DARWINISM REFUTED

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RESEARCHES IN PSYCHOLOGY.

BY

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L'incrédulité est plutôt le désespoir du pécheur que la ressource du péché.—*Masillon.*

On voit tous les jours des hommes, qui, trop faibles pour servir Dieu croient paraître *forts* en faisant semblant de ne le pas connaître.—*Ibid.*

La raison, une fois sortie des règles de la vérité, ne trouve plus rien qui l'arrête. Plus elle avance, plus elle se creuse de précipices.—*Ibid.*

L'incrédule est un perturbateur du repos public ; par cela même qu'il entrepend de saper les fondements de toute croyance, il entrepend de saper ceux de la société.—*Saurin.*

PREFACE.

AT such a time as this, when the most sacred beliefs seem to be shaken, there could not have appeared a work, whose results would have, over certain minds, more deplorable consequences than that of Darwin's "Descent of Man."

Materialists, already so numerous, forgetting purposely that Mr. Darwin names the Eternal at every page, have used his theories as an arm against any belief in an intellectual principle, that is God. They admit with science, that nothing in the universe can be annihilated; but they have the inconsistency not to apply this reasoning to intelligence. They cite by way of example, the various disorder of this world. I maintain that this disorder is only apparent, and that crimes are punished even in this life.

What I have tried to demonstrate in this little treatise, is the necessary, indispensable existence of an intelligent principle, to which you may give what name you please—is the existence of the soul, independent of matter—that this soul has some qualities which compose its own essence, which cannot be separated from it, since they form its individuality, these being *Moral Sense, Justice, Religion, etc.:* I have endeavoured to prove that these qualities exist, have

always existed, and are not "*poetical twaddle*," as it pleases the Materialists to call them. Further, I have at some length reviewed the bearings of Language upon the subject, and have adduced arguments to shew that articulate speech is the prerogative of Man, to the exclusion of all Animals. It is, therefore, against Materialism that I have written, and for those who have neither the time nor the power to examine those facts which prove a pre-conceived plan in creation and an intelligent order, without which, there would only be confusion in the elements, and consequently incessant revolution, rendering impossible any germ of life. It is for the reader to judge if I have succeeded in my attempt.

A. G. CARLIER.

Unthank's Road, Norwich,
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CHAPTER I.

"DARWINISM."

"HERE then is the God which has been sought by humanity for so long a time, and in whose name so many crimes have been perpetrated. Very well, I shall know now to whom to address myself. I am going to build a temple and erect a statue to him. The Ascidia not being large, its image will cost me little. I shall be able, after the fashion of all devotees, to adorn him with jewels, to burn incense to him; and who can even prevent me from having the God himself? Perhaps he will deign in my favor to reproduce the miracles which Darwin attributes to him, and create a race of men, less foolish, vain, and perfidious. Stay, a scruple arises in my soul; a thought troubles my mind. Is this new God his own beginning and end? No, replies Darwin. Who then has made him? And here humanity is again plunged into midnight darkness, for mankind is too sensible, with rare exceptions, to attribute to a blind power, such as that of matter or chance, the marvellous order of the universe. If chance produced anything, *we should be compelled to attribute man to it.*"

"I know that Darwin does not say anywhere that the Ascidia is a God, but as in the scale of beings, this one approaches nearest to the divinity by time, I believe I can

consecrate him to worship, without fear of being accused of idolatry. Besides, I see around me so many men adoring idols less worthy, in all points, of the consideration of an honest man, such as gold, a social position, a title, which they can obtain by intrigue or for money, that I think I am permitted this little infraction of the decalogue, and if I wanted an excuse I should beg of you to call it as I do, *respect for our ancestors.*"

Such are the few words which I had traced for myself alone after having read Darwin's *Descent of Man*, and I should have kept silence and gone no further, had it not been for the incredulity which I see increasing around me and entangling the most sensible of my friends. I am far from attributing to the great philosopher any intention of materialism; and above all, to reproach him for his book. It is not the less true, however, that it has exercised in certain minds an evil influence which I deplore. (1)

(1) And here I cannot resist the temptation of quoting a few words I wrote on this subject some years ago :—

Bernardin de St. Pierre says in his, *Paul and Virginia*, that he who makes one more sheaf of corn grow in a field is a greater benefactor to mankind than he who gives them a book. Perhaps it is so with regard to the great number of books that have been written without making men better, and since all has been said of morality that can be said. Observe that character changes as ages come to an end; that morality seeks to shape the age anew; that a book cannot be written for all times; that if others did not follow, in order to repeat the same things in a different style and with new images, all the good which had been produced would be lost. Ancient books are scarcely known, except to the learned, and if their names did not pass from them to the people, they would be entirely forgotten. Revolutions, which overturn everything and lead back to barbarism, might destroy in a day the wisdom of twenty centuries. This was evident when the barbarians deluged the south of Europe, under the last Roman Emperors. Whatever civilization there was disappeared, and the nations which issued from that confusion took twenty ages to attain to the same degree of light which there was then in the world. The perpetual changes of language prove the necessity for continual writing.

There never can be too many books. An author has done much for men if his work has inspired a noble sentiment or a generous action.

The theory of Darwin amounts to this.

An organic principle having been once created with the faculty of evolution, all the chain of beings flowed from it through this principle of evolution, retaining in themselves and transmitting to the new species the same faculty. So that from evolution succeeding evolution, and always becoming more perfect, this organic principle produced the monkey, and, at last, man. The latter does not seem destined to be the last creation of this principle, for the law of evolution might be equally named the law of unlimited progress towards perfection, since from the Ascidia it has produced all beings, Man included, passing through all the degrees of instinct and

I should feel myself great before men, and even before God, if all that I had written had dried one tear, or corrected one fault.

M. Bernardin de St. Pierre points out the few instances in which what has been written has cost the life of the author, and the indifference with which it has been treated; and thence concludes it is of little value. If he had remembered that the small progress we have made in civilization, which has been effected through a long course of ages, is owing to what has been written, he would not have made this attack upon it. It is true that he corrects himself in the following page. He had an opportunity of judging of its effects by his own works. It is therefore evident that he has done more for society than the ignorant peasant who sold him the sheaf of corn in question. . . . . Literature is so superior to all other things, that while the names of kings have disappeared with the remembrance of their victories, an echo of what is written remains in the world for two thousand years. The wisdom of mankind is entirely owing to it. It is the work of ages, and of those who have enlightened them. Each age brings its share of intelligence. Societies are formed, and each generation is the richer, by all the talent of the generation which preceded. If anything is worthy of the respect of men, it is talent, and, to borrow something from the author of whom we are speaking: "Is there anything more beautiful than a mission to declare the truth to nations, to the great, to kings, to serve as a barrier against error or against tryrants?" . . . . "The best of books," again says M. de St. Pierre, "which only preaches equality, friendship, humanity, and peace, the Gospel, has served for ages as an excuse for the bad passions of Europeans. How much tyranny, public and private, is still practised in its name upon the earth?" It is the unavoidable struggle of good with evil, and if we compare the times of Paganism with our own, we shall see that the good has continually gained upon the evil. . . . . .

intelligence, and following an ascending scale, for, I do not believe that Darwin anywhere says that Man might again become a monkey. According to this principle, the lowest animals are directly allied to us by blood, having had in common with Man, the Ascidia for ancestor, or in other words, for principle of development.

Moreover, it is probable, and even certain, that Man, such as he now is, will be for the men to come, what the monkey now is to the men of this generation, and so on up to the perfect being, or the last link in the chain of created beings.

Probably, according to the same theory, we shall be compelled to admit that the earth, subjected to the same laws of development, will perfect by degrees its nature also, in accordance with the new needs of its new inhabitants.

This would apply to matter, to form, in short, to the body.

But the soul—What is it?

Is it developed in like manner?

Does the Ascidia possess the soul of man in a rudimentary form?

Or, does God, having created matter with a principle of development, give to each being a different soul?

Or, must we materialize God, or divinize matter? For if God, such as we conceive "Him," that is to say, the eternal principle of all things, exists, He has created the Universe and the Ascidia, this principle of Man, with it;—

Or, if matter has always existed under some form, it must have had in itself this principle of development, and, therefore, matter would be God, and consequently the soul would be material; but, the soul is intellectual, and no one can deny that matter is unintellectual, and without pre-conceived will, as the stone which falls and kills us: therefore, the soul is unmaterial. If it were otherwise, how could we conceive an intellectual matter which would be *la cause raisonnée* of

its own suffering? for when an organic body is ill, it suffers, and an organic body is matter.

Then this material god would be imperfect, and this imperfection would lead it to destruction, and this is inconceivable. It could not make itself perfect, for it would become "God," as we conceive "Him," and this principle of development would have been in "Him" from eternity, then, matter would be God, imperfect in the beginning and perfect in the end, which is still more inconceivable. I cannot conceive any other god but an immutable or perfect one, for, the principle or power acting upon him, would be stronger or at least equal to him, and this power would be god also, then there would be duality. On the other hand it is easy to imagine a universal, intelligent Master, who commands all beings of whom he is the absolute principle, who can create, destroy, and re-create indefinitively according to eternal laws, which are his essence, his being, his perfection, his divinity.

An eternal principle exists, the universe is perfect, then this principle is perfect; it is eternal, because if it had been created, another power must have existed before it, and would have been the principle of the power now existing, and following always the same mode of argument we arrive at the infinite; it cannot end, for we should be obliged to suppose a stronger power which would be the cause of its destruction. Therefore there exists a power which has not any beginning and will not have any end, and this power is "God."

Do not ask me what "He" is; I never dared to ask it of myself. The universe is his abode; "His" name is written in letters of fire on the face of the stars, by the waves on the shores of the ocean, and above all in the heart of the wise; "His" mercy is infinite, for, if he had meted out his anger in accordance with the crimes of this earth, "He" would long since have annihilated it.

I do not know if the researches of modern philosophy as to the origin of man will have any result for true science; but if such researches only produce doubt on the one side and materialism on the other, we may be almost justified in envying the ignorance of our forefathers.

It has with truth been said that a hypothetical theory is much less dangerous than a false fact. It assists in grouping and classifying our information; it stimulates our researches, and when it has lived its time and seen its day, it gives place to fresh hypotheses more in accordance with the state of science.

I know that mathematically it is impossible to prove the existence of God, but also it is mathematically impossible to prove his non-existence; and those who have taken the trouble of looking around them and interrogating the laws of the universe, will tell you that the hypothesis is in favor of the existence of God.

Si Dieu n'existait pas il foudrait l'inventer. (1)

Beware then, O philosophers, of shaking our moral belief, however extravagant it may appear to you; for doubt oppresses the heart of man, and if it lasts it becomes conviction, and the unbeliever is immoral. (2)

The theory which I have conceived in reference to the formation of beings is this:—

The creation took place by circles and at different times. This is how I explain the intellectual development in the circles:—

(1) Voltaire.

(2) Whilst this is passing through the press, I notice in a newspaper that Señor Candau in a sitting of the Spanish Congress declared those persons immoral who did not believe in God.—If I were a member of Parliament, I would propose a bill to this effect, that no person should be admitted to fulfil any public office unless he took an oath of his belief in the existence of a God.

From instinct, common to all beings, was born intelligence, and this in proportion to the power of deduction within the prescribed limits of the circle for the development of each kind.

Whatever extent it pleases philosophy to give to this circle of development, we see no species of animal leap over these limits. The ant acts as the ant, the beaver as the beaver, etc.

The essential point in man seems to me to be the faculty of gathering up facts, of comparing them, of drawing from them inferences, and, by deduction, of adding new facts to them, and this incessantly.

Show me a single instance, however small, in which consecutive ideas or foresight extending beyond instinct, have been found in animals by which they have benefited their posterity.

And do not tell me that, not possessing the faculty of speech, it is impossible for them to extend their circle of observation; for amongst the vertebrata the generations do not follow each other as with some insects—in the case of which one generation disappears before the arrival of the next. The father, therefore, can teach the son even without the help of speech, how to fashion an arrow, make a roof, a vestment.

The monkey has hands like a man, but does not imitate him, however; and at the most learns from him how to use a stone for cracking a nut, etc. (1)

The facts related by Darwin concerning the species of monkey nearest to man, prove certainly a degree of intelligence which astonishes; but we find among other animals analagous facts, which authorise us to believe that the latter would equal them had they, as the former have, the faculty of holding themselves upright and seizing objects and throwing them to a distance.

(1) Darwin, page 51, vol. I.

In admitting the theory of evolution, such as the naturalists of our days seem to accept, the intellectual faculties of the monkey, as that of man, develops itself, and must develop itself, indefinitely, and so on with all animals; for the evolution exists and acts equally for all the species at different degrees, so that all creation goes moving on to an unknown end. The Ascidia of our days could not be the Ascidia of former times, all the races having progressed. (1) There came an epoch when the monkey, by evolution, became a man—says Darwin. Why is it that this law of evolution always existing, the phenomenon has not been repeated yesterday, a hundred years, a thousand years ago? Has man destroyed the species from which he descended? (2) That species even ought to re-produce itself from the species immediately inferior. Do these phenomena only take place in unknown caverns, or do they happen at epochs so distant the one from the other that they are effaced from human record? (3) This being the case, what law regulates them? For, judging by the difference of intellectual development, they must have often repeated themselves.

Creation, as I see it, seems to me a chain whose two extremities are lost in the infinite; *car je suppose aux éléments*

(1) Nevertheless there must have been a time when the contrary phenomenon must have occurred, because all the animals in general, had, before the appearance of man upon the earth—attained to a degree of development, three and even four times more considerable than the races of to-day. A continuation of circumstances, no doubt still in existence, must have caused their annihilation.

Therefore we should be compelled to admit the law of evolution up to a certain degree and say, that the races having reached a certain development are necessarily destroyed by the same circumstances, and that consequently, the law of evolution could not take place except within certain limits.

(2) This opinion is entertained by Darwin.

(3) And we have records which extend over three thousand years.

un souffle de l'âme universelle. Destroy one of its links, and the order of the universe is broken. Hence the gradation of beings without sudden transition. But no one of the links is the descendant of another. Man, such as God has created him, is akin to the brutes, and only differs from them by the circle of intellectual development which has been prescribed to him, and whose limit, I hope, we are far from having attained. As a proof of the immensity of that circle, I will only mention the difference which exists between a savage and Newton or Shakspeare. Divide the rest of the creation into groups, and you will remark that the individuals of each group differ as little in intelligence as in form. For example, take for the first group all the monkeys in general; for the second, the jackal, the wolf, the dog; for the third, the horse, the mule, the ass, the zebra, etc.

What shall we say of the following facts?

A few years since were sold in all the markets of the Southern States of North America, blacks belonging to inferior races, who had been kidnapped from the South of Africa. What became of them after three or four generations of slavery, a state level with that of brutes, and which deprived them of all improvement of an intellectual order? After the abolition of a system more shameful for the master than for the slave, they shewed themselves everywhere almost the equal of the white, and many now are at the head of establishments whose success belies all contrary assertion. (1)

(1) The colony of freed slaves formed at Liberia. This colonization began early in 1820. In 1839, a constitution was framed and a governor appointed. In 1847, the independence of the colony was formally declared, and a Republican constitution adopted. The British and French Governments promptly recognised the new Government, and framed liberal treaties with it. The constitution is professedly a copy of that of the United States. They have a President. The Senate and House of Representatives exercise the legislative power. The Senate consists of six members. The number of representatives is twenty-eight. The judicial power is lodged in a supreme court, and several inferior tribunals.

Then the intellectual difference is not what it seems to be at first sight.

Besides, civilization is nothing else but an accumulation of facts which we inherit, as I have said before.

Give to Africa that inheritance, and in a little time it will have leaped over the immense gulf which separates them from us. I refer you to the example which we have had in our days at Madagascar. (1)

But it may be argued—Why have not these races accumulated facts for themselves? I do not know; only I observe that civilization scarcely extends beyond the temperate zone. It would seem that man is developed in proportion to his need, and that the inclemency of the seasons have taught him all he knows.

The Southern part of the two Americas are the least civilised. Their inhabitants, all of European origin, are in the scale of civilization much below their ancestors, the Mexicans for example.

I am morally certain that two children, the one black the other white, treated indiscriminately, and educated from the same sources, would attain an equal development. At the most, there would appear but that inclination to idleness common to all the races of the tropics.

Certainly I do not seek to invalidate the observations of modern philosophy. I hold them to be true; only I think I am permitted to doubt the conclusions the evolutionists have drawn from them.

The rights of citizenship belong exclusively to people of color. A considerable coasting trade is carried on, as well as a large trade with the interior. The exports to foreign countries are said to average upwards of £100,000 annually. The population is estimated at 200,000, of whom about 10,000 are free blacks from the United States. Schools and places of worship have been established over the country.—Encyclopædia Britannica, 8th edition, v. 13, page 359.

(1) Vide Ellis, Madagascar Revisited.

In what would it be less reasonable to admit that the beings had been created in distinct species, with the faculty of evolution in a circle more or less extended; that this faculty of evolution having produced a difference, however small, between two subjects had produced a third one, and so on?

It is not a scientific explanation to affirm that they have all been formed on the same ideal plan, says Darwin.

Without doubt the same ideal plan presided at the formation of all created things, and we should be astonished had it been otherwise, these beings emanating from the same principle which we have called God, being formed from, and compelled to live by, the same elements. (1) A great number of these elements, considered in a chemical point of view (and this seems to me of first importance) have atomical affinities proper to each of them, and to such a degree of tenacity that no human art can alter their form. Hence the same remedy has the same effect on animals as on men. These elements, I say, must have, according to this invariable law in the formation of structures of tissues, a tendency towards analogous forms. Add to this, that the same beings are exposed to the same dangers and have the same needs; that it is an indispensable condition of their existence that they should be able to grasp, in order to feed themselves; to repel, in order to defend themselves; that they should have an apparatus of locomotion, to enable them to seek for their nourishment; and in order to avoid danger, should have ears to hear it, eyes

(1) Il y a des cas dans lesquels des animaux, y compris l'homme, mis dans l'état de mort apparente par la perte de leur sang, ont été ranimés par la transfusion du sang d'un être de même espèce, quel qu'en fût le sexe; on sait de plus que du sang d'agneau et de veau a été injecté dans les veines d'hommes qui ont survécu, qu'il en a été de même dans les cas de transfusion du sang d'homme au chien, de celui de la brebis et du veau au chien, du lapin et du cabiai à la poule et au cop. Ces phénomènes de Physiologie, joints au résultat des observations anatomiques, ne laissent aucun doute sur l'identité spécifique des éléments dans toute la série animale.—*Papillon, Revue des deux Mondes*, 1870, p. 348.

to perceive it. I shall quote here in part a letter from the famous doctor of Pergamos, which is particularly pertinent to our subject:—

"All the limbs of the body are useful to the soul, since the body is the organ of it. As souls are of different natures, hence comes that variety in the limbs of animals, whose body must be constructed conformably with the inclinations and faculties of the soul."

And further—"Nature has granted weapons to those animals whose character is pride, and who seek to do battle; as she has refused them to those who are timid and fearful. As to man—who is wise, and who is the only one amongst all the animals of the earth who has something divine—nature, instead of weapons and defences, has given him hands, necessary and sufficient instruments for all kinds of industry, which are useful to him in peace as in war. . . . . It is by the same means—that is, his hands—that he preserves his reflections and observations, that he retains the fruit of them in writing them, and that he can converse with Plato, Aristotle, and Hippocrates. . . . . For it is not because he has hands that he is the wisest of animals, as said Anaxagoras; but it is because he is the wisest of animals that nature has granted him hands. . . . I have seen several times a calf, who wished to strike some object with his horns before they were grown. . . . a young boar, who tried to make use of tusks which he did not yet possess. . . . . Each animal feels in advance, and knows without instruction the faculties of his soul, as well as the employment for which his limbs are designed." (1)

I observe in animals all the passions, perhaps all the defects and even all the psychological qualities, which are common to man. Two qualities distinguish the latter from all the rest of creation—Moral Sense and Speech.

(1) Galen, *De usu partium.*

CHAPTER II.

"MORAL SENSE."

I HAVE never seen this question discussed anywhere. How is it that vices, which are more numerous than virtues, and which struggle against them incessantly by violence and crime, have not yet effaced them from the surface of the earth?

My reply to this question is as follows:—

Vices are heterogeneous; virtues homogeneous. The latter continually tend to union, and form an indissoluble whole. The former resemble each other, but cannot unite, as there is permanent war between them. Thus, the weakness of vices has to strive against the strength of virtues. Vices being more numerous, if they could unite and form a compact whole they would destroy morality, and there would be an end of society.

Every society must have some virtue, and cannot exist without it. Observe, I am speaking of societies in general, even those of robbers, which could not exist without prudence, fidelity, submission to their chief, etc. These, it may be argued, can scarcely be called virtues, arising as they do from a selfish motive. I know this, but nevertheless they exist, and must exist. I shall not examine why nor how vices have entered into the world, nor whether the soul, fatally or

voluntarily, is subjugated by them. This would be entering into the question of freewill, (1) which after all constitutes all philosophies, and has been so much debated without ever being solved.

The dogma of fatalism is inadmissible, or it would be necessary to declare man the last of beings in the order of creation, because of the greatness of his sufferings, of his means of multiplying them, and of the knowledge he has of his state.

If man is free, God is justified.

If he is not, we must deny God, or deny his justice, which would be the same thing.

Great thinkers have declared man free in all that concerns him personally, and a blind agent as to the government of this world.

"Le bien et le mal sont de nous et sont à nous; mais la Providence se joue de nos perversités comme de nos vertus; et de ce bien et de ce mal, elle tire avec une égale infallibilité de sagesse l'accomplissement de son dessein sur l'humanité." (2)

Trans.—Good and evil are from us and belong to us; but Providence plays with our perversity and our virtues; and from this good and evil draws with an equal infallibility of wisdom, the accomplishment of its designs on humanity.

"Ipsum enim *bonum non est in opinionibus, sed in naturâ.* Nam ni ita esset, beati quoque opinione essent." (3)

(1) Animi valentes morbo temptari non possunt, corpora possunt, sed corporum offensionnes sine culpa accidera possunt, animorum non item, quorum emnes morbi et perturbationes ex aspernatione rationis eveniunt." Cicero Tuscul: Disput: Lib. iv., c. xiv.

Trans.—Healthy souls cannot become diseased, mortal bodies can; but the diseases of the body can exist without fault on our part, not so those of the soul, all whose maladies and troubles are produced by rebellion against reason.

(2) Lamartine Histoire de Christophe Colomb., ch. i.

(3) Cicero, De legibus, Lib. i.

Trans.—Good is not good by opinion; it is such by its own essence; if it were otherwise, opinion alone would form the happiness of the happy ones.

"La morale me parait tellement universelle; tellement calculée par l'être universel qui nous a formés, tellement destinée à servir de contrepoids à nos passions funestes, et à soulager les peines inévitables de cette courte vie, que, depuis. Zoroastre jusqu'au Lord Shaftesbury, je vois tous les philosophes enseigner la même morale, quoi qu'ils aient tous des idées différentes sur les principes des choses." (1)

Trans.—Morality appears to me so universal, so calculated by the Supreme Being who has created us, so destined to serve as a counterpoise to our fatal passions, and to solace the inevitable sorrows of this short life, that I see all the Philosophers from Zoroaster to Lord Shaftesbury teaching the same morality, although they have all of them different ideas about the principle of things.

"La notion de quelque chose de juste, me semble si naturelle, si universellement admise par tous les hommes, qu'elle est indépendante de toute loi, de tout poète, de toute religion." (2)

Trans.—The idea of something just seems to me so natural, so universally admitted by all men, that it is independent of any law, any poet, or any religion.

Moral laws resemble physical laws, and cannot be transgressed without causing disorder. Put your hand in the fire—it is destroyed; feed your soul with vice—it will become corrupt.

Consider that society exists, and must exist, that consequently morality, without which it could not exist, is one of the essential, indispensable, universal faculties which man

(1) Voltaire: Le Philosophe Ignorant.

(2) Ibid.

has not created, but which has been created with him, and must exist as long as himself.

Man alone recognises a God, knows himself, and judges himself. This is what constitutes his superiority over the whole creation. Deprive him of these two faculties, and I declare him a tiger under the skin of a monkey.

It is said that races of men have been found who had no idea of a Supreme Being, and consequently no words to express that idea. They believed, however, in malevolent spirits, which they thought to be their ancestors. This is an idea of future life. They had the fear of an unknown power. They had not yet learned to feel grateful. But wait! it is in the nature of man to create for himself a God. He will worship the sun, the moon, the wind, the thunder, etc. In him will originate two great sentiments—love and hatred; for we hate that which hurts us, and fear is an evil. Wait still, and he will proclaim one God only, as Moses did among the Jews, Socrates among the Greeks, etc.

These phenomena have existed amongst all races. Having started from an obscure point, the remembrance of which is obliterated, independently one from another, at different epochs, all of them strive to reach the same end; and according to circumstances, and according to the degree of their intellectual development, they arrive at periods more or less distant, to that degree of perfection, viz., to the proclamation of an only God.

Would it not seem that all souls are parts of an immense soul which gravitates incessantly towards the unknown, which is God, and that their strife here below must end only with time?

If we follow the lessons of history we find that religions perish with the persons that have practised them, or fall into contempt among the people who have succeeded them; the

idea of God alone remains, the doctrine disappears. Besides, religions are all alike, teaching virtue and condemning vice. No religion which has not had these two fundamental principles has been able to establish itself, or has disappeared almost as soon as it was born. The sects are but an accident of birth—of education; the Brahmins would be Mahomedans had they been born in Islamism.

No religion has extended so far, nor over people more civilized, than Christianity. The different forms of Christianity in Europe might be compared to the different forms of Protestantism amongst the English, etc. The difference exists in the details and not in the fundamental form, and seem to have a very limited influence on religion in general.

"Si quelques individus, quelques générations, quelques peuples donnent dans un vice ou dans une erreur, cela n'empêche pas que l'âme et le jugement du genre humain tout entier ne soient portés à la vertu et à la vérité." (1)

Trans.—If a few individuals, a few generations, a few nations, give themselves up to vice or to error, this does not prevent the soul and the judgment of the whole human race from being inclined to virtue and truth.

Shall I say in passing that we might assimilate politics to religion, with this difference—that as the former treats only of the affairs of this world, we dare sometimes to think for ourselves? Hence the almost invariability of religions, and the instability of political institutions.

From this philosophy concludes that all religions are at least respectable, if they are not equally reasonable. It excepts those whose doctrines are cruel and favour crime; and these are nothing more than fanaticism. Fanaticism is an excess of zeal, the product of ignorance, and

(1) André Chenier.

we know that no religion can reproach another on this score. (1)

They have blamed the religion of Christ. To this I answer:—Find me a purer moral, and I will adopt it. Till then, permit me non-association with new ideas.

"Ceux qui ont dit qu'*une fatalité aveugle a produit tous les effets que nous voyons dans le monde*, ont dit une grande absurdité; car quelle plus grande absurdité qu'une fatalité aveugle qui aurait produit des êtres intelligents." (2)

Trans.—Those who have said that a blind fatality has produced all the effects that we see in the world, have uttered a great absurdity; for what greater absurdity is there than to say that a blind faculty produced intelligent beings.

If we consider the question of materialism only from a human point of view, we can but declare it the most cruel of all principles. Let us accept for a moment that all finishes with the tomb. What? I exclaim, then, the snow is falling incessantly; no light shines on the human horizon except

(1) "The Moabites and Hebrews, etc., sacrificed children to Moloch.

"The Gauls sacrificed human victims to Mercury.

"Vestals amongst the Romans; the persecutions of the latter against the Christians.

"The Egyptians sacrificed young girls to the Nile.

"The massacre of the Albigenses and the Cathares.

"St. Bartholomew.

"The persecutions under Mary, Elizabeth, etc.

"Voltaire calculated the number of victims of Catholicism at nine millions and a half.

"The religion of Mahomet was established by the sword, and was the cause of the extermination of several races.

"In India widows were burned with the dead bodies of their husbands, etc., etc., etc.

"In principle these religions taught virtue. Fanaticism, excess of zeal, or superstition, have caused these crimes."

(2) Montesquieu, de l'Esprit des Lois; Vol. 1, ch. i.

that of the storms, which at intervals shake the foundations of society; shall my mouth, then, taste only of aliment mixed with gravel; my lips have but gall for beverage? But I have made for myself a roof of illusions against the snow; I have mixed the honey of my dreams with my food and my drink; and you break my roof, and you snatch from me the prism which concealed from me the frightful abyss of nothingness. Or, poor exile, seated on the shore of life, I long for a country, and you tell me that what you see beyond the waves is not a shore, for this sea has none; it is but a mirage, which the breeze of evening will disperse. Confess, then, oh materialist, that I shall have reason to regret my illusions, and to curse you for having deprived me of them.

Of all the materialists I have known, not one has been able to deny this psychological phenomenon—that besides the terror caused by the idea of approaching destruction, man at death is troubled, and feels rising within him that fear which is born of the unknown. Indeed if none of the marvels which science reveals to him every day of his life are for him sufficient proof of the existence of God, on the other hand, no mark, positive, certain, undeniable, which can be discussed, proved like an algebraical proposition, has been given to him as to the contrary. The obstinate silence of the heavens, (1) the injustice of man, the apparent disorder of nature, have made him deny God; the uncertainty evokes the thought of Him on his death-bed; and that faculty of judging one's self, of which I have already spoken, which we call conscience, and which after all forms man's individuality, cries to him, "Have I deceived myself?" I remember these words of a sergeant whom they were leading to death, "Tell those who say they do not tremble at the approach of death, that they lie."

(1) The Cathares pretended that this earth is a place of punishment, hence this obstinate silence of the heavens.

What faith can I have in the honor of that man who at first declares himself equal to the brute, with the difference only of a more complete development of certain organs which lend him new arms against me, of certain faculties which render him so much the more to be feared that they permit him to conceal from me his true character? I know instinctively that I must avoid certain animals. If they approach me, I oppose force to force. They can deceive me neither by words nor by a smile. But who will protect me against the perfidy of him who says he has no account to render of his conduct except to society, who will strike him if he offends me, not through a sense of morality, but through a simple need of protection—(1) of him who, if he can devour me with impunity, will make a prey of my substance? What does he care who has no moral sense, if an individual should perish or even society as a whole? In what way does he disarrange the order of the universe? And even if he were to disarrange it, if he finds in this his welfare, provided he escapes public vengeance, he is justified in his own eyes in attempting everything for a need, a caprice. In truth, if all is matter, in what can he be blamed for destroying me if I am an obstacle in his path, or even if he has the fancy for destroying me for the mere pleasure of doing so (for the accomplishment of a desire is a gratification), more than he could be blamed for putting aside the stone which has hurt his foot, or for destroying the flower which borders the wayside? The materialist is a perturber, who saps the

(1) Hanc igitur video sapientissimorum fuisse sententiam, legem neque hominum ingeniis excogitatam, neque scitum aliquod esse populorum, sed æternum quiddam, quod universum mundum regeret, imperandi, prohibendique sapientiâ. Cicero, De legibus, Lib. ii.

Trans.—I therefore say that our greatest philosophers have decided with one voice that the law is not an invention of the human mind, nor is it a simple regulation made by any people whatever, but something eternal which regulates the universe, by the wisdom of commandment, of prohibition.

foundation of all society, and is consequently a dangerous being.

And now let me remark that the man who declares himself an atheist goes everywhere speaking against religion, which, after all, ought to be for him of little or no importance. It seems that

> His impiety
> Desires to annihilate the God whom he has quitted:

and feeling his powerlessness wishes, as the angel of darkness, to drag after him all the human race, that he might not have to blush before them.

> . . . . If then His providence
> Out of our evil seek to bring forth good,
> Our labour must be to pervert that end,
> And out of good still to find means of evil.
>
> A mind not to be changed by place or time:
> . . . . .
> Can make a heaven of hell, a hell of heaven.

On the contrary, the man who knows and loves God, desires the good of his fellow men, asking from them in return neither reward nor gratitude, and demanding only, from the Author of Good, the perfection of his being in a better world. The pious man and the atheist, says Montesquieu, speak always of God. The former of what he loves, the latter of what he fears.

But it has been said several times, if God exists, how is it that He takes so little care of His creatures? How can you explain the periodical scourges which desolate the world? The least of our walks costs the life of thousands of insects. I reply:—

Tell me what is death, and I will tell you whether to die is an evil.

Death is an evil from man to man; but is it so from the creation to God?

And let us call to remembrance that all humanity has declared this life to be a valley of tears.

The Romans considered those who died young to be favored by the gods.

When we think we mourn over the dead, it is over ourselves we weep. "It is a sentiment of our nature that lies contiguous, if I may so express myself, to that noble sentiment which leads us, independent of our own reasonings, to *feel* that there is a hereafter." (1)

And if sometimes grief oppresses your heart, look upward to the heavens, and they will say to you, God is our master; is not His empire wide enough to console you for the sorrows of life?

(1) Hugh Miller.

CHAPTER III.

PHRENOLOGY.

THERE is not now-a-days a single intelligent and honest anatomist who believes in phrenology—at least as it is now generally practised, by the manipulation of the cranium. Facts have belied the theory of Gall, who attempted to read the propensities of the mind in the inequalities of the cranium. Lavater, on the other hand, believed he could discern them in what is called physiognomy. It should be observed of the former that the cranium does not mould itself upon the cerebral convolutions; it only represents them by the interior, and not by the exterior form; and often even the form of the brain is not the same as that of the cranium. I rather believe in the theory of the latter; that the mind on certain occasions reflects itself exteriorly, although man has the faculty of concealing himself or hiding his sentiments behind a mask!

I must say here that my intention is not to inquire whether, as Mr. Combe and a great many others believe, "The plurality of the mental faculties manifest themselves by a plurality of organs, or whether according to Dr. Carpenter, it is a fundamental error to suppose that the entire intellect can be split up into a certain number of faculties." It is no part of my subject to treat of these matters; indeed they are far beyond the range of my acquaintance with the science of anatomy. Nor

do I wish to inquire how the soul thinks; whether it is solely by the aid of material organs; whether this thinking is but the reproduction, by exterior signs, of a combination of images which it borrows from the material world—(and the latter, according to materialists, is nothing more than the conjoint and simultaneous act of the memory and imagination)—whether the faculties of memory and imagination belong to the brain and not to the soul, as experience seems to demonstrate; or whether the soul, in breaking the bonds which unite it to its organs, appears at the same time to break from mortal life and to cast off its joys, its sorrows, its miseries, its loves, its hatreds, its errors, and its remembrances. Science does not afford any answer to these doubts and questions; and there will, therefore, be a prop for faith on the part of man who does not like the idea of annihilation. The embryo in the womb of the mother knows nothing of the conditions of existence to which it will one day be called; and it *may* possibly believe that the hour of birth is for it the hour of death. For us, also, death is perhaps nothing else than a birth; and what we believe to be the extinction of thought is probably after all nothing more than the deliverance from thought. Vast as our science is, it cannot assume to itself pretentions of having fathomed the abyss of the possible, and to have reached all its limits. What is, is not the measure of what can be. Morality, moreover, comes here in aid of metaphysics: what the latter declares simply possible, the former proclaims as necessary.

What I wish to demonstrate by my researches is that science is far from having proved the truth of the theory of Gall or Spurzheim and others, and that even if the brain is divided into compartments, having each a particular intellectual or instinctive function, this complexity does not in any way disprove the unity of the soul, or prove that the development of certain of the lobes has transformed a monkey into a man.

But it will be said—if instincts are due to the predominance of certain parts of the brain, if we are born with the "bump" of secretiveness, of destructiveness, or of amativeness, what will become of our freewill? To this objection Gall replied by a very just and a very philosophical distinction—the distinction between the Desire and the Will. He said that we must not confound the instincts with the faculty of governing them, of disciplining them, of directing them towards a certain end: that what is attached to the organisation are instincts; that what belongs to the soul is Will; that these together will modify the effect of the organisation; and, moreover, that this is a difficulty which subsists in all the philosophical systems, since in every individual, as we must indeed admit, there are innate, and sometimes even bad instincts. The influence of consanguinity on the inclination is incontestable; and religion even recognises this fact, since it is principally on this ground that it founds the doctrine of "original sin." Phrenology is therefore in no way culpable in endeavoring to ascertain the organic seat of these different instincts; and it is not by this fact more antagonistic to spiritualism than any other physiological doctrine. (1)

The brain is divided into two lateral halves, called right and left hemispheres. Each hemisphere is divided into three portions, called lobes—anterior or frontal, middle, and posterior lobes.

Nothing is more difficult and less capable of being accomplished with precision, says M. Janet, than to dissect anatomically the hemispheres by means of the convolutions. Indeed, the convolutions are but continuations of one another, as the fold of a cloth, and are not rigorously separated; in reality, there is only a smooth surface, which, placed compactly in an

(1) Almost the whole of these notes have been borrowed from the work of M. Paul Janet, member of the Institute, and Professor at the Faculty of Belles Lettres of Paris.

enclosed space, the cranium, is gathered into folds, and thus appears to be divided.

However, the folds are not arbitrary, and the convolutions have fixed and determined places.

The system of Gall supposes the surface of the brain to be the seat of our faculties. "But," replies M. Flourens, "we can remove from an animal, either from the front, from behind, from the side, or from the top, a very considerable portion of its brain, without depriving it of any of its faculties."

The most important question, and one yet to be decided, is whether the anterior parts (frontal lobes) are the special seat of the intellectual faculties. It is there indeed, and not in the posterior lobes, that we feel the workings of thought. This is a very complex phenomenon which has not perhaps all the value that might be supposed. In general, subjective localisations are full of uncertainty. It is well known that the amputated suffer in the limbs they have lost; and especially is an injury to the nervous centres felt in the extremities. What is still more decisive and more pertinent to the fact we are treating is that, according to the phrenologist and physiologist, affections, emotions, and passions have their seat in the brain. Now it never happened to us to localise them there; we have no consciousness of loving by the head but by the heart.

"Sunt autem copulæ quædam et nexus, quorum causæ adhuc latent, quibus partes generationis miro modo gutturi et partibus ei circum jacentibus conjunguntur. Eunuchis enim non est barba: vox eorum quamvis fortis sit et arguta, sonum graviorem nunquam habet; morbi denique secreti sœpenumero in guttur ascendunt. Feminis quoque uterus, mammæ, caput inter se quodammodo alligata esse videntur." (2)

Besides, localisation in the anterior lobes gives rise to

(2) Buffon.

serious objections. M. Leuret, for example, observes that in proportion as we descend from men to inferior animals, it is not the anterior but the posterior parts of the brain which disappear, precisely those where Gall localises the animal faculties. To combat this difficulty, the phrenologist shifts the localisation according to the form of the brain. But M. Leuret says, with reason, if the organs are thus shifted from the back to the front part of the brain, they can as well be shifted from the front to the back. Why, therefore, should not the frontal organs be placed beneath the parietal? If, on the contrary, the organs are associated rigorously with any particular faculty, that faculty must disappear with them. Consequently, the purely animal instincts must die out or become feebler in the inferior mammalia, while intelligence remains the same, since it is the posterior and not the anterior part of the brain which is wanting. This is certainly one of the strongest arguments against the doctrine of phrenology. Besides, M. Lelut points out that the anterior part of the brain is as large in idiots as it is in other men. The same intellectual perturbations can be produced in whatever part of the brain the injury takes place, whether in front, behind, or sideways. Phrenologists explain these facts by saying that when a wound is inflicted or disease takes place behind, the anterior parts are sympathetically affected. We could reason inversely with the same authority.

It has been urged, in support of phrenology, that in some cases of madness there have been observed isolated and unaffected faculties. Memory alone often subsists amidst the ruin of all the other faculties. One class of thoughts, one class of affections can disappear, while the rest remain intact. The answer to this objection is, that the facts are absolutely analogous to those produced in the order of our sensations, without being obliged to conclude that there exists a diversity of organic seats. Thus all the sensitive nerves of the skin

have assuredly the same properties ([3]) and yet a sick man can lose the sensation of temperature and preserve the sensation of suffering. Moreover, we have the perception of one particular color and not of another; we retain the taste of sugar, and lose that of salt. Thus a certain organ can lose one of its modes of action without authorising us to doubt of its unity.

Of all the localisations marked out by the phrenologist, not one has been confirmed by experience.

The organ of love for children, or Philo-progenitiveness, placed by Gall at the posterior extremity of the cerebral hemispheres, forms, according to him, a very striking protuberance in women and in the females of animals. But M. Lelut has found this protuberance in a great number of robbers and amongst animals male and female indifferently.

The organ of Destructiveness again has been found in sheep. No localisation has been better refuted than that of destructiveness. M. Lelut, who has examined a great number of the skulls of assassins, has never found anything exceptional in them. The celebrated Fieschi was without the organ of destructiveness.

The organ of Veneration is also very remarkable in the sheep; and the same organ is likewise to be found in the wolf, the tiger, and the lion.

The organ of Music is much more developed in the ass (I knew he was a great musician!), ([4]) the wolf, and the sheep, than it is in the skylark, the chaffinch, and the nightingale.

Lastly, the organ of Secretiveness, very prominent, according to Gall, in audacious robbers and in idiots inclined to steal, is

([3]) It is what M. Vulpian affirms. Gratiolet appears to incline to an opposite opinion.

([4]) I have observed that those who have the faculty of music largely developed have it generally to the exclusion of other faculties. This, however, is far from being exceptional.

not to be found, says M. Lelut, either among the one or among the other.

Let us observe here that Professor Broca refuses to admit that the complication of the cerebral hemispheres is a simple caprice of nature. He believes that distinct organs have distinct functions.

Independently of these reasons, it is now already certain that the encephalon at least, if not the brain, is a complex organ, whose different divisions have each its particular function, although nothing is more difficult to determine by experience, etc., etc., etc.

I believe that these few notes, and I could extend them indefinitely, will suffice to show that nothing is more uncertain than the localisation, if it exists at all, of the instinctive faculties; and that proofs can be accumulated against the theory of exterior expression of instincts by the protuberances of the cranium as contended by Gall, Reid, and Spurzheim.

Now let us examine very rapidly if phrenologists have been more successful in the classification of intellectual faculties.

Certainly the brain is the organ of thought and of intellectual functions. We can, up to a certain degree, measure the intelligence of the different species of animals by comparing their brain. In effect, in the inferior animals, such as the zoophytes, which are deprived of a brain, and probably of a nervous system, we do not remark any instinct, any industrial aptitude. They have scarcely any inclinations analogous to those of plants (Gall). With the brain appears a few innate aptitudes. Let the brain become more perfect, and we find the marvellous instincts of bees and ants. Gradually we arrive at fishes, and at amphibia, in which the two hemispheres are already visible in a rudimentary degree, and this gradation is continued in the series of vertebrata.

This co-relative gradation cannot be denied when we limit

our observation to general facts. Men have weighed the brains of the different series of animals, and compared this scale of weights with the scale of intelligence in the different species. Now this comparison does not give very satisfactory results, for if a great number of animals seem to verify this law, there are great and inexplicable exceptions.

The dog has not more brain than the sheep, and less than the ox.

The brain of the elephant weighs three times as much as that of man.

The whale and several of the cetacea have also a brain superior in weight to that of man.

Gall considered these exceptions as quite decisive against the hypothesis which measures thought by the cerebral mass. Perhaps the absolute weight of the brain could not indicate the respective intelligence of animals without taking into account, in this comparison, the size and stature of the animals. For it would not appear astonishing that the elephant should have a brain considerably larger than that of man. It is, therefore, not the absolute weight of the brain, but its weight relatively to the mass of the body. Following this method we should say, that the animal which has more brain comparatively to the size of his body would be the most intelligent. ([5])

The brain of the ass is only the 250th part of the weight of his body, while that of the field mouse is the 31st part.

This system raises a few grave objections—for what relation can there be between the corporeal mass and the intelligence? Two animals, having by hypothesis, a similar quantity of brain, why should the smaller be more capable of exercising intellectual functions? If it were so, we should become more intelligent, more witty, in proportion as we became less corpulent.

([5]) Haller's system.

But the exceptional and contrary facts are here still more numerous than in the case of absolute weight: for according to this measure, man would be inferior to several species of monkeys (the saïmiri, the soï, the ouistili), and above all to many birds, and particularly to the sparrow, the tomtit, and the canary. The dog would be inferior to the bat, and the horse to the rabbit. (6)

The weight of the brain, either absolutely, or relatively, being a criterion so difficult to determine, and having so doubtful a signification, it has been thought less necessary to consider the weight than its form and its type. The brain of an adult male of the Circassian race has been selected for unity of measure and of form (man being the most intelligent of all); and it has been supposed that animals would be the more intelligent in proportion as their brains resembled that of man. Here we meet the same difficulties. In the intellectual order, says Leuret, to pass from the insects to the fishes is not to ascend but to descend. All that we know of the manners, habits, and instincts of fishes obliges us to consider these animals as generally inferior to insects, and to place them under the ants and bees.

Without leaving the order of mammalia, I would observe that it is difficult to attribute an absolute value to the form of the brain, for if it is true that the monkey has a type of brain quite similar to that of man, on the other hand, says Lyell, the extraordinary intelligence of the elephant and dog, so far exceeding that of the larger part of the quadrumana, although their brains are of a type much more remote from the human, may serve to convince us how far we are as yet from understanding the real nature of the dependence of intellectual superiority on cerebral structure. (7)

(6) Cuvier's "Comparative Anatomy."

(7) Antiquity of Man.

M. Lelut is equally opposed to the doctrine which assumes that the cerebral formation is the measure and the sign of intelligence. He quotes these words of the old anatomist Vesalius, that it is not the cranium which follows the form of the brain, but the brain which follows the form of the cranium; and moreover he affirms that the cranium itself receives the form required by the kind of life of the animal, and consequently of his movements.

I pass over the theory which compares the nervous system with the absolute or relative weight of the brain, compared with the mass of the body.

Finally—and this will be the last system I shall examine—particular conditions of structure have been noticed as characteristic of intellectual development. The two most important conditions which have been signalised are—1st, the development of the brain from front to back; 2ndly, the absence, the presence, the more or less complication of the cerebral convolutious. The phrenologists have rendered these convolutions celebrated, and I believe I have sufficiently demonstrated that the localization in each of them of the instinctive faculties is at least very uncertain. However, they appear to be concerned in intellectual development, as they are more or less numerous, more or less developed. But, says Galen, according to this rule, the ass, being a brutish and a stupid animal, ought to have the brain entirely smooth; whilst he has, on the contrary, many convolutions. Ruminating animals have more convolutions than carnivorous animals, though they are far more intelligent than the former. The sheep approaches the elephant nearer than the dog. Supplementary convolutions are described, but the horse and the dog, deprived of these supplementary convolutions which the monkey and the elephant possess, rise above the latter by education. By the extent and the number of these very convolutions, the elephant is superior to man. In the group

of the monkeys, the smaller have the brain entirely smooth, and their intelligence is at least equal to that of the larger species, etc., etc.

I think these notes sufficiently demonstrate that nothing is more uncertain than the localization, if it exists at all, of the instinctive and intellectual faculties, and that proofs can be accumulated against the theories which I have very succinctly analysed.

I have not said anything of the senses which certain animals possess, and the existence of which we can state without knowing their nature. The olfactory lobes, which men possess in a very rudimentary state, but which fully exist in animals, are connected with the sense of smell. Hence it is that that sense is so largely developed amongst the latter, and of which we can only form a very imperfect idea. In the dog the sense of smelling is so well known that I do not attempt to offer any remarks upon it. In "Coleman's British Butterflies" I read this remarkable passage: "If you breed from the chrysalis a female Kentish Glory Moth, and then immediately take her in a closed box mind—out into her native woods, within a short space of time an actual crowd of male 'glories' come and fasten upon, or hover over, the prison-house of the coveted maiden." Without this magical attraction, you might walk in these same woods for a whole day and not see a single specimen, the Kentish Glory being generally reputed a very rare moth; while as many as some 120 males have been thus decoyed to their capture in a few hours by the charms of a couple of lady "glories" shut up in a box.

Now, which of our five senses, I would ask—even if developed into extraordinary acuteness in the insect—would account for such an exhibition of clairvoyance as this?

Many similar examples might be found in insect life, such as the ichneumon, which is able to find the larva of a certain

beetle in which it deposits its eggs through the bark of a tree, etc., etc.

Can we not reasonably conceive a multitude of senses unknown to us, which however might exist in material nature? Hence there is only one step to the belief of an immaterial soul, visible only to beings of the same nature. An atom of electricity (if I may be permitted to express myself thus) has no body to our eyes; let it, however, be isolated an instant from the mass of electricity spread through the universe, and it will know how to find and unite itself again to that mass as soon as it is set at liberty. If before the discovery of electricity some one had described the phenomena inherent in it, he would have been laughed at, and no one would have believed in him.

A doctrine widely spread assigns a special seat in the brain to the faculty of articulate language. It is this that we propose to examine in our next chapter.

CHAPTER IV.

OF LANGUAGE.

WE recognise as a fundamental principle, as an established truth, that interjections are common to all beings with which to express their different and diverse sentiments—such as terror, joy, grief, &c. Darwin, in a chapter exceedingly weak according to my estimation, and full of error, tries to demonstrate that man is not the only animal that can make use of language to express what is passing *in his mind*, and that can understand, more or less, what is so expressed by another.

Either the word language is here (1) misapplied, or it signifies, according to us, a little more than "six distinct sounds," even with the addition of all the interjections possible. As for the rest, take away from a language all abstract ideas—which mean almost all the ideas possible—and I maintain that fear, anger, joy, desire of love even, may all be expressed by a few ejaculations. Now these psychological phenomena are common to all beings, as we have just said; man swears in anger, &c. (2) These are interjections, and nothing else. If this is what Darwin understands by language, we are of his opinion, and have not a word more to add.

But he says, "in his mind." This implies that animals (and in the course of his chapter he mentions the monkey, the

(1) Darwin on "Descent of Man," vol. i, page 53.

(2) Dr. Bateman on "Aphasia, or Loss of Speech, and the Seat of Language," page 112.

bird, and the ant) have not only the faculty of combination, of deduction, but also that of expressing the result of these complex functions of the mind. We recognize in certain animals a certain power of deduction, but we refuse to believe that they can communicate the result of it otherwise than when manifested in the form of a passion which can be expressed by a cry.

"The movements of the features and gestures of monkeys are understood by us, and they partly understand ours, as Rengger and others declare."

Passions acting on certain nerves impress on the physiognomy the expression of the soul in animals as well as in men; it is what is called the language of sentiment, doubtless for the want of a more adequate word, and refers to passion and not to thought.

"In Paraguay, the Cebus azaræ, when excited, utters at least *six distinct sounds*, which excite in other monkeys similar emotions."

This might be a peculiarity proper to this animal. Nothing proves that these few sounds, which express anger (excited) are not a simple interjection, a particular cry. Has it been observed whether these sounds come always in the same order? Do they occur in all cases of irritation? Are they common to all individuals of this species? If it is a sentence, it must contain a subject, a verb, an attribute. How is it that those who study languages which each contain many thousand words, have not learned to understand the sense of these "six different sounds?"

"It is a more remarkable fact that the dog, since it has been domesticated, has learned to bark in at least four or five distinct tones. Although barking is a new art, no doubt the wild species, the parents of the dog, expressed their feelings by cries of various kinds."

There are four or five *distinct* tones resembling terribly

these *cries of various kinds* of their parents. It is affirmed that the barking is an imitation of the human voice. A fine imitation, upon my word, and which they have had time since to modify for the better, according to the law of evolution!

Is this what Darwin calls a *language?*

"It is not the mere power of articulation that distinguishes man from other animals, for parrots can talk."

To speak a language is not then a physiological function, but a faculty of the soul.

"No philologist now supposes that any language has been deliberately invented; each has been slowly and unconsciously developed by many steps."

Surely this is a proof that man had in himself that faculty, to the exclusion of all the other animals. Let us add that this remark of Darwin indicates the immense gulf which exists between man and animals. Not only does man speak, but he has not received his language ready-made; he has invented it; he has invented it because the faculty was in him; and remember that there has not been found a single race of men who had not their own language.

"The sounds uttered by birds offer in several respects the nearest analogy to language, for all the members of the same species utter the same distinctive cries expressive of their emotions; and all the kinds that have the power of singing exert this power instinctively; *but the actual song and even the call notes are learnt from their parents or foster-parents.*"

I wonder what was their natural song, and why they have changed it, if they have so done. Young birds will improve their song if placed in a cage under another bird, and this is the limit of their progress. I have myself reared young canaries, which had never heard any of their own kind sing, and who sang as all the canaries in the world. Then they had inherited the song of their species; then the song is instinctive. Certain birds can learn to imitate the songs of other birds;

but they do not lose their own, and they return to it in preference. I have now a canary which imitates admirably the cries of the sparrows which come to pick in my garden.

It is generally admitted that the nations of Europe are all of the same descent, which at different epochs emigrated from the centre of Asia; all of them, however, do not speak the same language, and this fact is but an accident of circumstance and not of race.

"These sounds (those of birds), as Daines Barrington proved, are no more innate than language in man."

(This must refer to song as well as to *call notes.*)

If the song of birds, according to Barrington, is a language, my canary, which sings alone from morning to night, can be compared to those old women who go about muttering all the day long.

Perhaps if Barrington had listened more attentively, he would have discovered that the canaries of the Tyrol sing in German. As for me, I have failed to discover that the canaries of France, Italy, or England, sing in the language of any of these nations.

Amongst mankind the female sings, and that far better and more sweetly than her male partner. This never happens in the bird tribe.

Once more, the birds have naturally the song of their species, and the child of a Turk could not speak naturally the language of his fathers, nor the child of English parents speak English if brought up in a foreign land.

"I cannot doubt that language owes its origin to the imitation and modification of various natural sounds, the voice of other animals, and their own instinctive cries."

Nor do I. But these sounds exist for all the animals as for men, and they have as yet invented only the barking and *six distinct sounds.*

"Some early progenitor of man probably used his voice largely, as does one of the *Gibbon-apes* at the present day in producing true musical cadences. . . . . The imitation by articulate sounds of musical cries might have given rise to words."

Why does not this singing Gibbon invent in our days, according to the law of evolution, the rudiments of an articulate language as that early progenitor of man mentioned by Darwin?

"As monkeys certainly *understand much that is said to them by man*, and as in a state of nature they utter signal-cries of danger to their fellows, it does not appear altogether incredible, that some unusually wise ape-like animal should have thought of imitating the growl of a beast of prey so as to indicate to his fellow-monkeys the nature of the expected danger. *And this would have been the first step in the formation of a language.*"

Why does not this wise ape-like animal learn the language of man which he understands so well? It would be soon done, and he would have a language all complete. Many animals, without doubt, since the first day of their creation, imitate the cries of other animals; have they through this formed an articulate language? Is there no more in our time so much wit in the animal world?

"The mental powers in some early progenitor of man must have been more highly developed than in any existing ape."

Why has this intelligent race disappeared rather than the inferior races? What proof exists of it? It is on this hypothesis that all the system of Darwin's "Descent of Man" is founded.

"There is no more improbability in the effects of the continued use of the vocal and mental organs being inherited than in the case of handwriting, which depends partly on the

disposition of the hand, and partly on the disposition of the mind."

The parrot, of which we were speaking just now, possesses this quality of articulation. Why does not he then transmit to his descendants an articulate language, however rudimentary it might be?

Besides, naturally man does not know how to write; the mind must learn how to guide the hand, and the hand must learn how to obey it. And what shall we say of the left-hand, which has never been used for writing by any nation? It can write, however, when it is taught. This was the case with my eldest brother; it is the same also with a lady of my acquaintance whom nature has from birth deprived of her right hand.

"The fact of the higher apes not using their vocal organs for speech no doubt depends on their intelligence not having been sufficiently advanced."

This assertion appears to us very hazardous, and nothing reasonable authorises us to believe that it will ever be as Darwin suggests. Let us not forget to observe (for we attach a great importance to this fact) that the child of one year, and sometimes sooner, can articulate a few words, and certainly his intelligence is far from equalling that of certain monkeys, of which Darwin himself has given us the description.

"Why the organs now used for speech should have been originally perfected for this purpose, rather than any other organs, it is not difficult to see. Ants have considerable powers of intercommunication by means of their antennæ, as shewn by Huber, who devotes a whole chapter to their language. We might have used our fingers as efficient instruments, for a person with practice can report to a deaf man every word of a speech rapidly delivered at a public meeting; but the loss of our hands, whilst thus employed, would have been a serious inconvenience."

Had I been all my lifetime searching for the cause of these perfected organs, I should not have succeeded in finding for them a more fanciful origin. ([8])

"The same language never has two birth-places."

This is the most evident proof that articulate language is a faculty innate in man, and appertains to him exclusively. Let two dogs of the same race be brought up separately, and far from every subject of their kind, and they will bark the same as their progenitors; it is the same with birds, as I have said already. I am materially certain that the same phenomenon would not be produced if this experiment could be made on two children; their descendants could have two languages, and these would differ.

I conclude from all this that the faculty of speaking belongs to the soul as an attribute; that each race of man has created their language by a long development, that this development continues even in our days, in exact proportion with our new requirements; that this faculty belongs to no race of animals, since the law of evolution has not produced this phenomenon in any of them; and that this law, if it exists otherwise than I explain it, has not, even according to the Darwinian philosophers, ceased since time incommensurable to act on all races; that this theory of evolution is absurd in this, that if all the beings were descending from the Ascidia, there could not be now any Ascidia, all of them having become You, I, Napoleon, or the Pope.

([8]) As an example of the strange deduction Darwin draws from a similarity of facts, and without referring to the pointed ears mentioned by him, p. 23, v. i., I quote a few lines from the same volume, p. 121, in reference to the arrested brain-development of microcephalous idiots:—"*They are curiously fond of climbing up furniture or trees; we are thus reminded of the delight shewn by almost all boys in climbing trees;*" and he adds by way of *rapprochement*,—"This again reminds us how lambs and kids, originally alpine animals, delight to frisk on any hillock however small." A friend of mind suggests the propensity shewn by boys for climbing trees to be rather a *love for apples.*

Are we not authorised to conclude that God has delivered up as slaves to man all the animals, giving him over them an absolute power, which extends even to annihilation; and that in order that they might not importune him with their complaints, he has deprived them of speech?

I represent to myself this law of evolution as a mighty river which flows towards the seas, and adds incessantly wave to wave.

CHAPTER V.

ON THE SEAT OF LANGUAGE.

IN my preceding papers I have endeavored to show the untenability of Darwinism, and I have, by reasoning which I believe to be rational, and as succinctly as possible (for volumes would be required to develope these subjects thoroughly), sought to prove the possibility of a creation by circles, and at epochs more or less remote, which, if required, might be assimilated to the different geological formations, that is to say, to the different states of the earth and the different conditions of existence which it offered the individuals of these circles respectively. I have also sought to show that the intellectual difference between the human races is really much less than it appears at first sight; that civilization is nothing else but an accumulation of facts, which each generation inherits from the preceding one; and that this civilization appears to have no other origin than the need of man, and seems to stay in its progress when that need ceases.

Secondly—I have shown that "societies" could not exist without certain fundamental virtues; that the dogma of fatalism is inadmissible; that the probabilities are in favor of the existence of an "Eternal principle which we call God;" that man alone has the faculty of discovering "Him" in the harmony of the universe, and of consecrating to himself a religion; that materialism is not only immoral, but

cruel, and that no one could reasonably believe in the probity of that man for whom honor is but a word.

Thirdly—I have pointed out that "Phrenology," as it exists, is belied by experience, and that all the researches of science have not yet been able to indicate in the brain any precise seat for our intellectual faculties; and upon this subject I have quoted the opinions of many celebrated anatomists.

Lastly—I have spoken of "Articulate Language," which I believe to be a faculty solely pertaining to the human race, to the exclusion of other animals. I shall now proceed to fortify my anti-Darwinian position by reference to certain modern researches as to the seat of language.

I believe it is not generally known that Dr. Bateman of this city has written a very remarkable book on "Aphasia, or Loss of Speech," which has already been translated into French. This work cannot fail to exercise great influence on the study of the "Diseases which affect the Brain," as yet so little known; for the author not only brings forward his own personal observations upon the subject, but also the opinions of the great scientific men of other countries as well as of our own. Books of this kind are generally supposed to be written specially and particularly for the medical faculty, but this one will well repay the intelligent and thoughtful reader for its perusal, let him be a man of science or otherwise.

For myself, I shall be glad to learn that Dr. Bateman has continued to think on this great subject, and that he will, as the result of his thinking, add a second volume to the one already published.

Dr. Bateman has devoted several years to the study of the different theories as to the seat of speech, and he finds so many exceptions to each of them that he asserts that science has failed to connect speech with a "*material centre*," and that speech, like the soul, may be an attribute, the com-

prehension of which is beyond the limits of our finite minds.

The bearings of these researches upon Darwinism is evident. *"If speech cannot be traced to a 'material centre,' cannot be connected with matter, here then is the barrier between man and animals, and the Darwinian analogy between the brain of man and that of his reputed ancestor, the ape, loses all its force, and the general belief in the Mosaic account of the origin of man is strengthened."*

I think I have proved that the form of the brain has little to do with intelligence, that neither the weight nor the number of natural or supplementary convolutions seem to increase or diminish the intellectual faculties; and, to sum up my argument, the brain is an instrument by the means of which the soul communicates outside, according to its importance in the creation, by manifestations more or less different, more or less numerous, more or less elevated; that man has, in common with other animals, instinctive faculties—and more than they, a faculty which perhaps differs only from other instinctive faculties by its immense circle of development, and which we call mind, intelligence, genius, soul, and which we believe to be immortal.

"During the protracted debates at the Academy of Medicine the pathological and psychological aspects of the question were reviewed with great force and eloquence, but the discussion closed wlthout this learned body having arrived at any definite decision in reference to the localization of the faculty of speech." (1)

Of all animals, man is the only one who has the faculty of expressing his thoughts by words. However, in certain maladies of the brain, or of parts of the brain, he can lose that faculty partially or entirely. Thus Professor Behier, one of our guests at the recent meeting of the British Association

(1) Dr. Bateman, p. 15.

held in Norwich, in a clinical lecture recently delivered by him at the Hôtel Dieu, mentioned the case of a woman who was admitted into one of his wards with paralysis (1) of the right side of the body, the result of cerebral hæmorrhage; and in whom one of the first symptoms following the effusion was aphasia, which assumed in her case a very exceptional form. This woman was born in Italy, and had resided both in Spain and France; of the three languages she had thus acquired, she had completely forgotten the Italian and Spanish, and had only retained the use of French. (2)

Perhaps one of the most curious forms in which imperfection of speech shows itself, is where the defect is limited to some particular language: thus, Dr. Beattie (quoted by Dr. Scoresby Jackson) mentions the case of a gentleman who after a blow on the head lost his knowledge of Greek, and did not appear to have lost anything else. Dr. S. Jackson asks—Where was that gentleman's Greek deposited, that it could be blotted out by a single stroke, whilst his native language and all else remained?

"In many of the cases," says Dr. Bateman, "the play of the physiognomy shows that the sense of a question is perfectly understood by the patients; they have not lost the general faculty of language, for they understand written and articulate language when spoken by others; they preserve even the sense and the value of words, both in the auditive and graphic form; what is wanting in them . . . . is the faculty of articulate language."

In one of the cases mentioned by Dr. Jackson, all questions were perfectly comprehended by the patient and answered by signs, and it could be plainly seen by the smile

(1) I should advise those who have anything to do with children never to strike them on the head, for I see in my reading that paralysis in old age has sometimes been traced to similar causes.

(2) Dr. Bateman, on "Aphasia," p. 17.

on the countenance, after many ineffectual attempts to express his ideas, that he was himself surprised and somewhat amused at his peculiar situation.

A professor of Montpellier, M. Lordat, had an attack of aphasia, during which he could prepare his lessons and dispose his arguments without being able to pronounce a single word. In this case, the mental language was preserved without doubt. The exterior manifestation was alone paralysed. Otherwise, how was it possible that he should prepare his lessons without words? (3)

Loss of speech can exist without any evidence of structural lesion of the brain. For example, in a certain case a man's suspension of speech was unaccompanied by any symptom of paralysis, and the loss of the faculty of articulate language continued for six days, when, being asleep on his couch, he suddenly started up, and was heard to say three times, *"A man in the river!"* From this moment speech was restored. He had dreamed that a man was falling into the river. Surely there could have been *no* structural disease of the brain here, or speech would not have been recovered instantaneously. (4)

Strong mental emotion is often salutary in such cases; we are all familiar with the story in Herodotus of the son of Crœsus, who had never been known to speak, but who at the siege of Sardis, being overcome with astonishment and terror at seeing the king—his father—in danger of being killed by a Persian soldier, exclaimed aloud—"Oh, man, do not kill Crœsus!" This was the first time he had ever articulated, but he retained the faculty of speech from this event as long as he lived. Herodotus is universally admitted to be a trustworthy historian, but if it be thought far-fetched to illustrate

(3)

(4) Dr. Bateman, p. 139.

a subject by allusion to a work written 500 years before the Christian era, I may add that such cases have been met with by other observers. (5)

I have quoted these different examples of aphasia to demonstrate that the medium which the soul employs to communicate itself exteriorly can be affected in one of its modes of action without losing any of its intellectual faculties. While writing this, wishing to summon my domestic, I pulled the cord of my bell, but the cord breaking remained in my hand. I then lost one mode of communication without losing my individuality, and I was compelled to employ other means, as the soul, having lost the faculty of articulate language, employs signs. And if by one of the many accidents which happen in life I had found myself so isolated from the rest of mortals that it would have been impossible for me to communicate with them, I should have ceased to exist for them, not for myself; as the soul, when it loses that which constitutes its material life, exists no more for this earth.

Without having succeeded better than the phrenologists in reference to love, hatred, etc., certain learned men have assigned a particular corner of the brain as the seat of "Articulate Speech." The spot is not the same for all of them. According to the theory of Bouillaud, it is in the anterior lobes, right and left. Dax places it in the left anterior lobe, to the exclusion of the right. The French anthropologist, Professor Broca, places it in a very limited spot—a small fold in the left anterior lobe called the third frontal convolution. Here are three eminent professors differing widely in opinion. I might, if need were, find twenty more whose opinions would differ equally. Unfortunately for these gentlemen, numerous cases exist which belie all theories as to localisation by the most irresistible of

(5) Dr. Bateman, page 138.

arguments, that of incontestable fact, which we shall now proceed to examine.

In the month of March, 1843, a barber, sixty years of age, came under M. Velpeau's care. With the exception of his prostatic disease, he seemed to be in excellent health, was very lively, cheerful, full of repartee, and evidently in possession of all his faculties, one remarkable symptom in his case being his *intolerable loquacity. A greater chatterer never existed, and on more than one occasion complaints were made by the other patients of their talkative neighbor, who allowed them rest neither night nor day.* A few days after admission, this man died suddenly, and a careful autopsy was made. On opening the cranium, a cancerous tumor was found, which had taken the place of *the two anterior lobes.* (6)

M Peter relates the case of a man who fractured his skull by a fall from a horse. After recovery from the initial stupor there succeeded a *remarkable loquacity,* although after death it was found that the two frontal lobes of the brain were reduced to a pulp *(réduits en bouillie).* (7)

Another remarkable case is recorded in Trousseau's "Clinique Médicale." In the year 1825, two officers quartered at Tours quarrelled, and satisfied their honor by a duel, as a result of which one of them received a ball which entered at one temple and made its exit at the other. The patient survived six months without any sign of paralysis or of lesion of articulation, nor was there the least hesitation in the expression of his thoughts till the supervention of inflammation of the central substance, which occurred shortly before his death, when it was ascertained that the ball had traversed the two frontal lobes at their centres! (8)

(6) Dr. Bateman, p. 14.

(7) Ibid., p. 19.

(8) Ibid, p. 19.

In these three cases it will be observed that a profound lesion existed in the supposed seat of speech, according to Bouillaud and Dax; now, I would ask, What became of the faculty of speech, when in the first case its presumed seat was invaded by an enormous tumor, in the second, entirely disorganised by disease, and in the third, destroyed by a pistol ball?

CHAPTER VI.

CONCLUSION.

LET us now consider the most exclusive of all the theories about the localisation of speech—that of Professor Broca, who places it, as we have before said, in a very limited spot—a small fold of the brain called the third left frontal convolution. Now, if time permitted, I could easily quote cases which would show upon what a flimsy foundation this theory rests, but it will be apparent to everybody that the two cases I have quoted of destruction of the anterior lobes—in the one case by a tumour, and in the other by a pistol shot—apply as much to M. Broca's theory as to the others, for what proves the greater proves the less; and it is not conceivable that M. Broca's pet fold can have escaped injury amid the general destruction caused by the lesions described.

It is not generally known in this country that the great German naturalist, Carl Vogt, has discovered that the Apes have an extremely imperfect development of this third frontal convolution; therefore he says that, as the Apes cannot speak, comparative anatomy gives a subsidiary support to the theory which places speech in this convolution.

"*Now, if this third frontal convolution could, according to Broca, be proved to be the seat of speech in man, a strong argument could be adduced in favor of Darwinism. It might be said the Ape possessed the rudiments of speech in an undeveloped form; that in subsequent generations, by the process*

of evolution, this particnlar fold would become more developed, and the Ape would speak—in fact, would become a Man! As, however, this convolution has NOT *been proved to be the seat of human speech, the Darwinian argument from analogy of structure loses all its force, and speech remains a barrier the brute is not destined to pass.*" (1)

Having now reached the limits which I prescribed to myself, it only remains to answer one objection which has been made to me, and which is purely moral—"If God existed, should we see such frequent acts of injustice and intolerable abuses always recurring in the world?" J. J. Rousseau, in this very injustice and intolerance, found a proof of the soul's immortality. "If I had no other proof," says he, "of the immortality of the soul than the triumph of the wicked and the oppression of the just in this world, that alone would prevent me from doubting it. Such an apparent discord in the harmony of the universe would force me to seek some solution. I should consider that all does not finish for me with the end of life; after death a balance will be struck."

Les dieux sont longs à punir, mais enfin ils le font.—*Fénélon.*

God has eternity, towards which each hour fatally drags us. Has He any need to hasten? Time for "Him" has no existence. What is it to the "Almighty" that you revolt against "Him" on this grain of sand we call the world, and if you fill with imprecations the air which surrounds us? Evil is not with "Him," it remains with you, and acts against you; for public conscience, which is a reflection of God, accuses and stigmatizes you. Look around, and you will see in society beings with pallid faces, with an air of inquietude, whom honest men pity but avoid. They have "vice" written on

(1) I borrow this from a manuscript note appended to my copy of Dr. Bateman's book, added since the publication of Darwin's "Descent of Man."

their countenances, and if nothing yet indicates the ruin of their lives, follow them, and you will see them even in the midst of their debauchery pass their hand over their forehead as if to chase away a phantom, a remembrance, a fear. For

La débauche au teint pâle a peur du lendemain.

If they succeed in concealing from you their wounded souls, wait but for a few days, and the wounds of the body will soon appear, and medicine will exhaust in vain all the resources of its art, life will for them become a punishment, and to free themselves from it they will perhaps seek a refuge in death. What name can be given to these moral and physical maladies? What will you say, O materialist, of those criminals who many years afterwards come to the executioner and say, "Kill me, for I can no longer live with my remorse." Doubtless you will call them demented. Our prisons are full of malefactors; ask them if they are happy.

No one has yet succeeded in entirely stifling conscience, there is always some vulnerable part which, when touched, instantly re-awakens it and draws from it groans of anguish.

Chose étrange, si dans sa plaidoirie le défenseur parle des premières années de son client, de l'époque de pureté où, vivant près de sa famille, l'idée même du crime lui étoit inconnue, il est sans exemple que le coupable, fût-il trois fois meurtrier, ne laisse tomber sa tête entre ses mains et n'éclate en larmes. (2)

Trans.—So true is this—and there is no contrary example—that if during a trial the counsel for the defence makes allusion to the early years of the criminal, when he was living with his family and innocent as yet even of the idea of crime, in which the culprit, were he a three-fold assassin, has not let fall his head between his hands and burst into tears.

(2) Maxime Du Camp, Revue des deux Mondes, 1869, v. iv, page 871.

And if sometimes vice prospers, and crushes underfoot virtue, what does it matter? The cradle is so near the tomb that I scarcely dare to compare the insult of the wicked to the mire which the proud wheels of the happy of this world cast in the face of the virtuous but unhappy man. Believe me, a society of materialists could not exist. Men, even with the fear which all religion inspires, kill each other for a word. What would happen if they ceased to fear? They would tear each other even to the extinction of race; for, I repeat it, man is the most cruel of all animals. Do not say, O materialist, that you are righteous, that those who know you will bear witness of this, for what do you know about yourself? Every society at its commencement is always pure, *car elle se sait observée et s'observe;* but if one day it becomes the stronger, it throws aside the mask and shows itself as it is. I refer you to history. What would happen if you were the most numerous? Eh! Ask me what the jackals do when they are the strongest.

No one is more tolerant than myself as to the form of religion. I should leave my slippers under the porch of St. Sophia. But the unbelief in the "Eternal Wisdom" which governs the universe fills me with indignation, and in spite of myself my pen escapes control.

I do not write against theories, I wish only to combat the doctrine of Materialism; and I make use of their uncertainty to demonstrate that no one has as yet understood the soul, and that those who think they find it in matter have not even succeeded in assigning a true seat to its intellectual faculties, as I believe I have abundantly proved.

M. Villemain, the Minister of Public Instruction, when struck by slight mental aberration, was visited by M. Victor Hugo, who esteemed him much; and on being asked by him if he suffered much in the head, M. Villemain replied, "No, not in the head; higher—in the soul."

But if science succeeds one day in discovering that the brain is indeed a complex organ, it will not have proved anything in favor of Materialism, *for the question is not to know how we think, but what is thinking in us?* I imagine the brain to be like an electric machine with many or few, according to the species, conducting wires, (3) which vibrate at the slightest contact of electricity. As long as the machine is intact, electricity will manifest itself outside; break it, and the fluid ceases to exist for our senses. If all means of electric manifestation ceased to exist, who would dare to say that electricity existed no more? Withdraw the ocean from its bed, the shores will cease to be a limit to the waves which will no longer exist. Take away the soul from the brain, there will remain but a corpse; or, to reason inversely, take away the brain from the soul, and the latter, having lost all means of manifestation, will for our mortal senses exist no more. Let Materialists prove to me by an argument, more or less reasonable, that molecules, arranged in a certain manner, can become sensible, and I will declare myself entirely converted to their doctrine.

I shall now conclude by a few words which were said by a friend the other day on this subject. "Man seems called to be an actor and spectator to a drama, of which it has not been given to him to know either the beginning or the end;" to which I replied, in these words of the poet,

Vouloir expliquer Dieu, c'est folie à la terre.

(3) Charles Bonnet assigned a special function to each fibre, stating that every faculty, sensitive, moral, or intellectual, was in the brain connected to a bundle of fibres; that every faculty had its own laws which subordinated it to other faculties and determined its mode of action, and that not only had every faculty its fasciculus of fibres, but that every word had its own fibre! (Dr. Bateman, on "Aphasia," p. 143).

THE END.

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