and I will soon come to an end. You perceive that a watch is evidently composed of parts framed and put together for a purpose—which we know by the very constitution of our own minds, and by experience, is the result

of design and contrivance—for *we* could never make a watch except we exercised our power of design and contrivance at every step. A piece of wood cannot contrive, a piece of stone cannot contrive, a piece of iron cannot contrive, a tree cannot contrive. Yet we know, by experience, that an intelligent person can design and contrive ; and so I reason that an intelligent person designed and contrived this watch. You cannot say my reasoning is not sane. I *know*, by analogy, that a watch is designed or contrived by an intelligent person."

I would not have those who hear me to suppose that they have been listening to a merely imaginary conversation. I assure you, friends, it faithfully represents dialogues in which I have often had to take a part.

VI.

THE DESIGN ARGUMENT CONTINUED :—THE HUMAN
HAND AND ARM.

NOW let us turn to nature, and see if it does not present us with unmistakable evidence of the existence of the great personal Designer and Contriver. And let us begin with our own frames. The human eye is a most superlative instance of design and contrivance ; but I would rather you read, for yourselves, what is said about it in Paley's "Natural Theology"—a book which every young man should have. Never mind the sneers you have heard from sceptics. Read it, for yourselves, thoughtfully ; and you will say that a nobler book was never written. Take care, however, I would say, to get an edition to which the notes of that superb anatomist, Sir Charles Bell, are appended.

As an example which is more palpable, and so better suited than the eye for one who is addressing a public audience, I will take the human hand and arm. Are there not here design and contrivance? Are

there not here parts evidently framed and put together for a purpose? Let us see.

First, here is the clavicle, or collar-bone, attached to the sternum, or breast-bone. Now, the collar-bone is of a certain length : in other words, a man's shoulders are of a certain breadth. If you think a little, you will come to the conclusion they are of the right breadth. Suppose they were much broader, we should then be awkwardly fixed, for we should not be able to bring our hands to meet—which, you know, would be an unspeakable disadvantage to us. A man needs both hands to get his living with now-a-days. And although some men may boast that they can get their living by their brains, yet they could not live at all if it were not for the labour of other peoples' hands. Labourers with the head and the hands are mutually dependent, and should never disagree.

Again, if we were without collar-bones, and our two upper limbs sprang nearly from the same point, the one limb would be so much in the way of the other that we should never be able to make any serviceable use of either. A man's shoulders are of the right, convenient, useful breadth. Our upper limbs are sufficiently removed from one another to render them free ; and they are sufficiently near together to render the hands of com-mutual service, when we need so to use them.

The situation of the hand at the end of a lever

is the next advantage I would point out to you. Suppose we were without arms altogether, and our hands sprung forth from the body just where our arms begin—we should have been doomed to lead a sofe life. We must often have had to do our work in a posture that would have been very difficult and painful to sustain ; and, at times, disagreeable both to our eyes and noses. The situation of the hand—the instrument by which we have to live—at the end of a lever, is, doubtless, a great advantage to us.

But, if the lever had been comparatively stiff and unbendable, the advantage of it, after all, would have been little. Think how the advantage is increased by the moveableness of the shoulder-joint. You can throw your arm round, or in what direction you chose ; and you can take hold of things above, below, before, behind, to the right, or to the left, with the greatest ease. The perfect freedom of the shoulder-joint is remarkable.

Let us examine the whole formation of the shoulder-joint, and learn how far design and contrivance are discernible in it. First, we find a small bone, called the *coracoid* bone, attached to the end of the collar-bone ; and, then, the *scapula*, or shoulder-blade bone is joined to the coracoid bone. The shoulder-blade bone, by its being imbedded in the muscles of the back, has a firm foundation in the system ; and so the *humerus*, or

upper-arm—carrying with it the fore-arm and hand—can be hung safely to it, by what is called the ball and socket joint. The socket being in the upper part of the shoulder-blade bone, and the ball at the upper end of the humerus. In a joiner's shop, the joint would be technically called the “tenon and mortice joint.”

The socket is shallow at the shoulder ; but it is deeper, so as to form a perfect cup, at the human hip—where the ball is tied down into the cup, by a strong string or ligature. But there is no ligature at the shoulder-joint : this fact, added to the shallowness of the socket, renders the motion of the shoulder-joint so free.

You will easily understand all I have said, if you use a little observation when you cut up a leg of mutton, and a shoulder of mutton—for the joints are like our own so nearly that they will serve well for an illustration. As I have just observed, there is a perfect cup in our hip-joint ; and you will likewise find one in the leg of mutton joint—where you will also find a perfect ball tied down into the centre of the cup by a ligature : the ligature that is wanting in the shoulder of mutton joint.

Observe, too, how the edges of the shallow socket of the shoulder of mutton joint are fringed off with gristle ; but it is still more largely so with the human shoulder joint, and this effectively assists freedom of motion for the whole arm. Take

note, furthermore, how perfect is the polish of the ball, and of the cup and socket, too, in the leg of mutton and shoulder of mutton joints, remembering that this also is a close resemblance to the human joints. But the polish is not bone; it is cartilage, or gristle, laid on, and of a particular thickness: "parts put together for a purpose"—that is, in this instance, to secure slipperiness, or ease of motion.

Again, you working men who toil amidst machinery know very well that you cannot keep it in a condition for easy motion without the application of some lubricating substance, such as oil. So the human and other animal joints are kept in a condition for easy motion by *synovia*, or "joint-oil," as it is sometimes called. You put the oil on your machinery by pouring it out of the spout of a vessel, or, more delicately, with a brush or a feather. But *here*—in the joint of this arm which I am swinging round so freely—the *synovia* is secreted and made on the spot! Oh, how far above all man's designs and contrivances, are God's designs and contrivances, in their completeness and perfectness!

Let us pass, now, to the elbow-joint. This is a very different joint to that of the ball and socket joint of the shoulder. It is called the hinge-joint. You cannot roll it round: you can only move it one way. There is no pin put through bored parts

of the hinge, as in the hinge of a door. Such a construction would be liable to sudden fracture. Instead of that, cartilages are so wound and bound about the parts of the hinge, as to render it one of the strongest joints of the body. You scarcely ever heard of a man breaking his elbow joint, or "putting it out," as we say.

Let us pass on, now, to the fore-arm. Here are two bones in this part of the arm, while there is only one in the *humerus*, or upper arm. One of the bones of the fore-arm is called the *ulna*, and helps to form the elbow-joint: the other is called the *radius*, and helps to form the wrist-joint. Mind, it is not the same bone which helps to form both the elbow-joint and the wrist-joint. If it were so there would be but two motions possible in this part of the arm: the hinge-joint of the elbow and the hinge-joint of the wrist. But, because only the *ulna* helps to form the elbow-joint, and the *radius* alone helps to form the wrist-joint, the hand can be rolled half-way round at the wrist; an advantage to every one of us nearly as great as the free joint of the shoulder.

Now, for a moment, in order to bring home the conviction of design more strongly to our minds, suppose the elbow and shoulder joints changed. Suppose the hinge-joint removed to the shoulder. Remember you could only move your arm one way, that is to say, up and down. You could

neither roll it round, nor reach things behind or before. How narrowly it would restrict the use of the arm for man, who has to live by the use of his hands! Next, suppose the ball and socket joint removed to the elbow. You could then roll the fore-arm and hand round at the elbow; but a queer, loose, useless instrument it would be for a man to work with: and in what a helpless condition for getting our living, this change, like the other, would leave us!

Again: the hand constitutes what we usually consider to be the readiest organ of touch or feeling. Man has to ascertain by his fingers and thumb and palm whether a given substance be hard or soft, hot or cold, rough or smooth. But the outer-skin, *epidermis*, scarf-skin, or cuticle—for it bears all these names—cannot feel. It has no sensibility at all: no more than a piece of paper. What is it, then, that assists us to feel? If you could raise the outer skin of the hand, and inspect, with a microscope, the cushiony substance that comes next, you would see the *papilla*, or ends of the nerves. They are immeasurably smaller than the hairs of the head; and they conduct the feeling to the spine, and thence to the brain. Take note that the ends of the nerves enable us to feel without touching—so to speak: to feel through the outer skin that *cannot* feel.

Finally, here are nails at the ends of these fingers

and thumbs. One cannot help saying to one's-self — 'How come these nails here?' They are not skin, they are not gristle, they are not bone : they are unlike any other substance in the whole limb. How frail they seem to be, and yet of what universal use they are to man ! What could we do without them ? What precision they give to our handling and dealing with anything that is small ! Small ? Suppose a man has to wield a crow-bar, to lift a huge stone, or piece of timber—what could he do without his finger nails ? Let a man lose *one* finger nail, and see what a detriment it is to him, and then bethink him how he could get on in the world without any nails at the ends of his fingers. The nails are the very finish of the natural instruments with which the Maker has enabled Man to get his living.

The hand and arm, then, I conclude, exhibit contrivance or design. They are composed of parts put together for a purpose. But what a purpose ! Man has not the strength of a lion or an elephant. He has not the speed of the horse or of the gazelle. He cannot soar above the mountains like the eagle. But, with the little hand, as the instrument of the mind, he masters all things. He captures the creatures, he cultivates his land, he weaves his garments, he raises his buildings, he constructs his ships, he forms his railroads, he makes his machinery—he writes his books !

Read old Galen's almost poetical description of

the powers and uses of the human hand; read that most matchless of all the Bridgewater Treatises—Sir Charles Bell on the Hand—and learn to adore the Maker for His skill and beneficence. For who can use his reason while contemplating the human hand, and deny the existence of the Maker?

Here is undeniable design and contrivance. Here are parts most evidently put together for a purpose. You will not say they *happened* to come together thus: they must have come together somehow: all the atoms in the universe must come together somehow, as old Lucretius said and sung; and these atoms came together thus, *by chance*. And it has been thus with all the millions of hands that the human race have worn.

We cannot mock our minds with adopting such insanity and folly for truth. Nor can we adopt the feeble and unmanly hesitation to pronounce a truth when we are convinced of it—a habit which is so pitifully characteristic of the philosophy of our day. We see, as plainly as our minds can see anything to be true, that this arm and hand with which we are furnished present us with undeniable evidence of design and contrivance. And we repeat what was said in the instance of the watch; a piece of wood cannot contrive—a piece of stone cannot contrive—a piece of iron cannot contrive—a tree cannot contrive; but we know, by experience, that an intelligent person can design and contrive, and

we therefore conclude that there has been an intelligent, personal designer and contriver of this arm and hand.

Furthermore, as the contrivance and design displayed in the formation of the arm and hand are so superior to Man's designs and contrivances, so much grander than Man, in power and wisdom, must be the Great Designer and Contriver, God. For we feel there is no irrelevancy in tracing the design and contrivance to Him.

It will hardly be thought possible that the absurd opinion—that Man has always existed on the earth—should, now, remain in any mind. Yet, it was my lot, a few years ago, to meet a man on the platform, in debate—Richard Otley, of Sheffield, a well-known man, as the Socialist leader of his locality, and also esteemed to be a well-informed man—who stoutly affirmed the truth of this opinion, and said he did not care a straw for Laplace or any other modern man of science who affirmed the contrary.

"You call yourself the schoolmaster of the working men of Sheffield," said I.

"And I am so, truly," he replied, proudly.

"Are any of your scholars here?" I asked.

"Scores of them!" he shouted.

"Let any working man in this assembly who believes that Man has always existed on the earth, *hold up his hand!*" I cried.

Not a single hand was held up.

"My friend," I said to Richard, with a sense of pain and pity, as I beheld his look of mortification, "the schoolmaster's occupation is gone, in your case !"

My kind friend, Canon Sale, Vicar of Sheffield, will well remember the incident, as he was chairman of the meeting.

What endless guesses Men have made about the existence of the Universe and Man, rather than admit the fact of a Creator ! The old Greeks were very prolific in these guesses. Some of our modern men of science seem disposed to rival them.

VII.

THE DESIGN ARGUMENT CONTINUED :—INSTANCES
FROM THE LOWER ANIMALS.

YOU can pursue the study of human anatomy and physiology for yourselves. The human frame is so full of proofs of design and contrivance, that a man might lecture years upon it and not exhaust his subject. Let us pass into what is called the region of Comparative Anatomy, and glance at a few of the animals.

I feel desirous of impressing one fact upon your mind at starting—and it is this: expect, the more you study the nature and habits of the animals, and the better you become acquainted with them, to become conscious of two strong convictions being formed, and more and more strengthened in your mind. The first conviction will be, that *every animal is fitted to get its own living*; and the second will be that *every animal is fitted to take care of itself*.

Descending from man, and passing by the numerous order of the *Quadrumana*, or four-handed animals, we reach what are called *Cheiroptera*, or

winged-handed animals, the Bats, for a bat's wing is really a hand with the membranous wing spread between the thumb and fingers.

"But you will not take up our time with any discourse about such an abortive nuisance as a bat!" exclaims some fastidious hearer.

Forgive me, if I urge you to abandon your hastily formed notions about 'abortive nuisances.' Suppose you stretch out the wing of a bat and put it under a microscope, what would you see? An immense number of nerves, giving the creature the means of feeling to a degree of intensity that excites our wonder. It is supposed that a bat could feel, distinctly, each mote in a sunbeam, if he happened to flicker into one.

It is recorded of Spallanzani, a great lover and student of nature, who was a professor in the University of Pavia, in the last century, that he was amazed, one evening, with the large flocks of bats which came out of the caves in the neighbourhood of his dwelling. The next morning he entered one of the caves, and found he could only proceed a little way on account of the darkness. So he took with him two men with lighted torches, and started anew. The caves seemed to extend miles underground, and branched off in every direction; and they abounded everywhere with bats and bats' nests: the creatures and their habitations seemed unreckonable in number.

The naturalist began to think. "How," he said to himself, "how do these creatures make their nests here in the pitch darkness—for so it would be if I put the torches out—and how do they move about here so swiftly and with such perfect self-possession? It cannot be by eyesight. Their very small eyes may be of some service to them when they are catching the small soft insects in the open air, in the dusk of the evening, but can be of no use to them here.

Resolved to prosecute his enquiry, he had several of the bats caught, and began to examine them with the greatest earnestness. Yet he spent several days without making any discovery such as he sought to make. Suddenly he bethought him, one evening, to spread the wing of one of the bats before his lamp; and—behold!—he found the thin membranous wing was full of small streaks or threads! "What are these?" he said to himself. "Nerves," he answered, after some observation—for he found the creature's wings were very sensitive.

Now, what God Almighty can do with nervous power, or what it is, Spallanzani could not tell; but he began to imagine that he could bring something to light about it that had not been known hitherto, if he made experiments with these bats. He began by an act that you may deem cruel. Yet he knew he could make no conclusive experi-

ment without it. So he put out the eyes of a number of the bats, that he might be sure they were not aided in the act of perception, at all, by eyesight. He then placed a number of strings across a room, and hung up others from the ceiling. Having introduced a swarm of small flies, he next let fly the bats and watched them. They caught the flies rapidly, shunning every string with the utmost dexterity: never touching a single string, because aware of the strings by the nerves in their wings. *They felt without touching*, as you and I do—only their sense, or power of perception, is more intensified.

“You have explained my own case to me,” said a blind man who listened to my lecture, some years ago, at Merthyr Tydfil. He was a teacher of music. “When I am sent for by any one who wishes for my instruction,” said he, “and I am shown into a room, I know when there is any one in it, though there is not a breath of noise, and no one tells me. And I also know whether there is more than one person in the room. And, as I go along the street, I know when a wheelbarrow or a package of any kind has been left on the causeway. I never stumble over anything; because I always know when there is anything in the way. It must be because I have this intensified power of the nerves of feeling that you speak of as being possessed by the bat. Don’t you think it is so?”

"Not a doubt of it," said I; and then I delighted him by relating some of the feats and adventures of John Metcalfe—which I need not relate to you Yorkshiremen—of Blind Jack of Knaresborough—the framer of the best roads in the county—the crack hunter—the clever horse-racer. No one needs be assured that God can give intense power to the nerves of feeling in a man as well as in a bat, who knows Blind Jack's history.

But—to our problem. Here is the bat living in the pitch darkness, and yet making its nests, and enjoying its life, through the possession of this intensified power of feeling; and it is also able to get its own living. Watch it whirling around the chimneys at dusk, and shrieking with delight, as it catches and swallows the small flies!

"Yes," says one who listens, "it is evidently fitted to get its own living. But I feel a doubt whether it can always take care of itself. I remember, when a boy, finding a bat that some one had stricken to the ground; and I thought, as I held it in my hands and examined it, that I never saw a creature so helplessly formed."

You might say the same of a fish if you found it on dry land; and the fish, if it could speak, might very likely say the same of you if it found you in the water. But you shall have proof that *the* bat is so organised and endowed that it has

power to take care of itself. When are we, ourselves, most helpless? When we are fast asleep. Now, the bat has the instinct to provide for its own safety, even in such a case.

“But I am told the bat sleeps the whole winter through,” observes another. Yes; and it would be most deficient design and contrivance if God had ordained that the bat should go out, in the intense cold of winter, to encounter certain death with its sensitive wings, in the attempt to catch flies when there are none! Nay: the Great Designer has ordained that it sleeps all the winter long, and needs no fresh food. The bat knows when its sleepy season is coming, and hooks itself up by the thumb-nails,—which are most perfect hooks,—among the leafy curtains of an ancient ivy-bush, or in some lonely church tower, or amid the ruins of an old castle or abbey, or in a wide chimney, or in a dry dark cellar—to sleep all the winter. A man who worked in a large wine-cellar, in London, related to me that a bat came every year, for nine successive years, and hung itself in the same place, yearly; and that it came and went away usually about the same periods of the year—but that how it got into the cellar, and how it got out, they never could tell!

Let us take another step forward in the catalogue of the *mammalia*, or animals that suckle their young, and come to the *insectivora*, or insect-

feeding animals. "The bat was one," observes one of my audience. Yes, he is an insect-feeding animal ; but he feeds on soft insects. What are called the true *insectivora* feed on hard insects—such as the beetles. They must, you are sure, need peculiar teeth to be able to grind their food. And so it is. Their grinders are furnished with a great number of sharp points and are clad with strong enamel. Let us glance at two of them : the mole and the hedgehog.

"The blind mole is another nuisance !" cries one. Patience, friend. Let us consider a little. In the first place, the mole is not blind. But suppose he had fine large exposed eyes, what would be his fate ? Poor fellow ! he would get his eyes scratched out every day, and have to beg for a new pair every morning ! He has to get his living in the perfect darkness underground, amid gravel, and broken flints or stones, and roots of trees. So he is furnished with small eyes, sunk deeply into the bone of his skull ; and he can pull a cushion over them, and keep them from injury, while he is at his burrowing work. I mean, by the cushion, his skin, which is a perfect wonder for softness and closeness of fur, and is a most perfect defence for the creature from the damp underground.

When the mole throws up the hillocks which you see so commonly in some pastures, he can draw

back the cushion and come to the surface and look about him, and see if the world stands where it did. That, however, is of small consequence to him ; and he soon cushions up his eyes, and goes back to his proper region. And he makes a central lodging-place, and has long subterraneous passages to it—but you must get hold of a good Natural History and read about him ; and you will find he is a wondrous creature, in his way.

"Woe worth him !" cries the farmer, "he is a sore nuisance, and I hang him, as often as I can catch him !" All farmers, however, are not of the murderous mind towards the poor mole. Some have learned that the mole is one of the farmer's friends, and never an enemy. They have learned that while the mole is burrowing under the land, he is clearing it of insects which would ruin the roots of the grass, and render the pasture valueless. The hillocks of earth which the mole makes are no nuisance to an industrious farmer : they are soon spread, and the first shower of rain would convert the earth so spread into a fertilizer of the grass.

And now for the hedgehog. The bat caught his soft insects in the air, at dusk of eve ; and the mole catches and cracks his hard beetles in the perfect darkness, by feeling, underground ; but the hedgehog takes his beetle prey in the dusk of the evening, on the open ground, and by eyesight.

"He should have quick eyes to do that!" cries a bystander. Yes; and naturalists also assert that he has beautiful eyes.

"Beautiful eyes in a hedgehog!" cries a lady. "Oh, shocking!"

But, my dear lady, you do not know what a darling, loving and loveable little creature is the hedgehog; and how desirable a companion he would make in your drawing-room, if you could think so. He learns to come at a call. He learns to know the person that feeds him, and becomes attached to his feeder—nay, he displays more intelligence than, perhaps, you would give him credit for.

A good Quaker gentleman, in the north of England, said to me, one evening after the delivery of my lecture: "Thomas Cooper, I was so glad to hear thee mention the little hedgehog; and I want to tell thee about a little fellow that we kept three years." And then the gentleman told me how they had a large garden, into which they descended, from their back kitchen, by seven stone steps. In the summer evenings, so soon as they saw the hedgehog moving about in the garden, they would call to him, and he would run to them. They taught him to like bread-crumbs, as well as beetles.

"At length," said the Quaker gentleman, "I began, nightly, to put the bread-crumbs on a plate *upon* the top stone step and jingled the edge of the

plate with a knife. In a few evenings the hedgehog learned his lesson perfectly ; and he was so apt a scholar that he never forgot it while the summer lasted—but so soon as he heard me jingle the plate, in whatever part of the garden he happened to be, he would soon begin to hasten along the garden-path, and climb the seven steps, and eat the crumbs, from the plate at my feet, with every appearance of trust and confidence in me. Nay, some time before we lost him,” concluded the gentleman, “ he became so familiar with my children, that he would let them take him up into their hands and examine him as they pleased, without any alarm.”

“ Well, sir,” says another of my audience, “ your hedgehog seems well fitted for getting his living ; but I cannot help thinking that the prickles on his back must be a great weight, and an awkward incumbrance to him. I am sure they do not enable him any better to get his living.”

No : but they enable him to take care of himself. You must know that the hedgehog has very sweetly flavoured flesh. They say that, in Germany, hedgehog pie is considered to be a *bonne bouche*. And, when the gypsies were numerous in England they boasted greatly of their enjoyment of a ‘roasted urchin,’ as they called the cooked hedgehog. They vowed it was more tasteful than the nobleman’s venison. Now, several of the wild animals are exceedingly fond of the hedgehog’s

flesh ; and they hunt him, in the dusk of the evening, by the scent of it. Master Reynard is very fond of it, if he can seize the hedgehog by surprise. And so is the badger, and the weasel, and the fohart. But just as one of his enemies come up with him, and imagine they are about to make him their delicious prey, he rolls himself up into a ball of prickles—as much as to say, “I wish you may get it !”

Design—contrivance ! So again I enforce the reasoning : a piece of wood cannot contrive—a piece of stone cannot contrive—a piece of iron cannot contrive—a tree cannot contrive ; but we know by experience that an intelligent person can design and contrive ; and we therefore conclude that there has been an intelligent, personal designer and contriver of the bat, the mole, and the hedgehog.

VIII.

THE CAMEL A SUPERLATIVE INSTANCE OF
DESIGN.

IF I had to select one creature out of all that God has made, to set before man, as unfolding for him the greatest proofs of the existence, power, wisdom, and goodness of God, combined, that could be displayed in any one creature—it would be the camel. “The ship of the desert,” as the Arabs so significantly term it : the creature which is of such wondrous usefulness in the country where it is found.

There is not a wild camel in the world ; and it is believed there never was a wild camel—but that the first camels were given to the first men ; and that the animal has been kept in a domesticated state, as we term it, from primeval times. We learn, you know, both from sacred and profane history, that the first men lived in the warm regions of the earth. Large tracts in these regions are often girdled in with broad belts of sand, interspersed with rocky and sterile spaces. God,

however, intended men to be travellers; and therefore He gave them an animal exactly fitted to be their beast of burden in the sandy and rocky desert.

“ But the Arabs have fine horses, sir ! ”

Yes : and if an Arab were to descend from the back of his “ barb,” and bind a burthen on its back, and compel it so to travel, it would speedily lose all its native fire and spirit, and be rendered a poor, useless creature. Or, if you could transport a horse, in a moment, from England to the desert, and try to make a beast of burthen of him there, you would fail. Your immense horse from London streets—the brewers’ pride, with all his trappings and heavy iron shoes—would sink up to the chest in the loose sand, in some places. And if you were to try the experiment of a lighter horse unshod, and were to bind a burthen on his back, in the rocky parts of the desert, his fine feet would be worn out in two or three days.

“ Fine feet, sir? Are you speaking of the solid hoofs of a horse? ”

The phrase “solid hoofs” has no strict truth in it, my friend. The hoofs of a horse are composed of a series of *laminae*, or thin plates, lying one over another, to the number of a thousand in each foot; and each layer is a delicate spring. The horse moves on four thousand delicate springs. No wonder that the noble creature bounds and

moves so gallantly ; and that he has become man's favourite animal, as a racer.

The elephant, with his huge massive feet, has been tried as a beast of burthen in desert countries, and has failed. Abraham Haxby, an old soldier who had been in our wars against the Dutch, in India, in the last century, used often to tell me, in my childhood, how they tried to make use of the very hugest elephants to drag their cannon through the desert country : and how, in four or five days, the large feet of the creatures would be utterly worn out ; and he has seen them shot dead, and left behind the army in the wilderness, as useless.

Most wondrous to relate, you cannot wear out the feet of the "ship of the desert." When you happen to see a camel, take notice of its feet. Mark, that when it lifts them up, they seem to collapse, and lessen in size very much. But, when the animal plants them down they expand, as if they were sponges. You see that, thus spread out, they must tend very much to prevent the camel from sinking in the sand of the desert. The noiselessness of its tread, as it strides along, does not prepare you for the fact that there is a natural shoeing to the camel's feet which never wears out, and never requires the blacksmith. It is true the natural shoeing does wear away, day by day, as the animal travels amid the hot sand, and over the broken rock ; but the daily growth is always equal

to the daily loss by the wearing away. How wondrous the provision of such a creature !

Again, be it observed that the camel is a tall creature : a fact which often helps to preserve human life in the sterile desert. When a caravan moves off in the morning, and a man of mean rank is too feeble to travel, they leave a cruise of water with him, and a little food, that he may be able to follow them, should he recover. On the following morning, if his strength have returned, he will be able to discern the heads and tops of the necks of the camels, and also the humps on their backs and their burthens—in the distance, as the light brightens ; and can thus turn his steps in the right direction. Without such guidance he would be as helpless as a seaman without a compass on the pathless ocean.

As the camel is tall he has to kneel to receive his burthens. He is trained to do this at the word of command. And when the rider, or the burthen, or both, are duly placed, the animal rises at the word of command. The frequent kneeling has been provided for by the same divine goodness which furnished the foot that needed no shoe-smith. The animal's breast where it touches the ground, its knees, and other parts of the limbs whereon it rests when it kneels to receive its load, are furnished with bosses or callosities to prevent injury. *There are seven of these hard cushions, altogether.*

"Oh, I suppose the callosities come by use!" are you saying? Nay, my friend, the young camel is born with them—so that, if it could speak, it might say to the human beings around it, "Look! do you not see that I am made for your use?"

Sometimes, as you have read, the wild Simoom suddenly rises in the desert, and it seems as if the entire caravan—it may be of scores of camels, and hundreds of men, women, and children—would be swept away by the wind, or blinded by the cloud of dry, parched sand. All human travellers who are on foot fall prostrate, and hide their faces till the fury of the tempest is passed. The camel goes on, apparently unconcerned. It is furnished with an inner curtain, beneath the eyelid, which it can instantly draw down, and prevent all injury to its eyes from the minute particles of arid sand. The camel cannot catch ophthalmia. Its nostrils are also powerfully formed, so that it can close them perfectly, and shut out the sand at that entrance.

Sometimes, for days together, as they travel in the desert, there is not a blade of green grass, nor a stalk of southernwood—the plant of which the camel is especially fond. There is only a hard, prickly, salt shrub to be had for food. But the camel will live for days upon it. The animal has very powerful upper cutting teeth, so that he can tear up and separate the fibres of the shrub. And his

mouth seems as hard as leather, so that nothing can hurt it.

Sometimes, for days together, as they travel in the desert, there is not a drop of water to be had. It is, indeed, the "parched desert." What is to be done? The Arab has a little water, in a skin, or other vessel, he carries with him; but he dare not give it to the camel, lest he himself should die of thirst. The camel does not need his help. Its stomach is fitted to contain and store up water separate from its food. And, used to journeying as it is, the animal instinctively imbibes a sufficient portion of water to be stored up in the twelve rows of cells of which the second cavity of its stomach is formed. And these are non-absorbent vessels, so that the water is kept pure for use. In cases of great emergency camels have been killed for the sake of the water contained in their stomachs. Gibbon relates, on the authority of an Arab historian, that such was the case with the army of the Prophet, in his expedition against the Greeks.

But, sometimes, as they travel in the desert, there is not even the prickly shrub for the camel's food—much less grass or southernwood. It is indeed the "barren wilderness." There are the gliding serpents and lizards among the stones; but not a sprig of verdure, not an atom of vegetable life. There is literally nothing for the hungry camel to eat. *What is to be done?* The Arab has a few dates in

his bag ; but he dare not share them with the camel, lest he himself should perish of hunger.

One day's journey comes to an end, and the hungry camel is unburthened, and its legs fettered, and it sleeps. In the morning the dreary journey is renewed, and there is no food for the camel a second day. Again it is unburthened, its legs fettered, and it sleeps. A third day of hunger has to be sustained ; and the camel has been known to travel on to the fourth day foodless, and still alive ! How is it possible ? What silly people would call "the ugly hump" on its back, is *stearine* or fat ; and it goes into the animal's system, and keeps it alive : the camel will live while there is a bit of the hump remaining on its back !

There is one other fact which I must mention. I had a conversation with Colonel Shaw, at Bourtree Park, Ayr, in January, 1862. He commanded a regiment in India, in the last great Sepoy war ; and came through the Arabian desert in his way home to Europe. He expressed his wonder at the wild and ignorant notions of Bishop Colenso, with regard to the fuel the ancient Israelites would need in their passage through the desert, and the Bishop's comparison of their want to that of the coal-burning millions who form the population of London.

"I wonder," said Colonel Shaw, "that while he saw cow's dung daily used as fuel, at Natal, some more natural thought did not enter Colenso's mind.

The Arabs preserve the 'camel-balls,' as they term the dung of the animal, for fuel. Owing to the turpentine contained in the southernwood on which the camel delights to feed, the dried balls are on flame in a moment when a spark is struck. A few dried sticks are usually at hand, or soon found; and all the cooking the desert-traveller needs is over in an hour at most, and sometimes in a few minutes."

I have not described all the uses of the camel. Its flesh and milk furnish the Arab with a great part of his own and his family's food. He uses its hide for many purposes, and weaves his tent, and part of his clothing, out of its hair. It will carry six hundred pounds' weight, and travel over many miles in a day.

Who can think of the camel and not regard it as God's peculiar creature evidently made for man, and designed and adapted to man's peculiar wants and circumstances while dwelling in the hot and desert regions of the earth? And who can think of such a creature without being reminded of the fine, forcible words of St. Paul, "The invisible things of Him from the creation of the world are clearly seen, being understood by the things which are made, even His eternal power and Godhead."

IX.

VARIETY OF DESIGN AND CONTRIVANCE IN NATURE.

I T would take many hours to describe all one would wish to describe, of design and contrivance, in Nature. I must remember—for my hearers will remember—that I am limited to minutes.

Let us glance at what are so appropriately termed "Prospective Contrivances." The simplest instance of the kind is the "pebble," or horny bit of substance on the new-born chicken's bill. The little creature has to peck and break its way through the egg-shell into the outer world ; and it is thus furnished with the means to enable it to release itself from its prison. The pebble does not fall off till a few days after the chicken is born ; and if an ignorant servant-maid pulls it off, the poor chicken will very likely starve, because of the weakness of the point of its bill. How temporary is the want, and how well it is provided for !

But what undeniable "prospective contrivances" there are in our own frames ! Our teeth are formed in the infant's gums, usually a long time

before they appear to sight ; and a second set are formed beneath the first, to be used when the first set become too small and come out : a second set fully fitted for the use of the mature man.

I approach another subject with reserve—as I speak in a mixed assembly of the sexes, and of all ages ;—but I must allude to the human foetus in the womb. Let it be remembered that the eye is formed at a time, and in a place where it can be of no use. “It is,” in the clear language of Paley, “an optical instrument made in a dungeon ; constructed for the refraction of light to a focus, and perfect for its purpose, before a ray of light has had access to it ; geometrically adapted to the properties and action of an element with which it has no communication.” The unborn, yet living, creature can see nothing in its first dark home ; but the optic nerve, the retina, the lenses—all the organisation necessary for enabling it to see, are provided against the moment when it shall emerge into the light.

The lungs in the human foetus lead us to the same thought of marvellous provision for the future. No air passes through the lungs of the unborn living creature. Its lungs are fully formed and packed up for use when the time comes ; but they are of no use in the mother’s womb. Yet, the moment the child is born, the lungs begin to play—*the moment* that they catch the air ! Their

fine, delicate mechanism is all ready, and if the infant breathes, it lives—but it is in an entirely new element.

Passing hastily from Prospective Contrivances, let us glance at that especial wonder, the grand feather in a peacock's tail. It is, first, a very small bag, or bladder of blood; and, eventually, it is the grand feather three feet long, adorned with the "eye," as it is called—the figure composed of curve within curve—over and over again—of so many shades of colour—gold and purple, and green and blue, with all their admixtures of tints; the feather so brilliant and imposing!

Consider, that the figure upon the feather has not been drawn or painted on a plane surface, as you would draw on paper, or any other substance. It has to be formed by each fibre of the feather. You can imagine nothing more difficult to bring about. To imagine that a richly figured carpet is woven without being designed, is not imagining half the difficulty that has to be overcome in perfecting the figures on a peacock's feather. Yet how many millions have been perfected!

I must have done. Think, read, of the provision for enabling birds to sleep securely on the branches of trees, without danger of falling off;—of the "pillow" at the breast of the gannet, which enables it to plunge into the sea from the height of thirty feet, without injury, and then to rise easily,

with its prey, to the surface ; of the air-bladder in fishes, which they can expand or contract at pleasure, and thus vary their own specific gravity, and rise or fall, in the water, as they need ;—of the tongues of the chameleon, the woodpecker, and the woodcock, all so wondrously formed for enabling the creatures to “get their living ;”—of the trunk of the elephant ;—of the “shrimping-net” in the mouth of the whale—I must not go on. Read, read, read—turn over the pages of any good Natural History ; and you cannot fail, if you *think as you read*, to find it to be a real Treatise on the Design Argument.

X.

OBJECTIONS AGAINST THE DESIGN ARGUMENT.

ONCE, to my surprise, heard a bit of weak reasoning from a Scottish working man, who thought he could demolish the Design Argument: my wonder would not have been so great had I heard it on this side of the Border.

"A weel, sir," said the logician, "after a' ye have said, if ye have proven anything, ye have proven a Finite Deity; but naething mair. If God made mon, mon is but a finite work. And if He made the sun, and the sun be so lairge as ye say it is, still it is but a finite work. Now, a finite work simply proves a Finite Maker. What d'ye say to that, sir?"

"I say that I expected better logic on the banks of the Clyde," I answered: "if you have a right to say that a finite work proves a finite maker, I have an equal right to say that a round work proves a round maker, and a square work proves a square maker, and a three-cornered work proves a three-cornered maker, and a long work proves a long maker, and a short work proves a short maker, and

a black work proves a black maker, and a white work proves a white maker, and a blue work a blue maker—but I need not go on. When you asserted that a finite work proves a finite maker, was that really what you meant to say?"

"I—I—I think so," replied the man, hesitating, and blushing very deeply.

"Nay, my good friend," I said, "you have not said what you meant to say; you meant to say that a finite work does not prove an Infinite Maker; and that is true. But, neither does a finite work prove that its maker must be finite. How would you have God prove to you that He is infinite? By performing infinite works? He will not do that, any more than He will make a round square, a triangular circle, or a curved right line. That is to say, He will not perform what involves a contradiction in itself, or what it is irrational to conceive can be done. If you reflect, you will see that, in the very nature of things, God's works must be all finite works. The Design Argument may not clearly prove—like the argument a-priori—that God is Infinite; but it cannot be made to prove that God is *not* infinite: for you dare not deny that an Infinite Maker may perform finite works."

"'Deed, sir, and that's true!" said the Scotsman, and sat down very modestly.

I had a very different kind of querist, one night, in 1857, at the Hall of Science, City Road. A

smart young cockney sprang up at the end of my lecture, and, with a confident laugh, said: "You say, sir, that God designed man, and you call Him 'the Great Designer.' Now, pray, sir, what designed the Great Designer?"—and he sat down with the air of one who has "done your business," as we say: non-plussed you altogether.

"Will you first tell me," said I, "what is the colour of the sound of a trumpet?—whether B flat be sky-blue, and A sharp pea-green?—what is the sound of the taste of sugar-candy?—whether the smell of a rose be a full ounce, or only half-an-ounce, in weight?—or, stay, tell me whether old Father Thames came from Jericho or Jerusalem?"

"You must be a fool!" said the cockney, angrily.

"I should be a fool if I put such questions to you, in earnest," I said: "We always count people for simpletons who put to us questions in which there is no relevancy—no consistency—no common-sense, as we say. Now, I wish to show you that there is no relevancy—no consistency—no common-sense, in *your* question. It is utterly irrelevant, utterly inconsistent with common-sense, to talk of Design being displayed in aught which is not evidently composed of parts framed and put together for a purpose. I use Paley's words, for I cannot find fitter words, in which to express myself. Can you show us that God—the Infinite Personal

God that we assert designed Man and the other living creatures—is composed of parts framed and put together for a purpose? If you cannot, your grave question is utter nonsense, like the joking questions I first put to you.”

The cockney affected to pout, and to treat me with contemptuous silence—most likely, because he knew not what to say. But some older free-thinkers in the meeting caught at my mention of Paley.

“Well, sir,” said one of them, “if Paley’s book on the Design Argument be true, it follows that God must be composed of parts, and must be designed too. George Jacob Holyoake has shown that very clearly. Have you not read his book, ‘Paley refuted in his own words’?”

“Yes,” said I, “I have read it; and I think the title of the book is a misnomer. I think the author has neither refuted Paley in his own words, nor refuted him at all.”

“We defy you to show it!” cried several eager disputants, all at once.

So I had to try to “show it”—not only once but often, during the year and nine months (from September, 1856, to May, 1858, inclusive)—that I contended with London freethinkers, in the Hall of Science, City Road. I will now give the substance of what I said about “Paley refuted in his own words,” as well as I can. Some part of what

I give was spoken at one time, and some at another. We had so many queer, crooked wranglings in those Sunday night debates, during those one and twenty months, that I cannot remember everything that was said and done, or the order of what was said, at different times. So I must relate what I said, as well as I can.

In the seventh chapter of his little book, entitled "Paley refuted in his own words," my friend George Jacob Holyoake has this passage:—

"By reasoning from analogy, Paley infers that there is a personal, intelligent being—the author of all design—whom he christens Deity. But what kind of a person is a Deity? If a person, is it organised like a person? Whence came it? How did it originate? Was it formed, as it is said to have formed us? Did an intelligence superior to its own make it, as an intelligence superior to ours is said to have made us? Is Deity composed of flesh and blood as we are—or of what is it composed? These are all questions which a natural curiosity suggests, and I take it that they are fair and reasonable questions, without impropriety, and without presumption, and they are questions which Paley himself raises in the reader's mind, but to which he has deigned no answer."

The first time I read this passage—and it was while I was still in bondage to Strauss—I could

not help saying to myself :—How my friend Holy-oake throws dust in his own eyes ! My friend *must know* that all these questions are so utterly irrelevant to the subject of enquiry, that it is but sheer nonsense to ask them. My friend *knows* that, if there be a Deity, He *cannot* be “composed of flesh and blood as we are.” Neither my friend, nor any other civilized man of the Nineteenth Century could worship anything “composed of flesh and blood as we are,” for Deity. If any one were to point out to us a human figure as big as a mountain, and were to tell us that that was God, we should all say, “Nay: it may be a gigantic man ; but *that* is *not* God. That figure is not competent to the creation and sustentation of the universe.”

My friend asks other questions, and says he takes it they are “fair and reasonable questions.” I wonder he does not see that they are neither “fair” nor “reasonable” ; but each and all irrational and irrelevant to the subject of enquiry.

“Whence came it ?” He *knows* such a question is neither rational nor relevant. If anything could be shown to him, and he knew whence it came ; how it originated ; that it was formed, as it is said to have formed us ; that an intelligence superior to its own made it ;—he would not worship it, or acknowledge it to be Deity, neither would any civilized man of the Nineteenth Century.

My friend knows that there can be but one

Deity that he could worship—or that any of us could worship: the Invisible, yet Everywhere present, Eternal, Necessarily-Existent, Almighty, All-wise, All-holy, and Perfectly Good Being: the Uncaused Cause of all things, Who constantly upholds all other being by His Own Power and Will, and without Whom nothing could exist for a moment. *That* is the only Deity, I repeat, which civilized men of the Nineteenth Century can worship; and I venture to assert that it is the only Deity my friend could worship.

“Is it organised like a person?” my friend asks. The answer is that a person is *not* organised.

“If it be unreasonable to suppose design without a designer, it is surely unreasonable to suppose a person without an organisation to the full contradiction of all analogy and all experience,” says my friend. The answer is that it is *not* “to the full contradiction of all analogy and all experience” to suppose a person without an organisation.

“But every person is organised,” asserts my friend, in his next chapter (the eighth). I simply ask—How does my friend know that?

“No person was ever known without an organisation,” says my friend. No *human* person, he should have said.

“The term person implies it,” says my friend. The answer is, that the term “person” does *not* imply it.

The great blunder of my friend is that he confounds two things which reflection ought to have taught him to separate : Person and Organisation. I—the Person—Myself—am not organised ; that is to say *shaped into an instrument*. I—the Person—Myself—am the Agent who makes use of the instrument—the organisation. I am not the organisation itself. I might lose my limbs—which would mightily maim and lessen my organisation—but it would not decrease Myself—the Person. My organisation has passed away from Me, atom by atom, many times during my life ; but I have not passed away. I know that I am the Thomas Cooper who existed and escaped drowning, at Exeter, when I was two years old—the Person who went to school to Gertrude Aram and Daddy Briggs—the Person who passed two years in Stafford Gaol—the Person who shook hands with my friend George Jacob Holyoake, for the first time in my life, at Leicester, in 1842, just after he had left Gloucester Gaol, and would gladly shake hands with him, and say kind words to him to-morrow, if I were to meet him.

“ An unorganised person,” says my friend (in his ninth chapter) “ is a carved trunk or a chiselled stone.” The most nonsensical conglomeration of words ever used ! My friend cannot know what he is talking about, while he thus uses the word “ *Person*.” I should say, in plain English, that

only a natural fool would call a carved trunk or a chiselled stone an "unorganised *person*."

And immediately afterwards follows this sentence: "The same experience which assures us that design had a designer, assures us that a person must be organised, because we never knew one unorganised."

Had my friend said we never knew a *human* person without an organisation, no one would have disputed it. He should remember that there may be millions of persons beyond this earth—a man would be mad to deny the possibility of it; but neither "the same experience," nor any other kind of experience, can assure us that they, each and all, have organs, or "must be organised," as he phrases it.

"Is Dr. Paley to tell us with impunity," asks my friend in his seventh chapter, "that Deity is without body, parts, and passions, when the premises he himself lays down for discovering Deity's existence and personality, warrant the conclusion that it has both body and organisation, both parts and passions?"

But such a conclusion is *not* "warranted" by "the premises he himself (Dr. Paley) lays down." My friend himself presents us with Paley's "premises" in full, in his sixth chapter:—

"Paley presents his reasonings to his readers thus: 'Contrivance proves a contriver. Among

other things it proves the *personality* of the Deity, as distinguished from what is sometimes called Nature, sometimes called a principle—which terms, in the mouths of those who use them philosophically, seem to be intended to admit and to express an efficacy, but to exclude and to deny a personal agent. *Now that which can contrive, which can design, MUST BE A PERSON.* These capacities constitute personality, for they imply consciousness and thought. They require a centre in which perceptions unite, and from which volitions flow—which is the mind. The acts of a mind prove the existence of a mind: in whatever a mind resides *is a person.*”

Where do these premises of Paley warrant my friend’s conclusion? “In whatever a mind resides is a person,” says Paley—not “whatever is organised is a person,” or “whatever has body and organisation, parts and passions, is a person.”

You know—all of you whom I am addressing now—how my friend uses his supposed discovery of the weakness of Paley’s argument to show that the Person of Deity must have an organisation, because we know by experience that a human person has an organisation. An organisation shows contrivance and a contriver; and these, he affirms, need another contriver who must also be a Person; who also must have an organisation which *needs* another contriver who must also be a

Person—and so on, endlessly. In other words, my friend seeks to reduce Paley's whole argument to an absurdity. He thinks he has succeeded, and calls his book "Paley refuted in his own words." But Paley's *own words*—his "premises," as my friend terms them—have just been quoted, and *they* have not been used by my friend—nor have any other of Paley's *own words* been used—to *refute* Paley; nor has Paley been refuted, at all.

Such are some of the fragmentary recollections I have of what was said in attempting to answer my friend's disciples and partisans, sixteen years ago. I wish, when my friend reads this, it might lead him to reconsider what, we all know, he has often considered. I cannot help thinking that if he thought it his duty now, for the first time, to put forth a printed attack upon Paley's argument and book, it would be something very different from the pamphlet to which he has given a misnomer for a title. It would not, I think, contain sentences like the following:—

"If it be absurd to suppose that any person whom we see formed himself, it is quite as absurd to suppose that any person whom we cannot see formed itself. What is absurd to be conceived of one person is equally absurd to be conceived of another."

My friend seems, at the time he wrote his little

book, to have taken the word "Self-existent" as meaning that God formed Himself. He must know, I think, by this time, that no Theologian ever had such a meaning while using the term "Self-Existent": no Theologian was ever quite so thick-witted as to frame such a meaning to himself. And if my friend does not know in what sense Theologians really use the term, he ought to ask some of them to tell him. He is not without acquaintance, now—eminent acquaintance—in their ranks.

Finally, I entreat my friend to try to help us all in the solution of the great question—"Whence came the Universe?" which he talks of in the eleventh chapter of his book—instead of trying to shew us that Paley has not given us the solution. His new chapter (the twelfth) does not help us. He repeats his old blunder in it, with greater emphasis, and asserts that a Person must be organised, or it is *not* a Person: "it can only be an undefined element or principle;" and that "if a Person may act without organisation, *Nature may!*"

I must confess the two last words I have just quoted made me stare. What! I said to myself, has my friend, the "Reasoner," *par excellence*, of Freethinkers, thirty years ago, come to this? "Nature may!" Nature may have designed and contrived Nature!!! Alas, alas! and is this my

famous logical friend, George Jacob Holyoake? He knows I am fond of telling stories; and I will tell him one, by his permission.

A man rose hastily, in the Lyceum Theatre, at Sunderland, in 1859, and very scornfully and peremptorily said to me, at the end of my lecture—"What *is* God, sir?—what *is* God?" The man's harsh, scornful manner impelled me to turn the question upon himself. "What are *you*?" I asked. "Oh!" said he, waving his hands in the air, as if to illustrate his meaning—"produced out of all round us." "But, then," said I very slowly, "what produced all round us?" "Why, Natur," answered the man positively, "Natur, to be sure!" "Nature?—what is that?" I asked, again very slowly; "what *is* Nature?" "Why, everything, to be sure!" shouted the impatient man; "Everything—All round us!" "So then," said I, "*All round us* produced *all round us*!"

"*Nature may*!" says my friend!!!

XI.

THE MOST FORMIDABLE OBJECTION TO THE DESIGN
ARGUMENT: THE EXISTENCE OF PAIN AND SUFFERING.

“YOU are here to-night,” says the sceptic, “to proclaim that God exists, and that He is not only Self-Existent, Eternal, and Almighty,—but that He is also All-wise and Perfectly Good. How can you reconcile these attributes of God one with another, when you look at the fact, that He has made myriads of creatures, which cannot sin or offend Him, to slay and devour one another, and to put one another to pain and suffering? Has the thought of all this never caused you trouble of mind?”

“A great deal of trouble of mind,” I answer, “in the Past; but it does not now.”

And, if I be asked “the Reason Why?” I reply, partly because I am more and more persuaded from enquiry, that real Beneficence is traceable in the System of Prey among Animals, in the liability of God’s creatures to suffer, and in death itself; and, partly because I find I was so much

mistaken at the time I spoke and wrote strong words about Pain and Suffering: I find there is not so much Pain and Suffering in the world, as I formerly thought there was. I invite you to look at this fact with me.

The *Carnivora* form an immense Order of the *Mammalia*. They comprise the Cats, the Dogs, the Bears, the Weasels—and, in some arrangements—the Seals and the Whales. Let us take the first Sub-Order: the Cats—pursuing our enquiry about Pain and Suffering. From the largest cat, the lion, to the common house-cat, how remarkably akin all the family seem to be, and how unavoidably they bring back on our consideration Design and Contrivance! They are, each and all, covered with rich fur: sometimes of beautifully marked patterns, as in the Tiger, Leopard, Panther, and Tiger-Cat. They have all the same supple forms, rendering them capable of crouching, springing, bounding, and twisting themselves. They are all distinguished by length of tail, except the Lynx—which is the only short-tailed wild cat. They are all furnished with retractile claws, which they can draw in, so that they can walk with a “soft velvet footfall” on their padded toes, and steal noiselessly upon their victim; or they can put forth their talons to enable them to seize their prey. They are all furnished with bristles about the mouth, which are believed to assist them as feelers,

in darkness. They are all furnished with prickles on the tongue, set wrong way on, as we are accustomed to say. Let a dog lick your hand and you feel that his tongue is smooth ; but if a cat attempts to lick your hand, you withdraw it quickly, for the cat's tongue is rough and disagreeable. The tongues of the cats are bone-polishers. It is real economy in the Creator, and renders His creatures cleanly. When the flesh is stripped from the bones of a slain animal, as far as teeth can perform the work, it is perfected by these tongues of the cats. No putrid flesh lies about to breed filth in their dens. Nothing is left but the clean white bone.

Get the full persuasion into your mind that these creatures are intended to kill and destroy : that their frames are especially and skilfully organised to do so. The gastric juice of the Lion's stomach will not enable him to digest a blade of grass, or a grain of corn ; although he can digest bruised bone, as well as muscle and sinew.

What a terrible creature is the Lion enraged ! See him lashing his sides with his tail—his mane erected—his huge teeth bared—his eye-balls rolling—the strong compact mass of his body and stout limbs all ready for the act of destruction ! It is said the horse trembles at his roar, when heard a mile off !

But, to the *real* question. How does the Lion—together with his congeners, the Tiger, Panther,

&c.—take his prey? He usually crouches among the jungle of the forest, to wait for an animal coming to drink at a spring of water; and he bounds upon it with a terrific roar, striking its head with his right paw, so as to break its neck and separate the spinal marrow, just at the point where it will cause instant death! There is no time for pain—no time for suffering: so the objection vanishes altogether in this instance.

Some of you will remember Livingstone's account of lions. He is quite familiar with the sight of them, you know, and has been more than once in their power. In one instance, a lion had followed himself and his company, although they frequently shot at the creature, and, as they believed, had wounded it. Yet it continued to skulk behind rocks and trees, and still to follow them. At length it got nearer to them than Livingstone was aware of. Mark well what he testifies—for I will quote his own words:—

“Starting, and looking half-round, I saw the lion just in the act of springing upon me. I was upon a little height. He caught my shoulder as he sprang, and we came to the ground below together. Growling horribly close to my ear, he shook me as a terrier dog does a rat. The shock produced a stupor similar to that which seems to be felt by a mouse after the first shake of the cat. It caused a sort of dreaminess, in which there was no sense of

pain, nor feeling of terror, though I was quite conscious of all that was happening. It was like what patients partially under the influence of chloroform describe, who see all the operation, but feel not the knife. This singular condition was not the result of any mental process. The shake annihilated fear, and allowed no sense of horror in looking round at the beast. This peculiar state is probably produced in all animals killed by the *Carnivora*; and, if so, is a merciful provision by our benevolent Creator for lessening the pain of death."

We ought neither to discredit the illustrious traveller—(for whose safety and life we are all now so anxious!) when he ventures this opinion, nor ought we to be surprised that there is such a "merciful provision." We ought, long ago, to have expected to discover, that there is not all the suffering that some of us supposed there was for God's creatures that cannot sin. Deeper reflection, I say, should have persuaded us that He cannot have organised unoffending creatures to endure such pains and sufferings as some of us supposed they endured.

Passing by the horse and the dog, and some other creatures given to man, as his peculiar helps and companions—and, therefore, highly sensitive, doubtless to teach Man tenderness towards them, as they are in his keeping—the lower we go in the scale of animated Nature, the less susceptible of pain the creatures seem to be. Cut the limb of a Newt, or

English Lizard. Mark what a long time it will be before it moves the limb, and how slowly. Surely, there is no great sense of pain there. Sharp pain is usually signified by quick movements of the body.

The continued life and activity of insects under mutilation is proverbial. If you pull out the bowels of a beetle, he will walk about three days without them ; and he will walk about a whole day without his head. Even the dragon-fly, an insect one would suppose to be more sensitive than a beetle, has been known to live several days without its head. One cannot think that there is suffering in such cases.

Some of you have been at the sea-side in summer time, and have observed people trying to catch crabs. I have seen ladies go down to the low rocks on the sea shore, with their little basket and hooked stick in their hand. Let us suppose we are crab-hunting, and see a fine young crab among the shallow water, under a little ledge of rock. We think to ourselves—"That is the very fellow I want, for he has got his large fore-claws well formed." We thought we were going to have him ; but, he suddenly throws off the first joints of his large claws to lighten himself, plunges into the muddy water, and escapes !

Think of a man throwing his hands off—suppose he could do it—to escape being taken prisoner.

He would not do it even if he could, because of the pain he knew it would give him. There can be no pain for the crab, in throwing off the first joints of the large claws. If there were, the crab would not resort to such self-mutilation for safety.

That insects are positively exempt from pain seems demonstrable from one fact which is attested by the best Entomologists. If you sleep in the neighbourhood of trees or shrubs, on which some of the Hawk-Moths live—and you leave a window of your sleeping-room open on account of the summer heat—one of the Hawk-Moths may find his way into your room—for they sleep in the day, and fly about in the night. In the morning, suppose he has forgotten to go home to bed—as will sometimes be the case—and you find that he is fast asleep on something that you can easily pierce, take a finely pointed pin or needle, and slowly and gently pierce him right through the thorax to the board, or whatever it be that he rests upon. The act does not wake him! He will remain asleep till dusk of eve, and then move his wings and legs, and try to get away. There cannot be any sense of pain in a case like that.

“Away with your stuff about moths and beetles!” I think I hear some impatient hearer exclaim: “deny the fact that *we* suffer, if you dare. It *would* be mere mockery, sir! We should ask

you if you never had the tooth-ache. Come to the fact of human suffering, sir, and account for that."

And *that* is easy to account for, my friend. It never seemed easy to account for all the pain and suffering we used to believe the poor animals endured, till we learned better. But man is a sinner ; and therefore his suffering forms no difficulty to us. He is told that if he does not keep God's Moral Law, he will bring bodily pain, disease, or death, to himself. But he sins in spite of all warning. And he brings suffering on his children—diseases upon his race—even generations. He sets his children bad examples—he trains them, in too many instances, in theft, in idleness, in revenge ; and, for generations, they sin and suffer—but still sin, although they suffer.

I cannot forget the diabolic wrath of an Atheist Jew, who entered sometimes into our debates at the Hall of Science, City Road. "I hate your Jehovah !" he shouted, and almost shrieked : "He is as bad as Moloch. I will not worship your jealous God Who says He visits the sins of the fathers upon the children unto the third and fourth generation. The idea of such a Deity is abominable !"

"Stop, my friend, stop !" I cried : "you forget that all your wrath is but folly. Suppose you could succeed in persuading men not to worship such a Deity,—yea, could banish the idea of such

a Deity,—you have not banished the *fact* out of the world, that ‘the sins of the fathers’—their vices and crimes—*are* ‘visited upon the children unto the third and fourth generation.’ Remember you do not destroy the retributive nature of vice and crime by resorting to Atheism.”

The wrathful man seemed impatient ; but I cried, “Listen to me, my friend ! I have not said all I want to say, and want you to *feel*. So far from complaining of God because He made that clear declaration to your fathers, more than three thousand years ago, you ought to adore Him for its real beneficence. God is determined that Man shall understand that *sin is sinful*. God means that Man shall have no misunderstanding, make no mistake, about that. Sin is so abominable, so hateful, in God’s holy sight, and He knows it is so completely and eternally ruinous to Man, that He beneficently sets every possible warning before Man’s sight : perpetually strives to present sin in a deterring form to Man : makes it hard for men to sin. So Man is made to know—unless he will close his eyes perversely—that sin is ruinous, not only by the dire effects he will bring upon himself by committing it, but by the evil and suffering he will bring upon his children. His parental affections are powerfully appealed to. What man of any experience here does not know that this appeal sometimes happily prevails ? A man’s strong affection

for his children determines him to break an evil purpose, when he remembers that it would injure them to perform it. Indeed, my friend, that Revelation of God's Moral Government made to your fathers has more beneficence and real wisdom and consistency in it than you seem to understand. Never indulge in that wrathful strain again, my friend !”

The man sat down with a changed look, and made no reply.

And, now, let me observe, that although Man's sin enables us to account for his suffering, yet there are some such remarkable provisions in the constitution of the human body—exempting even its most vital parts from pain—as should lead us to acknowledge the goodness of God, with most grateful feeling.

The brain can be cut, or probed, by a surgeon, without the patient feeling it, under certain circumstances. You will find testimony to the truth of this fact in the works of celebrated surgeons.—In consumption, when the lungs are wasting away, it is not at the lungs that pain is felt ; and even when the patient is growing weaker and weaker, and life is ebbing away, he will often experience so much exhilaration of feeling that he tells you he is getting better.

But there is one fact which one cannot think of without some degree of amazement ; and which we

ought never to think of without great thankfulness. The heart has no sense of outward touch. If I could put my finger and thumb on each side of the heart of some person in this room, without touching any other part of his frame, he would not know when his heart was touched, unless he saw me in the very act of touching it.

"What!" some one will exclaim, "do you mean to say that the heart which is so instantaneously sympathetic with all mental emotion—which is so fearfully subject to palpitation and neuralgia—has no sense of outward touch? It seems incredible!"

And yet it is a known fact that the heart has no sense of outward touch. I might quote to you more modern proofs; but I choose to give you one which is more than two hundred years old, because I like to revive the memory of great benefactors of our race, and to revive and strengthen our sense of indebtedness to them.

The celebrated William Harvey, the discoverer of the circulation of the blood, and physician to King Charles the First, gives us this extraordinary relation. The son of Lord Montgomery had a severe fracture of the ribs when a child, which left an abscess that could not be cured. He went abroad, and came back to this country when he was between eighteen and nineteen years old, it was reported, with a large aperture in his left side, through which his lungs could be seen and touched.

The king heard of this strange story, and sent Harvey to learn the truth of it. Harvey found the young nobleman, who readily exposed the wound for his inspection. Instead of the lungs, Harvey found it was the apex of the heart which could be seen and touched. The action of the heart responded to the beat of the pulse in the wrist; and Harvey—the enthusiastic man of science, who endured so much obloquy for the maintenance of his great doctrine of the circulation of the blood—had, here, a full confirmation of its truth! He took the young nobleman to the king, who also handled the heart, and marked the circulation of the blood. But the most wondrous discovery, alike to the king and to the physician, was that the young nobleman did not know when they touched the heart, except he saw them touch it. They found the heart was without the sense of outward touch. (See Note at the end.)

This is a strong proof of beneficence of design in God. If the heart were sensible to outward touch, we should seldom eat without pain. For, as the stomach turns upward and presses against the lungs, and the lungs against the heart, as we continue to eat, the act of pacifying our hunger, or gratifying our palate, would cause suffering at the heart. Any poor fellow who only got a good dinner once a week, and then indulged himself, would have to pay bitterly for his excess.

We have hitherto been considering the limitation, to pain among the creatures, and as it regards ourselves; and the mistakes entertained about its prevalence in God's universe. But we must now proceed more boldly, and show that the real usefulness of pain can often be asserted, and God's benevolence in providing it. First, however, let us observe that very mistaken notions prevail in many minds about the amputation of a limb. It is not in the cutting of the muscles, or in the sawing of bones, or in separating the marrow, or in tying up the arteries—as some suppose—that the severity of an amputation is felt. *That* is over when the operator has cut all the outward skin which is necessary to cut. Our feeling of pain, let us say, is placed *where it is wanted*.

Suppose there were a great fire near me, and my hand were very cold, I should, naturally, hold it out to get it warmed. But I should soon be *warned*, as well as warmed. I should feel I was in danger of injury, if I put my hand too near. Now, of what use would be any warning to me, if the sense of pain were placed in the muscles? The skin might be burned off before I was *warned*. And if the sense of pain were placed in the bones, both skin and flesh must be burnt before I could be *warned*. And if it were placed in the marrow, the *warning* would be too late altogether; my hand would be destroyed.

No: the sense of pain is placed *where it is wanted*. The *papillæ*, or ends of the nerves, are just under the *epidermis*, or outer skin, and they instantly convey to us the sense of pain, in time to save us from injury. Instead of complaining that we have the sense of pain we ought to regard it as real kindness in God that He has provided us with it as a warning against danger, so that we may preserve pleasant life. What would become of children, if they were not provided with the sense of pain so near the surface of their bodies? They are always hurting themselves, even now. But if they were not deterred by this provision they would play strange tricks. A boy who could get no stick to whittle with his knife would be very likely to whittle his fingers off; and some of the more venturesome breed would be likely to break their own limbs—yea, their own necks, as soon as they were well out of leading strings.

Death itself has been very strangely objected to, by some reasoners. But the continuance of all creatures which are born into this life could not be. The *carnivora* would require living creatures to kill and eat. And if the *carnivora*, and all other creatures that take life, were taken out of the world, what a miserable sight should we soon behold in the aged vegetable feeders! Horses, oxen, sheep, and all the rest, becoming so decrepid and helpless with age, that our hearts would ache

every day to see them. God has made this world in a wiser way than such fault-finders imagine.

Death, to Man, is an event widely different to what it is to the animals. To them it is the end of all. To Man it is merely the end of his probation. He is warned to expect it at any moment ; and, therefore, should never complain of surprise. Life is given him here, on these very terms : that the Giver is to take him hence, at any moment, and Man is to take care to be ready to give an account of his probation. He ought not, therefore, to murmur at what is called "death by accident," whether it be by the agency of fire or water, or any other means.

A person with whom I once held a debate, and who took the Atheistic side, endeavoured to create a strong sentimental impression with referring to the recent shipwreck of a large steamer, by which four hundred lives were lost. He strove to make it felt as a complaint against a Deity, if there were one ; and then, into a proof that there was no God. I reminded him that one human being dies every second—making 3,600 persons in every hour, and 86,400 persons in every day, of our lives. I argued that the death of eighty-six thousand human beings seems far more appalling than the death of four hundred ; and yet, we should feel it to be utterly ridiculous to mourn and weep, and profess to be shocked, for the deaths of

all that die. Above all we should doubt if a man were sane who complained against God because so many die in one day, or that anybody died in this world.

I quit this subject: not imagining that I have cleared away every difficulty—or mentioned every difficulty involved in the consideration of it. The “Mystery of Pain” demands fuller treatment than I can give it, in a popular lecture. Let us confide that Man’s progress in knowledge will render the veil less and less dark; but I confess to you, solemnly, that I do not believe it will be rent asunder till we quit mortality.

XII.

THE MORAL ARGUMENT FOR GOD'S EXISTENCE.

I COME, lastly, to the consideration of the Moral Argument for the Existence of God,—or Argument derived from the fact of Man's Moral Nature.

What do I mean by the Moral Nature of Man? I answer, the Nature wherein he differs completely from the animals,—inasmuch as, they cannot sin : they cannot break a law, a moral rule given them by their Maker : they have no perception of one.

The feeling of responsibility which Men have has been called by various names. Reid calls it "the Moral Reason ;" Shaftesbury calls it "the Moral Sense ;" while Bishop Butler, and divines generally, call it "Conscience."

"Oh, you are about to speak of Conscience !" says some religious friend who has not had much leisure or inclination for thinking,—"of course we all know what Conscience is very well. Conscience, sir—Conscience, is a faculty that all men *have*, all over the world. Every man has a con-

science ; and if he would follow it, it would always show him what actions are right, and which are wrong. Conscience is Man's infallible guide, everywhere, if he would but follow it,—whether his skin be white or black, copper-coloured or olive : whether he be Christian or Pagan, Moham-medan or Jew, Brahmin or Buddhist, conscience will be his infallible guide, if he will but follow it."

Indeed, my good friend, that is *not* Conscience—although your notion is a very widely diffused one among professedly religious people—more especially with those who are not remarkable for thinking, though their piety is undeniable. Conscience an infallible guide to Man, whether he be Christian or Pagan !—an infallible guide to Man, even if he never heard of the revelation of Christ ! Then, why send the revelation to him ? Why ask for the infallible guidance of the Holy Spirit to be given him ? Indeed, my friend, you never made a greater mistake than when you termed Conscience an infallible guide for Man in whatever circumstances he may be found.

"I don't wonder at what you are saying," remarks the sceptic ; "I always laugh at religious people's common notions about conscience. The only conscience that I know of is enlightened judgment : well-informed reason. What so many religious people call conscience is, after all, a mere thing of education. It depends on where a man is

born, and how he is brought up, as to what kind of a conscience he has. The conscience of a Jew is not the conscience of a Mohammedan : the conscience of a savage is not the conscience of a civilized man."

I do not think that such education as a sceptic would give a savage would do much good in him ; but I would have every Christian man here to understand that there is a great deal of truth in what the sceptic asserts. Conscience *is*, very largely, a thing of education : it *does* depend, very greatly, on where a man is born, and how he is taught, or brought up.

"You have completely upset our notions of Conscience, sir !" say some religious friends : "we do not understand what Conscience can be, at all, now."

Let us try, then, to understand what it is. Let us try to make it plain to all our understandings : let us try to define to ourselves what is this "Moral Reason," "Moral Sense," or "Conscience !" I should deem it—the faculty in all men, white or black, olive or copper-coloured, wherever they may be born, however they may be brought up, which discerns that there is *a* right and *a* wrong, and that, for man, there *must be a right and a wrong* ; but *not* a faculty which infallibly discerns that this action is right, and that particular action is wrong ; *the faculty* needs education. You cannot educate

the faculty in a mere animal; because he has no such moral faculty; but you can effectually educate it in the savage. Bring the violent savage into our own country—where the highest morality, Christ's own morality, is taught. You can train his moral, as well as his intellectual nature; and observe the process for yourself. When you brought him hither, the savage would commit actions he did not know to be wrong—know to be sinful. But, as you train him, he comes to feel as you feel, morally; and the change is evident from his words and actions.

I need scarcely have said—"bring a savage into our own country." The moral nature of savages has been changed, regenerated, ennobled, purified, without taking them from their own homes. You know I am much in the habit of rehearsing what I remember to have heard and seen when I was younger. Excuse me, if I yield to that failing, now.

I cannot forget what I felt when I was a young man, and was attending a meeting in the little Independent chapel, at Gainsborough, and heard Dr. Philip, who had returned from Africa, relate the story of Africainer and Moffat the missionary: that venerable Moffat who has so lately returned to England.

Africainer,—it was told us, by Dr. Philip,—was the great name of terror to British colonists, in South Africa. The Griqua chief was nearly as

terrible to the colonists, as Africaineer. These fierce leaders of the native tribes were sometimes at war with each other ; and sometimes they united to spread devastation and ruin over the homes of the colonists.

One morning, the missionary Moffat—then but a young man—told his Christian companions that he had made the resolution, on his knees, before God, to travel alone into Africaineer's country, enter the tent of the terrible savage, and preach Christ to him. Moffat's companions attempted to dissuade him, telling him they felt sure that Africaineer would put him to death. But Moffat went ; and Dr. Philip described how the amazed savage trembled as he listened to the missionary—how he invited Moffat to come again—how Africaineer was converted to Christ—and how the Griqua chief also became a Christian.

“And,” said Dr. Philip, “before I had left Africa, I saw Africaineer and the Griqua chief kneel by a table which stood on the ground where they had formerly fought, with their tribes, for three days ; and, now, they grasped each other's hands, and wept and praised God together !”

Not many months ago, I was relating these recollections in the Wesleyan chapel, at Sedbergh, in Yorkshire, when William Moister, a venerable missionary just returned from Africa, arose and said, “I have preached in the pulpit of Africaineer.

He built it of clay, with his own hands, and preached in it, to his tribe, to his dying day; and his son preached in it after him."

So this Moral Nature in Man can be awakened, even in a savage; and from being the devotee of rage and bloodshed, he can be brought to love peace and meekness and goodness, and to preach these to others. The Moral Faculty *can* be educated.

"But all this is very contrary to the teaching we used to hear some years ago, when Robert Owen was in the height of his fame," some of you who hear me may be saying;—"and it seemed very clear to us, then, that he was right. We thought he had proved it—that Man is the mere creature of circumstance—that his character is formed for him and not by him—and that there ought to be no praise and no blame."

Ay, ay, I remember it all. But you felt you *must* praise and blame, and you felt you could not help praising and blaming. And the funniest thing was that Robert Owen himself was perpetually praising and blaming!

Do some of you retain your old prejudices in favour of Robert Owen, and the doctrines of Socialism? Do you really think your characters are formed for you and not by you?—that you are only "the creatures of circumstance"?—and that it is only a foolish weakness to praise and blame?

If there be such persons among you, I say to them—Answer me one question, I pray you:—Is there not one word in the dictionary—do you not feel that there is one word in the dictionary—of more importance to Man—and, therefore, of more importance to *you*—than any other word that can be uttered?—What is that word?

DUTY. What duty? whose duty? The duty of a horse, or of a pig? The duty of a bird, or of a fish? The duty of a reptile, or of an insect?

“Nonsense!” you immediately exclaim; “the animals have no duties. Everybody knows that well enough.”

Of course they do. I am talking about Man’s duty—*your* duty. You feel—every one of you—that, of all the creatures in the world, *you* are the beings of Duty. You cannot get quit of your sense of duty, with all your prate about being “creatures of circumstance.” No more could Robert Owen. He was perpetually talking about men fulfilling their duties, and perpetually praising and blaming men according as they neglected or fulfilled their duties.

Now, how is it that you cannot get quit of this sense of duty? How is it that you feel remorse when you have violated your sense of duty? One of you to whom I am speaking is the father of a family. I say to him—One day, you lose your temper, and you ill-treat your wife, or your children.

I don't care whether you call yourself Freethinker, Sceptic, Socialist, or Secularist: you feel you have violated your sense of duty. While your ill-temper remains, you strive to maintain that what you have done is right. But, when it subsides, and reflection returns, you say to yourself—"I was very wrong in treating my poor wife so unfairly and cruelly. How often I charge myself with this bad conduct, and say, I will never be guilty of it again. Yet I *am* guilty of it again. How I hate myself for it!"—or, if it were your child that you ill-used, you say to yourself, "What a wretch I was to ill-use my poor child so cruelly! I was *not* correcting it for its faults, though I pretended I was: I was only indulging my vile bad temper."

You know that I am telling you the home-truth. How is it that, involuntarily, you experience this self-recrimination when you have done wrong? Because you have this Moral Nature which we are talking of. How come you to have it? There is but one possible answer:—Because it has been given you by the Moral Governor to Whom you are responsible. Your very possession of the Moral Nature proves His existence. And it was the conviction of the great thinker, Immanuel Kant, that it is the strongest and most undeniable of all the proofs of God's existence.

You will read pleadings in some books for the existence of a Moral Nature in the animals. It is

contended that such a nature belongs to the dog, because he knows he does wrong when he violates the rules you have taught him; and he will demonstrate it so clearly to you by his uneasiness, that you cannot mistake him.

But neither the dog, nor any other of the animals, can violate a rule which his Maker has given him. The dog fears you, and the whip with which you correct him; and he leans on you for protection, and food, and favour. But he has no sense of a Higher Protection than yours.

Every creature obeys the instinct which the Almighty has given it; but indulgence of any of its instincts to excess brings to the creature no such feeling as Man experiences when he gets wrong. Can you conceive the image of a lion creeping into some corner of the wilderness, and groaning with remorse because he has killed too many antelopes? Can you picture to yourself the possibility of a cat secreting herself in the coal-hole to moan and repent because she has killed too many mice?

Man, only, feels remorse for sin. Man, alone, feels the whip and scourge of conscience. He may sin in spite of its reproofs. He may render conscience more and more callous by scorning its clear indictment of his villany. He may "sear it, as with a red-hot iron," but he cannot annihilate it. Man cannot kill conscience—be he ever so wicked.

"I think you are wrong, sir," some one who hears me may say; "did not William Palmer of Rugeley kill conscience? The man who was supposed to have poisoned his wife and brother, in order to get the sums of money for which he had insured their lives—and who was afterwards put to death for poisoning John' Parsons Cook, a person with whom he had intimate turf transactions, and whose money he wished to get? He must have killed conscience, sir; for he never would confess his crime, and died as hard as if he had been made of iron."

Nay: he had *not* killed conscience. Listen to what a gentleman told me, who declared he had the information from the chaplain, who visited Palmer, during his last hours of existence in Stafford gaol.

The chaplain lingered late in the condemned cell, with the prisoner, the night before the execution; but the mind of Palmer was still angry, defiant, and unrepentant: and he spurned away the charges against him as false. The chaplain left him unwillingly; and it was because Palmer threw himself on the couch, as if he wished to seek some repose. The chaplain knelt by his own bedside; but felt compelled to arise and return to the gaol—fearing the guilty man's blood would rest on him if he did not strive—even to the very end—to exhort him to repentance.

I knew Chidley, the chief turnkey of Stafford

gaol, during my own imprisonment there ; and I met him in the street of Stafford, in the month of October, 1868,—and he told me that the governor of the gaol and himself were in the condemned cell with Palmer, when the chaplain returned. And when I related to Chidley what I shall now tell to you, as having been related to me by the gentleman who declared he had his information from the chaplain, Chidley solemnly affirmed that every word of it was true.

“My dear fellow-sinner,” began the chaplain, “I have felt compelled to come back to you—for I dare not sleep while I think of the awful fact that you are to die in a few hours and your mind is so unprepared. Oh, will you try to leave your hardness and confess your sin ? If you would but try to confess, God would help you,—for He delights in mercy, and can give you the gift of true repentance and save you. In a short time it will be too late to repent. Oh will you try to repent *now* ?—will you try to confess your sin ?”

Palmer shifted again and again, uneasily, on the couch,—and, as hard as he was,—the passionate appeal of the good chaplain moved him—but not entirely beyond his stern guilty caution.

“If—I were—to confess—about Cook,” he said, slowly, and by broken words, “I should have—to confess—about—my brother, too,—”

“Why did you really poison your brother, too?” suddenly asked the chaplain.

The interruption checked the softening process of his mind, and the prisoner set his teeth together, and seemed almost to stifle himself in order to prevent another word escaping him—and he uttered a groan that seemed almost to shake the cell! They who stood by had never heard such a groan of agony in their lives! That groan was the voice of Conscience! The guilty man could not kill it—although he had striven so hard to do it!

XIII.

CONCLUSION.

I HASTEN to a conclusion.—I argue, then, from the fact of our own conscious, intelligent, individual, personal existence—without repeating the steps of the Argument a Priori—that there Necessarily exists the One, Eternal, Infinite, Uncaused, Personal Cause of our conscious, intelligent, individual, personal existence—the Almighty, All-wise God ; and, from the facts of the design and contrivance manifest in living things, (for I have been compelled to limit myself to these,) I argue that these facts corroborate and confirm our conviction of the Existence, Power, and Wisdom of God ; and from the fact of our own conscious Moral Nature, I argue that God not only exists, but that He is Holy.

I wish time would have allowed me to enlarge on this last method of proof. I should have liked to urge on your deepest reflection that most precious fact, that the Moral Nature of Man advances the more it is cultured. We cannot limit the capability of Man for moral elevation, when you reflect *that his yearnings are for greater and still greater*

purity, when he leaves vice, and begins to love virtue: that he desires complete rectitude, the more he advances morally. Is it not possible, then, for Man to become holy?—and to become a being devoted to purity of thought and purity of life?

And, if so—what must the Maker be?—For, if there be no God, Man's moral nature is the most incomprehensible fact—the most astounding and confounding riddle—you can present to the human understanding. *Why* have we this moral nature? *Why* are we uneasy about wrong, when we have done it, and cannot help our uneasiness—can no more get quit of it than we can throw off our skin? *How* comes this to be? You can find no answer but the fact that there is a God—our Maker and Moral Governor—to Whom we are accountable. We feel that every other attempt at an answer is a mere mockery of our understandings.

And how holy must God be, if, as we have just said, our own moral nature, with which He has endowed us, yearns for purity the more it becomes pure; and can find its highest joy only in the thought of perfect purity! Let the remembrance of God's perfect holiness check our rashness when we think we spy faults in His Creation. Our confidence in His perfect wisdom should do this; but, much more, our remembrance of His perfect holiness.

He permitted Evil to come into existence. He permits it to exist still. He permits pain and suffering to be felt by His creatures. Let us remember that whatever He permits is not only consistent with His perfect wisdom, but with His perfect holiness : that whatever He does and whatever He permits is *right* : right that He does it and permits it, or it would not be.

NOTE :—SEE PAGE 87.

Some readers may like to see the account in full. It is as follows :—

“A young nobleman, eldest son of the Viscount Montgomery, when a child, had a severe fall, attended with fracture of the ribs of the left side. The consequence of this was a suppurating abscess which went on discharging abundantly, for a long time, from an immense gap in his side ; this I had from himself and other credible persons who were witnesses.

“Between the eighteenth and nineteenth years of his age, this young nobleman, having travelled through France and Italy, came to London, having at this time a very large open cavity in his side, through which the lungs, as it was believed, could both be seen and touched. When this circumstance was told as something miraculous to his serene Majesty King Charles, he straightway sent me to wait on the young man, that I might ascertain the true state of the case. And what did I find ? A young man well grown, of good com-

plexion, and apparently possessed of an excellent constitution, so that I thought the whole story must be a fable.

“ Having saluted him according to custom, however, and informed him of the king's expressed desire that I should wait upon him, he immediately showed me everything, and laid open his left side for my inspection by removing a plate which he wore there by way of defence against accidental blows or other injuries. I found a large open space in the chest, into which I could readily introduce three of my fingers and my thumb ; which done, I straightway perceived a certain protuberant fleshy part, affected with an alternating extrusive and intrusive movement. This part I touched gently. Amazed with the novelty of such a state, I examined everything, again and again ; and when I had satisfied myself, I saw that it was a case of old and extensive ulcer, beyond the reach of art, but brought by a miracle to a kind of cure, the interior being invested with a membrane, and the edges protected with a tough skin.

“ But the fleshy part (which I at first sight took for a mass of granulations, and others had always regarded as a portion of the lung), from its pulsating motions and the rhythm they observed with the pulse,—when the fingers of one of my hands were applied to it, those of the other to the artery at the wrist,—as well as from their discordance with the respiratory movements,—I saw was no portion of the lung that I was handling, but the apex of the heart ; covered over with a layer of fungus flesh by way of external defence, as commonly happens in old ulcers.

“ The servant of this young man was in the daily habit of cleansing the cavity from its accumulated

sordes by means of injections of tepid water ; after which the plate was applied, and, with this in its place, the young man felt adequate to any exercise or expedition, and in short, he led a pleasant life in perfect safety.

" Instead of a verbal answer, therefore, I carried the young man himself to the king, that his Majesty might with his own eyes behold this wonderful case : that in a man alive and well, he might, without detriment to the individual, observe the movement of the heart, and with his proper hand even touch the ventricles, as they contracted. And his most serene Majesty, as well as myself, acknowledged that the heart was without the sense of touch ; for the youth never knew when we touched his heart, except by the sight or the sensation he had through the external integument.

" We also particularly observed the movements of the heart, viz. : that in the diastole it was retracted and withdrawn ; whilst in the systole it emerged and protruded ; and the systole of the heart took place at the moment the diastole or pulse of the wrist was perceived ; to conclude, the heart, struck the walls of the chest, and became prominent at the time it bounded upwards and underwent contractions on itself."

" *Anatomical Exercises on the Generation of Animals, etc.*" Works of William Harvey, M.D., translated by Robert Willis, M.D. London : printed for the Sydenham Society, 1847. In one volume, octavo, pp. 382-4.

II.

THE ARGUMENT FOR MAN'S SPIRITUAL
EXISTENCE,
AND
FOR A FUTURE STATE.

A POPULAR DEFENCE OF CHRISTIAN TRUTH
AGAINST THE DOCTRINES OF MATERIALISM.



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I.

MATERIALISM AFFIRMS THAT THINKING IS A
PROPERTY OF THE BRAIN.

“THERE IS NO SOUL,” says the Materialist :
“all the theories of metaphysicians, that
our bodies are mere clothing to the intellectual
substance, or spiritual essence, which constitutes
the real Man, are empty dreams, worth no more
than so many old wives’ fables. It is altogether a
foolish conceit that Man has a mind separate and
distinct from the body.”

Then, if what you say be true—we say to the
Materialist,—how is it that we think, reason,
imagine, judge, remember, and so on ?

“You are simply referring to the properties of
Matter,” replies the Materialist : “Thinking is a
Property of Matter.”

Do you mean the matter of the body ? we
ask him.

“Of course, I mean the matter of the body,”
says he : “Why do you ask me such a superfluous
question ? Have I not affirmed that there is no
soul ? Of course, then, if I be right—and I have

no doubt that I am—there is but the matter of the body for us to talk about.”

Then, if it be the matter of the body that thinks,—I say again to the Materialist ;—will you be so kind as to tell me—*if you know*—what part of my body it is that thinks ? Does my right shoulder think, or my left elbow ? Does my great toe think, or my little finger ? Do I think with the hair of my head, or with my teeth ?

“No, sir,” he replies, with an air of dignity, “it is the brain that thinks : that is an ascertained fact. Thinking is a property of the brain.”

Forgive me,—I say to him gently,—but, as you just now affirmed that Thinking was a property of Matter, I do not understand how it should be only the Brain—and no other part of the body that thinks—nor do I understand how the Brain thinks.

“You don’t understand it !” exclaims the Materialist,” of course you do not understand it. You know very well that you have to receive thousands of facts *as* facts, and yet you don’t understand them. Every thinking man knows well that we comprehend nothing : we merely apprehend things. I tell you it is an ascertained fact that the brain thinks. You do not overthrow the fact by telling me that you do not understand it. You do not understand how the stomach digests ; but you know it does digest. You will not deny that. Now, just as digestion is a property or office of the

stomach, so thinking is a property or office of the brain."

I reply, again, to the Materialist :—

We *know* that digestion is a property or office of the stomach. We have accounts of experiments made by highly intelligent members of the Faculty, showing us at what rate the process of digestion goes on in the stomach;—that the gastric juice acts much more rapidly on some kinds of food, than on others;—and how the doorkeeper at the pylorus opens, very good-naturedly, the passage for the digested pulp or chyme, into the duodenum, but refuses to let undigested matter pass—unless you medicine him, or make him drunk, and then he yields, but you are punished for it, nevertheless.

Nay more : the gastric juice can be taken from the stomach, and experiments openly made with it. Suppose we had a quantity of gastric juice in this glass that I hold in my hand. Put your finger into it. It will not touch your finger. Let a live bird step into it. It will not touch the live bird's claw. Why? "Because of the principle of Life," said John Hunter. And he was more likely to know than one hundred other men that could be named to you. What the "principle of life" is, John Hunter did not know; nor has any one yet discovered, nor is it likely that Man ever will know what the principle of life is. But it seems to be an incontrovertible fact that the gastric juice

cannot act on any living thing. It has been found corroding the stomach of a dead man ; but it does not act on the coats of the living human stomach. Put a quantity of masticated bread, or masticated meat, into this glass that we suppose to have so much gastric juice in it. Wait a while, and we shall soon see it dissolve the masticated food.

Now I go on to say to the Materialist :—You have insisted on a parallel between the case of the stomach and its functions, and those of the brain : “ Just as digestion is a property or office of the stomach, so thinking is a property or office of the brain,” was your position. We can test the property of the gastric juice which is secreted by the human stomach : we can make open experiments with it. Let us, therefore, try open experiments with the brain, in such a way as we can.

II.

EXAMINATION OF THE BRAIN, BY DIVISION INTO
ONE HUNDRED PARTS.

LET us suppose we have a Human Brain before us, and that I take it into my two open hands. You, the Materialist, say it thinks. How shall I find that out? What have I, here, in my open hands? A mass of pulpy matter, composed of convolutions, or twisted parts, some greyish, and some white, and a seemingly countless number of small red streaks among it, these being the blood-vessels of the brain.

Now, what shall I do with it? How shall I proceed to put the doctrine of my friend the Materialist to the test. He says the brain thinks. How shall I find it out that it either *does* think, or *can* think?

A chemist comes to me, and says, "Give the brain to me, and I will analyse it, and come back and tell you what are the primitive elements of which it is composed."

What is the information which he gives me, at length?—"I find, sir," says he, that it is composed

of so much carbon, and so much oxygen, and so much hydrogen, and so much nitrogen——”

Stop, my good friend, I cry to him, impatiently,—for you do not help me at all. You might as well talk so much Chinese. Your information, doubtless, is of value, given at the right time, and in the right place ; but, you see, it is of no value to me, now. I want to know whether the brain thinks ; and you do not help me, at all, by what you say.

“ I knew the chemist could not help you,” says another person, coming forward in a determined way. “ Now, give the brain to me, and I will divide it mechanically—say into one hundred parts ; and then, I will bring it back to you, and tell you, in plainer language, what are the names of its component parts ; and then, you can judge for yourself, whether thinking be a property of the brain or not.”

So I let my new friend take the brain, and divide it, after his fashion—mechanically, as he says. He takes some time to perform his self-imposed task ; but, at length, he returns, and says—“ There—Look at that ! I have divided the Brain into *one hundred parts*. In this vessel there are *eighty parts*, which are Water——”

Water ! I exclaim ;—do you tell me, and my Materialist friend, here, that *eighty* parts of every hundred, in a human brain, are water ?—four-fifths of our brains water ?

"The fact is before your eyes," says he.

I cannot help observing to my Materialist friend, that if his doctrine be true, one cannot wonder that the productions of some people's brains are so weak.

"*Eighty* parts Water," goes on the new analyser ; "*five* parts Fatty matter ; *seven* parts Albumen—the substance of which white of egg is composed ; *one* part Osmozome—the chemical substance of which muscle, or lean meat is composed ; *one and a half* part Phosphorus—the chemical substance so much in use for making Lucifer matches, you know—and that makes fish shine in the dark ; and the remaining *five and a half* parts, to make up the *one hundred*, various acids and salts."

Thank you, my good friend,—I say to the analyser. It must have cost you an immense dear of trouble to divide the Brain with such precision and exactitude. But, after all, I do not see how you help me any better than the Chemist to the discovery of the truth of what my friend the Materialist affirms :—that the Brain thinks. I am compelled to turn to him again, and ask him to tell me more distinctly and explicitly, what he means, when he affirms that the Brain thinks.

Do you mean,—I say to him,—that it is the eighty parts of water that think ? Do you mean that it is the five parts of fatty matter that reason ? Do you mean that it is the seven parts of albumen

that judge and remember? Or, that any of the other of these, the component material substances of the Brain, are conscious, imagine, will, determine? Or, do you mean that the intermixture of these substances forms a material composition capable of thinking, willing, judging, imagining, remembering, and so on?

"I mean," replies the Materialist, "that the Brain is composed of organised matter, and therefore it is capable of thinking."

Organised matter—I repeat: *organon*, an instrument: *organise*, to shape or form into an instrument. Doubtless the brain is an instrument. We can have no doubt of that. We can have no doubt that it is the very instrument which the Mind employs in thinking; but, remember, no instrument can employ itself. If you, my friend,—I say to the Materialist—if you granted that in some mysterious way the Mind—the spiritual agent—employed the organised brain—the instrument—in thinking, our controversy would be at an end. But that you do not grant. You seem to mean that it is organised water, organised fat, organised albumen, organised osmозome, organised phosphorus, and organised acids and salts, that think: that so much water, fat, albumen, phosphorus, and the rest, that form the brain, are *organised to think*, independently. Excuse me, when I tell you that to my humble self, *all this* seems exceedingly ridiculous.

III.

THE MATERIALIST PLEADS OUR IGNORANCE OF *ALL*
THE PROPERTIES OF MATTER COMPREHENSIVELY.

“**D**O not conclude so hastily,” rejoins our Materialist friend; “remember that you do not know *all* the properties of matter; and therefore you have no right to affirm that the organised material brain is incapable of thinking.”

What!—no right to say that so much organised water, and fat, and albumen, and phosphorus, and so on, cannot think, because I do not know *all* the properties of matter! Most assuredly, if men always talked in that way, we never should have any knowledge, any science. If I must not form any conclusive opinion about certain things, because I am not sure that I know everything pertaining to them, I shall have to put so many “ifs” and “may bes” into language, that I shall soon be tired of talking, altogether.

From what I know of it, I affirm that this glass will not go to pieces while I hold it in my hand, unless some foreign force reaches it. But I had better not affirm it, since I do not know *all* the

properties of matter. It may go to pieces in a moment ; though I do not expect it.

Form no opinions !—make no affirmations !—say nothing positive, or negative, either, about matter, because we do not know *all* its properties ! Then we shall have no science, nor even the nomenclature of a science. It is because Man has ascertained some of the properties of matter, and arranged his knowledge in order, that sciences have been formed. It is this ascertained and arranged knowledge which forms our Encyclopædia. We cannot throw it away because Man has not ascertained *all* the properties of matter.

Now, from what Man *has* ascertained of the properties of matter, we deny that Thinking can possibly be a property of matter. We ascertain the properties of matter by the exercise of our senses, or by the acts of measurement or weight, or by admixture with other matter, or by separation of its parts, or by burning, or by solution in water, or by some process in chemical analysis. Can we discover Thinking to be a property of matter, by any of these methods of examination ? Can we see Thinking ?—can we hear it ?—can we touch it ?—can we taste it ?—can we smell it ?—can we measure it, or weigh it, so as to enable ourselves to tell our neighbours that we have found a yard and a half of Thinking, or three ounces and three-quarters of Thinking ? Can we burn Thinking,

or dissolve it in water, or mix it up with flour and eggs? Can we speak of round thinking, square thinking, triangular thinking,—sweet thinking, salt thinking, sour thinking, bitter thinking,—white thinking, black thinking, blue thinking, green thinking, yellow thinking, red thinking?

What property of Matter does Thinking resemble?—or *how* does it resemble a property of Matter? I defy any man to tell me. Never, since the world has existed has any man discovered a single property of Matter that resembles thinking. Man has passed laborious days and nights in testing and examining Matter, and ascertaining its properties; but he has never yet discovered a property of Matter that resembles thinking.

IV.

WHIMSICAL THEORY OF A MATERIALIST ABOUT
PHOSPHORUS.

BUT, when a man wants to believe a something, in order to relieve himself of the irksome burthen of Mystery, how easy it is for him to persuade himself that he has found a proof of the something that he wants to believe!

Some years ago, when I was in the habit of holding debates with sceptical hearers, at the close of my Sunday evening lectures, in London, there was one man, a little advanced in years, who was a frequent debater, and who rose one Sunday night, to proclaim that, on the preceding Sunday night, I had not stated the whole truth—for that, in describing the composition of the brain, I had not shown that Phosphorus was the “Thinking Principle”!

I assured the debater that I was utterly ignorant of what he affirmed to be a well-known fact. I had never heard of it before; and asked him where he had learnt it. It was a discovery of Mr. Kyan, the great chemist, he assured me.

You mean, I suppose—said I—the inventor of what is called the Kyanizing of timber. He has the reputation of being a very intelligent man, and I cannot think he ever broached such a strange fancy.

“Fancy!” exclaimed the man, with warmth; “I tell you, sir, it is a truth; and if you do not know it, you ought to know it. You were right, last Sunday night, when you said there was usually *one and a half* part ‘phosphorus in the hundred parts into which you might divide a human brain; for it is so, *usually*. And that is the reason why the bulk of mankind are, simply, people of decent common-sense, and no more. But, if there be *two* parts phosphorus in the hundred parts of a human brain, the owner will be a man of bright intelligence—of splendid mind; while, if he have but *one* part phosphorus in the hundred, he will be an idiot!”

This display of information caused some mirth; but our friend, the champion of Phosphorus, was not to be put down by a laugh. He re-asserted what he had said, and asseverated that it was all true. I asked him, if he had had the statement from Mr. Kyan himself. He said he had not; but it was contained in a book written by Mr. Kyan. I asked him if he had read the book. He said he had not; but a friend of his had read the book, and *doubtless, the statement was true!* And he

uttered the last words with so much grotesque emphasis, that I felt resolved to make him see his own folly, till he should be ashamed of it.

My friend—said I—some of us, here, profess to be followers of Lord Bacon—disciples of the Inductive System. We like, always, to have the induction when a new scientific fact is proclaimed. That is to say, we like to be told, exactly and particularly, by what method it was discovered. Now, can you give us the induction with regard to the discovery of Phosphorus being the Thinking Principle in man? *How* did Mr. Kyan discover it to be so? Did he send for a very skilful surgeon who could separate the sutures of the skull of a living man, and discover it by inspecting the naked living brain?

“You mean to insult me, sir,” exclaimed our philosophic—or rather phosphoric friend; “I should think it would kill any man to take his skull in pieces.”

My good friend, I never insult anybody—said I—and I am never insulted myself. None but mere puppies ever talk of being insulted. It is a very absurd way of talking, and you ought to leave it off. But now, tell us: you mean, I suppose, that you do not think Mr. Kyan made his discovery by opening the skull, and inspecting the brain of a living man?

“Certainly not,” was the vehement answer.

Then—said I—I suppose you believe that Mr. Kyan made his discovery by inspecting the brain of a dead man?

“Of course, he did,” was the still more vehement reply.

So—said I—Mr. Kyan discovered the Phosphorus in the dead man’s brain to be the Thinking Principle, because the dead man had done thinking!

I cannot describe the look of the champion of Phosphorus. As for words he had none. The universal laughter made him shrink into silence; and I hope he abandoned his folly.

V.

EXPERIMENTS OF THE MATERIALIST SURGEON, IN
ROUEN.

OUR Materialist friend, by this time, will be saying—"When do you propose to look at the evidence on our side? You know that several men of eminence in the world—physicians, anatomists, physiologists, practical surgeons,—have been professed Materialists. You cannot pass by all their experiments in silence."

I do not mean to do so. I am just thinking of a remarkable case. I wish I could remember the name of the book in which I found it, many years ago—but I cannot. As distinctly as I can remember, it is as follows.

A surgeon of the name of Le Cat, living in Rouen, about the middle of the last century, had a poor working-man brought into his surgery, one day, in a state of insensibility. The man had fallen from a ladder and alighted on his head. He was placed in a chair, and the surgeon sponged his head, and then examined it, and found a piece of

the bone of the skull broken, and pressed down upon the brain. The surgeon raised the piece of bone from the brain, and the poor man awoke to the possession of his senses!

So read the account that I saw ; and it also read as meaning that the man recovered his senses, there and then, as we say. Now Le Cat was a Materialist, and he thought what he had just witnessed confirmed his own theory ; and he resolved to get further proofs of it, if possible. So he dipped the piece of broken bone back again upon the brain ; and again—he tells us—the man became insensible. In like manner the man awoke to the possession of his senses when the piece of bone was again raised from the brain. The surgeon tells us that he repeated the experiment, raising and depressing the piece of bone, very carefully, with the like results.

Very soon Le Cat bethought him to try another experiment. He raised the broken bone so completely as to be able to put two of his fingers into the fracture, and press upon the brain. The man—the surgeon tells us—relapsed again into insensibility, and awoke to the possession of his senses when the fingers were removed.

Le Cat assures us that he considered these experiments so conclusive of the truth of Materialism, that he could not resist the impulse to make a final experiment. So he raised up the piece of broken bone, so as to expose to his own gaze as

much of the brain as possible. And, now, Le Cat stood over the man who still sat in the chair, and tried to rouse his anger, to pique his pride, to make him laugh, and otherwise to excite him. The surgeon's eyes, all the time, were on the surface of the exposed bit of brain; and he solemnly assures us that he saw the brain—thinking !

You laugh—and you have a right to laugh. When a man most gravely tries to make a fool of himself, one cannot help laughing. What was it that Le Cat really saw? He tells us. He saw a waving motion of the brain under its covering, the *dura mater*; and this waving motion increased when he succeeded in exciting the man most highly. In other words, he witnessed the motion caused by the passage of the blood through the blood-vessels of the brain. A man's brain is, usually, about one-twenty-fifth part of the weight of his whole body; but there is usually a sixth part of our blood in our brain at one time: the brain is so vital an organ that it has to be very richly supplied with blood, and, for this reason, the brain—the organised brain—let us remember the words of our Materialist friend !—the organised brain is supplied with what we may well call a countless number of small blood-vessels. The blood has to run its amazing course through these small vessels, with the greatest regularity, or we should soon feel the evil effects of it. Now, the more you excite a man's mind, the more

you quicken the motion of his blood. It was these quickened wavelets of the blood which caused the motion seen by the French surgeon ; and he called what he saw—thinking !

I am sure you will agree with me when I say that none but a man bent on being a Materialist, whether there was evidence to produce true conviction, or no evidence at all, could have come to such a conclusion.

VI.

REMARKABLE BRAIN CASES, IN THE EXPERIENCE
OF SIR ASTLEY COOPER.

LET us, now, turn to a case or two a little more worth our attention. They form a part of the experience of Sir Astley Cooper—the illustrious surgeon who made his way from slender circumstances to fame and a title, solely by industrious application to his profession. I will read you one case from his “Lectures on the Principles and Practice of Surgery, as delivered in the Theatre of St. Thomas’s Hospital.” I read from page 134, in the fourth edition, published in 1835.

“A man was pressed on board one of his Majesty’s ships, early in the late revolutionary war. While on board this vessel, in the Mediterranean, he received a fall from the yard-arm, and when he was picked up, on the deck, he was found to be insensible. The vessel soon after making Gibraltar, he was deposited in an hospital in that place, where he remained for some months, still insensible; and some time after, he was brought from Gibraltar, on

board the Dolphin frigate, to a dépôt for sailors, at Deptford.

“While he was at Deptford, the surgeon, under whose care he was, was visited by Mr. Davy, who was then an apprentice at this hospital. The surgeon said to Mr. Davy, ‘I have a case which I think you would much like to see. It is a man who has been insensible for many months ; he lies on his back with very few signs of life ; he breathes, indeed, has a pulse, and some motion in his fingers ; but in all respects he is apparently deprived of all powers of mind, volition, or sensation.’

“Mr. Davy went to see the case, and on examining the patient, found that there was a slight depression on one part of the head. Being informed of the accident which had occasioned this depression, he recommended the man to be sent to St. Thomas’s Hospital. He was placed under the care of Mr. Clive ; and when he was first admitted into this hospital, I saw him lying on his back, breathing without great difficulty ; his pulse regular, his arms extended, and his fingers moving to and fro to the motion of the heart, so that you could count his pulse by this motion of his fingers. If he wanted food, he had the power of moving his lips and tongue ; and this action of his mouth was the signal to his attendants for supplying this want.

“Mr. Clive, on examining his head, found an obvious depression ; and, thirteen months and a

few days after the accident, he was carried into the operating theatre, and there *trephtined*. The depressed piece of bone was elevated from the brain. While he was lying on the table, the motion of his fingers went on during the operation ; but no sooner was the portion of bone raised than it ceased.

“ The operation was performed at one o'clock in the afternoon ; and, at four o'clock, as I was walking through the wards, I went up to the man's bedside, and was surprised to see him sitting up in his bed. He had raised himself on his pillow. I asked him if he felt any pain, and he immediately put his hand to his head. This showed that volition and sensation were returning.

“ In four days from that time the man was able to get out of bed, and began to converse ; and in a few more days he was able to tell us where he came from. He recollected the circumstance of his having been pressed, and carried down to Plymouth or Falmouth ; but, from that moment up to the time when the operation was performed (that is, for a period of thirteen months and some days) his mind had remained in a state of perfect oblivion. He had drunk, as it were, the cup of Lēthē ; he had suffered a complete death as far as regarded his mental and almost his bodily powers ; but, by removing a small portion of the bone with the saw, he was, at once, restored to all the functions of his *mind*, and almost all the powers of his body.”

Another, and still more remarkable case, I will relate to you from memory—for I do not possess the book from which I learned it. This case, I may say, occurred a long time before the great surgeon had won his honours. He was walking, professionally, through one of the London Hospitals, in his youth, when his attention was drawn, by one of the attendants, to the very curious case of a wounded soldier who lay in a state of utter insensibility. The man had been wounded in the head, at the battle of Corunna, in the year 1809.

That battle was fought—some of you will remember the record—under very remarkable circumstances. The gallant Sir John Moore had succeeded in conducting the remnant of the British army nearly to the shore where our ships were waiting, in the Bay of Vigo, to receive them, when it was found that Soult had come up with the French army, and he would have to be beaten before our troops could embark. The French were beaten; but Sir John Moore was killed. Wolfe's matchless ode on his burial by night, beginning

“Not a drum was heard, not a funeral note,”—

will be in all your minds.

This poor soldier, whom the young surgeon found in that London Hospital *two years after* the victory of Corunna, was taken up, senseless, from that battle-field, and carried on board ship. The ships

set sail, but an order was received, it seems, some way or other, before they had crossed the Bay of Biscay, for the fleet to divide, and for part of it to proceed to the East Indies. All the wounded were put into the ships to be taken to England, except this poor man, who was overlooked or forgotten. So he had to make the voyage to India. The sailors contrived to keep him alive—for Jack Tar is a shrewd fellow. The motion of the unconscious man's mouth was taken for an involuntary and instinctive sign that he needed food; and kind-hearted Jack watched him, and took care to feed him.

Behold! when they reached India, the poor fellow could not be received into the hospital at Calcutta because he had come in a king's ship! The hospital at Calcutta was for none but patients from the East India Company's vessels! So, once more, the poor unconscious man was on the ocean, in a ship bound for England. Finally, the man was brought to London, and put into the hospital, where young Astley Cooper found him.

The story naturally served to make the intelligent and philanthropic young surgeon feel a deep interest in the man's case. On examining the man's skull, he soon found it was fractured, and the bone largely indented at the top, and much pressed down upon the brain. With skill, courage, and care, and the use of the *trepphine*, he contrived to raise the bones

of the skull, and to support them in their proper condition.

The man was fed, and attended to, as usual ; and it was not until the end of a month that the attendants observed any change in him. He was seen, at first, to look about him wistfully, for a few minutes, and then to relapse into unconsciousness. But, by degrees, he kept his consciousness, apparently, for longer periods, till, at length, he took the food from his attendants into his own hands, and fed himself.

His first attempt to speak soon followed ; but he failed. He only uttered confused sounds that were unmeaning to his attendants. At last the words burst forth—“ *Who's won the battle ?* ” The attendants stared, and were speechless. “ *Who's won the battle, I say ?* ” he shouted ; and his excitement soon made those who heard him find their own power of speech.

They gradually informed him how he had been carried off the field of Corunna, put on board ship, taken to India, and then brought to England, and placed in the hospital ; and that it was two years since he was wounded in the head, at the battle of Corunna, where his commander had been killed.

The man burst into violent laughter, and shook his head with a knowing look, which an old sailor would have interpreted as meaning “ Tell that to

the marines!" The man had been utterly unconscious two years; and seemed, to his own mind, to have only very lately come from the field of battle.

Be it observed, before I end the relation, that this man had perfect recollections, not only of his soldier-life; but of a great deal of his earlier existence: his youth and boyhood.

VII.

THE MIND NOT ALWAYS CONSCIOUS. — INJURY OF
THE BRAIN LIKELY TO BLURR THE MIND'S
PERCEPTIONS.

“STOP !” cries our Materialist friend, “stop and tell me if your story does not prove my theory to be true ; and that we now need no further enquiry or dispute. These men with the broken skulls, and the bones of it pressed down upon the brain, were unconscious, the one thirteen months, you say ; and the other two years. Does not that show that thinking is a property of the Brain ? The men’s brains were weighted down—stopped in their thinking operations—so that the brains could not think ; and the men became unconscious, and remained so till the weight was taken off—till the hindrance to the brains’ thinking was removed. You say that man has a soul or spirit—a Mind separate and distinct from the body. Pray, sir, where were the souls of these two men you have been speaking of, during the thirteen months, in the one case, and two years, in the other, that they were utterly unconscious ?”

I reply that the soul was in existence, though not

in action. Where is the Thinking Property of the Brain that the Materialist talks of, in profound sleep? He will not grant that the Thinking Property has ceased to exist because it is not in action.

Whatever may be the real nature of the Mind, it needs neither argument nor proof to show, that it is *not* its nature to be *always conscious*. Profound and dreamless sleep, fainting-away and insensibility, besides well-authenticated cases of trance, show that it is *not* the nature of the Mind to be *always conscious*. There are well-authenticated cases of trance of five days ; and, for anything we know to the contrary, the poor man in the London Hospital might have lived in a state of unconsciousness for five years, or twice, or thrice five years, if young Astley Cooper had not found him.

“But how can you account,” says the Materialist, “for the entire interruption of consciousness or of sanity by injuries of the brain?”

I reply, first, that consciousness is not always interrupted by injuries of the brain. If you consult the works of medical men, surgeons, and anatomists, you will find abundant records of the wounding, cutting, and losing parts of the brain, without pain, and without interruption of consciousness.

M. Quesnay, a surgeon of high reputation, in the Memoirs of the Academy of Chirurgeons, attests the fact that twenty-two French soldiers, who had the top of their heads cut off, ‘with more or less

of the brain,' by sabre-strokes,—although they all, ultimately, died, had, at first, not a single bad symptom, and performed a journey of thirty leagues after being wounded, and one half of this distance on foot. (See Note at the end.)

I may also say that the brain of those who have been Inmates of Lunatic Asylums for many years has been examined; and, again and again, the most skilful surgeons have testified that they could discover no injury or irregularity in the brain which could be set down as the cause of insanity.

But, even suppose that we pass by all these cases as exceptional, and consider it to be an ordinary occurrence that mental disorder is caused by suffusion or rupture of the blood-vessels of the brain, or from outward injuries, such as fracture of the skull,—yet, all this seems easily interpretable to one who, like myself, believes in the Spirituality of Man's Nature.

That the brain and nervous system form the *nexus*, or tie, between the Human Soul and Body, I have not the slightest doubt. *How* they are tied together, I cannot interpret; but, since they are tied together so closely and intimately, I cannot wonder that the state of one affects the state of the other. That the state of the body, as it regards health, affects the mind, is a fact of perpetually recurring experience. And, that the state of the mind, and its changes, affect the state of the body,

is an equally notable fact : tell a man or woman some deeply afflictive news, very suddenly, and how often they become pale and helpless, or seem in danger of death !

That the brain is the instrument through which the Soul receives impressions from without, and which it uses in making observations on things without, is also very evident. And who can wonder that the faulty state of the instrument should often render the impressions or observations untrue ? If I look through a cottage window in which every pane is bad glass, I shall see nothing but distorted figures in the street. If I lift a telescope towards the heavens, and one of the lenses be cracked, how shall I discover Jupiter and his satellites ? Suppose we had a grand piano in this room, and that its furniture was of expensive wood richly carved, and the ivory and ebony keys were all geometrically cut, and the strings were all tuned by a first-class professional man, so that every string was at precise concert pitch. The grand piano is very perfect ; but it is silent—for it is only an instrument. Let the player sit down, and begin. Soon it discourses eloquent music. Smash in the lid upon the strings while the player is in the full tide of his harmony, —and where is the music, now ? So, if you break in a man's skull, and thrust the bone upon the brain, it can be no wonder if an entire suspension of consciousness follows.

VIII.

MATERIALISM IS OVERTHROWN WHEN WE CONSIDER
THE LIFE-LONG NATURE OF MEMORY AMID ALL
THE CHANGES OF THE BRAIN.

LET us come, now, to the great consideration which ought to fix the attention of the Materialist. The matter of our bodies—brain included—is perpetually changing. It is the rule of life. Life ceases if the change of the particles of matter ceases ; and then a new rule sets in for the body—that of decomposition. We commonly talk of the “decay of nature ;” but men never decay while they are alive. The assimilation of new matter is going on in the old man of ninety, and the old particles are going off. He is not decaying, so long as he lives. There is, indeed, a rule of deterioration, from about forty years of age—such as the formation of earthy matter instead of real bone—but it is not decay. We are perpetually changing, so that none of us have had our present bodies ten years. Except the enamel of the teeth, which a few anatomists hold to exist unchanged for many years—or, otherwise that its changes are ex-

tremely slow—it is agreed by all scientific men, that the entire matter of our bodies undergoes an entire change every seven or eight years, while the soft parts of the body—such as the brain—change oftener.

Perhaps the greater part of the brain which that poor soldier had at the battle of Corunna was gone, and new parts formed, when he recovered his consciousness in the London Hospital. And, doubtless, in the course of the thirteen months that the poor sailor was unconscious, a similar change of the particles of the brain had been going on. How was it that the sailor was able to tell the surgeons where he came from, how he had been pressed, and carried down to Plymouth,—and how was it that the soldier who had been two years unconscious should have so lively a recollection of the fight of Corunna and of his soldier's life,—if there be no soul, no spiritual substance which retains the memory and knowledge of facts and events when the worn-out parts of the brain have passed away?

I remind you of my own case. I remember the day I was two years old—as I have told the readers of my Autobiography. I have as clear and distinct a remembrance, at sixty-eight, of what was said to me, that day, on St. Thomas's bridge, at Exeter, after I had escaped drowning, as if it had occurred but yesterday. The brain I had when I was two years old would all be gone, very early.

Perhaps as many as three or four entire changes of the matter of the brain would take place by the time I was twenty ; and, most likely, more than a dozen changes of the entire matter of the brain have come about by this time.

We all remember the events of childhood and early life so well. How is this, seeing the brain of childhood and youth is gone ?

"Doubtless," replies the Materialist, "because the old brain leaves its impressions on the new brain. And, besides, you have repeated the record of the facts or events again and again, and thus re-impressed them upon the brain—impressed them on the newer brain. If you had not done so, very likely, you would not remember, in age, any fact or event of early life."

Leaves *what* impressions ? we ask. Does the Materialist mean that the old brain leaves *thoughts* to the new brain ? Nay : it has not been proved, yet, that the brain thinks. So that reply cannot pass for an answer.

And, that we do not remember what happened to us in childhood, or in youth, because we have repeated the memory of the fact or event, is not only not proven ; but there is abundant proof to the contrary. Every man and woman of more than mature age is often conscious of suddenly remembering events which they had not thought of for twenty or thirty years, or more.

You meet one who was your daily playmate in childhood, and your close companion in youth : you have not seen each other, it may be, for thirty years : you begin to talk of the old town or village where you lived, and of its well-known inhabitants—and how often the question and answer are pleasantly exchanged—"Do you not remember we did so-and-so, or what happened to such a one?"—"Ah! to be sure I do," will be the reply; "but I had quite forgotten that till you mentioned it: it has not passed through my mind once, in all these thirty years!"

It has often been said that the catalogue of facts has yet to be collected, for forming a true science of Psychology. And, indeed, men generally do not watch the acts of their own minds; and extremely few men note such acts down, or make a record of them. Whenever they are noted down, it is well to make use of them. It is now many years since the "Pacific" steam-ship was lost. One person on board of her, alone, was saved; and his very remarkable account was published. I give it briefly, and from memory:—

There was a great deal of gold in the ship. But when shipwreck was considered certain, no one cared about preserving it: on the contrary, in the alarm at the impending disaster, many passengers who had valuable rings, and trinkets, threw them on the deck. An old Negro cook-woman gathered

them into her apron, as though she thought she could make use of them in the next country!

While the one person who was ultimately saved was clinging to a part of the vessel, but under the belief that he must inevitably perish—just at the moment when the water was gurgling in his ears—he seemed to hear his mother say—“Jock! ha’ ye stolen the grapes?”

He stated that, so far as he could remember, the act referred to in this question was his earliest remembered transgression: he had stolen some grapes out of his sick brother’s room, when he was a little boy. He thought it very strange that the event should rise up to memory from its burial in the records of the soul—as he did not remember that he had ever thought of it from his boyhood. It seemed as if, in her great agony and distress, the soul was reviewing her acts of guilt, as she expected to come soon into the presence of her Divine Judge.

This was a remarkable instance of a person’s memory of an event after many years had passed without any rehearsal of it. Doubtless, thousands of facts could be collected in proof of the fact that the memory of facts and events does not depend on the rehearsal of them. I wish they were collected. They would help us, much better, to form a true Psychology, or doctrine of Mind, than all the fanciful guesses one reads in meta-

physical books about "The Law of Association of Ideas"—of which we seem to know scarcely anything. Very often, remembrances of long-past events arise suddenly in the mind, and there seems to be *no* "association of ideas"—for we were thinking of nothing that could lead to the remembrance of the said long-past events.

Materialism is utterly at fault when you ponder on this great fact that we remember facts and events, often, after many years of forgetfulness. The doctrine of Man's Spirituality of Nature clears up the difficulty: the Soul—the spiritual substance or essence which constitutes the personal being, the real man—keeps the record of our experience, though the matter of our bodies is perpetually leaving us.

Indeed, the doctrines of Materialism seem utterly ridiculous, when you learn what Materialists affirm. When the brain is beheld by the help of the microscope, it is found to be composed of minute globules of white and gray matter. Some Materialists affirm that it is the gray globules that think! But what is the history of a globule of the brain, whether white or gray? First, it has to come into existence. A certain time after we have taken a meal, new blood is formed. From the blood the new globules of the brain are formed. But they are not formed at once. When do they *begin* to think? Have they to serve an appren-

ticeship to the older globules of the brain, in order to learn to think? And when the first brain leaves its impressions on the second, and the second its double burthen on the third, and the third its triple burthen on the fourth—more especially when a later brain has to leave its tenfold burthen of impressions on one still later—must not the process be very burthensome, indeed?

We have no consciousness of any such process, nor of any other process that is material, when we exercise our mental powers. When I reflect on my own existence—when I say to myself, “I know that I exist”—I am neither thinking of matter, nor is there any material process in the mental act. You young men have been reading to-day—at least, if you have not, you ought to have been—and you found some new fact, truth, or sentiment, in the course of your reading. You thought what you had found would be useful to you, in the future, and said to yourselves, “I’ll take care of that!” And you have taken care of it. Did you write it down? No; but you will be able to produce it, at the proper time. *Where* have you put it? In no material box, chest, or drawer; on no material shelf; in no material “pigeon-hole,”—from which you can reach it out with your hand. Oh, no! your act of storing the fact, truth, or sentiment, in the memory for use was a spiritual act. Thinking has no kinship with matter. The soul has no

pigeon-holes, shelves, chests, or boxes, for retaining the memory of things. It might be weeks or months before you needed to make use of the fact or truth you had stored up in your memory ; but you would easily produce it. The changes of matter in your brain would not disturb your mental power. Old brain particles might pass away, and new particles be formed ; but your mental power to produce what you had stored in the mind would be unchanged.

IX.

THE QUESTION OF A FUTURE STATE ENTERED
UPON.

OUR friend, the Materialist, will now make an objection which he thinks will be fatal to what he calls our "fanciful Spiritual Theory." He will say—

"Now you must see that you have been trying to prove too much. You forget that all your reasoning, hitherto, has been but preliminary to your cardinal doctrine that there is a Future State. You contend that Matter cannot think—that even organised matter cannot think. Then, if Matter cannot think in the human brain, it cannot think in the brains of animals lower than man. Now you cannot be much with horses without feeling sure that they think ; and every one who keeps a dog, knows well that a dog thinks. Well : if your thinking proves that you have a soul or spiritual nature, the thinking of horses and dogs, and other creatures, proves that they have souls or spiritual natures, also."

Very well, I reply : granted that it is so. I do

not shrink from what I have affirmed—that Matter cannot think. Wherever intelligence and volition are found, there is something more than matter. You may call it soul, spirit, mind, intelligence, or instinct; and these may be joined to material forms. But mere matter cannot think.

“But, bethink you !” cries the Materialist ; “it is, I repeat, the doctrine of a Future State you aim to reach, and to establish. Now, if you are about to argue that you are to live hereafter because you have a soul, then it follows that the animals are to live hereafter, because they have souls.”

Stop!—I now cry in my turn—not so fast, please. I am not to live hereafter, simply, because I have a soul. I have no natural immortality—no absolute immortality—no independent immortality. What says St. Paul of God’s nature, in his first letter to Timothy?—“Who only hath immortality, dwelling in the light, which no man can approach unto, Whom no man hath seen, nor can see.” No human being has any independent life—life in, or of himself. No human being could exist for a moment, if God did not keep him in existence. The highest archangel in heaven could not exist for one moment, if God did not keep him in existence. God alone has natural immortality—absolute immortality—independent immortality.

No, no : my inheritance of a Future Life,—of a conscious and never-ending existence beyond this

mortal state,—does not depend on the fact, simply, that I have a soul. The most important question of all is—Has God said that I shall live again?

“Thank God, I know that He has!” declares the Christian: “God has declared it in His revealed word; and the Resurrection of His Son from the dead is the glorious fact which seals this truth.”

I do not intend, however, this evening, to go into that part of the Argument for a Future State which depends on Revelation, and the Resurrection of Christ. I purpose, to-night, that we confine ourselves to the philosophical argument. I think there is strong reason, from what we may call by the general name of philosophical arguments, for us to believe that we are to live hereafter, and live for ever.

“But what about the animals?” asks some one, impatiently. I reply that I see no reason for concluding that they are to have a future life. Some religious men have believed that they discovered in Scripture itself words whereon to found an argument that the animals shall live again. John Wesley did so, for instance. He thought that the nineteenth and four following verses, in the eighth chapter of St. Paul’s Epistle to the Romans, gave him sufficient warrant for maintaining that the animals will live in a Future State. Other scholars, however, have come to a different

conclusion from that arrived at by the founder of Methodism—who was too shrewd a man to make his crotchet a part of the doctrines of the Methodist body.

And there seems to be nothing in the life of animals that points to a Future State. They are not moral agents : they cannot commit sin : cannot break the moral law of their Maker. They indulge their instincts and propensities without moral blame from their Maker. Their life is not a life of responsibility. The whole purpose of their existence, so far as we can judge, is accomplished here.

Yet, although there seems to be no valid reason for believing that the animals are to live hereafter, there seems to be strongly presumptive reason—even from philosophical arguments only—for concluding that Men shall live again, and live for ever.

X.

THE ARGUMENT FOR A FUTURE LIFE, FROM THE
FACT OF THE PROGRESSIVE NATURE OF MAN.

I WOULD take my first proof, on the side of
Philosophy, from the fact of

MAN'S PROGRESSIVE NATURE : a nature wherein
Man differs from all the animals. The acts, the
habits, of some of the animals raise our wonder,
even down to the smallest of them. What an
astonishing creature is the Bee, for instance !
Watch a swarm of bees before their comb is made,
—or, I should say, when they were thinking of
making it—under a glass hive. See ! they divide
into two great ranks, facing one another. At length,
one bee steps out from his rank, approaches a bee
in the opposite rank, and holds up his trunk and
two fore-feet, as if he were asking for something.
The bee opposite, as if in reply, takes out a deli-
cate leaf of wax from between the folds of his
abdomen, and gives it to the other bee—who re-
ceives it, and immediately begins to manipulate it
into a little bank of wax, as the foundation for the
comb.

Very soon, he returns and seems to ask for another leaf of wax. Another and another bee steps out from the rank, seemingly also to ask for wax ; and soon the whole swarm are, in one way or other, busily engaged in building the comb. And, at last, it is built and finished : each cell hexagonal—that is six-angled and six-sided—and the cells are placed back to back, half-way—for the purpose of giving strength to the comb. And each cell is the most perfect form for capacity of measure which can be found : a fact which was not known until fifty years after Newton discovered the fluxional calculus, when Maclaurin, his disciple, applied the problem and brought the fact to light. Yet the bee has worked this problem thousands of years : he is, perhaps, the oldest and most perfect mathematician in the world.

Let us look at the Bee in another state of action. The young bees are coming into existence, and leaving their cells. On approaching the mouth of the hive for the first time, see the young bee spreading out its wings, and preening them from every particle of dust, with its feet. At length, out it goes ! No elder bee goes with it to instruct it. The Great, the Allwise Instructor is with it ! It proceeds at once to the nectary of some flower, and begins to collect the honey. No matter what may be the situation of the nectary in the flower : the bee goes to it, instinctively. The first day the

bee is at work, it is affirmed that it always makes what is called "virgin honey:" that is to say, it collects the nectar from one kind of flower only. It will not mix the honey, as it does, afterwards. If it begins to make the honey from the mignonne-flower, it will not mix it with that made from the bean-flower, or the lime-tree-flower.

Or, it goes out to gather pollen, or farina—the fine dust at the ends of the anthers of flowers. See it come home to the hive with its little thighs laden with the golden pellets! Four bees, it is also affirmed, regularly attend to unlade it, and help to store the farina in the cells.

The Wasp, some of you know, makes a similar comb to that of the Bee: only, the wasp's nest is made of paper, instead of wax. The wasp is, most likely the oldest paper-maker in existence. He, very probably, made paper several thousand years before Man learned to make it.

There are different sized wasps, and there is a delicate small wasp, in the North of Scotland, which makes his comb of paper, and hangs the nest in the open air. A lady, at Forres, twelve years ago, gave me one of these tiny wasps' nests, gathered from the spines of a gorse bush, on the moors. It formed a globe about the size that a man could compass, by placing the tips of the fingers of one hand to the finger-tips of the other hand, and then arching his fingers and joining his palms at the

bottom. This beautiful little paper nest, full of cells, had an entrance at the top ; and it was coloured with a broad stripe of blue round the top, and a broad stripe of blue round the bottom. So that the little wasp is a paper-stainer, as well as a paper-maker !

And, if you watch the webs of the spider, the homes of the ant, and the houses of many other tiny creatures, you will find them all very wonderful ; but they never, as classes of God's creation, get any further than their present point of skill. They never advance : they never progress : they never invent or discover : they never even borrow a habit or practice, one from another. Look at two creatures, as much alike as we can readily find : the hare and the rabbit. They will live in the same field all their lives, and never change their habits. The hare continues to make her simple "form," and the rabbit to make its burrow ; the one never "borrows an idea," as we should say, from the other.

We have an account of the bee, in Aristotle's "History of Animals," written some 350 years before Christ ; and that great philosopher's account shows that the bee had the same habits in his time, as it has in ours. It has not progressed.

None of the animals progress. There is no discovery or invention among them. We never hear of a cat that invents a mouse-trap to save herself the trouble of catching mice.

Go into the British Museum, and look at the stuffed large ape brought from South Africa, and called the Gorilla : the name by which it was called, it is believed, more than two thousand years ago, by certain old Greek navigators. Mark its powerful hinder hands—so powerful, that it is said to lay hold of the heads of black men, as they pass beneath trees, and wring their necks round. It will go to warm itself at the wood-fires which the native blacks make, in the rainy season. The natives, of course, run away, when they see it coming ; and the gorilla soon lets the fire go out, for it has not the sense to gather a single stick to keep the fire in !

There is not a gorilla, a chimpanzee, an ourang-outang, or a creature in the world, besides Man, that can point with his finger—a sign of intelligence. No creature but Man has the particular muscle which enables him to do it. Do you observe that God does not throw the furniture of the bodies of His creatures away ? He does not furnish them with instruments which they have not intelligence to use.

We hear of the sagacity of elephants, and of the wondrous reasoning powers of beavers and dogs ; but never hear of an animal that invents a foot-rule, or measures the land, or makes a map of any country. We never hear of an animal that invents a steelyard, or a pair of scales, with

weights, or a set of vessels, for measures. We never hear of an animal that invents a pair of scissors, a saw, a gimlet, a hammer and chisel, or a plane. We never hear of an animal that invents a spade or shovel, a wheelbarrow, or a plough. We never hear of an animal that invents a barometer, thermometer, electric machine, or a steam-engine, or who constructs a mariner's compass and makes use of it. We never hear of an animal who discovers the affinities of the metals, or classes the elementary bodies in chemistry. We never hear of an animal who constructs a telescope, ascertains the orbits of the planets, and shows us that Mercury is as heavy as lead and Saturn as light as cork. We never hear of an animal that rivals Leverrier and Adams in discovering a planet beyond Uranus ; or calculates the period of a comet's revolution, and prophesies truly, as did Halley, that that comet will return once in every seventy-five years.

Oh, no ! all this is Man's work : not the work of mere animals. Mr. Darwin, and the new philosophers, may exhaust their wit in showing that Men and Apes are very nearly related. I confess, I neither perceive the kinsmanship, nor appreciate the honour of it. I know of no progress among the creatures ; and I defy any one to show it to me.

On the other hand, the records of human history show me that Man is essentially a progressive

being. Nor can any bad power stop human progress, effectually, permanently. Civilisation may be trodden out with the iron heel of conquest, in one country, but it will take its flight to another country, and prosper there. Goths, Vandals, Saracens, Tartars, tried in vain to extinguish its light : in the very trial some of them caught it, and exhibited its brightness ! Tyranny, priestcraft, superstition, have in vain striven to annihilate Civilisation. It still exists and prospers. From its older dwelling-places it was driven to seek new homes, and found them in our own beloved England and other modern countries ; and now we see around us a grander civilisation than the world ever saw before ; and, I trust, we gratefully partake of its blessings.

If that melancholy, but attractive dream (which they say is *not* originally Macaulay's) should ever be fulfilled—if the day should ever arrive when the New Zealander will come and sit on a broken arch of London Bridge, and gaze on the long grass waving in the half-demolished windows of ruined palaces, where the daughters of beauty once stood in their pride—even *then* there will be Civilisation in New Zealand, or Central Asia, or Africa, or in the isles of the Southern Sea—ay, nobler and grander civilisation than we have now.

The enemies of freedom and enlightenment may as well try to stop the motion of the waves of the

Atlantic, as endeavour to arrest the course of Civilisation. Man is a being of Progress.

Difficulties—obstacles! Man laughs at them. They have often opposed the march of Progress; but they have been overcome. Men expect difficulties: they expect obstacles. But this does not destroy their courage—their perseverance—their confidence that they shall triumph. You may ponder on the history of the great conquests in discovery of modern times, and you will find that difficulties were ever present to check the ardour of the discoverer:—obstacles were ever present to benumb the powers of the inventor. But the conquest was won in spite of all opposition.

There is, for instance, the discovery of coal gas, and the introduction of its extensive use. Look at the obstacles that had to be overcome before mankind could be benefitted by it. Towards the close of the last century, a Scottish working man proposed its use in the Soho manufactory, near Birmingham; but it was difficult for him to persuade the proprietors to adopt the use of it. And when they began to use it, the wiseacres of that time said it might do very well for working men toiling amidst dirty iron; but it could never be made of any public utility: the smell was so offensive. Men had not then learned the process of purifying it, by passing it through lime-water; and, afterwards, through what is called 'Draked' lime.

In the year 1807, Mr. Winsor first obtained leave to light up Pall Mall and Old Palace Yard, with gas. And he lost his fortune, and died of a broken heart. He was served with actions for nuisance, and was slandered by the envious. The wits of the age sneered at him. Brougham was among the scoffers, as he afterwards regretfully confessed. The great Sir Walter Scott joined the scoffers also.

"D'ye know," said he at a public meeting in Edinburgh, "what a man is proposing to do, in England? He is actually proposing to light up Lunnnon wi' cold smoke!" His hearers, of course, laughed, and thought him witty.

But, above all, the 'vested interests' were against him. Perilous powers to contend against—the 'vested interests'! All the monopolizers of tallow were against him. All the rich men who had ships sailing to Greenland and Davis' Straits, and the South Seas, to get whale oil, conspired against him. And he was ruined, pecuniarily; and he died, broken-hearted.

What of that? Another man stepped into the dead man's shoes and carried on, vigorously, the scheme of public enlightenment by gas. "You will ruin yourself!" cried both his friends and enemies. "I don't believe it!" replied the new and stronger-minded man; "I am sure it may be made a great boon to mankind, and I mean to make it succeed."

And he did make it succeed ; and it does succeed, and it will succeed. What should we do without it ?—Would you have the brilliant light extinguished which this evening cheers us, and have the old oil lamps, or the coarse tallow-candles, restored ?

I have a remembrance, sometimes, on a Sunday night, when I am preaching in a well-filled and well-lighted chapel, that I cannot easily get out of my mind. I think of the good old Methodist meeting-house that I attended when a boy, and how, in the middle of the sermon, the lame man whom we lads used to call ‘Hop-a-kicky,’ used to enter the chapel, with his little ladder, plant it in the aisle, pull down the branched candlestick, and begin to snuff the tallow candles. All eyes were fixed on Hop-a-kicky, in a moment : no matter who was the preacher. Everybody watched how every candle was snuffed : and if one were snuffed out, there was a general sensation throughout the chapel. On went Hop-a-kicky pulling down each branched candlestick, and snuffing the candles, till his work was done—and everybody watched, to the end, how every candle was snuffed !

The preacher might display the splendid intelligence of Richard Watson, he might be as cogent in rousing conscience as Jabez Bunting, he might be as eloquent as Robert Newton, he might be as instructive as William Dawson—but who cared for the preacher ? He had to preach ‘against wind

and tide' as a sailor would say, for nobody listened to him. It was so interesting—so marvellously absorbing—to see a few tallow candles snuffed! Atonement of Christ—the salvation of the soul—eternity! The value and importance of such themes paled before the snuffing of a few tallow candles! Thank God! those evenings 'half in glimmer and half in gloom' are gone; and the preacher can preach to the end without the light of his sacred theme being quenched by the snuffing of a candle!

Think, as you go along the streets of London, or Liverpool, or Manchester, or Birmingham, or Leeds—or Glasgow or Edinburgh—think what our condition would be with the old dim oil lamp! Oh no! we cannot go back to that, or the poor tallow candle.—'Light!—more light!' cried the great German intelligence, when he was dying. And it is Man's earnest cry of need, all the way through life—'Light!—more light!' We are beings of Progress.

Think, now, of our mode of travelling. We have learned almost to annihilate Time and Space. Yet one thought presents itself as a check to our exultation. We boast of progress; but when we see how slow it has been, in some directions, we wonder Man has not made many of his discoveries sooner. What wonders we can now effect by steam-power! but why did not men make a con-

quest of steam-power sooner? Men had seen the action of boiling water, and must have been stricken with wonder at the expansive powers of steam, for ages.

There is a part of a Greek book remaining, written by Hiero, a philosopher of Alexandria, about two centuries before Christ, in which the notion is broached of Man mastering steam-power and making use of it; but the philosopher could not show the way to it. In the *Opus Majus* of Roger Bacon, in the thirteenth century, there are prophetic words that the time will come when men shall cross the ocean in ships without sails or oars; and some have suspected that the far-seeing Friar had made a discovery of the mastery of steam-power, or believed it would be mastered. But Roger Bacon's words are too vague to warrant such a conclusion. Only two centuries ago, the Marquess of Worcester wrote his 'Century of Inventions,' in which book some nearer approach is made towards a real proposal for the mastery of steam-power. But the conquest, in truth, was not yet won.

It was not till towards the close of the last century that man mastered steam-power, so as to apply the discovery to great mechanical purposes. It was found to be a vast power, a gigantic power, a colossal power: a power, one may say, without limit. And men applied it to the drawing of water

from mines, to raising stampers for driving down piles into beds of rivers for supporting bridges, and for turning immense wheels in machinery, and at last, for propelling ships on the water ; but men had not yet learned to travel on land, by its mighty help.

That could not be done until that little boy was born at Greenock—the son of the working mechanic,—who was so fond of hearing his aunt Marian recite poetry, and who was so often seen planting his forehead against the mantle-piece of the kitchen fire-place, and trying experiments with the boiling water in the kettle: taking the kettle-lid off, and putting it on again, and then stopping up the spout until the kettle-lid flew off! His sister would often pass through the narrow kitchen, and hit him, impatiently, on the head, crying, “Get oot o’ the way, Jemmy Watt! ye’re always at meschief!” But Jemmy Watt continued to be “at meschief” still.

One day—so runs the story—his mother, wishing to make a visit to a friend at a distance, said to the servant-maid—“Janet, ye can tak care o’ the hoose yersel, the day?” “Oh, ay! vera weel,” replied Janet. And so the mistress went on her visit, and Janet hersel was left as mistress. Now, Janet was a canny, sonsie Scotch lassie—one of the class who think that when your mistress is gone a-visiting is the vera best time for going a-

visiting, yersel. "Jemmy," said she, when the mistress had scarcely been gone an hour from the door, "ye can tak care o' the hoose yersel, the day?"—"Oh, ay! vera weel!" said Jemmy Watt.

It was just what the boy wanted. Janet speedily put on 'best bib and tucker,' and went off on her stolen holiday. Jemmy locked the door after her, very safely, rejoicing that he was free now to pursue his scheme, so long purposed, without interruption.

First, he made a rare good fire in the kitchen, and then he filled the kettle with water, and stuffed old rags about the kettle-lid till he could not force it on without difficulty. Next he plugged up the kettle-spout with old rags, and then took the bellows, and began to blow the fire with all his might.

"He blew till he got the steam up!" you'll be saying. Pooh! he did not stop at that. Jemmy Watt blew on and blew on, determined that even if the world came to an end, he would see the issue of the experiment. At length, the kettle split, with a frightful explosive noise and hissing, and tore away part of the fire-place!

The child was unhurt; and, with the intellectual eye, he caught sight of the Steam Giant! He had unkenelled him at last; and Jemmy Watt kept his intellectual eye on the Steam Giant, through

his youth, ever and anon walking round him, and trying to take the gauge and measurement of his strength. James Watt reached manhood, and now he girt himself up to the accomplishment of his final great purpose. Watt boldly laid hold of the Steam Giant, and grappled and wrestled with him, and mastered him, and harnessed and bridled him, and gave him up into the hands of mankind as their great toiler for the future—the future of Progress and Civilisation.

They say brave Geordie Stephenson was the first to lay bold hand on the bridle-rein, and dare to take the guidance and management of the Giant Steed of Progress. See! there goes the bridled and harnessed Steam Giant through woods and forests, through bright valleys and dark tunnels, across bridges and beside rivers, dragging after him hundreds, thousands of tons of iron, coal, wood, and stone—and tens of thousands of cattle, and of human beings, besides. Hark, to his startling whistle! If any of the old monks that lie about Kirkstall and Furness and Melrose could wake up, as he passes by, and see the rolling clouds of his breath, and hear his shrill scream, they would think ten thousand fiends were coming, and try to hide their heads in the grave, instead of coming up to see how the world is changed since they fell into their last sleep!

What a grand toiler is the Steam Giant for Man,

so long as Man does not over-toil his own frame so as to render his grasp of the bridle-rein unsafe, and so long as Man does not put an enemy down his throat to steal away his brains :—for, if Man seeks the company of that traitorous old rascal, Sir John Barleycorn, he will soon cease to have any ability to keep safe hold of the bridle-rein ; and then the Steam-Steed gets the bit between his teeth, and scampers on most madly, and makes fearful destruction of human life and property. Oh ! he is a terrible fellow, is the Steam Giant, if Man loses the management of him !

But what of that ? What could we do without him ? Remember that it is the essential nature of Civilisation to gather momentum. You cannot stay it : you cannot go back. How would our manufactures, our trade and commerce fare, if we were bereft of the Steed of Progress ? Altogether, we do the work of six hundred millions of human hands in this little island of *Great Britain* ! What could we do without the Steam Giant—I ask again ? We should knock our heads together in helplessness and confusion.

“Farewell to Feudalism !” cried the great Dr. Arnold, when he saw the first mail railway-train in motion. “God help Old England !” cried an old stage-coachman beholding the same sight, “they are going to make her into a huge gridiron, and fill her all over with hissing tea-kettles !” How

different is the value placed on Progress by high intellect and by grovelling self-interest !

I have already got beyond due bounds in dealing with this tempting subject of Progress, and must not say much more about it. Many scores of volumes might be written about it, and still the theme would be unexhausted.

The Electric Telegraph—what a wonder it is ! Yet, like the railroad, it is only in its infancy. The electric wires will be multiplied till every isle of the sea is joined together by them—till every continent is intersected by them a thousand—nay ten thousand-fold.

What ! if we have taught the Sun to take human likenesses and likenesses of almost everything, although he is 95 millions of miles off—what shall we learn to do with what surrounds us on the earth ? What will man learn to do with the wild-flowers—the millions of daisies and pansies, and blue bells and heath and marsh-flowers,—the rag-worts and thistles and hawkweeds and nettles ? Man has learned to do a great deal with the vegetables—but what of the rest ? Can they merely be intended for a few insects and birds ? Has man nothing to do with them ? “ Replenish the the earth and subdue it ! ” was the primary fiat of the Almighty. Will the human race quit the earth before it is fulfilled ? .

Man's course ended ? It seems to be only

beginning. We cannot tell what Man will learn to do on the earth yet ; and with all his boundless powers, his endless thirst for knowledge, can it be supposed that Man's life ends here? Think of Newton, the tiny child which his nurse said she could have put into a quart pot, when he was born ; and yet he lived to span the Solar System, and to ascertain its forces. Think of Humboldt, who died but a few years ago, in Germany. For ninety years he was acquiring the knowledge of all sciences, languages, and history. He was a walking encyclopedia : a saying affirmed of many men—but never so truly of any man as of Humboldt : yet, with all his knowledge, he was eager for new knowledge, to the last day of his life.

And do we not all know that the more we learn to know, the more we thirst to know? It is only sheer ignorance that has no desire for knowledge. And is this the nature of Man, universally and individually ; and can it be that we are to live no more? Is the wisdom of God so abortive as to make a being of boundless desires for knowledge, only at the end of a few years to put him out of existence? I dare not entertain a notion so derogatory to the perfect wisdom and goodness of God. The Progressive Nature of Man—if I use the most circumspect language—is a strong *presumptive* argument for a Future Life for Man.

XI.

THE MORAL NATURE OF MAN AN EVIDENCE OF A FUTURE STATE.—CONCLUSION.

THE most indubitable evidence that we have of a Future State—next to Revelation—is the fact of our Moral Nature. I have already drawn your attention to this great subject: I shall not presume, therefore, to say much more about it.

What is it that our Moral Nature so clearly discerns? That Vice, Crime, Wrong, deserve blame and punishment; and that Virtue, Uprightness, Self-sacrifice for the good of others, deserve praise and reward. But, are Vice and Crime and Wrong always punished here? Are Virtue, Uprightness, Self-sacrifice, always rewarded here? Oh, no! Vice is often triumphant, Crime is often kingly, while Virtue suffers, Uprightness is degraded.

Then the whole of God's Moral Government cannot be comprehended or contained in this our mortal life. If God's Moral Government were to end here, we should feel that there was an indelible stain on His Justice: it would forbid our belief in His Holiness. Our existence here can only com-

prise the beginning of His Moral Government, for us. This can only be a probationary state : there *must* be a Future State for us, as Moral Agents : a state wherein God's Equity shall be clear as the light to all : where the Wrong-doer shall be punished, and the right-doer shall be rewarded.

In that state, the Wrong-doer will not be able to urge that punishment is not due to him. He will not be able to throw the blame of his wrong-doing upon his Maker. He will be self-condemned by his own conscience. The consciences of all shall confirm the sentence passed upon all by the God of Holiness. May God grant that we may all stand before Him to receive our sentence, not with shame and self-condemnation ; but with loving trust and lowly confidence !

NOTE TO PAGE 141.

"A French soldier, at the battle of Waterloo, was wounded with a musket ball, which entered at the anterior portion of the squamous suture, lodged in the substance of the brain, and on the fifth day, after an enlargement of the wound, and the removal of several fragments of bone, was extracted from the posterior lobe of the right hemisphere of the brain, where it was found resting on the tentorium. Yet, during the several previous days, the man, with the exception of a slight headache, and partial deafness of the right ear, seemed to enjoy perfect health. The case ended well. (See Hennen's Mil. Surg., p. 289, ed. 2.) Still more remarkable instances of the duration of life, and even of the absence of very serious symptoms, after great and serious wounds of the brain, and the lodgment of balls, might here be cited ; but it will suffice to refer to the instructive essay of M. Quesnay, on the subject, in vol. i. of the Mém. de l'Acad. de Chir. 4to., and to the account of twenty-two French soldiers, whose vertices, with more or less of the brain, were cut off by sabre-strokes. All these men ultimately died ; but, at first, had not a single bad symptom, and performed a journey of thirty leagues after being wounded, and one-half of this distance on foot. (See Paroisse, Opuscles de Chir., p. 41, etc.)"—*From Article 'Head' in the 'Dictionary of Practical Surgery,' by Samuel Cooper.* (Longman and Co., London.)