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978-1-108-00074-1 - On the Power, Wisdom and Goodness of God as Manifested in the Creation of Animals and in their History, Habits and Instincts, Volume 1

William Kirby

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### **On the Power, Wisdom and Goodness of God as Manifested in the Creation of Animals and in Their History, Habits and Instincts**

This treatise, published in 1835 is one of a series of eight, commissioned by the Royal Society after The Reverend Francis Henry, Earl of Bridgewater, bequeathed funds in his will for the works. The Reverend Kirby unites the study of the Word of God, with that of His works, setting out to disprove Lamarck's hypothesis that all the works of creation can be attributed to second causes, rather than a first cause, i.e. God. Kirby questions the founders of modern philosophy, by agreeing with them in their objections to the superstitious and bigoted adherence to the letter of scripture, but questions their lack of attention to the spirit of scripture. In the two volumes, he explores the creation of animals in a spiritual context, and then goes on to consider the functions and instincts of the major animal groups, including molluscans, fishes, reptiles, birds and man. The two volumes are extensively illustrated throughout.

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and Goodness of God  
as Manifested in the  
Creation of Animals  
and in Their History,  
Habits and Instincts

VOLUME 1

WILLIAM KIRBY



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**THE BRIDGEWATER TREATISES**  
**ON THE POWER WISDOM AND GOODNESS OF GOD**  
**AS MANIFESTED IN THE CREATION**

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**IN TWO VOLUMES**

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“ C’EST, LA BIBLE A LA MAIN, QUE NOUS DEVONS ENTRER DANS  
LE TEMPLE AUGUSTE DE LA NATURE, POUR BIEN COMPRENDRE  
LA VOIX DU CRÉATEUR.”

GAEDE.

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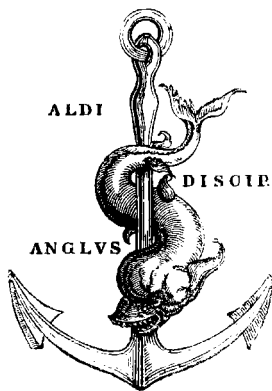
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ON THE  
POWER WISDOM AND GOODNESS OF GOD  
AS MANIFESTED IN THE CREATION  
OF ANIMALS AND IN THEIR HISTORY HABITS  
AND INSTINCTS

BY THE  
REV. WILLIAM KIRBY, M.A. F.R.S. ETC.

RECTOR OF BARIHAM.

VOL I



LONDON  
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1835



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TO THE RIGHT HONOURABLE

CHARLES,

BARON FARNBOROUGH,

KNIGHT GRAND CROSS OF THE ORDER OF THE BATH, A MEMBER OF HIS MAJESTY'S

MOST HONOURABLE PRIVY COUNCIL, AND ONE OF THE TRUSTEES

OF THE BRITISH MUSEUM,

THE FOLLOWING TREATISE,

BY HIS PERMISSION,

IS RESPECTFULLY INSCRIBED,

BY HIS LORDSHIP'S OBLIGED AND OBEDIENT SERVANT,

THE AUTHOR.

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## NOTICE.

THE series of Treatises, of which the present is one, is published under the following circumstances :

THE RIGHT HONOURABLE and REVEREND FRANCIS HENRY, EARL of BRIDGEWATER, died in the month of February, 1829; and by his last Will and Testament, bearing date the 25th of February, 1825, he directed certain Trustees therein named to invest in the public funds the sum of Eight thousand pounds sterling; this sum, with the accruing dividends thereon, to be held at the disposal of the President, for the time being, of the Royal Society of London, to be paid to the person or persons nominated by him. The Testator further directed, that the person or persons selected by the said President should be appointed to write, print, and publish one thousand copies of a work *On the Power, Wisdom, and Goodness of God, as manifested in the Creation; illustrating such work by all reasonable arguments, as for instance the variety and formation of God's creatures in the animal, vegetable, and mineral kingdoms; the effect of digestion, and thereby of conversion; the construction of the hand of man, and an infinite variety of other arguments; as also by discoveries ancient and modern, in arts, sciences, and the whole extent of literature.* He desired, moreover, that the profits arising from the sale of the works so published should be paid to the authors of the works.

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The late President of the Royal Society, Davies Gilbert, Esq. requested the assistance of his Grace the Archbishop of Canterbury and of the Bishop of London, in determining upon the best mode of carrying into effect the intentions of the Testator. Acting with their advice, and with the concurrence of a nobleman immediately connected with the deceased, Mr. Davies Gilbert appointed the following eight gentlemen to write separate Treatises on the different branches of the subject as here stated :

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PROFESSOR OF DIVINITY IN THE UNIVERSITY OF EDINBURGH.

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HIS ROYAL HIGHNESS THE DUKE OF SUSSEX, President of the Royal Society, having desired that no unnecessary delay should take place in the publication of the above mentioned treatises, they will appear at short intervals, as they are ready for publication.

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<sup>1</sup> *Regn. An.* iit. 297.



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<sup>1</sup> Owen's *Mem. on Naut. Pompil. t. v. h.*

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<sup>1</sup> Referred to by mistake as an *Ocypus*, 308.

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## INTRODUCTION.

THE *Works* of God and the *Word* of God may be called the two doors which open into the temple of Truth ; and, as both proceed from the same Almighty and Omniscient Author, they cannot, if rightly interpreted, contradict each other, but must mutually illustrate and confirm, “ though each in different sort and manner,” the same truths. Doubtless it was with this conviction upon his mind, that the learned Professor,<sup>1</sup> from whom I have borrowed my motto, expresses his opinion—that in order rightly to understand the voice of God in nature, we ought to enter her temple with the Bible in our hands.

The prescribed object of the several treatises, of which the present forms one, is the illustration of the Power, Wisdom, and Good-

<sup>1</sup> The pious Heinrich Moritz Gaede, Professor of Natural History in the University of Liege.

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ness of the Deity, as manifested in the Works of Creation; but it is not only directed that these primary attributes should be proved by all reasonable arguments derived from physical objects, but also by discoveries ancient and modern, and *the whole extent of literature*. As the Holy Scriptures form the most interesting portion, in every respect, of ancient literature; and it has always been the habit of the author of the present treatise to unite the study of the *word* of God with that of his *works*;<sup>1</sup> he trusts he shall not be deemed to have stepped out of the record, where he has copiously drawn from the sacred fountains, provided the main tenor of his argument is in accordance with the brief put into his hands.

Those who are disposed to unite the study of scripture with that of nature, should always bear in mind the caution before alluded to, that all depends upon the *right* interpretation, either of the *written word* or *created substance*. They who study the word of God, and they who study his works, are equally liable to error; nor will talents, even of the

<sup>1</sup> See *Monographia Apum Angliæ*, i. 2, and *Introd. to Ent.* i. Pref. xiii. &c.

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highest order, always secure a man from falling into it. The love of truth, and of its Almighty Author, is the only sure guide that will conduct the aspirant to its purest fountains. High intellectual powers are a glorious gift of God, which, when associated with the qualities just named, lead to results as glorious, and to the light of real unsophisticated knowledge. But *knowledge puffeth up*, and if it stands alone, there is great danger of its leading its possessor into a kind of self-worship, and from thence to self-delusion, and the love of hypothesis.

It is much to be lamented that many bright lights in science, some from leaning too much to their own understanding, and others, probably from having Religion shown to them, not with her own winning features, nor in her own simple dress, but with a distorted aspect, and decked meretriciously, so that she appears what she is not, without further inquiry and without consulting her genuine records, have rejected her and fallen into grievous errors. To them might be applied our Saviour's words, *Ye do err not knowing the Scriptures*. These observations apply particularly to two of the most eminent philosophers of the

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present age, one for the depth of his knowledge in astronomy and general physics ; and the other in zoology. It will be easily seen that I allude to La Place and Lamarek, both of whom, from their disregard of the word of God, and from seeking too exclusively their own glory, have fallen into errors of no small magnitude. It is singular, and worthy of observation, that both have based their hypothesis upon a similar foundation. La Place says, “ An attentive inspection of the solar system evinces the necessity of some central paramount force, in order to maintain the entire system together, and secure the regularity of its motions.”<sup>1</sup> One would expect from these remarks, that he was about to enforce the necessity of acknowledging the necessary existence of an intelligent paramount central Being, whose goings forth were co-extensive with the universe of systems, to create them at first, and then maintain their several motions and revolutions, so as to prevent them from becoming eccentric and interfering with each other,<sup>2</sup> thus—*Upholding all things by the word of his power*. But

<sup>1</sup> *System of the World*, E. Tr. ii. 330.

<sup>2</sup> *Ibid. Appendix*, concluding note.

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no—when he asks the question, What is the primitive cause?<sup>1</sup> instead of answering it immediately, he refers the reader for his hypothesis to a concluding note, in which we find that this *primitive* cause, instead of the Deity, is a nebulosity originally so diffuse, that its existence can with difficulty be conceived.<sup>2</sup> To produce a system like ours, one of these wandering masses of nebulous matter distributed through the immensity of the heavens,<sup>3</sup> is converted into a brilliant nucleus, with an atmosphere originally extending beyond the orbits of all its planets, and then gradually contracting itself, but at its successive limits leaving zones of vapours, which, by their condensation, formed the several planets and their satellites, including the rings of Saturn!!<sup>4</sup>

It is grievous to see talents of the very highest order, and to which Natural Philosophy, in other respects, is so deeply indebted, forsaking the *Ens Entium*, the God of Gods, and ascribing the creation of the universe of worlds to a cause which, according to his own confession, is all but

<sup>1</sup> *System of the World*, E. Tr. ii. 328.<sup>2</sup> *Ibid.* 357.<sup>3</sup> *Ibid.* 332.<sup>4</sup> *Ibid.* 358.

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a non-entity. He speaks, indeed, of a Supreme Intelligence, but it is as Newton's god,—whom he blames for attributing the admirable arrangement of the sun, of the planets, and of the comets, to an Intelligent and Almighty Being,<sup>1</sup>—and of an Author of Nature, not, however, as the preserver and upholder of the universe,<sup>2</sup> but as perpetually receding, according as the boundaries of our knowledge are extended ;<sup>3</sup> thus expelling, as it were, the Deity from all care or concern about his own world.

While the *philosopher* thus became *vain in his imaginations*, the *naturalist* attempted to account for the production of all the various forms and structures of plants and animals upon similar principles. Lamarck, distinguished by the variety of his talents and attainments, by the acuteness of his intellect, by the clearness of his conceptions, and remarkable for his intimate acquaintance with his subject, thus expresses his opinion as to the origin of the present system of organized beings. “ We know, by observation, that the most simple organizations, whether vege-

<sup>1</sup> *System of the World*, E. Tr. ii. 331.

<sup>2</sup> *Ibid.* 332.

<sup>3</sup> *Ibid.* 333.



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table or animal, are never met with but in minute gelatinous bodies, very supple and delicate ; in a word, only in frail bodies almost without consistence and mostly transparent." These minute bodies he supposes nature forms, in the waters, by the power of attraction ; and that next, subtle and expansive fluids, such as caloric and electricity, penetrate these bodies, and enlarge the interstices of their agglutinated molecules, so as to form utricular cavities, and so produce irritability and life, followed by a power of absorption, by which they derive nutriment from without.<sup>1</sup>

The production of a new *organ* in one of these, so formed, animal bodies, he ascribes to a new *want*, which continues to stimulate ; and of a new movement which that want produces and cherishes.<sup>2</sup> He next relates how this can be effected. Body, he observes, being essentially constituted of cellular tissue, this tissue is in some sort the matrix, from the modification of which by the fluids put in motion by the stimulus of desire, membranes, fibres, vascular canals, and divers

<sup>1</sup> *Anim. sans Vertèbr.* i. 174.<sup>2</sup> *Ibid.* 181.

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organs, gradually appear; parts are strengthened and solidified;<sup>1</sup> and thus progressively new parts and organs are formed, and more and more perfect organizations produced; and thus, by consequence, in the lapse of ages a monad becomes a man!!!

The great object both of La Place and Lamarck seems to be to ascribe all the works of creation to *second* causes; and to account for the production of all the visible universe, and the furniture of our own globe, without the intervention of a *first*. Both begin the work by introducing nebulosities or masses of matter scarcely amounting to real entities, and proceed as if they had agreed together upon the *modus operandi*.

As Lamarck's hypothesis relates particularly to the animal kingdom, I shall make a few observations upon it, calculated to prove its utter irrationality.

When, indeed, one reads the above account of the mode by which, according to our author's hypothesis, the first vegetable and animal forms were produced, we can scarcely help thinking that we have before us a receipt

<sup>1</sup> *Anim. sans Vertèbr.* i. 184.

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for making the organized beings at the foot of the scale in either class—a mass of irritable matter formed by *attraction*, and a *repulsive* principle to introduce into it and form a cellular tissue, are the only ingredients necessary. Mix them, and you have an animal which begins to absorb fluid, and move about as a monad or a vibrio, multiplies itself by scissions or germes, one of which being stimulated by a want to take its food by a mouth, its fluids move obediently towards its anterior extremity, and in time a mouth is obtained; in another generation, a more talented individual discovering that one or more stomachs and other intestines would be a convenient addition to a mouth, the fluids immediately take a contrary direction, and at length this wish is accomplished; next a nervous collar round the gullet is acquired, and this centre of sensation being gained, the usual organs of the senses of course follow. But enough of this.

Let any one examine the whole organization and structure, both internal and external, of any animal, and he will find that it forms a *whole*, in which the different organs and members have a mutual relation and

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dependence, and that if one is supposed to be abstracted, the whole is put out of order and cannot fulfill its evident functions. If we select, as a well known instance, the *Hive-bee* for an example. Its long tongue is specially formed to collect honey; its honey stomach to receive and elaborate it either for regurgitation, or for the formation of wax; and other organs or pores are added, by which the latter can be transmitted to the wax pockets under its abdomen; connected with these, are its means and instruments to build its cells, either for store cells to contain its honey and bee-bread, or its young brood, such as the form of its jaws, and the structure and furniture of its hind legs. Now here are a number of organs and parts that must have been contemporary, since one is evidently constructed with a view to the other: and the whole organization and structure of the whole body forming the societies of these wonder-working beings, that I mean, of the males, females, and workers, is so nicely adjusted, as to concur exactly in producing the end that an intelligent Creator intended, and directing each to that function and office which he devolved upon them, and to exercise which he adapted them. Were we

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to go through the whole animal kingdom the same mutual relation and dependence between the different parts and organs of the structure and their functions would be found.

Can any one in his rational senses believe for a moment that all these adaptations of one organ to another, and of the whole structure to a particular function, resulted originally from the wants of a senseless animal living by absorption, and whose body consisted merely of cellular tissue, which in the lapse of ages, and in an infinity of successive generations by the motions of its fluids, directed here and there, produced this beautiful and harmonious system of organs all subservient to one purpose; and which in numerous instances vary their functions and organs, but still preserving their mutual dependence, by passing through three different states of existence.

Lamarck's great error, and that of many others of his compatriots, is materialism; he seems to have no faith in any thing but *body*, attributing every thing to a physical, and scarcely any thing to a metaphysical cause. Even when, in words, he admits the being of a God, he employs the whole strength of his intellect to prove that he had nothing to

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do with the works of creation. Thus he excludes the Deity from the government of the world that he has created, putting nature in his place; and with respect to the noblest and last formed of his creatures into whom he himself breathed the breath of life; he certainly admits him to be the most perfect of animals, but instead of a son of God, the root of his genealogical tree, according to him, is an animalcule, a creature without sense or voluntary motion, or internal or external organs, at least in his idea—no wonder therefore that he considers his intellectual powers, not as indicating a spiritual substance derived from heaven though resident in his body, but merely as the result of his organization,<sup>1</sup> and ascribes to him in the place of a soul, a certain *interior sentiment*, upon the discovery of which he prides himself.<sup>2</sup> In one of his latest descriptions of it, he thus describes the office of this internal sentiment: “Every action of an intelligent individual, whether it be a movement or a thought, or an act amongst the thoughts, is

<sup>1</sup> *N. Dict. D'Hist. Nat.* xvi. Artic. *Intelligence*, 344. comp. *Ibid.* Artic. *Idée*, 78, 80.

<sup>2</sup> *Ibid.* 332.