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JOURNAL OF
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NOTE:—The papers, discussions and communications thereon from home or foreign members, are published in the Journal as soon as finally corrected by their respective authors.

**.* The Institute's object being to investigate, it must not be held to endorse the various views expressed at its meetings.*

PREFACE.

THE Twenty-Fifth Volume of the *Journal of the Transactions* of the VICTORIA INSTITUTE now issued, is a record of the various important questions taken up in papers by competent authors, carefully investigated, and impartially discussed at the Meetings by those who have studied the subjects considered. The papers contained in this volume are upon the following subjects:—“On the Monism, Pantheism, and Dualism of Brahmanical and Zoroastrian Philosophers,” by Sir M. MONIER WILLIAMS, K.C.I.E., D.C.L. “On Human Responsibility,” by the Right Honourable Lord GRIMTHORPE. “On Chinese Chronology,” by the Rev. JAMES LEGGE, M.A., Professor of Chinese in the University of Oxford; in the discussion of which Sir THOMAS F. WADE, G.C.M.G., and others took part. On the site of “The Garden of Eden,” by Mr. HORMUZD RASSAM, who combats certain statements

recently made by some known English and Foreign writers who have asserted that the Garden of Eden of the Bible was in the neighbourhood of Babylon, and answered to the old Babylonian *Gan duniya*: he refers to the map embodying the latest surveys made by Indian officers as supporting his contention.* Among those taking part in the discussion upon this paper are Sir J. W. DAWSON, C.M.G., F.R.S., Major C. R. CONDER, R.E., D.C.L., LL.D., Professor SAYCE, D.D., Mr. T. PINCHES, of the Department of Assyrian Antiquities at the British Museum, (the late) M. BERTIN, and others.

“On Islâm,” by the Rev. W. ST. CLAIR TISDALL, M.A.: the author discusses “Its Origin, Strength, and Weakness,” with a view to correcting the increasing and dangerous misapprehension existing in some quarters as to the character of Muhammadanism; adding quotations from acknowledged original authorities, so that the paper may be used in conducting arguments with opponents of high culture: the discussion thereon was taken part in by Sir THEODORE FORD, Major C. R. CONDER, R.E., D.C.L., LL.D., the Rev. Dr. KELLE, the Rev. H. LANSDELL, D.D., M.R.A.S., and other Eastern travellers. “On the Reality of the Self,” by Mr. W. L. COURTNEY, M.A., LL.D. “On Philosophy and Medical Knowledge in Ancient India,” by Surgeon-General C. A. GORDON, M.D., C.B., Q.H.P., &c.: in the discussion of this paper Sir JOSEPH FAYRER, K.C.S.I., M.D., F.R.S., took occasion to give the results of his investigations as to the history of the Science of Medicine in the East in ancient

* Mr. Rassam, a Chaldean and native of Assyria, has travelled much in Mesopotamia, Armenia, and Kurdistan, and has long been connected with Assyrian and Babylonian researches; his paper also contains important remarks on the “mistaken and doubtful conjectures” on the above and other important Biblical sites, which have of late crept into certain educational works.

times. "On the Apparent Cruelty of Nature," by the Rev. THEODORE WOOD, M.A., in the discussion on which many joined. "On Deontology," by the Rev. H. J. CLARKE. A few brief remarks, on the "Post Glacial Period," by Professor WARREN UPHAM, appear in this volume.

To all who have added to the value of the work done, the best thanks of the Members and Associates are due.

FRANCIS W. H. PETRIE, *Capt.*,
Hon. Sec. and Editor.

1892.

JOURNAL OF THE TRANSACTIONS

OF THE

VICTORIA INSTITUTE,

OR

PHILOSOPHICAL SOCIETY OF GREAT BRITAIN.



ORDINARY MEETING.

THE PRESIDENT, SIR GEORGE G. STOKES, BART., M.P., V.P.R.S.,
IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Paper was then read (March 19th) by the Author:—

REMARKS ON THE MONISM, PANTHEISM, AND DUALISM OF BRAHMANICAL AND ZOROASTRIAN PHILOSOPHERS. By Sir M. MONIER WILLIAMS, K.C.I.E., D.C.L., Boden Professor of Sanskrit, Oxford.

IN the present paper I propose to draw the attention of this Society to the principal monistic, pantheistic, and dualistic theories of Indian philosophers—whether Brāhmans or Indo-Zoroastrians—with the object of pointing out that these theories, although apparently contradictory, are in reality closely connected with each other, as well as with the polytheistic doctrines and practices of modern Hindūism.

Perhaps other members of this Society may be induced by my remarks to draw attention to some of the parallel lines of thought in European systems of philosophy.

I ought at the outset to explain that my observations will be founded quite as much on the conversations which I had with living learned men during my travels in India, as on the ancient philosophical writings of Hindūs and Zoroastrians.

Clearly the first difficulty is to settle exactly what is meant by the terms Monism, Pantheism, and Dualism.

Without pretending to any special knowledge of the philo-

sophical terms current in Europe, I believe I am right in stating that Monism is a term which may be fairly used to express the doctrine that only one Being really exists—or, in other words, that everything is resolvable into one eternal Essence, and into one only.

Pantheism, again, so far as I understand this vague expression, generally means that, whatever the one infinite Essence or Substance, whom we call God, may be, the Universe is identical with that one God, or again that God is identical with the Universe (not merely immanent or present in it).

Dualism, on the other hand, is a term which is generally employed to express the existence of two co-eternal principles, neither of which is the product of the other.

But there may be different kinds of Monism, Pantheism, and Dualism.

For example, there may be a kind of Monism which consists in believing that matter is the one only really existing thing, and that Spirit is merely a form or modification of Matter.

Again, there may be another kind of Monism which, like the Monism of the Indian Vedānta, teaches that Spirit is the one really existing (Sanskrit *pāramārthika*) thing, and that material (*jaḍa*) forms are merely modifications or illusory (*prātibhāsika*) manifestations of this one all-pervading Spirit.

Or, again, there may be another kind of Monism which substitutes the term "Mind" for "Spirit," maintaining that Mind (including, of course, volition) is the only eternally existing Essence, and that Mind creates or evolves out of itself all material organisms, and the whole external world.

It should be noted, however, that this idea of Mind is opposed to the doctrine of Indian philosophers, who make Mind (*manas*) an internal organ (*antaḥ-karāṇa*) developed by and belonging to the perishable body, and occupying an intermediate position between the organs of perception (such as the eye, ear, &c.) and the organs of action (such as the hand, foot, &c.), its sole function being to serve as an instrument or inlet of thought to the Spirit.

Again, some writers substitute the term "Soul" for "Spirit," or employ these two expressions as if they were identical.

Perhaps the chief objection to the indiscriminate use of the terms "Spirit" and "Soul," at least in Indian philosophy, appears to be that our word "Soul" conveys the idea of liability to affections, passions, and feelings, whereas pure Spirit, according to the Vedānta, is not liable to emotions of any kind, and does not even possess *self-consciousness*, or a sense of individuality. It is *Nir-guṇa*, quality-less.

For this reason the term "Self" (implying personality), sometimes preferred to both "Spirit" and "Soul" by translators of the word *Ātman*, seems open to exception.

Finally, I may note here a form of Monism said to be in favour with some European Scientists, who maintain that what is termed "Vital Force" (Sanskrit *Prāṇa*?) is the only existing Essence, and that this all-pervading Energy evolves infinite forms of matter which are periodically dissolved, and by their dissolution furnish a constant succession of raw material for the reproduction and perpetuation of life.

Clearly every one of these monistic theories may be regarded as also pantheistic, so that there will be as many different kinds of Pantheism as of Monism.

As to the term Dualism, it is evident that there may be one kind of Dualism which simply asserts that Spirit and Matter exist as separate co-eternal substances.

Another kind of Dualism—and this I may remark is the true *Dvaita* of Sanskrit philosophers—simply asserts the duality of Spirit, meaning by the term Duality that God's Spirit and man's Spirit have had a real separate existence from all eternity, and will continue to have such an existence.

Note, however, that this Duality theory might more suitably be called Plurality, inasmuch as it holds that human spirits are not only distinct from the Supreme Spirit, but from each other, and are infinitely numerous.

Again, the term Dualism may be used to express the eternal separate existence of two opposing principles—the respective originators of good and evil, knowledge and ignorance—as exemplified in the teaching of Zoroaster, and in the later philosophy of the Manicheans. The idea may have arisen from the supposed impossibility of believing that the Creator of good is also the Creator of evil; or else from a simple belief in the existence of some eternal law of antagonism as a necessary factor in the equilibrium of the Universe.

Turning now more particularly to the monistic, pantheistic, and dualistic theories current in India, I may remark that there are two well-known Sanskrit philosophical terms, *Dvaita* and *Advaita*; of which the two equivalent cognate English expressions are, Duality and Non-duality.

But in an introduction to the *Advaita* philosophy, just published by Pandit *Dvivedī*, Professor of Sanskrit at *Bhaunagar*, the word Monism, as well as Non-duality (equivalent, he says, to "inseparability"), is used for *Advaita*.

And I may state that almost every learned *Brāhman* in India is a believer in the spiritual Monism of the *Vedānta*

philosophy, while materialistic Monism is thought to be the doctrine of heretics.

The Vedāntist, in fact, professes to be more orthodox than any other teacher, because his belief is founded on the inner doctrine of the Veda, which, according to him, is absolutely monistic, and inculcates spiritual Pantheism.

Here is a portion of a well-known R̥g-veda hymn (x, 129), which I translate in metrical form :—

In the beginning there was neither nought nor aught,
Then there was neither sky nor atmosphere above.
What then enshrouded all this teeming universe ?
In the receptacle of what was it contained ?
Was it enveloped in the gulf profound of water ?
Then was there neither death nor immortality,
Then was there neither day, nor night, nor light, nor darkness,
Only the existent One (*Ekam*) breathed (*anū**) calmly, self-contained.†
Nought else than that there was—nought else above, beyond.

True Brāhmanism, the Vedāntist asserts, lays down as its fundamental dogma that there is only one really existing Essence, and that that Essence is pure Spirit.

This dogma is expressed by three Sanskrit words : *Ekam eva advītyam*, “there is only one Being, without a second.”

In this favourite phrase the one Being is designated by a neuter termination, yet a Brāhmaṇ will often apply to that Being the ancient name *Ātmā* (nom. case of *Ātman*), “the breathing Spirit,” or “Breath,”‡ which is a Sanskrit masculine noun.

In his daily worship, too, he will often repeat a well-known hymn of the R̥g-veda,§ which adopts another masculine title of the one Spirit, namely, *Puruṣa* (“the one representative male,” *pumān*, according to the commentator Sāyaṇa), a name which has no trustworthy etymology.

Then he often designates that Being by a very remarkable name, *Sac-cid-ānanda*, which is a compound word, or three words combined in one, ending in a masculine termination,

* Compare note on *Ātman* below.

† The Sanskrit is *Svadhayā* “in his own energy,” but Sāyaṇa, who is a Vedantist, interprets it to mean along with “illusion” (*Māyā* or *Prakṛiti*).

‡ I am aware that different etymologies of this word are given, but I prefer deriving it from the Sanskrit root *an*, to breathe ; cf. German *athem*.

§ That is, in the Pancāyatana ceremony. In this hymn (x, 90) it is stated that gods and holy men offered up *Puruṣa* as a victim in sacrifice, after cutting him up ; see my *Brāhmanism and Hindūism* (John Murray), p. 414. The final act of adoration in this ceremony is as follows :—Veneration to the infinite and eternal male (*Puruṣa*), who has thousands of names, thousands of forms, thousands of feet, thousands of eyes, thousands of heads &c. (see p. 415).

and denoting one Essence, composed of three inherent faculties, "Existence, Thought, Joy," which are inseparable.

Sometimes he prefers the simple name Cid (C = our Ch) or Cit, that is, pure "Thought," or Consciousness (but not *Self-consciousness*), which is a feminine noun; or the equivalent expression Caitanya, which is neuter.

In real truth, however, he most commonly designates the one Being by a name which is incompatible with all idea of sex.

He calls the one Being Brāhmā, a neuter word implying "growth," "expansion," "evolution," "universal pervasion."

It is only when that Being becomes the Evolver of the Universe that he is called by a masculine name, Brāhmā.*

This one eternal neuter Essence (in the Illusion by which it is overspread) is to the external world and to the human spirit what yarn is to cloth, what milk is to curds, what clay is to a jar.

From this is everything born, in this it breathes, in this it is dissolved (according to the Sanskrit formula *tajjalān*).

The Vedāntist's own personal identification with this one universal Spirit is expressed by the two monosyllables *Tat tvam*, "That art thou," two words which, when combined in one, stand for all philosophical truth (*tattvam*).

The number One, indeed, appears to have assumed the character of a kind of God in the minds of some Indian thinkers. *Aham Brāhmāsmi*, "I am God," says the Hindū pantheist.

Hence we read in the Bṛihad-āraṇyaka Upanishad (iv, 5) :—

"When there is anything like duality there one sees another, one smells another, one tastes another, one speaks to another, one hears another, one minds another, one regards another, one knows another."

Then this ancient philosophical work, which represents the views of Indian metaphysicians at least 500 years B.C., goes on to assert that the One Infinite Essence "neither sees, nor smells, nor tastes, nor speaks, nor hears, nor minds, nor regards, nor knows."†

The apparent sternness of ancient Indian Monism seems to be paralleled by almost identical phases of modern German philosophical thought. According to Dean Mansel :—

"With German philosophers the root of all mischief is the number two—Self and Not-self, Ego and Non-ego.

* The masculine deity Brāhmā is not eternal, but lapses back into the neuter Brāhmiṇī. The crude base Brāhmān (in grammar) stands for both.

† Compare *Amos* v, 21.

“The (German) pantheist tells me that I have not a real distinct existence and unity of my own, but that I am merely a phenomenal manifestation or an aggregate of many manifestations of the one infinite Being.”

Then again, we know that a favourite dogma with all pantheists is, *Ex nihilo nihil fit*, nothing is produced out of nothing; Sanskrit, *nāvastuno vastusiddhiḥ* or *a-sataḥ saḥ jāyeta kutas*, “how can something be produced out of nothing?” so that if there is a Supreme Creator, he cannot create the external world out of nothing.

Hence he evolves all visible nature out of Himself, and all nature is Himself.

And is it not the case that some of our own modern scientists are continually telling us that all Nature is one, and that mind and matter are inseparable? or that all the elements are mere modifications of one element? or again, that all the forces which act on the elements are mere modifications of one force; or that “everything is everything else”?*

The point to be noticed is that in India the Unity-theory was current many centuries before it was even heard of in Europe, and that there this idea is found to be compatible not only with dualistic, but with the grossest polytheistic doctrines and practices,

I found in fact that, although, in my conversations with learned Brāhmins, they laid the greatest stress on their dogma, *Ekam eva advītyam*, “there is only one Being, without a second,” they always, when questioned, admitted the truth of another Vedāntic dogma, *Māyā-cid-yogō'nādīḥ*, “the union of the one Essence with Illusion is from all eternity.” In other words, the one infinite Essence is associated from all eternity with *Māyā*, “Illusion” (also called *Avidyā*, *Ajnāna*, Ignorance), which is also eternal (so far, at least, as it is confessedly “without beginning,”) though merely an illusory essence.

In point of fact the modern Vedāntist holds that it is from this *Illusory Essence*, associated from eternity with the one *Real Essence*, that the whole external universe is evolved.

From this *Illusory Essence*, too, are evolved the separate individual spirits of men, whose sense of individuality ceases at the moment when they deliver themselves from all Illusion (or Ignorance) and attain a knowledge of the Truth, that is, of their own identity with the one spiritual Essence.

* The President of the Royal Society in a recent speech quoted this saying of the eminent chemist Galen.

“Get rid of ignorance,” says the Vedāntist; “all the evils and sufferings of life arise from your not knowing that you are God (Brāhmā).”

Confessedly, at any rate, the Advaita or Non-duality of the Vedāntist amounts *practically* (that is, in the *vyāvahārika* or practical world) to a kind of Dvaita or Duality.

It is commonly said that Śankara, the great Vedāntist Teacher of the 8th century of our era, was a stern upholder of the Non-duality creed against the Dvaita, or Duality creed.

On the other hand it is commonly alleged that the chief teacher of the Duality (Dvaita) doctrine was the great Vaiṣṇava teacher Madhva, who is believed to have lived in the 13th century.

Strictly speaking, however, the only difference between the teaching of these two eminent philosophers was that Śankara taught that the separate spirits of men were the product of an eternal Illusion united from all eternity with the one Spiritual Essence, while Madhva taught that the spirits of men had a *real* eternal existence of their own.

It is a question, indeed, whether one form of Dualism, which ultimately became formulated in the Sāṅkhya system of philosophy, was not a more ancient belief in India than Advaita or Non-duality.

The idea of a second principle, as necessary to the act of creation, is vaguely implied in a text of the well-known hymn of the Rig-veda (x, 129), thus translatable:—

“Then in the beginning in that one Being arose Desire, which was the primal germ of Mind, and the subtle bond of connection between Entity and Nullity.”

Again, in an ancient Brāhmaṇa (Śatapathabrāhmaṇa xiv, 4, 24), as well as in an ancient Upanishad (Bṛihad-āraṇyaka i, 3), it is affirmed that the “One Being was not happy being alone.

“He wished for a Second.

“He caused his own self to fall in twain, and thus became husband and wife.”

A still older idea was the supposed marriage of a Heavenly Father (Dyo or Dyans) with Mother Earth (Pṛithivi) for the creation of gods, men, and all creatures.

When the Sāṅkhya philosophy was formulated its distinctive characteristic was the assertion of the eternal existence of two principles:

1. A Producer or creative germ, named Prakṛiti (but also called Māyā or “Illusion”), and
2. A Spirit (Purusha).

This Spirit, however, is not one, as in the Vedānta; but is multitudinous, each human spirit existing of itself as an independent eternal entity.

Neither the Producer nor a Spirit, however, can create by itself.

The external world (including the human frame, consciousness, feeling, individuality, and mind) is evolved out of the eternal creative germ, Prakriti, and yet only so evolved when an individual eternal spirit is associated with it.

It is abundantly clear, therefore, that the only distinction between the so-called Unity-theory of the Vedānta and the Duality of the Sāṅkhya system seems to be that the germ of the material world has an *illusory* existence from all eternity in the one system, and a *real* eternal existence in the other.

And if this be so, I think I am justified in asserting that a kind of dualistic woof everywhere underlies the monistic and pantheistic warp of Indian philosophy.

I may add that such an assertion is borne out by ocular observation, for it is certain that the idolatrous worship of the Linga and Yoni*—united in one image and symbolizing the mysterious union of the two creative principles—meets the eye of observant travellers in every part of India.

And this is not all—the student of Indian philosophical thought, who has been brought into actual contact with the religious life and usages of the inhabitants of India in their own country, will observe in every village, and almost in every nook and corner of the land, illustrations of the remarkable fact that the Monism and Pantheism of the Vedānta are compatible with all varieties of religious belief—now with Theism—now with Deism—now with Dualism—now with Triadism—that is, with the worship of the Indian Triad (wrongly called the Indian Trinity), Brahmā, Viṣṇu, and Śiva, the three gods who, with their wives, preside over creation, preservation, and dissolution respectively—and now with all the polytheism, polydemonism, animism, and fetishism associated with these three chief deities of the Hindū Pantheon.

Time will not admit of my going into this important subject at any greater length; it will be sufficient for me to state that a Hindū finds no difficulty in attributing either

* Only students of Indian religions are likely to know that these symbols represent the phallic emblem (linga) and the emblem of the opposite sex (yoni) united. Similarly, Śiva has an Ardhā-nārī form.

duality or triplicity or plurality in unity to the one Being who delights in manifesting his Essence in various forms.

It is, of course, understood that this same Being may ignore himself for a time, so that any one of his forms may do homage to another, as to a superior Being, or deal practically with another as with a distinct Being.

This alone will account for the multiplicity of divine manifestations (popularly thought to be 330 millions), worshipped or honoured as gods, although the number represented by images is not large; all the gods being finite and subject to re-absorption into the one essence. Indeed few idols are to be seen, except forms of Vishnu and Śiva and of their wives. Brāhmā's image is only worshipped in two temples in all India, while the one eternal Brāhmā has neither temple nor image.

And here, too, lies the secret of the great difficulty of Christianizing India according to the true meaning of Christianity.

For, according to the Brāhmanical theory, Christianity is to be accepted as an example of the one Being's many manifestations suited to Europeans.

Its excellence is even sometimes admitted; at any rate, I found that whenever I succeeded in pointing out to thoughtful men the fundamental differences between the religion of Christians and that of Hindūs, the reply generally was that both might be true, according to the doctrine taught by one of the oldest texts of the R̥g-veda (1-164, 46), *Ekam sad Viprā bahudhā vadanti*, "Sages declare that the one Essence manifests himself in manifold ways;" just as (according to a later illustration) the metal gold, though really preserving the unity of its nature everywhere, assumes different forms, names, and uses in different places.

I must not conclude my remarks without adverting more particularly to the theory of the existence of good and evil spirits—the respective sources of good and evil.

It is well known that the eternal existence of a good and evil principle is a kind of Dualism, which is generally regarded as a distinguishing feature of the Zoroastrian philosophy.

The idea, however, is by no means exclusively Zoroastrian. The continual conflict between good and evil spirits is a dominant idea in many other religious systems.

In Śankara's commentary on the Chāndogya Upanishad (p. 26, ll. 2-8) there is a remarkable passage, describing the constant struggle between good and evil, knowledge and ignorance.

All Sanskrit literature, too, teems with descriptions of the battle continually going on between gods and evil demons;

and images of the chief gods of the Hindū Pantheon frequently represent them in the act of crushing their demon-antagonists.

Krishna (a form of Vishṇu) is often seen bruising the head of the malignant serpent Kāliya, and Śiva tramples, during a kind of wild dance, on the prostrate body of the arch-fiend Tripura.

As regards Zoroaster's Dualism, I now submit briefly to this Society the explanation of it given to me by some learned Indian Pārsīs of Bombay (especially by Mr. K. R. Cama).

Let me first remark that we read in the Gāthās, that Zoroaster began his mission by declaring that: "In the beginning there were two spirits—each active. These are the good and the base in thought, word, and deed." "I will declare the two primeval spirits of the world, of whom the better One thus spoke to the evil One—'Neither our minds, nor our doctrines, nor our understandings, nor our belief, nor our words, nor our actions, nor our laws, nor our souls agree.'"

The explanation given to me was that Zoroaster, although a believer in one Supreme Being, and a teacher of Monotheism, set himself to account for the existence of evil, which could not have its source in an all-wise Creator,

He, therefore, taught that two opposite—but not opposing—principles or forces, which he calls "Twins," were inherent in the nature of the Supreme Being, called by him Ahura Mazda (or in Persian Ormazd), and emanated from that Being, just as in Hindūism, Vishṇu and Śiva emanate from the Supreme Being Brāhmā.

These two forces were set in motion by Ahura Mazda, as his appointed mode of maintaining the continuity of the Universe.

The one was constructive, the other destructive.

One created and composed.

The other disintegrated and decomposed, but only to co-operate with the creative principle by providing fresh raw material for the work of re-composition.

Hence there could be no new life without death, no existence without non-existence.

Hence, also, according to Zoroaster, there was originally no really antagonistic force of evil opposed to good.

The creative energy was called Ahura Mazda's beneficent spirit (Spento-Mainyus), and the destructive force was called his maleficent spirit (Angro-Mainyus, afterwards corrupted into Ahriman), but only because the idea of evil is connected with dissolution.

The two spirits were merely antagonistic in name.

They were in reality co-operative and mutually helpful.

They were essential to the alternating processes of construction and dissolution, through which cosmical being was perpetuated.

The only real antagonism was that alternately brought about by the free agent, man, who could hasten the work of destruction or retard the work of construction by his own acts.

It is therefore held that the so-called dualistic doctrines of Zoroaster were compatible with the absolute unity of the one God (symbolized especially by Fire).

Ultimately, however, Zoroastrianism crystallized into a hard and uncompromising dualism.

That is to say, in process of time, Spento-Mainyus became merely another name for Ahura Mazda, as the eternal principle of good, while Angro-Mainyus or Ahriman became altogether dissociated from Ahura Mazda, and converted into an eternal principle of evil.

These two principles are believed to be the sources of two opposite creations which were incessantly at war.

On the one side is a celestial hierarchy, at the head of which is Ormazd; on the other side, a demoniacal, at the head of which is Ahriman.

They are as opposed to each other as light to darkness—as falsehood to truth.

The whole energy of a religious Indian Pārsī is concentrated on the endeavour to make himself—so to speak—demon-proof, and this can only be accomplished by absolute purity (in thought, word, and deed), symbolized by whiteness.

He is ever on his guard against bodily defilement, and never goes out to his daily occupations without first putting on a sacred white shirt and a sacred white girdle. Even the most highly educated, enlightened, and Anglicized Pārsīs are rigorous observers of this custom, though it seems probable that their real creed has little in common with the old and superstitious belief in demons and evil spirits, but rather consists in a kind of cold monotheistic pantheism.

How far Zoroastrian dualism had affected the religious opinions of the Babylonians at the time of the Jewish captivity is doubtful, but that the Hebrew prophets of those days had to reckon with dualistic ideas seems probable from Isaiah xlv, 6: "I am the Lord, and there is none else. I form the light and create darkness, I make peace and create evil. I, the Lord, do all these things." The New Testament, on the other hand, might be thought by a superficial reader

to lend some support to dualistic doctrines, inasmuch as it asserts the personality of Satan, and takes for granted the existence of evil spirits hostile to the spirits of men.

I need scarcely, however, point out that the Bible account of the origin, nature, and destiny of Satan and his angels differs, *toto cælo*, from the Zoroastrian description of Ahriman and his host.

Nor need I add that the various monistic, pantheistic, and dualistic theories, briefly indicated by me in this paper, are utterly at variance with the Christian doctrine of a Personal, Eternal, and Infinite Being existing and working outside man and outside the material universe which He has Himself created, and controlling both, and in the case of human beings working not only outside man but in and through him.

Our Church of England Prayer Book tells us in one place that God "made all things of nothing,"* and this, no doubt, is the meaning we give to the word "create" in the first chapter of Genesis. But we are nowhere told, either in the Bible or Prayer Book, that, having created material germs on the one hand and the spirits of men on the other, He willed to endow these two distinct creations with an eternal independent separate existence and an independent capacity for self-evolution.

We know, indeed, that God is Spirit (*Πνεῦμα ὁ Θεός*),† and that, having created man's spirit *with a separate personality of its own*, He has endowed it with moral free agency; that is, with the power to choose or reject the good or the evil.

We know, too, that this freedom of choice is held by acute thinkers to furnish a fairly satisfactory explanation of the origin of evil without having recourse to the Indian method of solving the difficulty through the doctrine of metempsychosis.‡ But the exact relationship of man's spirit to material organization is not revealed to us. Nor can we tell whether the dissolution of man's body at death releases his spirit from all connection with even the subtlest forms of matter, so that an intermediate conscious existence of entire separation from matter is possible to it.

* See the third prayer at the end of the Marriage Service; and compare Psalm xc, 2.

† So also, *ὁ Θεὸς φῶς ἐστίν*, "God is Light," 1 John i, 5.

‡ I am reminded by the Rev. C. G. Chittenden, of Hoddesdon (who has sent me some able remarks on my paper), that Butler (*Anal.* i, 5; iv, 2) considers that the gift of moral free agency only furnishes a partial explanation of the origin of evil, and that the same writer thinks it possible

What we may surely believe is that God is always creating, and that out of His eternal Workshop (if I may so speak reverently) are for ever issuing new spirits and new material forms.

Surely, too, we must believe that God is for ever superintending and supporting His creations; and that not a single spirit and not a single material atom can exist for a single instant without His upholding and vivifying power.

We Christians, at any rate, who feel that we depend on our Creator for life and breath and all things, may surely so interpret the words of Christ, "My Father worketh hitherto and I work."

It has occurred to me that, with the permission of the President, I might add a few remarks to my paper; and in the first place I should like to remind you that the Brāhmanical expression for the One Infinite Being—*God is Existence, Thought, Joy*—has been compared with the Christian statement of God's tri-une Nature.

God is Life. God is Light. God is Love.

In regard to this point, however, I may observe that the Sanskrit translators of the Bible have translated the words *I am the Life* by a phrase meaning *I am the Life-causer*, because we believe that God is not simply Pure Life but the Giver of Life to His creatures.

The difference, too, between *God is Joy* and *God is Love* is to be noted (though we may also note that the Apostle St. Paul's three primary fruits of the Spirit are Love, Joy, Peace).

I may also be permitted to point out as noteworthy that the idea of a peculiar sacredness attaching to the number "three" runs through all Indian systems of thought.

And, in explanation of the prevalence of this idea, I may remind you of a well-known fact—that there are not a few cases in which *three* seems to exhaust all that can be conceived of any subject.

For example, Past, Present, and Future exhaust the whole conception of time; Length, Breadth, and Height, of space; Solid, Liquid, and Gaseous, of matter; and not less than three lines (or a triangle) enclose a space.

Let me also add that one object of my remarks this evening has been to draw attention to the fact that Brāhmanism

that the living agent may exist and even be active apart from matter (*Anal.* i., 1). (See page 28.)

is a most subtle system of pantheistic philosophy, which, while it is tolerant of Christianity and claims to have much common ground with Christianity, admits of the development of every form of corrupt religious doctrine and idolatrous superstition.

It is on this account a very formidable antagonist—more formidable than either Zoroastrianism or Muhammadanism—an opponent indeed of such hydra-like vitality that no Christian missionary can hope to cope with it effectively, unless he be armed with the truest and most divinely tempered weapons in the whole Christian Armoury.

And let me further say that the grossest polytheistic superstitions of modern India, absurd and deplorable as they may appear to us, are not to be scornfully brushed aside, as if they were mere heaps of rubbish obstructing the onward march of the victorious army of Evangelists, and quite unworthy of serious examination.

On the contrary, these, to us tangled and unintelligible, masses of time-honoured traditional doctrines and practices, which I have elsewhere treated of under the general name of Hindūism, are really like rugged jungle-clad mountain ranges, rising one behind the other in the path of the progress of Christianity. Or rather perhaps may they be compared to a series of outposts grouped in circle after circle around the ever-receding fortress of Pantheistic Brāhmanism. Hence it is that the proud and self-confident Hindū, when apparently driven in defeat from the defence of any one point, retires, without the slightest sense of humiliation, to other coigns of resistance, and has always the last resource of retreating behind what he conceives to be the impregnable Brāhmanical dogma that:—

There is only one God—only one Infinite Essence—which, although inseparably one, is to be identified with every really existing thing, and may manifest itself in manifold ways and in different forms in different places.

The PRESIDENT (Sir G. G. Stokes, Bart., V.P.R.S.).—I am sure I need not ask you to return your thanks to Sir Monier Williams, for the very learned and deep discourse with which he has favoured us. (Applause.) I now invite those present who have attended to these religious views of other nations, to make some remarks.

C. COLLINGWOOD, Esq., M.D.—I venture to call attention to the interesting fact that in these very ancient books we find a nearer

approach to what we may suppose to be the truth, than we find in later times, and I attribute this to the fact that all ancient religions began with a high standard of intelligence and excellence, and gradually became more and more materialized, so that in later times that excellence is, in a great measure, lost; and those truths which they seemed once to possess have become more or less corrupted. There is a statement on the second page of the paper, that "there may be a kind of Monism, which, like the Monism of the Indian Vedānta, teaches us that Spirit is the one really existing thing, and that material forms are merely modifications, or illusory manifestations of this one all-pervading Spirit." Of course there are various ways of taking such a statement as this; but in one aspect it may be regarded as strictly true: I think, that the original knowledge of truth of these ancient religious writers may be shown to have been derived from the foundation of all truth; though, on the other hand, some might argue that the view in question possesses a Pantheistic tendency, which I really do not think it does. The question in our minds is, I think, whether there is more than one world. All Monists admit that there is something more than the merely natural—something which they call, not supernatural, but *hypernatural*; but they all admit that there is more than one world. There was a statement by Professor Huxley some time ago, in the *Nineteenth Century*, to the effect that it is admitted that there are two worlds, the natural and the spiritual, but what the connection between those two worlds is no one can say. Now, I think it possible to point out what connection *does* exist between the two worlds, and this statement, which has much to do with the facts of Creation, can be shown to have a great deal of truth in it. Let us suppose, then, that there are two worlds, a natural and a spiritual: we all know that we have an external nature, which is in immediate connection with the world around us. All our senses are in communication with that external nature. We have also an internal nature—that part of it which thinks. No one imagines, surely, that that part of us which thinks, or that part which many of us believe to be of a spiritual nature, is *identical* with that external nature, which has merely to do with our bodily functions. How are we to know what that external nature is? For instance, I look at a man, and I see a body which is purely material—an organized body, and I know, for many reasons, that he also possesses a mind; but how am I to know whether a person possesses a mind or not? By merely looking at

him I cannot determine that fact. I might live for a month with such a person, and never know what passes in his mind, if he has one. How am I to know? The only possible way for him to give some evidence of it is by speaking or writing, *i.e.*, he must appeal to our external sense of hearing, or our external sense of seeing; but how can the man so appeal? In this manner. Let us take, for example, the eye. If you wish me to know what is passing in your mind, you *write* something that I can *read*, *i.e.*, you *reduce* the ideas in your mind to certain symbols of a purely conventional character, which have *no resemblance* to the ideas which they convey, but which symbols you place on paper before me. As soon as the eye of the mind recognizes those symbols, it is able to deduce from them the mental conceptions you have placed therein, and thus a *communication* is effected between mind and mind; and so also in speaking, the same thing is done in appealing to the ear. Certain sounds are produced bearing no identity whatever with the mental conception which they convey to the mind; but those sounds are capable of being reconstructed and returned again by the same process, so that we are then said to be able to *correspond* with each other, because the two symbols of writing and speaking and the mental processes which they convey are in exact *correspondence* with one another. Hence, when we write to a distant friend we place our ideas on paper and communicate with him, because when he gets our paper he can see and read what we say, and he is thus able to reproduce the ideas that we wish to convey, and we so correspond with him. Let us now adapt this principle to the idea of the creation. It was said, and very properly, not only by the ancient Greeks, but by the more ancient Hindüs, *Ex nihilo nihil fit*. I believe that is a perfectly sound principle, that "out of nothing nothing can be made." Now we are asked to believe, and the Bible tells us, and we believe it as Christians (without desiring to introduce theological matters into the discussion), that God is Spirit. If God is Spirit, and we are dwellers in the world, there can be no question which of those two is anterior. Evidently the Creator must be anterior to the created, and Spirit must be anterior to Matter. Therefore God, who is Spirit, created that material world which we see around us, of Matter. But how? Thus then, God being a Spirit, being anterior to Matter, it may explain by analogy what was the process by which it is possible to believe such a creation was effected. We possess, it is true, a Spirit, but it is hidden away in a material body. In

the body we cannot see the Spirit, but we can, under certain conditions, feel that a Spirit exists in it, and we feel that we can communicate with that Spirit; but it is so shut up in a material body that we have a closer connection with the world around us than with the Spirit within. Therefore it is very difficult to convey spiritual ideas to a mind so shut up in a material body. But if this Creator of the Universe did exactly what He has allowed us to do, as I have just shown, in order to communicate with our fellows by reducing our ideas to certain material substances and ultimate forms, and educing from those signs the ideas which they enable us to communicate with each other, so God could be imagined to project or reduce his spiritual qualities or attributes, which are infinite, into the material substances and ultimate forms which we see around, and which constitute the countless objects of the created world of matter. His two great primary attributes of Love and Wisdom, the outcome of which are Goodness and Truth, are, indeed, the source or spring of an infinite number of sub-qualities or attributes, every one of which, therefore, could be thus projected, as it were, and fixed in the material substances and ultimate forms of Creation. Each created thing would thus be the absolute counterpart, as it were, of something in the Divine to which it bore a strict and definite correspondence, and the universe would be a storehouse of signs and symbols of the infinite qualities of the Divine Mind; so that anyone who held the clue to the relation between the two could read in nature the absolute ideas of God Himself. Such a clue I believe it is intended we should find, and space alone prevents me from indicating it at this time. I think you have an explanation of how He may have created the universe, and how, by projecting His own attributes from the spiritual centre into circumferential (or ultimate) material forms and images—not out of nothing, but from the potencies of that spiritual cause, the natural materials (*i.e.*, created things) being not the realities they seem, but rather mere shadows of that real causative spirit, from which they were derived. Thus, indeed, by such knowledge we are enabled truly to *communicate* with Him. Let me give you an illustration of what I mean. We say that God is *Love* and *Wisdom*. That Love and Wisdom have nothing to do with our natural life as far as we live in this world. We cannot live on Love and Wisdom; we require natural food and drink. Love and Wisdom are only adapted to that spiritual part of us which we do not see. But other things are necessary in our external life, food

and drink, and heat and light. When we speak of Love, do not we always refer to its terms of warmth, such as an ardent attachment and warm regard? But if you speak of Wisdom or Truth, you always clothe the conception with terms relating to light, such as bright ideas, a brilliant imagination, luminous views, &c. Therefore, I say, inasmuch as we have two natures, one belonging to this earth, and one that does not, He has set over this external nature of ours something which exactly corresponds with Himself, viz., the sun. Hence we possess warmth and light from this material source which corresponds with His Love and Wisdom, and which ministers to all *external* creation in the same way as His spiritual attributes nourish our *internal* nature. (Applause.) I might say more, but the subject is inexhaustible.

MR. DESAI here spoke. (See note to the Author's reply.)

MR. W. H. ROBINSON.— I have paid attention for some years to the study of the Veda, and there is one point which, if I might, I would like to shape into the form of a question to the Author of the paper, at whose feet, metaphorically speaking, I have sat for many years. It occurs to me that while it is true that Christ identifies Himself with His Father, it is not true that all religious teachers do so; nor yet that many did, certainly neither Moses nor Zoroaster nor Mahomet identified themselves with God. The great stumbling-block of Brāhmanism at the present time is that its votaries identify themselves with God. The author of this paper says, at the ninth page, "all Sanskrit literature, too, teems with descriptions of the battle continually going on between gods and evil demons," and in another paragraph the authority he quotes for that is Śankara's *Commentary on the Chāndogya Upanishad*. Well, it strikes me that Śankara is no authority at all, any more than a man writing in the present day is an absolute authority on the doctrines of the New Testament—we take him for what he is worth. Śankara wrote 1500 to 1800 years after the time of the Upanishad he refers to, and at a period when the most corrupted notions of good and evil had taken possession of the Hindu mind; but I submit what I desire to say more as a question to the Author of the paper than as disputing with him. So far as my reading has gone, I have not met with any account of contests or battles between *good* and *evil* in the early literature of India. I am submitting this point to the Author; but according to my reading the contests are, for example, battles between Indra and Vritra, which are cosmic. They may be capable of such an application, but they

are not, to my mind, contests between *good* and *evil*. Now, in the literature of the Pārsis, you have it that this Indra himself became a demon, and that the followers of *Zerdušt* or *Zoroaster*, as we call him, styled Indra a demon; but I do not think, so far as I can tell, that the Vedic Indians retaliated and called any of his worshippers demons. I think, so far as I can see, the earliest Vedic conceptions were monotheistic. I have spent some years in the study of what I conceive to be a statement of the successive stages of the development of the Vedic religion, as described, not by modern students of the "Science of Religion," but by the very Vedic *Rishis* or "Seers" themselves. The Author well knows the passage of the Vedic story I am about to refer to, and the hymns of the Rig-Veda embodied therein. It occurs in the *Aitareya Brāhmaṇa*—which is the ritual portion of the Rig-Veda—and is there called "The Story of Śunaḥśepha." The greatest importance was attached to it by its authors, it having been ordered to be related at the Coronation of Kings, occupying in such ceremonies a position and a ritual importance exactly corresponding to the formal presentation of the Holy Scriptures at our own Coronation ceremonies at Westminster. I do not think any of our learned scholars have yet commented upon the story in this, its very important original aspect. (I have spent some time on it, and hope shortly to present the result of my work to the public.)

Certainly no one has as yet construed the sequence of Vedic hymns attributed to the authorship of Śunaḥśepha and linked together, as in a chain, by the incidents of that wonderful and beautiful story. To make myself intelligible, I must, as briefly as possible, relate the main incidents leading up to these hymns, which consist of a hundred Rig-Veda verses. A certain king, *Haviśchandra*, had been required by *Varuṇa* to sacrifice his son. After many delays his son flies to the forest to avoid being sacrificed, and there, under Divine guidance, finds a youthful Brahman, Śunaḥśepha, who accompanies him back to his father, and who submits to be a vicarious sacrificial victim. I will not stop here to even touch upon the many thoughts arising out of this incident, but hasten to those which immediately touch the subject of the paper read. When Śunaḥśepha is bound to the sacrificial post, and the moment arrives for his immolation, he—whom I say the authors of the story intended to typify doomed humanity—exclaims, "I will seek refuge with the Devas." We know that this word—literally "the shinings," or "the shining ones"—involves

in later Sanskrit the idea of plurality in Divinity. But what does Śunaḥśepha do? He commences with a short mysterious verse, "Whom shall I seek of all the Divinities? Who will restore us to Aditi (*i.e.*, The Boundless One, The Infinite) that I may again see my father and my mother?" *Rig-Veda*, I, 24, i. This verse is said by the Vedic writers to have been addressed to Prajāpati—*i.e.*, "The Lord of all Creatures"—and to Him he cries for restoration to Aditi, the One Lord of All, in whom he should be restored to father and mother. This remarkable verse, when construed with the expression preceding its utterance, reminds us of the word Elohim in Genesis, a name of the One Lord in plural form, and of masculine and feminine conjoint significance. Then I see right through the succeeding chain of hymns an agreement in the successive manifestations of the various "Devas" or deities. Śunaḥśepha having addressed Prajāpati, the Lord of Creation, Prajāpati sends him to Agni, whom he addresses in substantially the same terms as Prajāpati. Agni sends him to Savitar, a name afterwards applied to the Sun, Savitar sends him to Varuṇa—the Lord of Encircling Heaven—to whom he addresses two sublime hymns, unsurpassed save in Holy Scripture, for pure spirituality, and reverential, pathetic human supplication. Varuṇa promises deliverance, but sends him to Agni, in the hymns to whom the sacrificial idea is more developed, Agni being addressed as being both the offering and the priest who officiates. Agni sends him to the Viśvedevas—or host of Devas—to whom he addresses a verse expressing veneration to all the Devas, "old and new," with a prayer for pardon if he neglect any of them. The Visvedevas refer him to Indra, whose worship, as the special divinity of the Aryans as against their enemies, comes next. In the verses to Indra, and his manifestation to the poet's imagination, appear the first traces of anthropomorphic, and therefore plural, conceptions of Deity in this chain of hymns. In Indra also we reach the first idea of anything like a contest, but that contest (and this is the point I started with) is not between good and evil, but between Indra and Vritra, both as representations of cosmic forces. Time would fail me to follow the legend and the chain of hymns further, or to do more than glance at Śunaḥśepha's subsequent deliverance at the morning dawn (for a close comparison of Vedic ritual has convinced me that the Vedic authors intended to represent him as crying out, while bound to the sacrificial post, from the waning hour of noontide—the ordinary sacrificial hour of the Mosaic ritual and of Vedic India also—all

through the dark night), when he was delivered at the first glint of the Sun, which, according to the later poets of the *Uttara Kanda* of the *Rāmāyan*, included all the Divinities of India in his One all-absorbing and predominating glory. I hope I have not intruded too long. The great point for present purposes is that the legend in the Aitareya Brāhmana shows that they called upon one God, represented in all these various manifestations co-operating together. I have epitomised the thoughts that arise on reading the story in a few brief lines of my as yet unpublished work on the legend. I trust I may be forgiven if I quote them.

'Twas thus the seers discerned The Infinite,
 In various aspects, various shades of light.
 Sometimes they neared Him, sometimes went astray,
 Sometimes enlightened, sometimes dark their way,
 But light or dark, as ages rolled along,
 By varied names, and ever changeful song,
 They worshipped *One* who lived for aye the same,
 Whate'er their song, whate'er they called His name.

(Applause.)

If we could only impress this on our Hindu brethren, we should go a long way towards the evangelization of India, by showing them that dualism came in far later—as the last speaker has said—than monotheism, and that there is one God to whom we hope all to be united at last. (Applause.)

MR. U. S. MISRA.—In rising to speak upon this subject in the presence of such a select audience as I see before me, my heart sinks within itself, but when I think that I am a Brahman from the holy town of Benares, and son of a Brahman Pandit, a man well known in literary circles, I believe that, unless I gave expression to my feelings, a great burden would lie on my mind. Therefore I rise, but before making any observations on this great subject which is occupying your thoughts this evening, I must point out to you that of all living Englishmen, not only here but in Europe, Sir Monier Williams is the best of persons to deal with the religions of India, for he has not only revelled in the pages of Kālidās, but has actually made the great sacrifice of going out to India and making a practical study of the subjects treated of in his paper. When I talk of Sir Monier Williams I do not think of him as Sir Monier Williams, but as a Pandit of the holy town of Benares, who is fitted to take rank with other Pandits, and this

in itself is no mean distinction even for a knight. Now I see in the discussion that has followed the reading of the paper that a great deal of theoretic matter has been brought into the argument. Different systems of philosophy have different theories in regard to Mind and Matter, and it is difficult to decide which of them is correct. A recent writer in the *Nineteenth Century* takes a practical view of all religions and systems of philosophy, and in a conflict between religious science and philosophy the latter must fare the worse, as it begins in doubt and ends in doubt. Great stress has been laid on the Pantheism of the Hindus. It is nothing more than the cosmic theism of modern times. It simply illustrates the system of philosophy involved in Herbert Spencer's theory of the Unknown, and the Unknowable; or, in other words, that God is but the potent energy underlying the phenomena, and can only be known, as far as He is manifested, through phenomena. This being the case, the Hindu philosophy hit upon a theory, in times when Herbert Spencer was undreamt of, which is consistent with modern investigations, and is the keynote to all philosophical scientific discoveries. In talking of Hindu philosophy, all that we claim for it is that it laid the foundation for different modern philosophical systems. We find that Sāṅkhya philosophy is represented in the atheistic doctrines of David Hume, and the Vedānta in the ideal philosophy of Bishop Berkeley. However, my contention is that neither Christianity nor any other religion has anything to fear from other religions, but a great deal from science. I join most heartily in the vote of thanks to Sir Monier Williams for illustrating to us the different systems of philosophy of India.

Professor H. L. ORCHARD, M.A.—May I be permitted to point out that the two positions of the Brahmans are mutually destructive? One is exposed by our Brahmanical friend—that Brahma was an undifferentiated substance; and not only so, but could not be differentiated. Alongside with that position we have the other, that man is God; but if God is not differentiated, how came He to be identical with all the human denominations of sin? Then as to Spirit manifesting itself through material signs, this would be absolutely useless, unless understood by those to whom the manifestations were made, and this surely has some relation to the truth that man was made in the image of God (that there might be a certain correspondence between God and man), and the fact that the Messiah manifested Himself in ~~the~~ flesh. Between the mani-

festations and those to whom they were made there was a certain connecting link, a certain correspondence, without which those manifestations would have been absolutely useless. Brahmanism appears to me to be altogether inconsistent with Christianity, which teaches me that I am a fallen being; that I can only enter the Kingdom of Heaven by being born again, and becoming a partaker of the Divine nature. Brahmanism ignores this. It ministers to human pride and to human wickedness by declaring that without a radically new birth I can enter into the Kingdom of Heaven. Might I be allowed to add another to the very interesting list of triads with which Sir Monier Williams concluded? I do not think he mentioned self and not self and the consciousness which connects the two.

Sir M. MONIER WILLIAMS.—I have been greatly interested in the speeches which have followed my paper; but, to deal satisfactorily with all that has been said, I should require to make a very tedious reply, or to write a second long paper, which would be a bad return for the kind attention accorded to my exposition of a dry subject on the present occasion. With Dr. Collingwood's striking observations, in which he dwelt on the truth that Nature, or all natural phenomena, are, as it were, the written language through which we, who are created in God's image, may read, mark, and understand the ideas, designs, and qualities of Love, Wisdom, &c., existing in the mind of our Creator, and so communicate with Him; I need scarcely say that I entirely agree, and I may add that a well-known Christian hymn supports his view in the following words:—

Thou, who hast given me eyes to see,
And love this sight so fair,
Give me a heart to find out Thee
And read Thee everywhere.

And still more a well-known verse in the Bible:—"The invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made." The speech which followed Dr. Collingwood's was dealt with by Mr. W. H. Robinson, and in some respects sufficiently answered.*

* The reporters' notes of this speech—that of Mr. Desai, a Brāhman—were sent to him for correction, but never received back, and Sir Monier Williams writes: "*Before the publication of my paper* (now published for

Mr. Robinson went on to question the authority of Śankara's interpretation. With regard to Śankara, I can only repeat what I have pointed out in my book on "Brāhmanism," (p. 55), that if it be possible to point to any one really historical concrete personality around which Brāhmanical dogmas and their orthodox interpretation may be gathered, it is certain that we must look to him rather than to any other native writer. Of course I could adduce many other passages from the sacred Sanskrit texts themselves, and, indeed, could point to the whole plot of the Rāmāyana and Mahābhārata in support of my statement as to the conflict between good and evil spirits; but the very superabundance of my proofs and illustrations leads me to forbear. Those interested in the subject will find it fully treated of in my chapter on Demon-worship (see "Brāhmanism and Hindūism," published by Murray, p. 230). As to Mr. Misra's speech, I will only say that I agree with much that he said, and thank him cordially for the kind expressions he used in speaking of me, and of the researches which I prosecuted during my travels through all parts of India on three different occasions. I will only, in conclusion, express my cordial agreement with what fell from Professor Orchard.

The Meeting was then Adjourned.

the first time in the *Journal of the Victoria Institute*), Mr. Desai most unwarrantably allowed to be printed and published (in a certain magazine) two articles written by himself containing an amplification of his speech and founded on an *unrevised* proof of my paper, sent to him merely for his convenience (that he might join more readily in the discussion) and marked 'PRIVATE AND CONFIDENTIAL' in large type. This *uncorrected* proof was not adhered to verbatim by me in delivering my paper; but, even if I had not changed the wording here and there, it is clear that by all codes of literary honour (whether European or Asiatic) a rough, uncorrected, and private proof ought not to have been made use of for the purposes to which Mr. Desai applied it."

REMARKS ON THE FOREGOING PAPER.

The Rev. F. A. ORDE-WARD, M.A., writes :—

In reference to Sir M. Monier Williams's remark that "the number one, indeed, appears to have assumed the character of a kind of God," &c., and other allied remarks in his paper, I would briefly call attention to the Pythagorean doctrine, as rightly interpreted by Prof. Ferrier, in his "Institutes of Metaphysic" (the high water mark of English thought), p. 94. "Theory of Knowing," prop. I, section 18: "*Whatever is to be known must be known as one, or as many, or as both; but whatever is to be known can be made one only by being referred to one self; and whatever is to be known can be made many only when each of the plurals has been made one by being referred to one self; and whatever is to be known can be made both one and many only by the same process being gone through, i.e., its unity and its plurality can only be effected by its reduction to the unity of self.*" This necessary method of knowing, embedded in the very constitution of the mind, seems to me singularly fruitful in its suggestions. It evidently leads to Monism, as the inherent and fundamental principle of Nature. The popular notion, that Pythagoras taught things were already numbered by Nature as one or many, and we *re-number* them as they emerge within the horizon of knowledge, is too absurd to be entertained for a moment. Dualism and Pantheism, when really thought out to their logical limits, must land the enquirer in pure and simple Monism or Monotheism. Is it possible for minds constituted like ours to *think* Dualism or Pantheism? It is easy to *talk* of them, but that is little. The current counters of metaphysics are too often mere verbal signs, that correspond to nothing and mean nothing. To adapt Tertullian's saying, "O testimonium animæ naturaliter *monotheisticæ.*"

In connection with the Vedantic dogma, "the union of the one essence with illusion from all eternity," it is curious to find a popular doctrine now that God governs us (as children) by illusion, *βλέπομεν γὰρ ἄρτι δι' ἐσόπτρου ἐν αἰνίγματι.* And in his "Institutes

of Metaphysic," Ferrier gives the only philosophical form of Agnosticism, which Huxley so unluckily coined.

Mr. W. MARTIN WOOD writes as follows:—

I would refer to the remark at page 11, where the author says:—

"The whole energy of a religious Indian Pārsī is concentrated on the endeavour to make himself—so to speak—demon proof, and this can only be accomplished by absolute purity (in thought, word, and deed), symbolized by whiteness. He is ever on his guard against bodily defilement, and never goes out to his daily occupations without first putting on a sacred white shirt and a sacred white girdle. Even the most highly educated, enlightened, and Anglicised Pārsis are rigorous observers of this custom, though it seems probable that their real creed has little in common with the old and superstitious belief in demons and evil spirits, but rather consists in a kind of cold monotheistic pantheism."

Now my query is in brief; can Sir M. Monier Williams (waiving the notion of so high importance being given to outward defilement), not put the ethical position of the Zoroastrian somewhat higher than this? I have known many of them intimately, in all ranks and conditions, and allowing for the earthiness which is one side of the dualism pervading all human nature, my impression is that many of them cherish a higher standard of moral action than he implies, and which as we know has always been maintained in the ethical—or even spiritual—side of their operative creed. Just to glance at authorities which are, of course, quite familiar to him, like the passage in the introduction to A. H. Bleek's "Avesta" (Stephen Austin, 1864), which was revised by Professor Spiegel; we read p. 18—"A religion which is probably as ancient as Judaism, and which certainly taught the immortality of the soul, and a future state of rewards and punishments for centuries before these doctrines were prevalent amongst the Jews—a religion which, for ages prior to Christianity, announced that men must be *pure in thought* as well as in *word and deed*, and that sins must be *repented* of before they could be atoned for—a religion whose followers were forbidden to kill even animals, at a time when the ancestors of the French and English nations were accustomed to sacrifice human victims to their sanguinary Deities—a pure and venerable religion, &c." Then see the quotation from Burnouf, in which he speaks of the high place that "human personality, and human morality occupy in Zoroas-

trianism." He goes on to compare this to the disadvantage of "Brahmanism as it appears in the gigantic conceptions of Vedic Naturalism." He points out that, "in detaching itself more decidedly from God and Nature, Zoroastrianism has certainly taken more account of man than Brahmanism," and has "gained in depth what it has lost in extent." And, what is more to the purpose of my query, he considers it "a system which tends to develop the noblest instincts of our nature, and which imposes on man as the most important of his duties that of striving constantly against the principle of evil."

Then the moral aspects of Zoroastrianism are opened up with much clearness in Mr. Dadabhai Naoroji's paper on the *European and Asiatic Races*, read before the Ethnological Society, March, 1866, at p. 7 (C. L. Parekh; collected essays, writings, and speeches of the Hon. Dadabhai Naoroji, Bombay. Caxton Printing Works, 1887)—he quoted from Zoroaster—"I understand truth-telling exalted; all the days of the holy man are with thoughts of truth, words of truth, and deeds of truth . . . What is the high religion? that which promotes my holiness and truth, with good thought, word, and deed." Then follow other citations to similar effect, and Sir. G. Rawlinson is quoted as saying that in "their (Zoroastrian) system, truth, purity, piety, and industry were the virtues chiefly valued and inculcated." But I need not further cite testimonies not only to the high ethical teaching of Zoroastrianism, but also to the moral quality of modern Parsiism, which must be familiar to Sir Monier as an eclectic philosopher. Hence I feel confident that he can, on due reconsideration, somewhat raise "the religious Indian Parsi" in the scale of comparative ethical quality.

THE AUTHOR'S REPLY.

August, 1891.

I have nothing to add to Mr. Orde-Ward's interesting remarks, and I agree with nearly everything in Mr. Martin Wood's remarks, but I think that he will find, on reading my paper attentively, that I have said nothing to derogate from the ethical position of the Zoroastrians. Can there be a higher standard of morality than aiming at absolute purity in thought, word, and deed?

NOTE.

The following are the remarks by the Rev. C. G. Chittenden, B.A., referred to in a note to page 12 of Sir Monier Williams's paper:—

Page 2, paragraph 1.—“I believe I am right,” &c. In the popular discussion of these questions in the present day, “Monism and Dualism” seem to be used, each in two different ways:—

(1) To denote opinions as to the cause of phenomena; whether they are the result of the existence of Mind alone; or of Matter alone (Monism): or whether they result from the mutual action of both, being distinct existences (Dualism). This use may be called “*Metaphysical*” Monism and Dualism.

(2) To denote opinions on the origin of the moral world as it is presented to us in this life; whether it is the work of one Being or of two, and this use may be called “*Ethical*” Monism and Dualism.

It may be observed with reference to “*Metaphysical*” Monism, that, to minds of a metaphysical cast, Bishop Berkeley's Idealistic Monism is more easily conceivable than what may be called Material Monism, viz.—that Mind is a product or function of Matter.

Berkeley's theory is consistent with itself, and the chief argument against it is a “dualistic instinct” in man.

Page 11, last paragraph.—Isaiah xlv, 6, 7.

Here “evil” being opposed to “peace” must mean “physical evil,” “adversity.”

Page 12, last paragraph.—“We know too that this freedom of choice,” &c.

“*Ethical Dualism*” seems to be the refuge of some minds from the difficulties of “*Ethical Monism*” in attempting to account for the existence of moral evil. (See S. Laing's “*Modern Zoroastrian*.”)

Bishop Butler (“*Analogy of Religion*,” Part I, Chapter 5), considers that a partial explanation of the entrance of moral evil among finite beings, is furnished by the fact of their having particular “affections” or “propensions.”

But the difficulty of many minds (*e.g.*, J. S. Mill) is in conceiving that a Being who is all-good, all-wise, and all-powerful, would permit a state of things in which moral evil should exist. (See “*Three Essays on Religion*,” Theism, Part II.)

J. S. Mill appears to be an "Ethical Dualist, or Pluralist," in assuming that the Creator must have been limited by one or more opposing forces. He seems to consider that we have faculties and materials sufficient to warrant this inference.

But is it not probable that the minute portion of the Universe within our cognisance should suggest ideas which a view of the whole would show to be erroneous?

It is surely conceivable that, as Good and Evil are to us correlative ideas, the highest good could not be produced in finite beings, except by actual acquaintance with evil; and that men are now passing through that zone of evil in the course of the evolution of their highest good.

It may be that to complain that this highest good is unattainable without the experience of evil is tantamount to complaining that Omnipotence cannot work contradictions.

The History of this World to this time may be a minute fraction, both in time and space, of the history of the Universe; and what is an enigma, if we assume the fragment to be the whole, might be seen to be a necessary portion of the scheme, could we comprehend the whole in our view.

If our existence, indeed, is supposed to terminate with this life there seems no room for the idea of a good and just Creator; and the difficulty of forming that idea is immensely increased if it must be harmonised with the perpetuity of evil.

NOTE.

THE POST-GLACIAL PERIOD.

Professor WARREN UPHAM, Assistant Geologist of the United States Geological Survey, in a paper "On the Cause of the Glacial Period," makes the following remarks:—

"Measurements of the gorge and falls of St. Anthony show that the length of the post-glacial or recent epoch to have been about 8,000 years. From surveys of Niagara Falls, Mr. C. K. Gilbert thinks it to be 7,000 years, more or less.* From the rates of wave cutting along the sides of Lake Michigan, Dr. E. Andrews estimates it at not less than 7,500 years. Prof. Wright obtains a similar result from the rate of filling of kettle holes among the gravel knolls and ridges called kames. Prof. B. K. Emerson, from the rate of deposition of modified drift in the Connecticut Valley, thinks that the time cannot exceed 10,000 years. A similar estimate is formed from the study of the Lakes Bonneville and La Hontan. The last great rise was contemporaneous with the last extension of ice sheets. Prof. James Geikie maintains that man in Europe made neolithic implements before the recession of the ice sheet from Scotland, Denmark and the Scandinavian peninsula, and Prestwich suggests that the dawn of civilization in Egypt may have been coeval with the glaciation of north-western Europe, and D. Mackintosh cites the boulders in Wales and Yorkshire as proof that a period of not more than 6,000 years has elapsed.† Dr. Robert Bell refers to the preservation of the glacial striation and polishing. The striæ are as fresh looking as if the ice had left them only yesterday. According to the astronomical theory which Croll and James Geikie have advocated, the glacial period was from 240,000 to 80,000 years ago, but it is wholly untenable in view of the geological evidence."‡

* See also *Victoria Institute Transactions*, on these Surveys, vol. xix, p. 93.

† In a paper read before the Victoria Institute; *Trans.*, vol. xix, p. 73.

‡ *American Antiquarian*.

ORDINARY MEETING.*

SIR J. RISDON BENNETT, M.D., F.R.S., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed.

The following Paper was then read by the Author :—

ON HUMAN RESPONSIBILITY. By the Right Hon.
Lord GRIMTHORPE.

I AM asked once more to write a paper for your Transactions, and this subject was suggested to me, for the second time, as one that had not yet been discussed here. But, since this paper was mostly in type, a friend has sent me one of your early volumes (IV), in which it was discussed at great length as long ago as 1869, which may account for its being forgotten. This is a sad practical commentary on one of the laudatory estimates of Dr. Irons's papers at the time, that they would rank with Butler's *Analogy*. He wrote an "Analysis of Human Responsibility," in three successive and most elaborate papers, which, with the discussions on them, fill a large part of that volume. If this paper of mine is too short, I must say I think Dr. Irons's "wood can hardly be seen for the trees." Or, in less figurative language, his papers were so complicated, as well as analytic, and his reasoning so abstract, that if this were (what it is not) an abstract of them in the legal sense, there would still be an excuse for writing it; though I do not think I should have done so if I had known that I had been

* Jan. 5, 1891.

so anticipated. Those discussions, however, are valuable to me now, because I find that the only person who disputed the author's main arguments or conclusion was one who confessed—not at all in the offensive and insolent language of some atheists—that his difficulty remained, that there was and could be no proof of the God on whom a future life depends. I had already written what you will see farther on, on the necessary connexion between the two doctrines. Mr. Holyoake's speech on that occasion still more convinces me that it is all but a waste of time to try to prove future responsibility independently of the proof of revelation, or what is called the Evidences of Christianity. I have not seen anything else in those papers or speeches which suggests any material addition to or alteration of what I had written before.

I have also found a paper written for the Christian Evidence Society in 1873 by Prebendary Row, who took part in those discussions here, and I am sorry to hear is very ill now, concluding: "My whole argument therefore stands thus: Mankind have asserted with unanimous voice that certain actions are virtuous and vicious. But they can be neither unless men are voluntary agents. All voluntary agency involves responsibility. Men therefore feel themselves responsible." He rightly combats the ordinary attempts of atheistic writers to make out that we are not voluntary agents, which I should think never persuaded anybody yet that he is not a voluntary agent, except under absolute compulsion, or some motive which he is literally, and not only figuratively, unable to resist, to do something dangerous to himself; in which case he is deemed, both by the law of England and common sense, irresponsible for his actions, or a lunatic. Such cases as that have nothing to do with the question of free will in persons possessed of proper reasoning faculties, nor have any other manifest exceptions: nor ought we ever to be frightened by the common claptrap difficulty of what is called "drawing the line" between normal and exceptional cases, either by abstract rules (which are never of any use) or in particular instances, where different juries might guess differently whether a man is in his right mind or not.

Dr. Row also exposed the fallacy of the late Mr. Buckle's paradoxical conceit, that, because all human actions which are reducible to statistics show approximate averages, or that about so many people per million generally commit murder or suicide or matrimony in a year at present, there-

fore it is a law of nature that each man who does so cannot help it, though the vast majority do help it—an absurdity which only needs stating in this naked way to become ashamed; and yet I will try to shame it a little more by applying Buckle's own mathematical test to it. It is certain that 1 in 100,000 people (or whatever is the number) will kill themselves generally in a year. That means, in mathematics, that the chances are 100,000 to 1 *against* any one man doing it. Buckle called that a necessity that all who do must. It is absolutely certain that in the long run an unbiassed halfpenny will as often come heads as tails. What is the certainty about each toss? The only certainty is that one is likely as the other. And so one might go on with any number of illustrations of such a piece of nonsense. No materialist ever treated himself as being a machine, or anybody else over whom he has power; and every man is a hundred times surer that he can generally do as he likes than anyone who has muddled his head with either misapplied physics or unintelligible metaphysics can be of any or all arguments to the contrary. I say "muddled with physics" as well as with metaphysics, because using physical facts to prove things entirely beyond them is mere darkening of counsel without knowledge, and making a pretence of omniscience under the guise of humility and agnosticism.

Still, I think Dr. Row's statement of his argument did leave a gap unfilled. Indeed I always distrust those neat epigrammatic statements which have the appearance of settling difficult questions in two or three lines of axioms and deductions. Generally it is the materialistic party that is fondest of them. I have exposed several of them in former papers here and elsewhere, and need not advert to them now. I am afraid his assertion that "mankind have unanimously asserted that certain actions are virtuous and vicious" will hardly carry all the weight he put upon it, either in fact or logic. If it were true that even all civilised mankind were agreed as to the virtue or vice of *every* action (not of certain actions), that might be a safe basis to work upon; but conscience is far too variable and dependent on external circumstances to be accepted as a basis for this demonstration. Certainly no opponent will accept it. Nor do I see how even that proves that we shall ever be held responsible by any power beyond human vengeance. Unfortunately, however, the assumed universal agreement is not universal. Some things which no Christian has the least doubt about being virtuous or vicious are

denied to be so by some people who set up for moralists; or who choose to neglect or to do them without setting up for anything except "being as good as their neighbours," which depends on "who is their neighbour," and, if true, proves nothing except that vice is common in their society, and therefore more noxious to the world than if they were solitary offenders. At what age does uneducated conscience begin to convince children that absolute selfishness is not the true guide of life: nay does it ever convince some educated adults?

So I cannot accept conscience as an assumable proposition to base responsibility on. You know that Paley took this view, and I think proved it in his usual lucid way, in his *Moral Philosophy*, cap. v. An ingenious writer has sent me a paper called "Ratio Rationis," professing to refute it, by dividing morals into our own and other people's, and saying that the province of conscience is not to discover what is right, but to warn us to do what we believe to be right: "The question for my conscience is how far my present conduct tallies with my present light;" which obviously comes to this, in its simplest terms: Conscience only tells us that we ought to do what we believe we ought. So it is quite right and virtuous, and a thing to be rewarded here and hereafter, to act on the rule that selfishness is the true light that lighteth every man that cometh into the world, until he is taught better and convinced that that light is darkness; and if he should be seduced into an act of benevolence against his interest, his conscience will rebuke him. I daresay *something* will; but a diabolic or natural conscience of that kind is not a very solid basis for a doctrine of responsibility. So that queer piece of reasoning only ends in affirming, not contradicting, the great Senior Wrangler who wrote the *Evidences of Christianity* and *Natural Theology*, and could put more good reasoning, and more intelligible, into a page than most moral philosophy-makers in a dozen, or a volume. Dr. Row says: "Men *therefore* feel themselves to be responsible." It is no use saying "therefore" unless the conclusion as well as the premiss is a fact either demonstrable or self-evident. If it were a fact that all men feel themselves to be responsible, it would be a waste of time to write papers to prove it. It would indeed be not far from the truth to say that all men feel all *other* men to be responsible, and at any rate take care to treat them so, subject to reasonable excuses; and an excuse is only a mitigation, not a plea of not guilty. Every man

expects *everybody else* to do his duty—in the sense of demanding it.

And that I think really is a good argument for responsibility. “*Securus judicat Orbis*” when the whole world is agreed except those who have a plain interest in dissenting. It will be time enough to discuss non-responsibility as a practical question when we find any civilised nation or society dealing with its subjects or members on that footing. That has nothing to do with the particular things which the particular society may regard as crimes, and they might conceivably be quite opposite in different nations, or the same, as indeed they are in religious matters, and even the most glaring crimes are sometimes pronounced virtues for political objects or trade unionism. I suppose there is not, nor ever has been, a nation without punishments, and punishment *ipso facto* means responsibility.

So that the only open question is not about responsibility in this world, which is the very foundation of all society above the merest barbarism, but responsibility in another world. And here the difficulty of proceeding is that by “another world” everybody at once understands one where the virtuous and wicked will be treated differently, and therefore the argument becomes whether there will be another life or not. All arguments on that are so immeasurably short of the evidence of revelation that they are hardly worth discussing, except perhaps to answer new objections. Apart from revelation, it can hardly be said that we have any more convincing reasons for believing in a future life, and one of punishments and rewards, than the ancients, of whom the most intelligent evidently had a very faint belief in it, or none at all. I am not going to discuss Christian evidences here, and therefore all I can discuss is whether the modern arguments against responsibility are sufficient to raise any serious doubt about it, and, as the more practical issue, to furnish any rational excuse to those who wish to act as if future responsibility were disproved. For if an honest examination of the probabilities leave the conclusion only doubtful, no man of sense would run such a tremendous risk as he must know that it is to act as he pleases on the mere chance that he may escape all consequence of doing things which the vast majority of mankind agree are wrong, whether they acknowledge divine laws or not, merely because he sees some present advantage in doing so.

I remember a Judge answering an offender who pleaded that he did not know that the particular fraud of which he

was convicted was illegal, "If you choose to do what you know to be wrong in the hope that it is not also punishable, you have no right to complain if you are disappointed." One cannot but reflect that multitudes of people will some day hear the same kind of sentence, and feel that it is just. Now that the uniformity of laws of nature is universally acknowledged, far more than in ancient times, one may ask the deniers of responsibility for actions universally admitted to be bad on what ground they can hope to escape bad consequences any more than they generally do for physical excesses or follies, whether joined with immorality in general opinion, or perfectly innocent to other people, and in a proper degree innocent to themselves, like excesses in reading or exercise, or doing work which may even be for the good of others. Nature notoriously accepts no excuses. One man may indeed escape where most men suffer; but escaping is the exception, not the rule; and where laws are not simply mechanical like those of nature, but are administered with human discretion, the endeavour always is to make their action and effect certain—to make those exceptions as rare as possible.

Until men can prove that there is no discretionary power to govern the universe, it must be irrational to act as if there is no power to do that much better which human discretion is always trying to do. When they can prove that there is none (which agnosticism does not pretend to do) they may be justified in running vice against virtue and the laws of nature and the world; but even then they generally get the worst of it, and find that they have been responsible after all, and that their game has been as great a failure as continued gambling against a "bank" with the mathematical chances in its favour, which must ruin them if they go on long enough.

One of the crazes of modern rectifiers of the world on sentimental *v.* religious principles is that all criminals are irresponsible lunatics, and should be treated accordingly; in other words, that imprisonment, perhaps for life, should follow every conviction for a serious offence. If that is the meaning of being irresponsible, there is not much to dispute about; for non-responsibility would then be a great deal worse than the ordinary punishment of criminals who are still treated as responsible and reasonable by all other reasonable beings. Again therefore, the proposition of non-responsibility vanishes for all practical purposes; for the only remaining alternative is that everybody should be

allowed to do as much mischief as he likes until mankind irresponsibly disposes of him by Lynch law.

I am old enough to remember when a political legal luminary, who passed for a great man till he outlived his reputation, invented for party purposes the maxim that "Man is not responsible for his belief," meaning his religious creed. Probably those who found the maxim useful never reflected that, if that dogma meant what it said, it was flatly contrary to the Bible, which the inventor did not repudiate at all, to do him justice, whatever his successors do now. I suppose they really meant that one man is not responsible to others for his religious belief. But that depends altogether on whether his belief generally produces actions injurious to them or not, of which they must be the judges and not himself. And though it may seem plausible *a priori* to say that abstract religious opinions not necessarily involving conduct towards others must be innocent and cannot produce actions affecting other people, all the history and present experience of the world contradict that *a priori* conclusion. Religious opinion has notoriously produced greater and often worse effects upon mankind than even the lust of money or of conquest, or grosser lusts. It is needless to spend time in giving proofs of a proposition which nobody is likely to deny, and of which we see ample proof daily. The lazy indifference of these days may not choose to see what is transparent to all who are not indifferent to everything but their immediate comfort, or to physical or sentimental evils which stare them in the face: and they may try to evade the question by the easy cant of "refusing to believe" that the same causes and motives which have disturbed the world before, whenever they became strong enough, will do so again as soon as those who are moved by them are strong enough again.

But the responsibility of men to society is not the subject of this inquiry. It is future responsibility, though that is not expressed in the title of the paper. Freedom of opinion, until it develops into actions hostile to society, is unquestionable now in all countries which have escaped from priestly and political tyranny. What they have to guard against is the danger of falling under it again, which is greater than indifferentists choose to recognise. But all this time the ledger of responsibility is posted up daily with unflinching accuracy somewhere. Even materialists admit and assert that nothing is forgotten by nature: the smallest act propagates some consequences to the remotest time. No doubt

that alone does not prove that we shall be personally judged by them. But he must be a very bold man who ventures to pronounce that, instead of that ledger being ever opened for business and a final settlement of accounts, it will be destroyed at the end of the world, which must come by cold if it is not anticipated by heat, science predicting one and revelation the other; so that the atheistic vision of the perpetual improvement of "Humanity" is a baseless fabric; and it is men and not humanity whose future has to be considered. "Continuity" is one of the accepted doctrines of the philosophy of experience or induction, and is combined in a famous book with "Correlation," or the permanence of the sum of all forces in the universe. Why are we to take for granted that the responsibility which is evidently a universal law of nature and society is to be broken and stopped before its work is half done? The *onus probandi* lies with those who say it will. If they answer that we see it broken every day by death, I reply that we see nothing of the kind. All we see is that people die and pass out of our sight. I do not pretend to prove without revelation what happens to them then. But those who deny that anything will, and teach men so, and act on that belief, contrary to the laws of every moral philosophy that has ever been generally received, have no kind of evidence that they are right nor any *a priori* reason for believing it.

This, like all such questions, up to the fundamental one of creation, admits of only two alternative answers, and of no middle one. Neither of them can be given with the certainty of either mathematics or induction from all the known instances, seeing that none are known. Therefore they can only be decided, or rather acted on, according to the balance of probabilities. In the case of creation the two alternatives are (1) that the world made itself, including all the laws of nature, which means (as I have shown elsewhere) the spontaneous resolution of every atom in the universe always to behave towards every other in a certain way whenever they have the opportunity; and (2) that all the laws of nature were made and are maintained by one supreme power. The latter theory needs no explanation. The former needs one so much yet that no half dozen philosophers, whose names are known to the world, have agreed on any. I showed in my first paper here* that the most popular

* "How did the World Evolve Itself?" 1884, to which my paper "On the Beauty of Nature," in 1887, was supplemental.

leader of those who fancy that they believe that the world made itself confessedly runs up all his prime causes at last into a thing which he calls Persistent Force, in no particular direction, which divided itself into the infinity of forces which are called Laws of Nature, by means which he calls "unfathomable mysteries;" and his latest expounder or rival (whichever it may be), Mr. Clodd, says just the same in a book which he designates *The Story of Creation*, beginning with "inherent forces" of two opposite kinds, and "the play" of them "causing the rearrangement of atoms," of course with the presiding genius Evolution waving his explanatory rod whenever a *dignus vindice nodus* can be untied in no other way. He may call that a Story and a Play. But it is only a confession that he cannot get his leading actors on to the stage; and the story is a fairy tale.

Similarly, the phenomenon called Christianity in every civilised nation in the world has to be traced up to some prime cause. It is no use quibbling about the amount of proof that we ought to demand for this or that miracle. That has long ceased to be the real problem. The existence of Christianity is the real evidence now, though ocular testimony was originally. As I have asked in my S.P.C.K. tract thereon, what have Hume and Huxley and all their followers done to account for that phenomenon which is as glaring as the sun and moon? And what is it to us if some weak-kneed people who call themselves Christians, but want to pose as philosophers too, fancy that preaching a thing called Non-miraculous Christianity is the way to convert the world to that religion which is the grossest of impostures if the miracles of which it fundamentally consists were fictions. Such people are only converting themselves into un-Christians, just as others pretend to bring converts into the Church by abandoning all distinctive doctrines and then calling themselves and those whom they have joined "the Church," though no such church was ever known before, or can live on that foundation of sand.

Now then see how this includes the responsibility question, even without bringing in the positive evidences of Christianity, on which so many books have been written without a shadow of real refutation. Here is a religion of which a primary doctrine is responsibility in a future life, which has grown from the smallest conceivable beginnings, with no earthly helps or advantages, and in the face of all sorts of difficulties, and no rational explanation of that growth and prevalence except the common historical one has ever been

invented or stated definitely and accepted as rational by any but some trumpety and temporary school or party till some other has come in. If the common history is true, as it must be unless a better is established as more probable, the doctrine of responsibility is true in just the same degree.

It is no longer an isolated theory or creed depending only on its intrinsic probability, great as that is, but an essential part of a structure that has stood for ages, and grows stronger and larger every day, and of which, until some other architect is found and proved to be more probable, we are bound to say that "the builder and maker is God." That is the practical difficulty which deniers of future life and responsibility have to face and answer, before they can expect any man capable of reasoning to accept their denial as worth anything. Those who have their own reasons for wishing the denial to be true will probably succeed in persuading themselves that it is, or that professing ignorance about it is sufficient excuse for ignoring it. But nothing can be more certain than that, if they are wrong on the main question of the truth of the system of which this is a fundamental part, they have not the smallest chance of their agnosticism being accepted as an excuse. Agnosticism is *ipso facto* unbelief, and if the Bible is true we know what that involves.

Here I might well stop, and indeed I have no more to say on the bare question of whether it is rational to believe or to act as if we believed in no future responsibility. For it is quite a different question how that responsibility is likely to be administered, as we say of earthly justice. Some persons fancy that they have done all that need be done to make unbelievers easy by declaiming on the injustice of holding honestly ignorant or unwilling offenders guilty of death. That might be worth something if it were any part of our doctrine that no allowance will be made for such difficulties by the righteous Judge, though we have no means of knowing what that allowance will be in each case. All that I have to say on that point is that an excuse is only a demand for mitigation of punishment, not a plea of not guilty, and still less a proof of it. As for the plea of ignorance, nothing is more certain than that it is very often wilful. We hear men boasting of their desire to read both sides, while they practically mean that they read all that they get hold of against the accepted faith, and fancy they know all the reasons for it, and probably soon find objections to it which they cannot answer, and therefore yield to them. How few do we meet with who even try to balance the probabilities of

the only two possible alternatives which I have pointed out, or seriously reflect that there are only those two; and yet no axiom of Euclid is clearer than that, and those who reason in that way are mostly persons of quite intelligence enough to know better, and would be indignant if they were told that they do not know the elements of reasoning. If such people come to the wrong conclusion, even honestly upon the books they read, it was neither rational nor honest upon the whole transaction of choosing the books and reading them, and the plea of ignorance would not avail them in any earthly court. Why should it in the other? When a trustee, or any one accused of fraud, defends himself by the plea that he was ignorantly misled, the immediate question of the Judge is, Did he take all possible means of avoiding it by making all the proper inquiries, and not *some* inquiry only? If he did not, he is at once declared responsible for all the consequences. Even if he did make them and yet acted as a prudent man would not, he does not escape. Such cases are called hard, and in a sense they often are, when the person has derived and sought no benefit to himself. And yet it would be harder if those who have been ruined by his laziness or imprudence had to suffer instead. The case of rejecters of the doctrine of responsibility, because they prefer pleasing themselves, is evidently worse; for their professed inquiry has been biassed by their wishes as much as that of a trustee who had some indirect object, if only good-nature to somebody, in consenting to a breach of trust. However liberally we may interpret "He that knew not his Lord's will," we must feel sure that the alternative is to be read, "He that had *the means of knowing* his Lord's will and did it not."

The other suggestion, that it is unjust to punish involuntary offenders, and therefore incredible that they will be punished, requires much the same answer. We have no reason to doubt that the degree of genuine compulsion on which any one acts wrongly will be taken into account, as well as his amount of genuine and involuntary ignorance. All such difficulties as those, amounting sometimes to impossibility for us who do not know men's hearts, to say on which side of the line they really stand, do not affect the main question the least, and our business is not to speculate on the fate of individuals, but to see whether there is any rational ground for expecting that they will all have no fate at all, except annihilation. That is the question I have tried to throw some little light on by the only kind of reasoning which

seems to me worth anything in these matters which admit of no absolute determination.

The inquiry has run, of necessity, more into the nature of a sermon than of what is called a philosophical essay. But that is from the very cause just mentioned, that no reasoning which does not take the existence of the world, and of Christianity, now all over the civilised parts of it, as the phenomena to be accounted for can advance a step beyond the uncertain and shifting position in which the old philosophers were obliged to leave it in the most highly educated city in the world, with its "altar to the unknown God." For they knew better than to believe seriously in the impossible monsters of the Pantheon. They saw the world as it is, and generally assumed that it had some kind of a creator, and could perhaps say as strongly as we can that every other way of accounting for it that had been suggested was a transparent absurdity or begged the whole question. That was a great deal to say, and perhaps enough to say negatively: for unfortunately they had no positive information about a Creator which they could rationally accept. Their divine cosmogonies were not much better than our materialistic or atheistic ones. One nation alone had that positive information and believed it, and very likely its early revelation to their ancestors had somehow got diffused among others, though incurably corrupted by the want of a written record. We have abundant proof now that even civilised people have a tendency to run into ever-increasing superstition, or else into its opposite, as soon as they begin to depend on any pretended spiritual information beyond our original records of the creation of the world and its present religious condition, while no other rational explanation can be given of either of them. "Development" has invariably meant development of error, to which there is no assignable limit.

The CHAIRMAN (Sir J. RISDON BENNETT, M.D., F.R.S.).—I will first ask you to present your thanks to Lord Grimthorpe for this valuable paper.

Mr. W. GRIFFITH, B.A.—Lord Grimthorpe's paper is so lucid and consistent that one feels regret that it is so short, and wishes it had extended to the length of the three papers he mentions. I regret that his lordship has not only not touched on the

ground of responsibility, but that he has not also discussed the question for what actions we are responsible, and what are the duties we have to perform, as well as the reasons why we should perform them. With regard to what has been said about Paley. Dr. Paley has been very much criticised because he has made expediency the rule of conduct, and some have gone even so far as to say, like the Dean of a certain college at Cambridge at the present day, that he was not a Christian. Unfortunately, Paley adopts a tenet which I think is not based on responsibility or on Christianity; it is that a person is to obey the law because it is expedient that he should; and that is far inferior to the tenet of Bishop Butler, that right and wrong are independent of the individual, and the individual is to obey the dictates of his conscience. Paley's mistake was in making what may be the measure of legislation for any State the measure by which an individual might act, now expediency is not the proper motive of conduct in an individual.

Rev. Prebendary WACE, D.D.—I think Lord Grimthorpe has said all that is necessary on this occasion; the last speaker seemed to make some complaint that his Lordship had not discussed the whole moral law—as I understood him to say; but I fear that could hardly be done in an evening:—but, perhaps you will allow me to offer one or two short observations on the general spirit of what his lordship has advanced. I am disposed to put rather higher than Lord Grimthorpe put it in one or two places, the general conviction of mankind respecting permanent responsibility both here and hereafter. The most extraordinary phenomenon in that respect is, perhaps, the ancient Egyptian religion. We have old documents, particularly the “Ritual of the Dead,” which contain the most minute descriptions of the judgment passed on all souls in the other world, a complete account of a sort of judicial tribunal to which they were all subject. Whether these were partly, as the late Canon Cook used to think, the remains of primeval revelation or not, it is certainly a very striking phenomenon. There can be again no question at all that the very motive, so to say, of some of the most interesting and most momentous of the writings of the Greek poets, for example, is the sense of responsibility hereafter: the very reason that Antigone gives, for instance, for burying her brother against the express law of Creon is that she will have to live with the members of her family and

be subject to all the great principles of right and justice always, whereas she will only have to live with Creon and those she is dealing with now for a short time. It is impossible for a play of that sort to be acted before an Athenian audience without a sense of responsibility lying very deep indeed in their hearts, and there are many signs of its existing similarly in that nation which had even a still stronger sense of righteousness than the Greeks, I mean the Romans; and I am not aware, I confess, of any early civilized nation or any nation that had the germ of civilization existing without a very strong apprehension in their minds, amounting to an abiding conviction, of a judgment in the next world, and of actions and conduct being rewarded or punished according to their virtue or vice.

That is a consideration which, of course, only strengthens Lord Grimthorpe's general arguments; and it is desirable to recognize that these great principles are, practically, human principles—you may find exceptions to them, but take human nature as a whole and you get a wonderful sense of responsibility hereafter as well as here. As to responsibility here it is well observed by Dr. Row, that everybody thinks everybody else responsible. There is a very good epilogue that I remember reading in a Hindoostanee book. A sceptical Hindoo went to the Dervish and asked him to solve him three questions:—"First of all," he said, "why should I believe in God? I cannot see Him—why should I believe in what I cannot see? You teach me as part of your religion in respect of a future world, that the evil spirit is tormented by fire, and you tell me, at the same time, that he is made of fire. How can he be tormented by that of which he is made? Thirdly, why should a man be punished for his actions when he is not responsible for them?" The Dervish, instead of giving him an answer to his questions, took up a clod of mud and shied it at his head, which made the sceptic extremely angry, and he summoned the Dervish before the Cadi, who asked the Dervish what it meant. He said, "This man said he could not believe in what he could not see; let him show you the pain in his head before you take notice of it. He asked also how the evil spirit could be hurt by that of which he was made. He is made of mud, and I shied mud at him. Then he said men were not to be punished for their actions. Why does he want to punish me?" (Laughter and applause.)

No doubt, as the last speaker has said, perhaps next to the fact

that we are responsible for our actions, the most momentous question is what is the nature of that responsibility? If we are to be judged hereafter, what is the standard by which we are to be judged? Even in respect of that point there is, I consider, a deeper agreement in human nature than is sometimes supposed. The general principle, "Do as you would be done by," is one on which all the nations of the world are agreed, even in countries where paganism is not exterminated. You may take it for certain that in any nation of the world a man will expect you to treat him as you would expect him to treat you, and if that principle were worked out it would no doubt carry us very far through the whole range of morals. I have heard it said by an experienced missionary in respect to nations in which the greatest vice prevails, that, nevertheless, when the principle of the Christian moral law is stated to them, it has cordially commended itself to their conscience, *i.e.*, they felt that the principles of Christian moral law did correspond with what were the true relations in which they ought to exist towards one another; in other words, that Christianity is the re-establishment of the true relations of man to man, as well of man to God. Certainly, it would seem that nothing is more strikingly characteristic of our Lord's teaching than the way in which His parables appeal to what I may call the unsophisticated instincts of the human heart as the basis of the principles He lays down. He teaches men what is their duty towards each other and to God by appealing to the true and deeper instincts of human nature; but at the same time, when human nature once gets corrupted by false religion, evil habits, and vice, nothing is more certain than that it has no power to recover itself, and that man needed, therefore, a superior influence to reveal once more the true principles of action, and to enforce those principles by revealing the ultimate authority to which we are responsible. That is what the Christian religion did—it stated again what was the rule by which God intended man to be governed, and it also stated simultaneously, with equal earnestness, what was the tribunal by which this rule would be enforced. For practical purposes therefore, Lord Grimthorpe's contention in the latter part of his paper would seem to be unanswerable—that practical moral responsibility in corrupted human nature is based on religion—it is a revealed responsibility. Our Lord came forward as the Legislator for

mankind, and the Judge of mankind, and in that point of view I must own that it seems to me, more and more, nothing but a great waste of time to discuss questions of morality and responsibility apart from the Christian revelation. If the Christian revelation be true, all these questions are settled once and for ever; and the Christian religion, as Lord Grimthorpe has said, from its position and its command over human nature, from all the claims it has upon us, must be heard and ought to be heard before we go any further.

I think, therefore, apart from the general question whether we are responsible here or hereafter, the only question worth discussing is whether the law laid down in the Gospel is the true law that man should follow, and whether our Lord is the Judge by whom that law should be enforced. (Applause.)

Rev. W. J. ADAMS, D.C.L.—I think it is very important to observe that a knowledge and sense of responsibility should lead us up to God. If I tell a man he is responsible, the man naturally says to me, "Responsible to what?" I say, "To God's law;" and if he says, "Where is God's law?" I reply with St. Paul, "It is written in men's hearts." Now, Dr. Wace very aptly referred to the moral law of the old Egyptian Empire. It is a very remarkable fact that in the old Egyptian moral code, in respect to which every Egyptian had to clear himself before he could enter the Egyptian Heaven, there were forty-two mortal sins, any one of which would keep an Egyptian out of heaven, and every one of those is contained in the Law of Moses, that is to say, the old Egyptian moral code covered the whole Mosaic law. It is a very remarkable fact because that was in existence centuries before the time of Moses. Therefore there was a moral law, as St. Paul says, written in men's hearts from the very beginning, and the Christian faith, as I think Dr. Wace admitted, though he did not say so in so many words, claims not so much to be a new foundation for morality, as a sanction by an express Divine Person in an express Divine Appearance in the world of the old moral law; but from the very beginning the law was written on man's heart, and St. Paul argues therefrom. The Christian faith corroborates that law and gives it a Divine sanction and makes it clear. It found the moral law in men's hearts, and the Christian faith brings it to light and gives a Divine sanction for that moral law; but the moral law has been in the world from the very beginning, and so

leads us up to God, which is the point at which we are so anxious to arrive.

The CHAIRMAN.—I would like to ask Lord Grimthorpe his position in regard to the Egyptian "Ritual of the Dead," to which reference has been made by Dr. Wace, and to which my attention was called lately. I am more than ever impressed with the extreme importance of it, and especially when considering the age in which it was framed. In connection with the moral law being written in the heart of man, I would ask what is the difference between that and what we usually term conscience? Is not conscience itself a record of Divine influence which is granted to each individual coming into the world, whether civilized or savage? I cannot help thinking we mistake in separating conscience so entirely from the sense of moral law described by the apostle as being written in our hearts. It is difficult to distinguish between conscience in men and instinct in brutes; but I think it will be seen that there is a wide gulf between what we understand as the conscience of rational beings and the wonderful phenomenon of instinct in the lower animals. If that be so is not conscience, in point of fact, a revelation? In this Egyptian "Ritual of the Dead" the revelation is spoken of as being a moral law written in the heart. No doubt a moral law given as a revealed religion, is very much more definite, positive, and available, and in connection with responsibility, of a far higher and broader kind. I would venture to ask Lord Grimthorpe whether he could give any direct reference to these points which are not, I think, touched on in his paper.

Lord GRIMTHORPE.—When you speak of the conscience coming from revelation, you must recollect that revelation in this matter may mean two things—either original revelation, such as I have alluded to in my paper, of which the Jews alone seem to have kept a record, which has kept it from running into bad developments, or such a revelation as there may have been to earlier nations even than the Jews, or to the Egyptians themselves. Another kind of revelation may be said to be one that goes on continuously in the nature of instinct. If we can prove that people never inherited revelation, and have a conscience like ours, in the sense of approving or disapproving of certain things, that would prove, I think, a continuous revelation. As to the Egyptian

“Ritual of the Dead” any information as to its probable date from Dr. Wace would be extremely valuable.

Rev. Dr. WACE.—Well, it is at least 2,000 years before Christ—before Abraham.

LORD GRIMTHORPE.—We know well from the Bible that there were revelations of one kind or another long before that, and I cannot help thinking—of course it is only *think*, and may not be good for much—that some revelation was probably given to the very earliest people. I have no doubt that the tradition of that went down, and I believe from reading the stories of Abraham and Noah that a religion was known. Even Moses does not profess to have given all his religion as a novelty, and even the Sabbath observance, which was a great deal earlier than that, was a kind of revelation. I cannot help thinking everything tends in the same direction; that conscience, or whatever it may be called, that has always existed in the world, has probably come from original revelation handed down more or less accurately. When Dr. Wace talks of future rewards, tortures, and Elysian fields, the notion of Elysian fields is not very satisfactory, and a great Homeric hero said he would rather be the meanest slave on earth than the greatest man in the Elysian fields. That, again, looks like a revival of old revelation corrupted a good deal, and so much corrupted that that great poet, who I suppose represented the faith of many others, put that speech into the mouth of Ajax in the Elysian fields. I agree with much that has been said by Dr. Wace and you, Sir Risdon Bennett. I cannot pass by altogether the reflections that have been made on Paley. He happens to be a pet of mine. I cannot help thinking that no man ever lived in modern times who did so much to advance the Christian religion as Paley. I was at Cambridge about the time he began to be sneered at, and that was coincident with the rising of a very different school which has passed through many names and phases. Paley was not hot or strong enough for them. He talked too much common sense, and relied on the Bible too much for them, and relied on tradition too little for them. And taking all those things into consideration, I am not surprised at many who call themselves authorities on religion reviling Paley. And when we are told that a modern Dean at Cambridge reviled him, I am still less surprised, because a certain tutor at another University spoke

still more disrespectfully of Butler, in language which I dare not quote, in the opposite direction. When Paley is accused, as Mr. Griffith has accused him, of dwelling on the doctrine of expediency, I must remind you that Paley was a man who expressed himself in a manner that might be misunderstood. He said short, sharp things, and people may take up and use a single term or sentence of his and say, "Paley only believed in expediency." But see what he meant by it. I will not quote from him now; but go home and read, and you will find that it is very different to what is commonly called expediency. I suppose you all agree that it is expedient to believe in Christianity, and Paley said so, and he would soon satisfy you that he is right; but it shows the mistake of taking words used originally in one sense and using them in another: one of the commonest logical fallacies.

There are sundry other points upon which Paley might be quoted, and which look like heresy, and perhaps absurdity, but that has arisen, as I say, from his short and sharp way of writing.

Dr. Wace has said all that is necessary in answer to Mr. Griffith about my not taking up more of the moral law; but at this time of night, in this cold weather, and at my age, I am not equal to entering upon that.

The HON. SECRETARY (Captain F. PETRIE).—With regard to the Egyptian "Ritual of the Dead," it will interest members to know that twenty years ago, when it began to be somewhat discussed among English Egyptologists, this Institute was the first to draw public attention to it; the late talented Mr. W. R. Cooper, who had specially devoted himself to its study, prepared a careful paper for this Institute entitled, "*Observations on the Serpent Myths of ancient Egypt*," in which he thoroughly described the teaching of the "Ritual of the Dead." This paper, valuable then, December, 1871, is so still, for Mr. Cooper's object in writing it was to place a complete and correct description of the subject before the world.

Rev. Dr. WACE.—Is the paper in our Transactions?

The HON. SECRETARY.—Yes, in the sixth volume, which is still in print.

The Meeting was then adjourned.

COMMUNICATIONS.

The following communications have been received in regard to the foregoing paper :—

The Rev. R. COLLINS, M.A., writes—

“ I have read the proof of Lord Grimthorpe’s paper with some interest. No doubt a man’s conviction of his responsibility to God depends upon his apprehension of God ; and the responsibility remains so long as there is the opportunity of that apprehension. Lord Grimthorpe’s contention is sound, that a conviction of the truths of Revelation must come before a conviction of future responsibility.

“ But perhaps in many minds there is a question that is needed to be met, as to the causes that lead up to our actions : are any of them the result of causes over which we have no real control ? If it be so, there can scarcely be responsibility. Many questions are involved here. Responsibility means that a man must be able to know his actions as his own, the result of his own will ; he must also be in possession of a knowledge and sound judgment, as to whether the actions are right or wrong. And even when there is not sound knowledge there may be responsibility in not taking advantage of opportunities of obtaining knowledge. Now the general sanity of mankind should be enough, perhaps, to prove their responsibility. But the difficulty will be in a certain class of minds in regard to the actual nature of the will ; with those, for instance, who regard will as a mere ‘ conflict between two sets of ideal motor changes which generally tend to become real, and one of which eventually does become real ’ ; in other words, as something quite different from a voluntary and original determination of a being who is an originating free agent. The real nature of the recipient of a revelation from God, as well as the fact of the revelation itself, seems to me to be a necessary part of the groundwork of a discussion on this subject, if the object be to meet the actual difficulties that exist in some minds as to the nature of human responsibility.

“The motto over the doors of the old Temple at Delphi might well be inscribed still on prominent places farther west. No doubt many hold loose views as to human responsibility, because they refuse to believe in a divine revelation ; but I think there is equally no doubt that there are those whose belief as to this subject is vitiated by a false view of man as man, and of his relation to the universe itself.”

Dr. D. BIDDLE, the author of *Ratio Rationis*, referred to by Lord Grimthorpe in the 4th page of his paper, sends “A summary of what Paley has said on the subject under discussion, and his own words in refutation thereof” :—

“Our next instance shall be taken from Paley’s celebrated disquisition on a *moral sense*, its existence in man or otherwise, given in the work on Moral Philosophy (Book I., Chap. 5). He begins by giving the case of Caius Toranius, who betrayed his own father to arrest and death ; and, after depicting the deed in all its malignity, he says, ‘The question is, whether, if this story were related to the wild boy caught some years ago in the woods of Hanover, or to a savage without experience, and without instruction, cut off in his infancy from all intercourse with his species, and, consequently, under no possible influence of example, authority, education, sympathy, or habit ; whether such a one would feel, upon the relation, any degree of that sentiment of disapprobation of Toranius’ conduct which we feel or not ?’ And that we may be in no doubt as to what he considers to be the matter in dispute, he further says, ‘They who maintain the existence of a moral sense ; of innate maxims ; of a natural conscience ; that the love of virtue and the hatred of vice are instinctive, or the perception of right and wrong intuitive (all which are only different ways of expressing the same opinion), affirm that he would. They who deny the existence of a moral sense, &c., affirm that he would not.’ After saying that ‘what would be the event can only be judged of from probable reasons,’ he proceeds in the most lucid language to give the various reasons adduced on either side. Thus, the one party assert that a certain approbation of noble deeds and a corresponding condemnation of vice, are instantaneous and without deliberation ; and also uniform and universal. But the other side show that nearly every form of vice has at some time or in some country been countenanced by public opinion, even by philosophers and others in high position ; that we ourselves do not perfectly agree as to what is right and what is wrong ; and that the general though not

universal approval of certain lines of conduct may be accounted for in various ways. For instance, 'having experienced at some time, a particular conduct to be beneficial to ourselves, or observed that it would be so, a sentiment of approbation rises up in our minds, which sentiment afterwards accompanies the idea or mention of the same conduct, although the private advantage which first excited it no longer exist.' By these means the custom of approving certain actions *commenced*: it is kept up by authority, by imitation, by inculcation, by habit. Besides, say they, none of the so-called *innate maxims* are absolutely and universally true, but all *bind* to circumstances. Thus, veracity, which seems, if any be, a natural duty, is excused in many cases towards an enemy, a thief, or a madman; and so with the obligation to keep a promise. Nothing is so soon made as a maxim: Aristotle laid down, as a fundamental and self-evident maxim, that nature intended barbarians to be slaves. 'Upon the whole,' says Paley, 'it seems to me, either that there exist no such instincts as compose what is called the moral sense, or that they are not now to be distinguished from prejudices and habits; on which account they cannot be depended upon in moral reasoning; that is, it is not a safe way of arguing, to assume certain principles as so many dictates, impulses, and instincts of nature, and then to draw conclusions from these principles, as to the rectitude or wrongness of actions, independent of the tendency of such actions, or of any other considerations whatever'; and he finishes by dismissing the question as of no concern except to the curious."

"But a very different complexion is put upon the matter by a careful classification of the chief terms. *Morals* may be divided into our own and other people's, and under both these heads we may place on one side *overt acts, habits, &c.*, and on the other side, what are summed up under the designation of *motives*—those secret sprigs of thought and action which may be inferred, but cannot be perceived, by outsiders. These motives act in the higher regions of the being's nature, in those parts which are in immediate relation with the sentient power, and they produce an impression, agreeable or otherwise, according to their harmony or discord with what the being himself accepts as *right*. As the rain-drops descend upon the sides of a mountain, and, percolating through the several strata, reach the central reservoir whence the streams receive their supply, and as the set of the strata determines in great measure the particular side of the mountain on which the spring will appear, so a man's deeds are the resultants of the various influences brought to bear upon him, and, in his reaction upon the outer world, he is able, by his Will, to determine more or less the character of his acts. It is at this juncture that the conscience comes in, its province being to perceive the equality or inequality of a nascent act to the being's accepted standard of right, that is, to the degree of *light* he possesses. If, at the critical

moment, temptation prevail, a painful impression is produced, but, if the temptation be withstood and overcome, the result is pleasing. In these respects the moral sense is like the other senses, which perceive equality or inequality in the things which concern them, and produce corresponding impressions. But the conscience or moral sense of one man is not concerned with the overt acts, much less the motives, of another man. The overt acts of others may be judged of by the Reason, and, if good, followed, if bad, shunned; but it must not be forgotten that what is good, or at least harmless, for one man, may be extremely blameworthy in another. The rules that suit everybody are broad indeed. Caius Toranius may have been, and probably was, the greatest blackguard imaginable; but to reprobate his conduct will not mend matters for me. The question for *my* conscience is, how far *my* present conduct tallies with *my* present light. Moreover, the moral sense can be blunted and destroyed, or educated and refined, much as any other. This and various circumstances concur to produce at different times, and in different localities, habits and customs which differ greatly on the score of morality. But to deny the existence of a moral sense on this account, is like denying the sense of hearing, because the accepted music of one nation is discord and confusion to another; or like denying the sense of sight, because one man beholds beauty where another sees only so much canvas and paint."

The author of that paper adds, "I do not think Lord Grimthorpe means us to swallow Paley whole, simply because he was Senior Wrangler, the writer of several useful books, and a generally sound logician. Even at Cambridge, his influence has long passed its zenith, and to show how pendulums swing, the Dean of one of the Colleges there lately told me that he could hardly regard Paley in the light of a Christian—quite an undeserved aspersion.

"But to appeal to Scripture. If there be no authoritative principle in the natural man, how comes it that St. Paul in the text on which Bishop Butler's three sermons on Human Nature are based, speaks of those who, having not the law, 'do by nature the things contained in the law,' of the 'work of the law written in their hearts,' of their 'conscience bearing witness,' and their 'thoughts accusing or else excusing one another.' That which is chiefly condemned is, 'holding the truth in unrighteousness.' But if the conscience were infallible, St. Paul would not have spoken of doing a thing 'ignorantly in unbelief' as a reason for obtaining mercy, nor would Christ Himself have foretold that certain persons would think they were 'doing God service' in persecuting His Church.

"At the same time, as I have elsewhere said, the only moral sentiment with which, by nature or grace, we are endowed, excepting that which though higher in degree we have in common with the beasts, is to be found in the struggle described by St. Paul: 'The flesh lusteth against

the Spirit and the Spirit against the flesh, for these are contrary the one to the other, in order that ye may not do the things that ye would.' This is the influence of God in the hearts of His people. The natural conscience is only a higher degree of the moral censor possessed by a *dog*, who, when caught stealing a tempting bone, disappears with his tail between his legs."

ORDINARY MEETING.*

SIR GEORGE GABRIEL STOKES, BART., M.P., V.P.R.S.,
IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Elections were announced :—

LIFE MEMBER :—The Rev. Henry Lansdell, D.D., M.R.A.S., F.R.G.S., &c.,
London.

MEMBERS :—Professor A. S. Carrier, B.A., United States ; Professor J. B. Sears, United States ; Professor J. Harry Deems, United States.

LIFE ASSOCIATES :—Rev. T. B. Tress, New South Wales ; S. Taylor, Esq.,
Cambridge.

ASSOCIATES :—F. Sessions, Esq., M.R.A.S., F.R.G.S., Gloucester ; Alan Lambert, Esq., London.

HON. CORRESPONDING MEMBER :—J. Theodore Bent, Esq., Mashonaland.

The publication of the incomplete paper read on this occasion is necessarily delayed.

* Feb. 2, 1891.

ORDINARY MEETING.

THE PRESIDENT, SIR G. GABRIEL STOKES, BART., M.P., P.R.S.,
IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Paper was read by the Author :—

CHINESE CHRONOLOGY.* By Rev. JAMES LEGGE,
M.A., &c., Professor of Chinese in the University of
Oxford.

The Historical Department of Chinese Literature.

1. **T**HE *Historical* is the second, and to my mind the most satisfactory, of the four departments into which the Chinese divide their national literature.† We have in what are called “The Twenty-four Dynastic Histories” records coming down to the year 1643 of our Christian era, and professing to extend over a space of 4,340 years, going back to the 4,587th year from our present A.D. 1890. These records are disposed in 3,264 books or chapters. My own copy of them, bound in English fashion, forms 73 portly volumes of imperial octavo size. If we can put faith in the ordinary Chinese tables of chronology, Hwang Tî,

* Read in 25th Session, Paper and discussion finally revised May, 1892.

† Classics ; History ; Philosophy and the Arts ; and Poetry and the *Belles Lettres*. See Wylie's *General Notes on Chinese Literature*, p. 1.

the Sovereign with whom these histories commence, began to reign in the 247th year of Noah's life, and 353 years before the Deluge; according to Calmet's arrangement of scriptural dates. According to that of Dr. Hales, the reign began nearly 150 years before the building of the tower of Babel, and 550 years before the birth of Abraham. I will not, however, now anticipate any judgment to which we may be brought in the course of our inquiries, concerning Hwang Tí, whether he should be regarded as a real or simply a fabulous personage. My object will be to lay before you, as concisely as I can, the two schemes of Chinese chronology, and consider how far we must admit or deny the claims based on them for the extraordinary antiquity of the nation.

Composition of the Dynastic Histories.

2. At the outset, let me call attention to one circumstance in connection with the dynastic histories. The first of them, called the Shih Chí, or "Historical Records," was written by Sze-mâ Ch'ien, who died in or near the year B.C. 85. It embraces the long period of about 2,600 years, from Hwang Tí to nearly the end of the reign of Wú, the sixth of the Han Emperors. It thus covers more than a century of the dynasty under which its author lived. But the other histories were all written after the dynasties which they commemorate had passed away; yet not long after. The rule is, that each succeeding dynasty shall commemorate the fates of that which preceded it. While the events may still be considered fresh, and all the important documents are accessible, a commission is issued for the compilation of the history. For instance, the latest of these histories is that of the Ming dynasty, extending from A.D. 1368 to 1643. As soon as the present Man-cháu holders of the Empire thought they had sufficiently consolidated their rule, a commission was issued in 1679, appointing 58 men of literary eminence to compose the Ming history; and the result of their labours, as we now have it, was laid before the Emperor of the Ch'ien-lung period in 1742.* This method is supposed to secure, and does no doubt secure in a great measure, impartiality of treatment, and access to contemporaneous documents, all the archives of the Empire being open to the writers.

* Wylie's *Notes on Chinese Literature*, p. 19.

The Chinese Institution of Historiographers.

3. But there is no question about the chronology of China since the rise of the Han dynasty in B.C. 206. Every reign and the length of it are well authenticated. Between 20 and 30 different dynasties have occupied the throne during the 2,096 years that have elapsed; but the clue that has dropped from the grasp of one House has immediately been seen in that of another. Two or more pairs of hands occasionally appear together, one trying to keep its hold of the clue, and the others to snatch it to themselves; but the narrative of the continuance of the government is unbroken. How was it, however, in the earlier times? Did Ch'ien derive his records from other documents contemporaneous with the events which they described? And how far back and with what precision of detail and date did such documents extend? To these questions answers can be given more full and satisfactory than might be expected.

Mâ Twan-lin, the encyclopædist, whose great work was published by imperial command in 1319, has stated as the result of his researches, that the office of historiography was instituted by Hwang Ti, and that its action may be traced down through the dynasties of Hsiâ and Shang.* I have not succeeded to my satisfaction in substantiating this statement; but I take occasion from it to refer to that office as existing certainly more than a thousand years before the time of Ch'ien. The testimonies of the Shû Ching, the Châu Kwan, and the Confucian Analects; the supplements to the Ch'un Ch'iu, and the narratives of the States, place this beyond a doubt. By means of the members of this body, who are variously denominated by translators,—‘recorders,’ ‘annalists,’ and ‘historiographers,’—provision was made at the Royal Court of Châu, from the commencement of the dynasty in the 12th century B.C., for the preservation of royal charges and ordinances, of accounts of the operations of the general government, and the histories of the different States; and also for the preservation and explanation of documents purporting to be come down from more ancient times. And as there were those officers at the royal court, there were similar functionaries at the courts of the various feudal princes. Of how these historiographers had been in the habit of discharging their duties we have the testimony of Confucius, that he had seen the time when one of them

* See the 51st chapter of Mâ's work, Article 7th. Read also the 1st section of the 1st chapter of my prolegomena to the *Shû*.

would leave a blank in his text rather than enter anything of which he was not sufficiently assured.* We are furnished by Tso Ch'û-ming with an instance in point of a somewhat different character, which occurred in B.C. 548, when Confucius was in his 4th year. In that year the Marquis of the State of Ch'i was killed in the mansion of Ts'ûi Chû, one of his principal ministers with whose wife he had been carrying on a shameful intrigue. The death was not inflicted by the minister's own hand, but it had his knowledge and approval. We hardly blame him for the deed; but the hereditary historiographer of the State, as he was bound to do, entered the notice of it in his tablets in the words, 'Ts'ûi Chû murdered his ruler;'[†] and the minister, enraged, caused him to be put to death, and the record destroyed. First, one brother and then another, who had succeeded to the office, repeated the offence and met with the same fate; a third brother took the fatal pencil and followed their example; but by this time such a general feeling of indignation had been excited by the events that the minister did not dare to deal with him as he had done with the others. He was obliged to let the man and the notice alone.

There were then historiographers in the time of Châu, and from an intimation in the 10th Book of that dynasty in the Shû Ching, we learn that similar officers had existed under the previous dynasty of Yin or Shang, the commencement of which dates from B.C. 1766. Beyond the Shang dynasty I have not been able to trace them. Mention is made indeed in the Shû of a writing made in B.C. 1321, and of another made earlier, about B.C. 1753. "Statutes of Government" are also referred to in the 4th Book of the Dynasty of Hsiâ, assigned to the 22nd century B.C., from which expression we must conclude that there existed even then a written code of laws in the country; and if there were written laws, there must have been further written records of every kind. We may safely believe that when Ch'ien undertook the composition of his work, the materials necessary for it were ready to his hand.

Some account of Sze-mâ Ch'ien.

4. Let me interject here some account of the man himself, brief indeed, but longer than I gave at the outset. He appended to his records a short autobiography which supplies

* *Analects* xv, 25.

† See the Tso Ch'wan, under the 25th year of Duke Hsiang.

the necessary materials. He traces his descent up to the time of the sovereign Chwan-hsü, a grandson of Hwang Tî, and claims that members of this line exercised functions connected with astronomy and historiography down into the dynasty of Châu. In the 8th century B.C., they assumed the surname of Sze-mâ, and were, for a century and a half, one Head of the family after another, the Grand-Historiographers at the Royal Court. The troubles of the kingdom drove them from the capital about B.C. 650, and individuals of them are traceable, now in one, and now in another of the feudal states, till in B.C. 320, or thereabouts, we find a Sze-mâ Ch'o at the court of the ambitious and growing state of Ch'in, which was already meditating the overthrow of all the other states or kingdoms, and the establishment of an imperial sway. His descendants served in Ch'in till the fall of the short-lived dynasty which was set up by Shih Hwang Tî, the builder of the Great Wall, the burner of the books, and the fell opponent of the Confucian *Literati*. On the rise of the Han dynasty they followed its fortunes, and we come to Sze-mâ Tan, the father of Ch'ien, in the position of Grand-Historiographer in the time of the emperor Wû. For thirty years, from B.C. 140 to 110, he filled that office. He was also versed in astronomy; an earnest student of the Yi-Ching; and endeavouring to survey impartially the various schools of thought which had arisen in past ages. The principles of Mo Tî which Mencius had vehemently assailed attracted him, and still more did those of Lâu-tsze. He had conceived above all the purpose of writing the history of the nation from the earliest times, and made considerable progress with it. Death surprised him, however, with his work unfinished; but he had the presence of his son, Ch'ien, with him, and solemnly and pathetically committed to him the completion of his undertaking.

Ch'ien was then, it has been thought, about thirty years old. He had been born at Lung-măn in the present Shen-hsi, near which the great Yü had commenced his famous labours on the deluge more than 2,000 years before. At the age of ten he could repeat the most celebrated pieces of the ancient literature. At twenty he commenced a series of extensive travels through the Empire, and visited the spots hallowed by memories of the departed great, and especially of Confucius. Not long before his father died, he had returned to the capital, to report the results of a military expedition to the western parts in the present province of Sze-ch'wan. He was appointed to succeed his father as

Grand Historiographer, and after the usual period of mourning entered on the task which had been entrusted to him. In five years, "amidst the stone chambers and metal coffers" of the Imperial library, he had brought his "Records" down to the year B.C. 104. As he was continuing his labours, in B.C. 98, in consequence of his connection with Lî L'ing, the leader of an unsuccessful expedition against the Hsiung-nû or Huns, a Turkic people on the north, he incurred the imperial displeasure, was thrown into prison, and suffered a cruel mutilation. Even there he did not cease from his labours. There is at least one passage in his work referring to events that took place in B.C. 91.

Such was Ch'ien, and such was his preparation for the great achievement of his life. He has been called "the Herodotus of China," but I do not think that the comparison of him to the author of "The Nine Muses" does him justice. We have no occasion, however, to speak of the nature and execution of his book, which has been the model of all the subsequent dynastic histories, excepting as regards the chronology of China to which all that I have thus far said has been introductory.

The First Certain Date of B.C. 842.

5. Ch'ien begins his records, we have seen, with the reign of Hwang Ti, which commenced, according to the usual tables, in the year B.C. 2697. But he himself did not venture to assign that or any other date to it. He did not find among the documents, to which he had access, any ancient era by their distance from which the recorders or annalists had been in the habit of showing the sequence of events in their national history. A list of sovereigns and of the lengths of their several reigns was the only method which there was of fixing the chronology of the past. And it would be a sufficiently satisfactory method if we had a list of sovereigns, and of the years that each reigned, that was reliable and complete. But we do not have this. The first year to which Ch'ien ventured to annex the cyclical expression of its date (of which cyclical expression I will speak by and by) was the 38th of Lî, the 10th of the kings of Ch'âu, and corresponding to the year, in our reckoning of time, B.C. 842. From that date downwards the names of the first years of the several cycles are all entered in Ch'ien's chronological table. The year in question, B.C. 842, called *K'ang-sh'ân*, was the first of the period known as *Kung-Ho*, or "Har-

monious Co-operation." The designation has reference to the fact that when king Li fled, or was driven, from the capital in the previous year, the Government was carried on by the dukes of Shão and Cháu, who acted together as Regents for 14 years, till the king's death in B.C. 829, when they placed his son, whom we call king Hsüan, a very different man, upon the throne. We may say, therefore, that B.C. 842 is the first era of Chinese chronology about the correctness of which there can hardly be any difference of opinion. From that time downwards, on to the present day, Chinese historical writers are agreed as to the rise of the different dynasties that have ruled the nation, the names of their several sovereigns, and the length of their reigns.

Substantiation of the Era B.C. 842.

6. Before we try to grope our way to Hwang Tî from the *Kung-Ho* period, it will be well to point out some considerations by which that date and others subsequent to it are substantiated. King Li was succeeded, we have seen, by his son, king Hsüan, in 827. He was succeeded in his turn, after a long reign of 46 years, by his son, king Yü, in 781; and in the *Shih Ching*, or "Book of Ancient Poetry," mention is made of an eclipse of the sun, which took place in Yü's 6th year. It is said:—

"The sun and moon met in the upper sphere,
The day *hsin-máo*, the tenth month of the year;
The moon was new, as she should reappear;
And then the sun, eclipsed, showed evils near;
The moon eclipsed before, and now the sun!
Alas! we men below shall be undone."*

It is found by calculation that this eclipse did take place on that *hsin-máo* day, corresponding to the 29th of August, new style, in B.C. 776; the first year, it may be remarked in passing, of the Olympiad of Corcebus, a principal epoch in Grecian history. The accession of king Yü, it is thus determined, took place in B.C. 781; that of his father king Hsüan in 827; and the fifteen years of his father king Li's dethronement bring us to 842, the era of *Kung-ho*. King Yü was succeeded by king P'ing, and towards the end of his reign, in B.C. 722, there begins the chronicle of the History of Lû, the native state of Confucius, compiled by him, and extending over 242 years, down to B.C. 481, two

* See the *Book of Ancient Poetry* in English verse, p. 229 (Trübner & Co., 1876).

years before he died. The whole period is called that of the *Ch'un Ch'ü*, or Spring and Autumn, from the name which he adopted for his work. The chronicle contains the record of 36 eclipses of the sun, as occurring during the period, of which 32 have been verified by calculation so far as the years and days assigned to them are concerned. The month of some of them is not correctly given, but I will show, ere we have done, that what seems to be an error of the month confirms the genuineness of the entries. Of the other four, which are erroneously reported, I need not speak. The error in regard to them may also be, I believe, satisfactorily accounted for; but here are 32 dates in that space of 242 years about which there can be no dispute. The first eclipse took place on February 14th, 720, and the next entry in the chronicle is that in the month after king P'ing died. The first year of his successor, king Hwan is thus determined to have been B.C. 719, as stated in the history. In a similar way we are able to fix the dates of eleven other sovereigns, bringing us to king Ch'ang, who came to the throne in B.C. 519.

After king Ch'ang we have not the same astronomical aids in verifying the chronology given by Ch'ien, but other sources of certainty are thenceforth multiplied; and I may venture to say that of no ancient history is the chronology so well authenticated as that of China since the era of Kung-Ho, B.C. 842.

The Annalistic Histories, and the Dates in them.

7. I may also say that the great historians of the country have not been forward or anxious to push the dates of their early records to a remote antiquity, though there is a general impression or suspicion to that effect among European writers. Our knowledge of China is derived mainly from Father de Mailla's *Histoire Générale de la Chine*, published at Paris in 1777, and which was translated from Ch'ü Hsi's "T'ung Chien Kang Mû," the preface to which is dated in A.D. 1172. This work was a reconstruction and condensation of another completed in A.D. 1084, by Sze-mâ Kwang, a distinguished statesman and author of our 11th century. They are both constructed on a different system from the dynastic histories, being *Annals digested under Headings and Details*, after the pattern of Confucius's "Ch'un Ch'ü" and the three well-known supplements to it. All that ability and research could do for the history of China seems to be accomplished in these two works. Ch'ü Hsi tells us, however, that when Kwang

made the first scheme of his Annals, he began with the first year of king Wei-lieh, corresponding to our B.C. 425. "Afterwards," it is added, "he extended his dates to the era of *Kung-Ho*. By and by he made his *Examination of Antiquity*, but he could find no dates of years earlier than that era. It was Shào K'ang-chieh* (died in 1077) who pushed the calculations up to the first year of Yáo." We cannot blame this Shào, one of the most famous scholars in the Augustan period of the Sung dynasty and a contemporary of Sze-mâ Kwang himself, we cannot blame him for what he did; but the note of Chû makes it plain that the cyclical dates assigned to events before B.C. 842, are the result of calculations by modern scholars of more or less ingenuity, but not commanding our confidence as if they were drawn from express mention of them in ancient documents. Let us, therefore, take here a new departure from that era, or, for convenience sake, from 827, the first year of king Hsüan, and try to find our way back, in the first place, to the commencement of the Cháu dynasty.

The Bamboo Annals, and Rise of the Cháu Dynasty.

8. We are confronted at this point by a chronology somewhat different from that which is commonly received. It is known as that of the "Bamboo Annals," and professes to be derived from a source with which Sze-mâ Ch'ien was unacquainted. The story goes that in A.D. 279 some lawless parties dug open the grave of king Hsiang of Wei, who died in B.C. 296, and found a great number of bamboo tablets, containing on them more than 100,000 characters. A committee of scholars was, of course, appointed to sit on them and examine them. The names of fifteen different Works, the tablets of which were more or less complete, were made out. Especially there was discovered a Book of Annals, beginning, like Ch'ien's Records, with the reign of Hwang Tì, and coming down to the year B.C. 299, the 16th year of the last sovereign of the Cháu dynasty. There the tablets had lain for 575 years in the bosom of the earth, and now they were thus unexpectedly brought to light:—were they genuine? A controversy necessarily arose on the subject, and it can hardly be said to be yet settled. The opinion of scholars is for the most part unfavourable to their genuineness; but I

* See a note in my prolegomena to the third volume of *The Chinese Classics*, p. 83.

am not concerned to adjudicate here in the strife. Let us accept the years of the Bamboo Annals as one scheme of chronology, and those of Sze-mâ Kwang, ordinarily received, as another, and see the difference between them. Ch'ien, as we have seen, fails us altogether after B.C. 842.

The two schemes enumerate the ten kings of the dynasty before Hsüan, agreeing also in their order and in their names. Five of the reigns are also of the same length—36, 26, 55, 12, and 35 years respectively; the other five are shorter in the Bamboo scheme, being of 6, 19, 9, 8, and 26 years, instead of 7, 51, 15, 16, and 51. The ten in the longer scheme amount to 295 years; in the shorter, to 223. These two numbers, added to 827, give B.C. 1122 and 1050 as the year when the Châu dynasty commenced. The difference between them is only 72 years.

In the last chapter of his works, and wishing to make the distance as short as he possibly could, Mencius says that "from king Wăn to Confucius there were 500 years and more." He, no doubt, intended his "from king Wăn" to be equivalent to "from the beginning of the Châu dynasty," and his "500 years and more" to be equivalent to "more than 500 years and less than 600." In this way we have to conclude that the era of Châu was between B.C. 1051 and 1151. The date of 1122 cannot be far from the truth.

To the Rise of the Shang Dynasty.

9. We go on next to the dynasty of Shang, or Yin which preceded Châu. The received chronology assigns to it 28 reigns and 644 years; that of the Bamboo Books 30 reigns and 508 years. The dynasty began, according to the former, in B.C. 1766; according to the latter, in 1558.

The differences in the number of reigns is unimportant and, if the schemes otherwise agreed, would only affect the length of the dynasty by six years. In the 15th of the Books of Châu in the Shû Ching, the names of three of the Shang sovereigns are given, and the lengths of their reigns, 75, 59, and 33 years,—to show how Heaven crowns a good king with long life and sway. The two schemes agree in the length of those reigns and of five others. Pan Kû, the historian of the first Han dynasty, made the duration of the Shang to be 529 years, and there is a statement in the Tse Chwan that it lasted 600 years. In the passage of Mencius to which I have already referred, he says that from T'ang the founder of Shang, to King Wăn of Châu there were "500 years and more." From all this we may conclude that

the 644 years of the received chronology are too many, and the 508 of the Bamboo Books too few; and the difference between the two schemes has now increased to 208 years.

To the Rise of the Hsiâ Dynasty. A Solar Eclipse.

10. To Hsiâ, the first of the three feudal dynasties, the common scheme assigns 439 years, and the Bamboo Annals 403. The former makes it begin in B.C. 2205, and the latter in 1961. The difference in the two schemes is not great as regards the duration of the dynasty, though they agree only in the length of three of the seventeen reigns which each specifies. Mencius says that from Yâo and Shun to T'ang "there were 500 years and more." If we allow, as both schemes do, 150 years for the period of Yâo and Shun, and add that number to 439 or 403, the sum in each case is under 600 years. The period usually assigned to the Hsiâ dynasty must be nearly correct. In the 4th of the Books of Hsiâ in the Shû, it is said that during the reign of Chung K'ang, the 4th of its kings, there was an eclipse of the sun in the sign Scorpio. The particular year is not mentioned, but only the month and the day. The received chronology refers it to the first year of his reign, the year B.C. 2159. There was, however, no such eclipse in that year; but Father Gaubil calculated that such a phenomenon occurred on the very month and day of Chung K'ang's 5th year. Subsequent calculations, however, seem to have brought it out that that eclipse took place in the night, and could not have been visible at the then capital of China. Chinese astronomers of the T'ang dynasty are said to have proved that there was an eclipse fulfilling the conditions of the text of the Shû in B.C. 2127, which would take us into the reign of Chung K'ang's son. I have been loth to give up the eclipse of Gaubil; but while any uncertainty attaches to it it should not be pressed into the service of chronology.*

The period of Yâo and Shun.

11. We come now to the earliest period of Chinese history for which the claim of documentary evidence can be advanced with any show of reason, the period, namely, of Yâo and Shun.

The first two Parts of the Shû Ching are occupied with the

* While writing this paper, I have received an elaborate article on this Eclipse by Dr. G. Schlegel, Professor of Chinese in the University of Leyden, and Dr. Franz Kühnert, of the Imperial Observatory, Vienna. They think the most likely date for it is the 7th May, 2165 a.c.

events of their time. They contain in all five different Books or Sections; but it cannot be claimed for them, nor indeed for the first Book of the next Part, which describes the labours of the Great Yü on the inundated country, that they are records contemporaneous with the events which they relate, though their compilers, I do not doubt, had some such records before them. At what time the documents, in the form in which we now have them, were composed we cannot tell. I do not, indeed, believe that the compilation of the Shû was made, as Chinese authorities affirm, by Confucius; but he was well acquainted with it; and both he and Mencius regarded it as giving the earliest account of their national history. The existence of Yáo, Shun, and Yü is not to be doubted. I could as soon doubt the existence of Abraham and the other Hebrew patriarchs in our Sacred Scriptures. The question is not as to their existence, but as to the time to be assigned to them on the chart of chronology.

According to the common Chinese scheme, the reign of Yü began in B.C. 2205; that of Shun in B.C. 2255; and that of Yáo in B.C. 2357. The Bamboo Books, of course, reduce these dates, and their cyclical year of Yáo's accession places it in B.C. 2145.

In *The Canon of Yáo*, which forms the first Book of the Shû, that sovereign is found instructing his astronomers to determine the solstices and equinoxes by the culminating of certain stars, which he specifies. The Rev. Dr. Pritchard, Savilian Professor of Astronomy at Oxford, kindly prepared for me a chart of the stars as they were visible in China in B.C. 2300. This has been published in the third volume of *The Sacred Books of the East*, and an inspection of it shows that all the phenomena mentioned by Yáo might have been seen by an intelligent observer at that date. I do not say that this determines the exact place of Yáo in chronology, and much less that it determines the year in which his reign or chieftaincy began; but it makes it probable, to say the least, that the date assigned to him in the common scheme, and the statements in the Shû, are not to be hastily set down as extravagant or without good foundation.

To sum up what has thus far been said:—About the era of Kung-Ho, in B.C. 842, there can be no doubt; and China was then a very considerable nation. Of earlier dates we cannot speak with the same certainty, but we seem to be able to trace the prints of its history up to B.C. 2000 and a few centuries beyond it. The difference of about 200 years in the two schemes of which I have spoken need not seriously

affect our judgment. As the balance of credibility inclines in favour of the longer estimate, up to the 24th century B.C., the chronology of China may be pronounced to be historic.

Can we trace our way back to Hwang Tî?

12. We must plunge now into the shadowy ages before Yâo, and try if we can discover in them any traces of what can be considered historical narration. There must have been men, subjects and rulers, anterior to him. Even in the "Shû," Shun speaks in one place of "the barbarous tribes that were disturbing the Great, Bright Land,"* and in another, of "the emblematic figures delineated by the ancients"† on robes of state. Can we find anywhere contemporaneous accounts of those "ancient" men? It is plain to me that Sze-mâ Ch'ien had no written documents with dates in them earlier than those of the Shû Ching. He begins his history, as I have already stated, with Hwang Tî. Hwang Tî is followed by his grandson, Chwan-hsü. After him comes the Tî Ch'û, also a grandson of Hwang Tî, but not a son of Chwan-hsü. Then we have two sons of this Tî Ch'û, first Chih, who soon comes somehow to a bad end, and gives place to his brother, the famous Yâo. But in his chapter on the five Tî, Ch'ien assigns no length to the reign of Hwang Tî, nor to those of the sovereigns between him and Yâo.

The Bamboo Annals assign to Hwang Tî a reign of 100 years; to his son, whom Ch'ien barely mentions, a very short record, with no specification of the length of his reign; to Chwan-hsü, 78 years, and to the Tî Ch'û 63 years. A note adds that *his* son Ch'ih was deposed after a short reign of nine years.

In the ordinary chronological tables, six years are allowed to Ch'ih, Yâo's brother. Yâo's first year is B.C. 2357; the Tî Ch'û's, 2432; Chwan-hsü's, 2510; Hwang Tî's son Ch'ih's, 2594; and Hwang Tî's, 2697.

When we compare what Ch'ien says about Hwang Tî with what we find in other books, his language must be pronounced very careful and subdued. The Bamboo Annals, for instance, say that in Hwang Tî's 59th year the chiefs of "the Perforated Breasts" and of "the Long Legs" came and made their submission to him. There is a book called *The Book of Hills and Rivers* (concerning which Mr. Wylie inclines to the opinion that it existed in the Châu dynasty and portions of it probably earlier), in this book it is said that anciently

* Part II, i, 20.

† Part II, iv, 4.

there was a region where the people had a hole in their breasts, and carried one another on a pole which went through it, and another region where men's legs were more than 30 feet long. Such notices are not history, but silly fables, and there are none of them in Ch'ien. The nearest approach to them is his account of Hwang Tî's battles with the rebel Ch'ih-yû, against whom he led bears, panthers, tigers, and other fierce animals which he had trained to fight; and this may be only a metaphorical description of the courage of his soldiers. What is more remarkable is that Ch'ien's account contains none of the great inventions, representing mighty strides in the progress of early civilization, gathered from the mass of ancient legends by the labours of Sze-mâ Ch'ang of our 8th century, of Sze-ma Kwang himself, and of Liû Shû, one of Kwang's ablest collaborateurs, who ascribe them to Hwang Tî, and even earlier men, so that they have been prefixed as introductions to some editions of the great Histories of Ch'ien and Kwang, and chronicled in Compendiums of them as veritable achievements of social progress. Ch'ien might have introduced them into his records, but his historical instinct rejected them, and he found no solid ground to rest upon earlier than the documents of the Shû Ching.

Of the Three Hwang and Five Tî.

13. But when speaking, earlier in the Paper, of the ancient institution of historiographers in China, I said that provision was made under it for taking care of the histories transmitted from earlier times. In the Ch'iu Kwan it is said concerning the historiographer of the exterior, "He has charge of the Books of the Three Hwang" (meaning Great or August ones; the character is different from the Hwang of Hwang Tî) "and the Five Tîs." Who were those three Hwang and five Tîs? The question has wonderfully vexed all Chinese archæologists, and hardly two of them agree in their replies to it, though the names themselves, Hwang and Tî, were associated together by the founder of the dynasty of Ch'in to form the imperial designation of himself and all who should descend from him and occupy his throne; and Hwang Tî is now applied by the Chinese to all foreign potentates who have the title of Emperor.

Further, in Tso Kh'û-ming's Commentary and Supplement to the Ch'un Ch'û, under the year B.C. 530, there is a narration,—that the lord of the semi-barbarous region of Ch'û boasted that his grand historiographer could read the Three

Făn, the Five Tien, the Eight Soh, and the Nine Ch'ü. A visitor from another and more civilized State, to whom the boast was made, intimated that he hardly believed it, and made the lord of Ch'ü ill by his reply. Whether his scepticism went so far as to deny the existence of the Three Făn and other books we cannot tell. No Chinese writer whom I have consulted, however, ventures to go so far. Mâ Twan-lin says that "the books have perished, and what is said about them in those two passages need not receive much consideration." Many critics and scholars, however, have not shown Mâ's good sense. K'ung An-kwo, a descendant of Confucius of the 2nd century B.C., thought that the Three Făn were the same as the Books of the Three Hwang in the Châu Kwan, and that of "the Five Tien" we have portions in the first two Books of the Shû, which are called the Tien or Canons of Yáo and Shun. The Eight Soh are supposed to have given an explanation of the Yî King; and if there ever were such a book, I am sorry for the loss of it more than for that of all the others. The Nine Ch'ü, it is thought, may have been a statistical account of the nine regions or provinces into which the country was divided. But the Soh and Ch'ü are gone, and Mâ Twan-lin says nothing to exempt the Five Tien from the same fate; nor does he refer to a publication of our 11th century, which purported to be a recovery of the Făn, but which Chinese scholars generally have consigned to the limbo of things

"Abortive, monstrous, and unkindly mixed;"

in other words, have regarded as a poor attempt at forgery. But that expression in the Châu Kwan, "the Books of the Three Hwang and Five Tî," has led to an amount of chronological speculation of which it is necessary that I should take some further notice.

I will say nothing about the Books; they confessedly perished long ago, unless we have a fragment of them remaining in the Canons of Yáo and Shun. But as to the men themselves—if they ever existed—who were they? Mâ Twan-lin makes them out to have been Fu-hsí (often called Fô-hí, and said to be the founder of the Chinese nation), Shân Nang, the father of husbandry and medicine, and Hwang Tî. This was not Ch'ien's view, for, as we have seen, he makes Hwang Tî the first of the Five Tî, and in his chronological table he has no name, either of Hwang or Tî, before him.

Mâ was influenced, no doubt, by what is said in the

longest appendix to the Yi Ching,* where those three personages are spoken of as having led the way in the processes of civilisation, and taught the savage people around them how to make nets for hunting and fishing, to cultivate grain and vegetables, to build houses for themselves instead of living in caves, and to make and use coffins, to subdue the ox and the horse for their service, and to hold markets at which to exchange commodities for their mutual benefit.

Those old fathers especially invented written characters, and substituted them for the knotted cords which had been previously employed to maintain the memory of events and engagements.

Because these things are related in that appendix to the Yi Ching, the authority of Confucius has been pleaded for them; but only those portions of that appendix which commence with the formula, "The Master said," can with any show of reason be ascribed to him, and that formula is not prefixed to those statements. All that we can say about them is, that when the appendixes to the Yi were made, probably towards the end of the Cháu dynasty and after the death of Confucius, such stories may have been current, and were gathered up and stereotyped in *The Great Supplement*.

But nothing is said there about when or how long those three Hwang reigned. The late Mr. Mayers, adopting B.C. 2697 as the date for Hwang Ti, makes Shān Nāng's reign commence in 2739, and Fu-hsi's, in 2852. In the Tables of Twan Chang-chí, published in 1814, we go through seven reigns before Hwang Ti, in the line of Shān-nāng, up to the first year of that sovereign in 3322. Fifteen reigns in the line of Fuh-hsi then bring us to him; but there is no attempt to give the length of the period, only to Fuh-hsi himself there is assigned a reign of 110 years.

Immense Periods of the Later Táoists.

14. But even these figures dwindle into insignificance before others which are to be found in books all later than our Christian era, and must be put down as nothing but the wild reveries of Táoistic speculation; its wild reveries, especially after it had come into contact with Buddhist missionaries from India, and learned something of the Indian doctrine of a succession of worlds. The earlier Táoist writers, Láo-tsze himself, Lieh-tsze, and Chwang-tsze, all

* *The Sacred Books of the East*, xvi, pp. 382-5.

speculated about the beginning of historical time, and traced the evolution, development, or "becoming" of things through four stages, down to the state of Chaos. One name for this Chaos was P'an-kû, and by and by P'an-kû was personified, and became the first man, or rather the first King, for he found himself among other men who had come into being as mysteriously as himself, and were multiplying without the sanctities of marriage, and living without the knowledge of fire to cook their food or defend themselves from cold. After P'an-kû they place the three Hwang, or rather the three Hwang lines, consisting of 12 Celestial Augustuses, 11 Terrestrial, and 9 Human, to each individual of which they assign a length of 18,000 years. After these there come a number of *Chî* or Periods, something like the Indian *Kalpas* and *Yugas*, the last of which is still running its course; and which all have strange names that do not look or sound like Chinese. The lengths of the several *Chî* are different; but from the beginning or the separation in Chaos of heaven and earth, down to B.C. 481, two years or thereabouts before the death of Confucius, there had elapsed 2,276,000 and odd years, or, according to Sze-ma Ch'ang, 3,276,000 years. Other calculations are much more extravagant. The lowest surely gives an extent of time which should satisfy all the demands of evolutionists. My only excuse for troubling you with such representations is, that I wished to give you a sketch, at least, of all that is to be found in Chinese literature on the chronology of the nation.

But no writer of any character pays attention to those wild speculations. Back to B.C. 842, as I have repeatedly said, the chronology of China is as surely established as we could desire. For about 1500 years more, to the time of Yâo, we seem to have some historical guidance, though the milestones or time-stones of the course become more difficult to decipher the farther back we go. Various considerations connected with the origin of the written characters, and the social condition which the earliest of them indicate in the condition of the then existing people, make me not unwilling to admit earlier centuries not a few for the commencement of Chinese civilisation, but I dare not venture to specify how long or how short that formative period may have been.

The Chinese Cycle of Sixty.

15. There is just one other topic on which I must touch to complete my lecture, and then I will conclude by adverting to a new phase of speculation which has recently been

challenging consideration. The first cyclical name for a year found in Sze-mâ Ch'ien is, we have seen, that for the era of *Kung-Ho*, which he enters as the year *Käng-shän*.

For the measuring of days and years the Chinese use a cycle of *sixty*. It is composed of two series of characters, one consisting of *ten*, which are called "the Heavenly Stems," the other of *twelve*, which are called "the Earthly Branches." The first stem is called *chiá*, and the first branch *tsze*. These two, joined together, make *chiá-tsze*, the first term of the cycle. The two second characters, *yi* and *ch'au*, are similarly joined, and make the second term, and so on with the other terms to the tenth, which is *kwei-yü*.*

* It may be well to subjoin here a table of the cycle both in Chinese and English.

1 甲子, chiá-tsze	21 甲申, chiá-shän	41 甲辰, chiá-ch'än
2 乙丑, yi-ch'äu	22 乙酉, yi-yü	42 乙巳, yi-sze
3 丙寅, ping-yin	23 丙戌, ping-hsü	43 丙午, ping-wü
4 丁卯, ting-mão	24 丁亥, ting-hái	44 丁未, ting-wei
5 戊辰, wü-ch'än	25 戊子, wü-tsze	45 戊申, wü-shän
6 己巳, chi-sze	26 己丑, chi-ch'äu	46 己酉, chi-yü
7 庚午, käng-wü	27 庚寅, käng-yin	47 庚戌, käng-hsü
8 辛未, hsín-wei	28 辛卯, hsín-mão	48 辛亥, hsín-hái
9 壬申, jän-shän	29 壬辰, jän-ch'än	49 壬子, jän-tsze
10 癸酉, kwei-yü	30 癸巳, kwei-sze	50 癸丑, kwei-ch'äu
11 甲戌, chiá-hsü	31 甲午, chiá-wü	51 甲寅, chiá-yin
12 乙亥, yi-hái	32 乙未, yi-wei	52 乙卯, yi-mão
13 丙子, ping-tsze	33 丙申, ping-shän	53 丙辰, ping-ch'än
14 丁丑, ting-ch'äu	34 丁酉, ting-yü	54 丁巳, ting-sze
15 戊寅, wü-yin	35 戊戌, wü-hsü	55 戊午, wü-wü
16 己卯, chi-mão	36 己亥, chi-hái	56 己未, chi-wei
17 庚辰, käng-ch'än	37 庚子, käng-tsze	57 庚申, käng-shän
18 辛巳, hsín-sze	38 辛丑, hsín-ch'äu	58 辛酉, hsín-yü
19 壬午, jän-wü	39 壬寅, jän-yin	59 壬戌, jän-hsü
20 癸未, kwei-wei	40 癸卯, kwei-mão	60 癸亥, kwei-hái

The tenth term exhausts the stems, and then the first stem is joined to the eleventh branch, and the second to the twelfth, making *chiá-hsü* and *yi-hái*, the eleventh and twelfth terms. The twelfth term exhausts the branches; but the third stem is then prefixed to the first branch, making the thirteenth term, which is *ping-tsze*. And so the process goes on till we reach sixty, the least common multiple of ten and twelve. No more different combinations can be made with the two series of characters. The cycle is completed and a new one begins. To speak of sexagenaries instead of centuries sounds strange to us; but I would make little account of that, if we could tell where the inventors got the idea of its component parts,—the ten stems and the twelve branches, and how they were led to the employment of the characters,—for the most part hardly more complex in form than our figures, by which these characters are denoted.

The Cycle at first intended for Days, not Years.

16. Thus far, however, I have been baffled in my endeavours to discover light on these points. It is more important to observe that authorities agree that the object of the cycle at first was to keep a record of days and not of years. In the *Shû* and some of the other *Ching*, we find many such applications of it to days, but not a single instance of its application to years. We have seen that the cyclical names annexed to the years in *Sze-mâ Kwang's* history were not carried back to the time of *Yáo* till our eleventh century; and much in the same way it has been proved that the cyclical dates for the years in the *Bamboo Annals* were not in the tablets when they were disinterred in A.D. 279, but are a subsequent addition. Of the astonishing accuracy, however, with which the cyclical terms were employed in the record of days, we have an example in the notices of the solar eclipses, which are recorded, as I said, in the *Ch'un-ch'ü* of *Confucius*. Of the thirty-six eclipses mentioned in that computation, extending over 242 years, thirty-two have been verified by calculation. The year is always right, and the day; but the month is often wrong; the error in the months being explained by the irregularity with which the process of intercalation,* according to the Chinese method, was conducted. The very error is a strong confirmation of the genuineness of the history;—it is a fine illustration on a con-

* See this proved by Dr. Chalmers in the prolegomena to *The Chinese Classics*, vol. v, pt. i, pp. 93—97.

siderable scale of the adage, *Exceptio probat regulam*. But there was no room for such error in recording the days. That only required care from day to day, and needed no science. "The rule of thumb" was sufficient for it. The task of the Recorders in regard to days was not more difficult than that of Robinson Crusoe on his desert island, when, as he tells us, he marked the lapse of his days by making a notch for each. Illness and accident might occasion intermissions and errors in the case of a single individual. The entries would be made regularly, when to make them was the work of a Board composed of many scholars.

Barbarous Names in Ch'ien's Cyclical Table for Intercalation.

17. We cannot tell when the cyclical terms were first employed to chronicle years as well as days. If the entry of *K'ang-sh'än* in Sze-mä Ch'ien's history for the year B.C. 842 was made by himself, the credit of the ingenious application is due to him. In his work, however, we find a table constructed for the purpose of intercalation over a period of 75 years, the first year being B.C. 104. Instead of employing the Chinese cyclical characters in it, he uses words of two and three syllables, borrowed we may say, evidently, from some foreign language.

This strangely sounding cycle is still 1 of 60, made up of 10 stems* and 12 branches. The first term in the selected period, for instance, properly indicated by *ting-ch'äu*, appear in it as *Yen-f'äng Sheh-t'ü-ko*. Where did Ch'ien find all his dissyllables and trisyllables? He did not invent them himself, for we find two of them in the poem called *Lí Sáo*, written by Ch'ü-yüan of the 4th century, B.C., whose suicide is still commemorated in parts of China by the festival of Dragon Boats. And the outlandish thing did not long maintain itself. The polysyllables were superseded in the time of the usurper Mang, that is, in the period A.D. 9-22, by the monosyllables of the cycle proper. They all occur, indeed, in the vocabulary or *Rudimentary Dictionary of the R Yá*, which is mainly a compilation of the Han Dynasty.†

* *The Historical Records*, Bk. 26, the 4th of Ch'ien's Monographs. The ten stems are read: *yen-f'äng*, *twan-m'äng*, *yü-ch'áo*, *chiang-wú*, *t'ü-wei*, *chü-lí*, *shang-h'äng*, *ch'áo-yang*, *h'äng-ái*, and *shang-chang*; and the twelve branches are *sheh-t'ü-ko*, *tan-eh*, *chih-hsü*, *tá-mang-lo*, *tun-tsang*, *hsieh-hsia*, *ch'ih-fun-jo*, *tso-eh*, *yen-máu*, *tá-yüan-hsien*, *k'wun-tun*, and *jui-han*.

† See Wylie's *Notes on Chinese Literature*, p. 7. He says:—"The authorship is attributed, with considerable probability, to Tsze-hsü (one of

For about 400 years the strange names and their application in chronology are to be found in Chinese literature, and then they disappear. We may compare the case to what geologists call a *fault* in a stratum or vein which occasionally interrupts the progress of mining operations. Where did they come from? What is the meaning of them? I have in vain explored the documents of Chinese literature for answers to these questions. The *Ê Yá* has come down to us with a commentary by Kwo P'ò, a famous Tàoistic scholar and antiquarian, who died in A.D. 324; and he tells us that he did not understand those names, and put them on one side, without attempting to explain them. A discovery may be in store for the explorers in Sanskrit or Assyriology, or some other Eastern mine. But let it be borne in mind that the use of the cycle of sixty for the measurement of days, and, possibly, other periods of time, was long—very long—antecedent to Sze-mâ Ch'ien. How it arose is another mystery, and to me a deeper mystery than his application of it with strange names to the chronology of years.

In Twan Chang-chí's tables, to which I have made reference more than once, "the stems and branches" are entered as an invention of one of the Celestial Augustuses millions of years ago; and then, again, the same tables say that Hwang T'í commissioned Tâ-Náo, one of his ministers, to make the Chiá-tsze cycle. This last is the current tradition, which further places the achievement in Hwang-T'í's 60th year, which would be B.C. 2637. The same statement is found in the introductory chapter to Chû Hsi's *Redaction of Sze-mâ Kwang's History*. The only authority given there, however, for the statement is the work of Liú Shû of our 11th century, whom I have already mentioned as an associate of Sze-mâ Kwang. But Tâ-Náo does not appear in Ch'ien's Records, nor in the Bamboo Annals, nor in Pan Kú's History of the first Han dynasty; and I am not able to accept him as a historical personage. It remains for scholars to discover when and where the cycle of sixty first arose, and its terms took the peculiar and elegant nomenclature which they have in Chinese. Both the stem and branch names appear frequently in the Shû Ching in the Books of Cháu. But the Shû contains only one such earlier specification of a day,—in the 4th of the Books of Shang, representing probably a

the ablest of Confucius' disciples), though there is a tradition that a part of this had also been handed down from Cháu Kung." But it has been proved to be in many parts only of the Han.

day in the 12th month of the year B.C. 1753, according to the common chronology. But that the stem names at least were in existence at a still earlier time is proved by the use of them, though without their branch complements, by the Great Yü, to designate certain days of the year B.C. 2287, according to the same chronology.

Was the Cycle of 60 of Indigenous Origin in China?

18. Are we to rest then in the belief that the sexagenary cycle was of indigenous origin in China? It is impossible for me to work myself into a *furor* on such a question; but I have neither read nor heard anything of force enough to make me think it was not so. The Hindoos had a cycle of 60 years, "the Vrihaspati chakra, or cycle of Jupiter." It is very ancient, but its origin has not been discovered; and it is allowed that possibly it may have gone to the Hindoos from the Babylonians, together with other astronomico-chronological or astrological periods, and various astronomical knowledge.* And it is possible, further, that the knowledge of the cycle may have travelled either from India or Chaldea to China. But is not the reverse equally possible? There is no impossibility either way; and where there is no conclusive evidence to determine the mind in favour of the one supposition or the other, it would serve no purpose to discuss the probabilities which have been urged in favour of the Chinese origin or of one more Western:—

"Non nostrum tantas componere lites.

I prefer to guide myself by an excellent critical canon of Confucius:—"Hearing much, put aside the points of which you stand in doubt, and at the same time speak cautiously of the others."

Hwang T'i not to be Identified with the Babylonian Nakhunta.

19. Some scholars, however, have in recent years eagerly maintained the connexion of the old Chinese literature with Babylonia. This is the burden of an article in the third number of the *Quarterly Review* for 1882; but I have nothing to do with it in this paper, excepting as it finds a proof of the connexion which it affirms in the name of Hwang T'i,

* See *Chinese Researches*, by Thomas Fergusson, pp. 144, 145 (Shang-hái 1886).

about whom I have had occasion to speak so abundantly. "The mythical emperor, Hwang Tî," it is said, "may be identified with Na Khunta, who, according to the Susian Texts, was the chief of the gods. Among the ancient Chinese, Hwang Tî was known as Kon Tî, and his distinctive name is given as *Nak*. In some of the dictionaries of the older forms of the characters, these two names are represented in one group of characters which are to be read Nak-kon-tî. This resemblance of name is sufficiently striking" And, again, "Chinese records speak of Nai-hwang-tî, *i.e.*, Nakhonti."

Such is the proof. It is not worth while to controvert the metamorphosis of the modern sounds *Hwang Tî* into Kon-tî or Khun-ta; but the assertion that the distinctive name of the personage was *Nak* is amusingly wrong. His distinctive appellation was *Yü Hsiung shih*, meaning "the possessor or Lord of Hsiung," Hsiung being the name of the territory or principality which he originally held by descent. The other assertion, that in some dictionaries he appears under the style of *Hsiung Hwang Tî*, is equally baseless, and evidently made by the writer to support his argument. He appears, indeed, as *Yü Hsiung Hwang Tî*, the *shih* being dropped, but never the initial *Yü*. The *Hsiung*, it is contended by those who deal in the restoration of the old sounds, was pronounced *Hiong*. But where did the writer get the transmutation of it into *Nai* and *Nak*? This seemed to me to verge on literary dishonesty, till I happened to look one day into the Chinese chronological tables of the late Mr. Mayers, where I found that he, giving the Chinese characters correctly, yet transliterated the distinctive or personal appellation by *Yü Nai Shih*. That he, a competent scholar and careful writer, should write *nai* instead of *hsiung* is a remarkable instance of the *humana incuria*. The writer in the *Quarterly Review* probably never looked at the Chinese character, and no doubt thought that its sound was correctly transliterated by *nai*. There being in *Yü Hsiung* neither an initial n nor an â, the identification of Hwang Tî with Nak-hunta of course passes away like the baseless fabric of a vision.

According to Canon Rawlinson in his *Five Great Monarchies of the Ancient Eastern World*, Nakhunta, or in full Kudur-Nakhunta, was the first of the Elamite Kings, who constitute the first historical dynasty of Chaldea, commencing in B.C. 2286. He says that the meaning of Kudur-Nakhunta is thought to be the exact equivalent of that of the name

Zoroaster! That may be, or may not be; but I am sure that the man and the name had nothing to do with Yü Hsiung Hwang Tî, the legendary sovereign of China.

Conclusion.

20. On the cycle of China, I have nothing more to say that bears on the chronology of the nation. I cannot account for its origin, nor give the name of its inventor, nor say when the use of it began. I cannot account for the temporary appearance of the barbarous names employed by Sze-mâ Ch'ien and a few others in lieu of its simple terms. Light may come to us on some of these points by and by. But the conclusions which I have sought to set forth are independent of all theories about the cycle. The era of Kung-Ho in B.C. 842 is sufficiently established by astronomical calculation and certain historical notices. From that date we go back, feeling our way slowly and as surely as we can, along the course of time for about 2,000 years more, and then all light of history fails us. The facts of the language convince us that there were men in China, communities of men long before that date, but we can say nothing further about them.

Canon Rawlinson has done his best to describe the five great monarchies of the ancient Eastern world. We are gradually becoming aware that there was a sixth Eastern monarchy greater than any of his five;—the monarchy of China, which probably preceded them, and certainly outlived them; and which still lives on, a modern monarchy as well, showing comparatively few signs of decay, with hardly a wrinkle on its brow! I cannot but hope that there is a future before it, compared with which its long past history shall not be worthy to come into mind.

The PRESIDENT (Sir G. G. Stokes, P.R.S.)—I will ask you in the first instance to return thanks to Professor Legge for his very elaborate and interesting paper (applause). As there are some present conversant with the subject, perhaps they will favour us with their remarks.*

* A brief letter was received from Professor T. de Lacouperie, expressing his dissent from Professor Legge's statement in Section 19—that 'Hwang Tî is not to be identified with the Babylonian Nakhunta.'

Sir THOMAS F. WADE, G.C.M.G.—I have very little, in fact nothing, to add that directly bears on the subject of the chronology of China. I have naturally been, to a certain extent, a student of its history, and have had to pay attention to its chronology subsidiarily; but I am not in possession of anything by which I could attempt to modify or verify a statement of Professor Legge's. There is one point which I think worth mentioning as due to a man who is gone from amongst us, which may be the probable cause of a mistake in Mayers' chronology. Every Chinese student must be sensible of the very great service that he has rendered by the execution of that very valuable little work. It was printed for him a thousand miles away, and he complained to me very bitterly of the number of errors both in English and Chinese in the subject-matter of his work.

As regards the subject-matter of the paper to which we have listened with so much interest, I think everyone who examines Chinese history at all must be struck, not with the difficulties he has to face in respect of the antiquity of Chinese history, but with the astonishing absence of incidents which we might be inclined to doubt. There seems to be no question as to the trustworthiness of Chinese Chronology from the Han dynasty, 206 B.C., and I think when we read through those ancient records that Confucius had before him, and from which he learnt the history of his country, we must be struck with this—that notwithstanding the extraordinary length of the three dynasties presented to us, the incidents that are recorded are very rarely, if ever, incredible. The ages assigned to the individual men are to us, who believe in the patriarchal ages, in no instance astonishing. I think it is impossible to doubt, as Professor Legge suggests, that Fu Hsi, Shǎu Náng, and Hwang Tì were real personages, and that we have their histories, as governors and teachers, before us in one of the most ancient chronicles in the world, known as the Shih Chì. I think I should go further than Professor Legge has gone into a belief in the existence of historiographers in very ancient times, and it is very interesting to observe that in their relations to the government, in the acts they recorded, they stood very much as the prophets of Israel did. They were not only mere recorders of what passed, but they were the mentors of the sovereign, continually recalling to him that this act or the other was in defiance—I will not say of God, for I do not find in Chinese literature that they

were acquainted with God, as I am in the habit of using the word—but in defiance of a supreme Being whose will they believed it to be their duty to obey; and I think the most interesting consideration, although it is outside this immediate question, which presents itself to any student of that ancient history, and I might say of the modern history almost of our own time, is this: that throughout, more particularly in the ancient books, the object of the historiographers appears to have been not so much to recall the facts, but to impress on small Chinese communities that were increasing, that these facts were recorded for a moral purpose, partly to impress on governors their duty to the people, and on governors and governed that Heaven was in it all, that their success and prosperity were accorded to them in proportion as they obeyed the will of Heaven, and that misfortunes and evil were due to their departure from what they knew to be the will of Heaven. I think we find this lesson, with a certain continuity, throughout the ancient books to the days of Confucius; and with the days of Confucius we have this sentiment put forward in the very few treatises that are supposed to have come from his hand, and continually occurring in the utterances of members of that school that has existed to the days in which we live. I am very sorry to be unable to add more.

Dr. C. COLLINGWOOD.—On Chinese subjects we know Professor Legge is *facile princeps*, and perhaps there is no one who is so well able to write so interesting and instructive a paper as we have heard; I am anxious to make an inquiry, the reply to which would, doubtless, gratify others who, like myself, feel an interest in the matter. I have been very desirous to know what is the earliest date of authentic chronology in China. It appears that up to about 842 B.C. is tolerably well authenticated, and that there is good reason for believing, to a certain extent, in history which was written up to 2000 or 2200 years B.C.; but one can easily believe that beyond that there is nothing but a shadow of history, and that it then verges into fable, as do all historical records except, perhaps, those of the Bible; but I would ask Professor Legge what is the earliest known MS. in which these histories are found, and whether in those very early MSS. the characters employed are the same, or nearly the same, as those which are used at the present day. Of course we are all aware that in a spoken language there are a vast number of dialects—

for instance in the Pescadore Islands, which I visited, the islanders could not understand ordinary Chinese; and when I have travelled elsewhere I have found the same thing much nearer the centre of China itself.

The AUTHOR.—In China we have certain monuments going back before the Christian era, but the inscriptions are very short. We have not very old manuscripts in China, but we have some very old manuscripts and written characters, such as you would see in some parts of my paper, being engraved on stone, that is, cut into the stone. In our second century, about A.D. 180, an officer of the government was appointed by the reigning emperor to have cut in large tablets of stone all the characters in all the classical writings, and they were cut there and set up in the capital near the Temple of Confucius. It might have been supposed that these stone tablets would have remained, and yet there are only fragments of them now at the enclosure called "the Forest of Pencils" in the West of China, in the City of Ch'ang-an; but early in the ninth century another set of stone tablets was engraved and set up in front of or near the Palace during the T'ang dynasty, and all these tablets remain in that enclosure to the present day, and copies of them are being taken every day in the year, so that in those manuscripts it is just as if some writer were to find complete copies or records of the Old and New Testaments, going back, in the first place, to the ninth century, and then fragments of one equally complete that went back to our second century. Then there are fragments of monuments of later date cut here and there in Chinese. There are some stone tablets in Peking supposed to contain certain verses in poetry made in the eighth or ninth century before our era. Paper was not made until after the beginning of our era; before then the characters were written, now painted, now perforated, on bamboo and slips of wood. I am very happy that Sir Thomas Wade had no serious objections to urge to any of the statements that I have made in my paper. There is not a single statement in it that I have not investigated for myself and pored over again and again, and we go back, as I have said, with some sort of written authority, to the twenty-fourth century B.C., and we learn there that there must have been men and governments and written laws long before that, but how long we cannot say.

Dr. COLLINGWOOD.—May I add one other question. You say that your copy of these books of Record consist of seventy-three

large volumes. May I ask in how many of these books the examinations are conducted which have so great an influence on Chinese official advancement ?

The AUTHOR.—The examinations have always existed in China from nearly 1000 B.C., but the system of competitive examination was not fully organised until the seventh century of our Christian Era, and embraces all the classical books.

The Rev. F. A. WALKER, D.D.—Is it true that all the historical records connected with Confucius perished, as stated in the public press in England ?

The AUTHOR.—They did not all perish, but the destruction was no doubt very considerable. It was just as if any of the palaces of our great noblemen were burnt down, which would not affect the archives of Great Britain. I myself went over that residence of Confucius about seventeen years ago, and saw a great many things that no doubt are not to be seen there now ; but the fire was nothing like a complete destruction of the works of Confucius. Suppose the establishment of the Bible Society here were to be burnt down, still Bibles would not be burnt out of England ; we should have them everywhere.

Mr. R. C. ASHBY.—May I ask if there still exist any known samples of the knotted cords by which the records were kept ?

The AUTHOR.—No, none.

Mr. ASHBY.—Is there any known system extant of these knotted cords ?

The AUTHOR.—No, they have great difficulty in telling us what they were, and we might not be willing to believe in their existence until we turn to the accounts of the first discoverers of Mexico. There the quippos were found by the Spanish invaders to have been used for chronological record by the Mexicans. This seems to have been the way of keeping the records in China, but you must go back for it, according to the Chinese accounts, to about 4000 B.C. or more.

The Meeting then adjourned.

ORDINARY MEETING.

THE PRESIDENT, SIR G. GABRIEL STOKES, BART., M.P., P.R.S.,
IN THE CHAIR.

The Minutes of the last Meeting* were read and confirmed, and the following Elections were announced :—

LIFE ASSOCIATE :—Rev. J. Boyle, Brazil.

ASSOCIATES :—Rev. L. G. Bonford, M.A., Trowbridge ; Rev. C. F. D'Arcy, M.A., Ireland ; E. A. Ford, Esq., London ; H. A. Harper, Esq., Hampshire ; Rev. J. Hyslop, F.G.S., United States.

HON. COR. MEMBER :—J. Armstrong Smith, Esq., Government Educational Department, Honolulu.

The following paper was then read by the Author :—

THE GARDEN OF EDEN AND BIBLICAL SAGES.
(WITH MAP). By HORMUZD RASSAM, Esq.

IN coming to address you this evening upon most difficult and intricate subjects in connexion with Biblical Sages and their races, together with some disputed ancient sites, I do not wish to enter into any religious or scientific discussions, but merely to explain certain facts founded on my geographical knowledge and historical research. In doing so I must say a few words by way of preface as to the motive which actuated me in taking upon myself the formidable task of contesting certain theories which have been started with reference to the Sacred rivers of Eden and Abraham's and Job's countries and nationalities.

In quoting some passages from Scripture I do not wish to appeal to Holy inspiration in connexion therewith, but I want merely to make use of it in a historical point of view, inasmuch as the points I am going to argue are recorded wholly and solely in the Bible and nowhere else.

Doubtless every person has a right to have his own peculiar theories in spiritual as well as temporal matters, but when important publications, such as Encyclopedias, Dictionaries

* Last Meeting, 25th Session.

† The Author has not desired to fix the site of the *Garden of Eden* of Genesis, but to contest the truth of a theory that it was in Southern Babylonia, some writers having argued from this theory that the Babylonian Garden of Eden was the one described in Genesis. The accompanying map is corrected to May, 1892.

of the Bible, and school books, follow certain mistaken and doubtful conjectures just because certain literary men and scholars of note have entertained new notions in their minds, it becomes rather serious and misleading to those who have not studied the subject well, especially in regard to known geographical positions.

From time immemorial the site of Eden, or Paradise, has been disputed, argued, and speculated upon without a tangible result; but of late years it has been almost unhesitatingly believed that not only the Garden of Eden but the supposed lost two sacred rivers, the *Pison* and the *Gihon*, have been identified in a certain locality in Southern Mesopotamia!

There have been so many errors committed by eminent scholars in their theories about ancient histories, that I now feel quite reluctant to believe mere conjectures and problematic geographical positions in connexion with Biblical lands.

Whether in the *Encyclopedia Britannica*, *Smith's Dictionary of the Bible*, or the commentaries, the site of Sepharvaim or Sippara is put down at Mosayib, a town on the right bank of the Euphrates, on the way from Baghdad to Karbela, and about 30 miles above Babylon, whereas I discovered it, in 1881, 30 miles further north, about five hours' journey to the south-west of Baghdad.

The mound, now called by the Arabs Babel, on the northern limit of Babylon, was also fixed upon as the site of the temple of Belus, but I have found it to be that of the hanging gardens.

No one who knows anything about the structures of Assyrian and Babylonian palaces and temples would think for one moment of fixing on Mosayib as the site of Sippara, because in both of those ancient kingdoms no palace or temple was ever erected excepting on artificial mounds, of which Mosayib is destitute for miles around.

The land and nationality of Abraham have also been uncompromisingly disputed from time immemorial, but now we are assured, on mere conjecture, of the very spot in Southern Babylonia—that is to say, in the supposed Babylonian site of the Garden of Eden, where he was born and brought up, because, forsooth, an inscription was found in a mound in the outskirts of the Arabian desert, called Mackayir, or Magayir, in which then came of a city of Uri, or Uru, exists. This has been construed by some Assyrian scholars to mean the exact *Ur of the Chaldees* out of which Abraham was

called forth by Divine Will. As I have, however, to enter more fully hereafter into the history of Terah's migration, I will begin with the disputed site of the Garden of Eden and explain the geographical position of the four rivers mentioned in Genesis.

It is not easy to determine which of the three ideas is most fantastic: the stretch of pious imagination of the Fathers who gave a mystical interpretation to the existence of Eden, the notion of Josephus and others that it denoted the whole sphere of the earth, or the modern thought that Paradise was situated in the hottest part of Southern Mesopotamia, and the rivers Pison and Gihon were merely canals or artificial cuttings from the Euphrates in ancient Babylonia.

I have, in the first place, to describe the different ideas that have been mooted with reference to the lost site of Paradise; secondly, to contest certain theories which have been adduced in support of the Mesopotamian theory, and lastly, to try and prove from my geographical knowledge that the only part of the world that could be assigned for the ancient site of the Garden of Eden would be the country that surrounds Lake Wan, in Armenia.

The site of the Garden of Eden has been located by different writers in several parts of the eastern hemisphere, from Scandinavia to the South Sea Islands, from China to the Canary Isles, and from the Mountains of the Moon to the coasts of the Baltic. The great rivers of Europe, Asia, and Africa have in turn been brought forward as the identical two of the four sacred rivers, the Pison and the Gihon, and it may be that we have yet to learn that the Garden of Eden was situated either in America or in the Antipodes!

Before enumerating the different ancient and modern opinions as to the locality of Paradise, it is necessary that I should quote what the most primitive record discloses to us regarding the Garden of Eden, in order that we might judge how far the different opinions agree therewith.

The allusion to the four sacred rivers in the first book of the Pentateuch (Genesis ii, 10 to 14) reads thus:—"And a river went out of Eden to water the Garden, and from thence it was parted and became into four heads. The name of the first is Pison; that is it which compasseth the whole land of Havilah, where there is gold; and the gold of that land is good: there is bdellium and the onyx stone. And the name of the second river is Gihon; the same is it that compasseth the whole land of Cush. And the name of the third river is

Hiddekel; that is it which goeth toward the east [or in front] of Assyria. And the fourth river is Euphrates."

No one can dispute that these words are quite plain, and do not require much learning to understand, whether they are read in Hebrew, Aramaic, or any European language. The theories I am going to refer to must strike even an unpretending scholar to be inapplicable to the simple meaning of the text.

The first idea that was started contrary to the plain words of the tenth and following four verses of the second chapter of Genesis was by Josephus, who said that "the garden was watered by one river which ran round about the whole earth, and was parted into four parts. And Phison, which denotes a multitude, running into India, makes its exit into the sea, and is by the Greeks called Ganges. Euphrates also, as well as Tigris, goes down into the Red Sea.* Now the name Euphrates, or Phrath, means either a dispersion or a flower; by Tigris, or Diglah, is signified what is swift, with narrowness; and Geon runs through Egypt, and denotes what arises from the east, which the Greeks call Nile."

Philo, contemporary to Josephus, gave an allegorical meaning to the existence of Eden, which he interpreted as pleasure, a symbol of the soul that sees what is right, exults in virtue, and prefers our enjoyment, the worship of the only wise, to myriads of men's chief delights. The four rivers he explains to be prudence, temperance, courage, and justice, while the main stream of which they are branches is the virtue and goodness which go forth from Eden, the wisdom of God.

Origen considered Paradise to be heaven, the trees angels, and the rivers wisdom.

Ambrosius placed the terrestrial Paradise in the third heaven, in consequence of the expressions used by St. Paul in his second epistle to the Corinthians xii, 2 and 4.

Amongst the Hebrew traditions, mentioned by Jerome, is one that Paradise was created before the world was formed, and is therefore beyond its limits.

Moses Bar Cepha assigns it a middle place between the earth and the firmament.

Others affirm that Paradise was on a mountain which reached nearly to the moon, while other writers held that it

* Josephus does not mean by the Red Sea as it is understood now, but all the South Sea, which included the Red Sea, the Gulf of Aden, and the Persian Gulf, as far as India.

was situated in the third region of the air, and was higher than all the mountains of the earth by twenty cubits, so that the waters of the flood could not reach it.

Bar Habraeus regarded it as a description of the human body.

Of recent writers upon the same topic Major William Sterling believed in the idea, which he published in 1855, that Malwa in India was the site of Paradise and that the lost rivers, the Pison and the Gihon, were the Nerbudda and the Taptee. That the land between these two rivers, resembling Mesopotamia, was Abraham's country!*

The latest and most quaint theory regarding the site of the Garden of Eden was promulgated by no less a distinguished personage than the lamented General Charles George Gordon, of China and Khartoom renown. He harboured the idea that the Seychelles was the place where Adam ate of the forbidden fruit, which he considered to be the "Caco-de-Mer," or the double cocoa-nut, that abounds on those islands. This strange discovery has been noticed in the *Universal Review*, and it may not be uninteresting if I quote a few passages of the article bearing on the point. The writer says:—

"The discovery was that of the identity of the Seychelles Islands with the Garden of Eden, and the evidence of which he (Gordon) sought to prove it was the chart of the Islands, the correspondence of the four rivers mentioned in the Bible with those of the Seychelles, and the identification of the 'Caco-de Mer,' or double cocoa-nut, with the forbidden fruit by which our first parents fell.

"It is easy to laugh or sneer at such a theory; it comes, it may be, a hundred, or so, years too late; but there is little that is really laughable therein when we consider that the man (Gordon) would fight and prevail, secure in his religious belief, against the most overwhelming odds; that he inspired such confidence and trust in his men that those he led were almost invincible; that he did justice and hated iniquity throughout his life; that he left his name as one of the proudest; that he died in a last supreme unselfish effort.

"That he should have dreamt, in one of the brief resting-spaces of his life, this dream of having found man's first habitation and the cause and manner of man's first sin, in these strange far-away Islands of the Seychelles, is but one

* *The Rivers of Paradise and the Children of Shem*, by Major William Sterling. Rivington: London.

more proof of his single-heartedness, of the literal acceptation of Scripture by which his bravest deeds have been rendered possible.”*

I must confess that this is one of the most astounding ideas that have been mooted regarding the lost site of Paradise; and, coming from a firm believer in the Bible, it makes it the more surprising that General Gordon should have conceived such a thing. Had the theorist been an unbeliever, or a doubter, or even one of those who try to explain away difficult passages in the Old Testament to suit their learning and scientific knowledge, I could have easily understood their hypothesis; but such a notion coming from a man like the late guileless Christian, Gordon, who was, as I know, a thorough believer in the literal wording of the Pentateuch, has certainly bewildered me. He seems to have overlooked the fact of the mention of the two well-known historical rivers, the Euphrates and the Tigris, together with Assyria and Mesopotamia which they skirt.

I could quote many others who have, from time to time, tried to interpret in their own peculiar fashion the meaning of certain parts of the Biblical narrative, or strain their geographical knowledge to suit their ideas; but I think I have adduced sufficient authorities for our purpose to show you what conflicting and startling sentiments have been brought forward, from time to time, by theologians, eminent scholars, and deep thinkers, about the lost site of our first parents' habitation.

I have now to take up the prominent, and what seems to me, at present, the most accepted problem, of fixing the position of the Garden of Eden in Babylonia.

Among other writers, Calvin, Huet, and Bochart place Eden in Southern Mesopotamia, on the supposition that the *Pison* and the *Gihon* are the two channels by which the united rivers Euphrates and Tigris, now called Shatt-al-Arab, enter the Persian Gulf.

Hopkinson considers the *Pison* to be Nahr-Malka, the largest artificial canal which joined, in the days of yore, the Euphrates with the Tigris near the ancient Seleucia and Ctesiphon; but Grætius made it to be the *Gihon*. Even those commentators who agree in placing the Garden of Eden on Shatt-al-Arab, the river formed by the junction of the Euphrates and the Tigris, do not agree as to which of the branches the two lost rivers represent.

* *The Universal Review*, No. 8, Dec. 15th, 1868.

There are at present a number of eminent scholars who support the Babylonian theory, the latest of whom is my friend Dr. Friedrich Delitzsch, Professor of Assyriology at Leipzig, whose arguments, set forth in a work he published in Germany,* I shall try to prove quite untenable when compared with the plain words of Holy Writ which I have already quoted.

Although I do not presume to stand on a level with their learning, I will nevertheless dare to contest, on geographical, historical, and trigonometrical grounds, every point that they have adduced in support of their hypothesis.

I cannot boast of being an Assyrian or Akkadian scholar, but I know enough of Semitic languages to convince me that certain mysterious words that have been found amongst the inscriptions discovered in Babylonia have no more connection with Hebrew or Aramaic than with Persian or Turkish. If, as we are made to understand, the "Gan-Dunias" of the Akkadian inscription can be harmonized with the Hebrew words גן עדן (Garden of Eden), then we could easily render from the Hebrew גן the English word "garden," because it begins and ends with the same letters ג gamal, and ך noon, or g and n. The word *Dunias* might also be construed to mean in Arabic the "world," because in that language it is written دنيا *Dinia*, and جنه *Jenna*, which means "garden" in the same language, could easily be turned into *ganna*, by pronouncing the g as in gum, as they do in Egypt; and so both words could then be interpreted into the "Garden of the world," as some men have supposed the Garden of Eden to mean.

If we trust to conjectures and coincidences, nothing can be more tangible than to suppose that *Tally-ho*, the cry of the fox-hunters in this country, is derived from Chaldean or Aramaic, because תלל *talla*, means fox, and הו *ha*, behold in that language, that is to say *behold the fox*.

Also, that the word *Europe* is derived from the same language, because הור *Hor*, means white, and אפא *appa*, face, in Chaldean, so both would sound like *Europa* from *horappa*.

Moreover, no Assyrian scholar can say that the *Gan-Dunias*, in the cuneiform characters, represent the Hebrew text, either in idiom or construction, and the fact that an allusion is made to such words by a Gentile scribe, without believing or

* *Wo lag das Paradies?*

knowing the sacred narrative, does not prove to me that they have any connexion with it.

In communicating with my friend Mr. Theophilus G. Pinches of the Department of Egyptian and Assyrian antiquities at the British Museum about the Babylonian theory concerning the site of the Garden of Eden, he replied as follows:—

“With regard to the site of Paradise, as explained in Genesis, I am in favour of Armenia. I made a few remarks upon the subject as early as December, 1881 (see the “Proceedings of the Society of Biblical Archæology” for that date*) in consequence of my discovery that the district now known as Cappadocia corresponded, either wholly or in part, with the Kusua of a Cappadocian tablet and the Kûsu of the Assyrian horse-tablets, &c. This, of course, would correspond with the land of Cush of the Bible. I do not now recollect, however, why I added the footnote (note § below) on page 30. I suppose that I either wished not to commit myself to any definite expression of opinion, or that I meant to say: ‘The most likely position of the Babylonian Paradise is the region

* The remarks which Mr. Pinches alluded to above are the following: “The question of the situation of the land of the Kusûa, as well as that of the form of the name when used to denote the country itself, seems to be set at rest by one of the tablets from which the above list of names of towns is taken. This tablet, which is first published on Plate 53 of the work above referred to (the 2nd vol. of *The Cuneiform Inscriptions of Western Asia*), contains, in the second column of the obverse, the names of the cities and countries in the neighbourhood of the Taurus range of mountains, and includes (1.13) the land of the† Kûsu† (𐎧𐎠 𐎠𐎢𐎽𐎢𐏁 𐎠𐎢𐎽𐎢𐏁, *mdt Ku-u-su*). It is evident, therefore, from the connection in which it occurs, that we are to understand by this Cappadocia, and not Ethiopia. This identification sheds at once a new light on two important passages in the Book of Genesis the first of which is in chap. ii, v. 13, where the River Gihon, which “encompasseth the whole land of Cush,” is mentioned; and the other in chap. x, v., 8, where is recorded the fact that Cush begat Nimrod. Now, in both these passages it has been supposed by some scholars that the land of Cush here mentioned is the same as Ethiopia; but it seems to me much better to identify it in both cases with Cappadocia. The question of the position of Paradise is also connected with these identifications,§ on account of the removal of the river Gihon up thither.

† The word “the” seems to be due to a misprint—read “the land of Kûsu.”

‡ The word is given here in its simple geographic form, but on the “horse-tablets” (Assyrian tablets referring to the transport of horses) it always occurs in the “gentilic” form *Kusûa*, “Cushite.”

§ The most likely position of Paradise is the region of the Persian Gulf (“the remote place at the mouths of the rivers”).

of the Persian Gulf'—the place to which Ūm-napištim, the Chaldean Noah, was translated, as to a paradise (see the Chaldean account of the Deluge). It is not improbable that the Babylonian idea of the position of Paradise should have been, that it lay somewhere in their own native land. This question, however, is quite distinct from that of the position of the Biblical Paradise, as described in Genesis.

“You will see on p. 30 of the ‘Proceedings of the Society of Biblical Archæology,’ December, 1881, that I have pointed out the duality of names which formerly existed in the ancient East, places at a distance from each other being designated in the same way. Thus we have the Musri, to the north of Assyria, and the name Musur (Misir) applied to Egypt; the Cush, Cappadocia and the Cush, Ethiopia; the Makan and Meluḥḥa in Babylonia and the districts of the same name to the southwest of Babylonia, formerly regarded as names of districts of Egypt, but now supposed to designate the peninsula of Sinai; and, finally, the use of the ideogram for Akkad (𐎶 𐎠 𐎶 𐎠) to designate both Armenia and the northern part of Babylonia—all these peculiarities have a meaning, and seem to me to bear upon the question of the position of Paradise, which, as I have said, the Babylonians seem to have wished to locate in their own country.* There is another duality of names, however, which seems to me to be of very great importance—Delitzsch has pointed out in his *Paradies*, that the cuneiform inscriptions inform us that the non-Semitic name of the Araxes was Guḥandê, a name which he identifies with Gihon. He does not, however, draw the obvious conclusion that this may be merely copied from the Armenian Gaiḥûn-er-Râs—‘the Gihon-Araxes,’ with a folk-etymology thrown in.† The Babylonian *Guḥandê* = *Araḥtu* is therefore a reflection only of the Armenian *Gaiḥûn* (*Gihon*) *er-Râs* (*Araxes*).”

It is necessary that the number, direction, and names of the four rivers which rose from one source, *i.e.*, the river of Eden, must first be proved to exist in Babylonia before we can be made to believe that the Garden of Eden was situated in Southern Babylonia. All I can say is, if the Babylonians fancied that a *Gan-dunias* was localized in their marshy country, it had no connexion whatever with the Hebrew *Eden*, out of which issued a river which was divided on entering

* It is the Babylonian Paradise which Delitzsch has found.

† *Guḥandê* is an Akkadian word, meaning “let him speak.”

the Garden, (rendered in the Septuagint, Paradise) into four *heads* or ראשים Rasheem. As a matter of fact the Rasheem or heads in this instance mean neither more nor less than chief or principal rivers, and not artificial canals or offshoots caused by the overflow of a river. These latter in this instance cannot be called Rasheem or heads, as understood in the Hebrew, ראשון Rasheen in Aramaic, and رؤوس Roos in Arabic, though in other applications Rash may mean differently.*

With reference to the contention of Dr. Delitzsch that Babylonia represented the Garden of Eden on account of its fertility, the abundance of the water supply, and the richness of its productions of cereals and the palm, I wish he had visited the sources of the Euphrates and the Tigris before he came to that conclusion. I feel confident that on examining the country which I have traversed, where the sources of those two rivers rise, in the highlands of Armenia, and comparing it with Babylonia, he would without the least hesitation pronounce in favour of the former for beauty, grandeur, and productions, as the most likely spot where our fallen parents first dwelt.

Had Babylon been such a magnificent country, and redundant with beautiful landscape, one of its famous kings would not have troubled himself to erect an artificial mound and plant it with all kinds of trees to resemble a mountain scene to please his Median consort, who had sighed for her beloved highlands.

According to Berosus, the Chaldean historian, as quoted by Josephus,† the then monarch of Babylon “erected very high walks supported by some pillars, and by planting what was called *pensile Paradise*, and replenishing it with all sorts of trees, he rendered the prospect of an exact resemblance to a mountainous district. This he did to please his queen, because she had been brought up in Media, and was fond of a mountainous situation.”

As regards the canals of which Professor Delitzsch tries to create an existence to the Pison and Gihon, all I can say is that the conjecture is futile both in fact and theory; because, we are told plainly in the Sacred Record, that a river went

* In pronouncing Semitic words like the Hebrew, Aramaic, and Arabic, I follow those who read them as their living tongues, and not as those who only study them as dead languages. Nor do I read them according to the points invented in late years, but simply pronounce them in the same way as those whose language it is, without the vowel points.

† Josephus against Apion 1, 19.

out of Eden to water the Garden which was *parted*, or divided, and *became into four heads*, one of which was called *Euphrates*, and *not* that the Euphrates was divided and became into three rivers. The canals which the learned Professor mentions are merely artificial branches dug out from the Euphrates about 900 miles below its source, and it is quite a mystery to me how any one can make them correspond with the two rivers Pison and Gihon, which sprang from the same source as the other well-known Biblical rivers, the Hiddekel and Euphrates. The four rivers must have branched off simultaneously from the same quarter and run down their respective courses.

Professor Delitzsch also brings forward another argument in support of his Babylonian theory regarding the site of the Garden of Eden, that the word נַהַר *Nahr* in the Semitic languages means both a natural river and artificial canal. He is right in one sense if we take the *Nahr* to mean a *stream*, whether it is the Mississippi or any of the English artificial canals, but he seems not to know that in all Biblical lands there are local names to distinguish the difference between a great river and a canal. For instance, rivers like the Euphrates, Tigris, and Nile, are either called the river or they are mentioned by name. Supposing we take the Thames and the London canals as an example, the former would be designated either as the river or the Thames, and the latter as the Paddington, the Regent, or the Surrey, with or without the addition of river to them. Thus the Euphrates would be called in Babylonia either the Shatt, the *Nahr*, or the Firath (the Arabic word for Euphrates), while the artificial canals would be styled by their proper names, or with the word *Nahr* attached, like the Mahhaweel, or *Nahr-al-Mahhaweel*, the Hindia, or *Nahr-al-Hindia*, the Tahmazzia, or *Nahr-al-Tahmazzia*, and so forth. Besides the Euphrates, the Neel canal and the river Hai are called Shatt, because the former was named after the great Egyptian river, and the latter a natural outlet from the Tigris, opposite Coot-al-Omara, which runs into the Euphrates a few miles above Souk-ash-Shiokh.

Moreover, if we refer to the Hebrew Scripture, we shall find the word *Nahr* was very seldom used for any other stream but a natural river. For instance, in Ezra, which is written in Chaldee, the Euphrates is always called there by the word נַהַר, *Nahr*, but when Daniel wrote about his vision at Elam, he called rivers of Ulai אַבְּל, *Abbal*, or אֹבְבַל, *Obbal*.*

* Daniel vii., 2, 3, and 6.

It will also be seen from what is recorded in the 25th verse of the 37th chapter of Isaiah, when Sennacherib's boasting was referred to, the mention of the "rivers" there evidently meant canals, and written in Hebrew יַאֲרֵי, Yaoree, and not נַהֲרֹת, Nahrouth.*

The Neel canal, which Professor Delitzsch identifies with the River Gihon, is of a recent construction. I mean it was dug since the Arabian conquest by one of the Arab caliphs who came from Egypt, and gave it the name of An-Neel, in remembrance of the African Nile, and this is the reason why it is called Shatt. It is the same as the Hindia canal, the source of the Pallacopas, which was repaired by an Indian prince, who gave it the name of India. On examining the Neel it would be found that it had been dug through and over other ancient canals, and in comparison to other cuttings, it looks quite a third-rate channel. All the great canals are blocked up, and their grandeur can only be known now from the huge embankments thrown up from the old diggings.

The Pallacopas, which the same author identifies with the Pison, is partly artificial and partly natural. It is dug out of the right bank of the Euphrates, halfway between the Mahhaweel Canal and Mosayib. After it passes in a regular course for about fifteen miles, it pours into the lake which skirts Birs Nimroud, and reaches as far as Kufa, a distance of about 35 miles, and from what Arrian, the historian of Alexander the Great, says, even at his time it was not mistaken for a regular river. His account of it is as follows:—

"But, in the meantime, while vessels are being constructed, and a harbour dug at Babylon, Alexander was conveyed by the Euphrates from Babylon to the river Pallacopas. This is distant from Babylon about 800 stadia. Moreover, this Pallacopas is a channel cut from the Euphrates, not a river rising from springs, for the Euphrates, flowing from the mountains of Armenia, flows during the winter between banks, inasmuch as it has not much water, but when spring sets in, and much more under the heat of summer, it increases greatly, and, overflowing its banks, inundates the plains of Assyria. For then the snows, melting in the mountains of Armenia, increase its waters in a wonderful manner, and thus

* "I have digged, and drunk water; and with the sole of my feet have I dried up all the rivers of the besieged places,"—or according to the revised version, "with the sole of my feet will I dry up all the rivers of Egypt."

raised to a great height, it overwhelms the whole region adjoining, unless any person turning it aside should discharge it through the Pallacopas into the lakes and marshes, which, indeed, by the entrance of this channel, even to the region neighbouring on Arabia, and from thence into stagnant places, and at length, by many and unknown windings, is carried to the sea. But when the snows are dissolved, especially about the setting of *vergiliae*, the Euphrates grows small, but nevertheless, a great part of it is drained by the Pallacopas into the marshes. Unless, therefore, some one should again block up the channel of the Pallacopas, so that the water, repulsed near the banks (dams), remains in the channel, it may so greatly drain the Euphrates into it, that thus the fields of Assyria cannot be irrigated by it. Wherefore, a governor of Babylonia, with much labour, blocked up the exits of the Euphrates into the Pallacopas (although they are not opened with much difficulty), because in those parts the soil is marshy and for the most part muddy, seeing that it is well washed by the water of the river; it may allow of the less easy shutting out of the water, so that they may have occupied more than 10,000 Assyrians three whole months at this work. When these things were told to Alexander, they incited him to meditate something to the advantage of Assyria. Therefore, at the point where the flow of the Euphrates is drained into the Pallacopas, he resolved to dam its mouth firmly up. When he had proceeded thirty stadia, the ground was observed to be rocky, of such kind that if a cutting were carried to the ancient channel of the Pallacopas, the water might be prevented from overflowing by means of the firmness of the soil, and that its escape might be able to be effected without difficulty at a stated period of the year. Therefore Alexander both sailed to the Pallacopas, and descended by it to the marshes, into the region of Arabia. There, having fixed on a certain convenient locality, he built a city, and surrounded it with walls, and conveyed to it a colony of Greek mercenaries, volunteers, and others, who, by reason of their age or any debility, had become useless in war.”*

Arrian, however, was in error when he said that the mouth of the Pallacopas was 800 stadia or 90 miles above Babylon, as the Hindia is not more than fifteen miles distant from the ruins, unless he mistook another canal for it higher up, which started about twenty miles below Heet, the ancient Is, and

* Arrian, *De. Exp. Alex.*, lib. vii., c. 21.

irrigated the alluvial soil to the west of the Euphrates as far as Nijif.

Herodotus gives another version of the origin of the Pallacopas, and as his account is also interesting I will quote what he says on the subject. His words are these:—

“The city (Babylon), as I said, was divided by the river into two distinct portions. Under the former kings, if a man wanted to pass from one of these divisions to the other, he had to cross in a boat; which must, it seems to me, have been very troublesome. Accordingly, while she was digging the lake, Nitocris bethought herself of turning it to a use which should at once remove this inconvenience, and enable her to leave another monument of her reign over Babylon. She gave orders for the hewing of immense blocks of stone, and when they were ready and the basin was excavated, she turned the entire stream of the Euphrates into the cutting, and thus for a time, while the basin was filling, the natural channel of the river was left dry. Forthwith she set to work, and in the first place lined the banks of the stream within the city with quays of burnt brick, and also bricked the landing-places opposite the river gates, adopting throughout the same fashion of brickwork which had been used in the town wall; after which, with the materials which had been prepared, she built, as near the middle of the town as possible, a stone bridge, the blocks whereof were bound together with iron and lead. In the daytime square wooden platforms were laid along from pier to pier, on which the inhabitants crossed the stream; but at night they were withdrawn, to prevent people passing from side to side in the dark to commit robberies. When the river had filled the cutting, and the bridge was finished, the Euphrates was turned back again into its ancient bed; and thus the basin, transformed suddenly into a lake, was seen to answer the purpose for which it was made, and the inhabitants, by help of the basin, obtained the advantage of a bridge.” *

It also appears from the account given by Herodotus about the capture of Babylon by Cyrus that he had used the Pallacopas for his stratagem by turning the bulk of the Euphrates into it, which enabled his army to enter the city by the bed of the river. The narrative of Herodotus is so interesting that I am tempted to quote it:—

He says that “Cyrus had placed a portion of his army at the point where the river enters the city, and another body

* Rawlinson's *Herodotus*, Book I., chap. 186.

at the back of the place where it issues forth, with orders to march into the town by the bed of the stream as soon as the water became shallow enough; he then himself drew off with the unwarlike portion of his host, and made for the place where Nitocris dug the basin for the river, where he did exactly what she had done formerly: he turned the Euphrates by a canal into the basin, which was then a marsh, on which the river sank to such an extent that the natural bed of the stream became fordable. Hereupon, the Persians, who had been left for the purpose at Babylon by the river-side, entered the stream, which had now sunk so as to reach about midway up a man's thigh, and thus got into the town."*

When Babylonia was at the zenith of its prosperity no country could have surpassed it in the system of its irrigation, as the whole alluvial soil between the Euphrates and the Tigris, a distance of about 300 miles in length, and varying between 20 and 80 miles in width, was intersected with huge canals supplying hundreds of other watercourses, which ran in all directions to complete the water communication between all parts of the province. Four of the largest canals, whose mountainlike embankments, produced by the deep cuttings, appear to have joined the two rivers, so as to be utilized from either when the Euphrates and the Tigris overflowed their banks. The gradient between them is so slight that any extraordinary rise from the Euphrates or the Tigris would answer the purpose for which the canals were intended.

The great rise which takes place periodically does not occur, generally speaking, in both rivers at the same time, consequently I have often seen the Euphrates overflowing its left bank and inundating the plain eastward, and at other times the Tigris rose to such a height near Baghdad that it spread over its right bank and took a westerly and south-westerly direction.

So little rain falls in Southern Mesopotamia that if it were not for the rivers of Armenia that tract of land would be a mere waste and a howling wilderness. There is no natural river to the south of the Khaboor, which is about 300 miles above Babylon; nor are there any tributaries to the Euphrates after the said Khaboor joins it, but there are no less than five large rivers that pour into the Tigris after it passes Nineveh. The great Zab, or Zabatus, of Xenophon, which I consider

* Rawlinson's *Herodotus*, Book I., chap. 191.

to be the Pison of the Bible, as I shall try to prove presently, joins the Tigris a few miles below Nimroud, the supposed Calah mentioned in the tenth chapter of Genesis as having been founded by Nimroud, "the mighty hunter before the Lord."

The greatest objection, I think, to the theory that the situation of the Garden of Eden was at the junction of the Euphrates with the Tigris, is the difficulty of harmonizing the description of the countries encompassed by the rivers of Pison and Gihon with the land of Shinar.* We are told that the River Pison encompasseth the land of Havilah, when we know that the kingdom of Nimroud contained these provinces, namely, Babylon, or Babel, Erech, and Accad; and if Havilah existed there also, the same sacred writer would have included it in it. Then the Gihon is said to have compassed the whole land of Cush, and not of Nimroud, when Shinar was well known in those days, and which was really encompassed by the Euphrates and the Tigris, and not by the Pison and Gihon.†

Having disposed of the Babylonian theory regarding the Garden of Eden, I must now submit to my learned fellow-members my own opinion of what I consider to be, according to Biblical account, the legitimate site of the long-lost earthly Paradise. In doing so, I crave your indulgence in what might seem tedious quotations from different authorities for the purpose of substantiating certain problems which I have to lay before you with regard to the sources of the four rivers of Eden, and I trust that I may be pardoned if I should commit any error in my geological calculations, as my scientific knowledge on that head is somewhat meagre. I merely refer to what other more competent authorities have said about the effects of earthquakes upon terrestrial waters in different parts of the world, even to this century,

* Genesis x., 10.

† It is mentioned in Faussett's *Englishman's Bible Cyclopaedia* that "the Primitive Eden was somewhere in the locality containing the conjoined Euphrates and the Tigris (= "Hiddekel"), which branch off northward into those two rivers, and southward branch into two channels again below Bossara before falling into the sea, Gihon the east channel and Pison the west. Havilah, near the west channel, would thus be north-east Arabia; and Cush (= "Ethiopia") near the east channel would be Kissia, Chuzestan, or Susiana. The united rivers are called the Shat-al-Arab." Knowing the country as I do, I must confess the foregoing is quite unintelligible to me, and it is doubtful if any one else can quite comprehend this imaginative description of the site of the Garden of Eden.

when subterranean convulsions have changed mountains into valleys and valleys into mountains, deserts into lakes and lakes into deserts.*

It has been the fond desire of commentators, whose object it was to put a literal construction on the passage that "a river went out of Eden to water the garden," to find two streams to correspond with the Pison and Gihon, which, together with the Tigris and Euphrates, formed a common origin; and thus the difficulty experienced in determining upon the exact spot has led many theologians and linguists to wander from the plain meaning of the narrative.

Reland, Brugsch, and other writers have identified the Gihon with the Armenian Araxes, called by the Turks and Persians Aras, which rises at Erzeroom, and, after uniting with the Kyros, flows into the Caspian Sea. They make the Pison either the Phasis, which issues in the Caucasus and flows westward into the Black Sea, or the old Armenian Kyros, the present Kur, which rises westward of Kars. This last opinion, which was shared by Kurtz and Bunsen, was regarded by the late Dr. Franz Delitzsch, the father of the present Professor of Assyriology at Leipzig, as the most acceptable.

The Araxes may or may not be a portion of one of the four rivers of Paradise, because in olden times the changes that took place in the courses of rivers through the effect of volcanic eruption and violent earthquake convulsions all over the world, as illustrated by geological research, might have happened in Armenia also and destroyed the common source of the four rivers and caused them to flow in different directions; but why the Phises or the Kyros, two insignificant rivers, have been chosen for the Pison when there are more important rivers in the neighbourhood is a puzzle to me.

My own opinion is the two rivers mentioned in the second chapter of Genesis are now existing, though not in the same condition as they were when they first *parted* from one source, together with the Hiddekel and the Euphrates. The last-named river having been simply mentioned as the Prat, or Euphrates, without a distinctive peculiarity, indicates that it was well known to the Israelites, from their ancient association with that *great river* through the emigration of Abraham and the sojourn of Jacob in Padan Aram.

* Luther Clericus and others, and more recently Baumgarten, have inclined to the supposition that the flood had altered the course of the streams, and thus rendered it impossible to identify the locality of Eden from the description given in Genesis.

The Pison, which I take to be the great Zab, was outside or eastward of the Tigris, as the Gihon was outside the Euphrates to the west, in the form of the human body; that is to say, the legs answering to the Euphrates and Tigris, and the arms to the Gihon and Pison. The sources of the Pison rise in the Albae district, on the border of the Turco-Persian boundary, about fifty miles to the south-east of Lake Wan. It passes through the Assyrian and Coordistan mountains, and after it proceeds about 90 miles southward, as far as Bet Kara, a Nestorian village in Chall, it disappears. It then reappears near the village of Mender, in the Sharwan district, after having run underground for more than 30 miles, when it proceeds on its course for 70 miles further, and joins the Tigris about 22 miles below Mossul.*

Not a little discussion has taken place amongst eminent scholars as to the countries the rivers Pison and Gihon encompassed, and what was the meaning of Havilah, and the products that it contained, namely, the bdellium and the onyx stone. Learned philologists have puzzled their heads from time to time to suit their imaginations by twisting and distorting certain words which might have had quite a different signification to what they thought them to be; just as we have now some words in the English language which express two and sometimes three distinct meanings.

It is my earnest desire to try and show from personal observations and late discoveries where, most probably, the Pison and Gihon were flowing in their primitive existence, and why their common source is now difficult to trace.

In entering into the controversy of the whereabouts of the four rivers of Paradise, their sources, positions, and directions must be taken into account, inasmuch as the countries mentioned in the sacred narrative, which they traverse, ought to prove in a great measure in what part of the globe they are to be found.

We are told that "the name of the third river is Hiddekel, that is it which goeth towards the east of Assyria"; or, as the revised has it, *which goeth in front of Assyria*. The words *before* and *front* in Hebrew and Chaldee or Aramaic, are represented by קדם Kdaam, or front, and in this sense it means neither more nor less than front or before, though different scholars have cavilled at the real sense, as if that

* It is an interesting fact that the Nestorian Chaldeans consider the Zab to be the Pison, and their Patriarch dates his official letters from "the bank of Pison, the river of Eden."

would make any difference to the course of the Tigris. There is no doubt that the writer meant to say that the third river, after having separated from the river of Eden, flowed down in front of Assyria, the same as an Englishman might say that the river Thames runs in front or towards the east of Middlesex.

The Assyria of the Hebrews had a limited sense; that is to say to that part of the country which was immediately in the neighbourhood of Nineveh. It is surprising to me how any one can find it difficult in understanding the passage with regard to the flow of the Tigris in front of Assyria. At all events this is one of the rivers of the Garden of Eden, the existence of which, together with the Euphrates, already alluded to, is not doubted.

The river Pison, which, as I said before, I identify with the great Zab, was said to compass "the whole land of Havilah, where there is gold; and the gold of that land is good"; there was also "bdellium and the onyx stone." So far as the land of Havilah is concerned, it is now quite impossible to say exactly where it lay, and what were its limits; but from the description of its productions we might fix upon the upper part of the Zab for its locality. Those mountain regions abound with all kinds of metallic mines, whether of copper, iron, or lead. Sir Henry Layard, who visited that country in 1846, discovered an old copper mine in the neighbourhood of Asheetha, and not far from Hairamoon and Gairamoon, into which he and I penetrated for some distance.* His opinion is that, according to sacred and profane authors, it was collected in such extraordinary quantities in Nineveh and Babylon that as it is generally included in the Egyptian inscriptions amongst metals brought from that part of Asia, so it is to be presumed that mines of it were once worked within the Assyrian dominions.†

* Sir Henry Layard's account of that mine is so interesting that I must quote his own words in full. He says: "At a distance from the entrance copper ores were scattered in abundance amongst the loose stones. I descended with some difficulty, and discovered many passages running in various directions, all more or less blocked up with rubbish and earth, much of which we had to remove before I could explore the interior of the mine. The copper runs in veins of bright blue, in small crystals, in compact masses, and in powder, which I could scrape out of the cracks of the rocks with a knife. I recognized at once in the latter the material used to colour the bricks and ornaments in the Assyrian palaces" (*Nineveh and its Remains*, vol. i, 223).

† Sardanapalus is said to have placed one hundred and fifty golden beds, and as many tables of the same metal, on his funeral pile, besides gold and

I have no doubt if a well organised geological survey be conducted in that country there would be traces found of that precious ore. Whether we read of the golden beds of Sardanapalus, the fabulous treasure found in Nineveh when it was captured, the massive golden statue of Jupiter and its altar in the temple of Belus, and the image which Nebuchadnezzar set up in the plain of Dura, three score cubits in height, and six in breadth, we cannot but conclude that gold must have existed in abundance somewhere in the Assyrian and Babylonian Dominions.*

We now come to the bdellium that existed in Havilah and about the meaning of which there has been much discussion amongst the learned; but one thing is certain that the majority of commentators have agreed that it was a kind of gum or resin. With reference to this I can point out two kinds of valuable secretion of trees which are to be found in the country compassed by the Zab or Pison. The first is the Mann-as-Samma (two Arabic words which mean Manna of Heaven). It is collected at a certain time of the year from off rocks and trees and taken to Mossul for sale. When it is melted together it becomes like toffee and is very much appreciated both in Mesopotamia and Assyria.†

silver vases and ornaments in enormous quantities, and purple and many coloured raiments (*Athenæus*, lib. xii). When Nineveh was taken it contained, according to some absurd tradition, £26,000,000,000 sterling in gold!—*Nineveh and Its Remains*, vol. ii, 416.)

* Herodotus mentions in his account about the temple of Belus in Babylon thus: "Below in the same precinct, there is a second temple, in which is a sitting figure of Jupiter, all of gold. Before the figure stands a large golden table, and the throne whereon it sits, and the base on which the throne is placed, are likewise of gold. The Chaldæans told me that all the gold together was eight hundred talents' weight. Outside the temple are two altars, one of solid gold, on which it is only lawful to offer sucklings; the other a common altar, but of great size, on which the full-grown animals are sacrificed. It is also on the great altar that the Chaldæans burn the frankincense, which is offered to the amount of a thousand talents' weight, every year, at the festival of the god. In the time of Cyrus there was likewise in this temple the figure of a man, twelve cubits high, entirely of solid gold. I myself did not see this figure, but I relate what the Chaldæans report concerning it. Darius, the son of Hystaspes, plotted to carry the statue off, but had not the hardihood to lay his hands upon it. Xerxes, however, the son of Darius, killed the priest who forbade him to move the statue, and took it away. Besides the ornaments which I have mentioned, there are a large number of private offerings in this holy precinct. (Rawlinson's *Herodotus*, Book i, 183.)

The idea that exists at Mossul and its surroundings in regard to the production of Mann-as-Samma is, that during the summer months, whenever heat lightning flashes at night, the whole mountainous district below

The second is mastic, a valuable mercantile commodity exported in great quantity to Europe and used as a stringent, and in drying varnishes. Why should not either of these productions be the bdellium mentioned in Scripture?

The second produce which existed in Havilah, according to sacred record, was the onyx stone or beryl. Commentators have also differed in opinion upon the nature of this stone; but according to the Septuagint it was supposed to be the latter, of light green colour. Be it as it may, it is not improbable that the highlands of Assyria and Coordistan, in the vicinity of the Zab, contain such sort of minerals as the onyx and beryl. Mr. William Ainsworth, the eminent geologist and botanist, who was attached to the Euphrates expedition under General Chesney visited that country in 1837. He found on "the banks of the Zab, and for one or two miles on the plain of both sides, a deposit of rolled pebbles of limestone, diallage rock, serpentine, hornblende, rock quartzes, jaspers and Lydian stone."*

I believe turquoise has also been known to exist in some parts of Coordistan bordering on the Zab. May not this be the שדה Shaahm of the text?

As regards the *Gihon* it is merely referred to in the second chapter of Genesis as the river which "compasseth the whole land of Cush" (rendered in the Septuagint as *Ethiopia*). It was natural when *Ethiopia* was considered formerly to be in Africa, certain writers inclined to the belief that the Nile represented the *Gihon*; and others being convinced that there was another Cush in the neighbourhood of the Persian Gulf did not hesitate to place the second river of Paradise somewhere there. Now, however, as I said before, through the decipherment of a cuneiform tablet the indefatigable Assyrian scholar, Mr. Pinches, has discovered that there was another Cush, existing formerly to the south-west of Armenia, known to the Greeks as Cappadocia, which goes now by the name of Roomalee.

it gets covered with a sweet substance in the shape of flakes of snow, and in the morning it is collected by the natives for sale. I quite remember in my boyhood, the joy which possessed those who were fond of sweets on their seeing the flashes of lightning on the mountains of Assyria, when there was no sign of clouds, especially in July and August. They all used to clap their hands and call out "Mann-as-Samma, Mann-as-Samma is falling."

* Ainsworth's *Assyria, Babylonia, and Chaldea*, page 256.

It may be remembered that on a former occasion* I had to bring to the notice of this Institute the valuable and most important discovery which was made by the above-named scholar of another Cush around which ran the river Gihon. He proved then and since, before the "Society of Biblical Archæology," † that this Cush was the country mentioned in Genesis ii, 13, and consequently the river that compassed it must have been the Gihon, the second river of the Garden of Eden. Now to find that identical river is the difficulty; but if we take it for granted that some unnatural causes, such as earthquakes, volcanic eruption, or even upheaving of terrestrial bodies had taken place at the sources of the Euphrates and the Tigris, then the obscurity which hangs over the river of Eden would vanish.‡

The river Gihon I take to be the ancient Pyramus, now called by the natives of Asia Minor *Gehan* (a corruption of *Gihon*) which rises almost from the same spot as one of the tributaries of the Euphrates named Tookma; and after it is joined by another river at Maraash, called in Turkish "Aksoo" (or white water), which flows down from three small lakes called also in Turkish "Maadan-Gool" (or the Mine's-lake), it runs into the gulf of Alexandretta, a distance of about 200 miles.

It has been erroneously alleged that the word *Gehan* was the common name amongst the Arabs for a river. It is not so, because *Gehan* is not an Arabic word, but Turkish and Persian, which means a *Universe* and applied by the Turks, generally, to all great rivers, just like the Arabs of Mesopotamia call all large rivers *Firra*, a corruption of the word *Firra* or Euphrates. It is most probable that the Pyramus (a Greek appellation) was known formerly by its primitive name *Gihon*, and was corrupted in after time by the Tartars into *Gehan*, that is to say, the Universe.

With reference to the influence which volcanoes and earthquakes have had on rivers even up to late years, I cannot do better than refer to well-known geological authorities who have written on the subject.

* *Babylonian Cities*, read before the Victoria Institute, see vol. xvii.

† "Proceedings of the Society of Biblical Archæology," December, 1881.

‡ There is a remarkable allusion made in the Book of the Prophet Joel, regarding the Garden of Eden, in connexion with God's terrible judgment upon Zion. In the 3rd verse of the 2nd chapter it is prophesied thus: "A fire devoureth before them; and behind them a flame burneth; the land is as the Garden of Eden before them, and behind them a desolate wilderness; yea, and nothing shall escape them." (Note p. 119.)

In Lyell's *Principles of Geology* we find the following:—“Vivenzio states, that near Sitizzano a valley was nearly filled up to a level with the high grounds on each side, by the enormous masses detached from the boundary hills, and cast down into the course of two streams. By this barrier a lake was formed of great depth, about two miles long and one mile broad. The same author mentions that, upon the whole, there were fifty lakes occasioned during the convulsions, and he assigns localities to all of these. The Government surveyors enumerated 215 lakes, but they included in this number many small ponds.

“Such lakes and ponds could only be permanent where rivers and brooks were diverted into an entirely new course, whether into some adjoining ravine or into a different part of the same alluvial plain. In cases where the new barrier obstructs the whole of the drainage, the water flowing over the dam will gradually deepen a new channel in it, and drain the lake.

“From each side of the deep valley or ravine of Terranuova enormous masses of the adjoining flat country were detached, and cast down into the course of the river, so as to give rise to lakes. Oaks, olive trees, vineyards, and corn, were often seen growing at the bottom of the ravine, as little injured as their former companions, which still continued to flourish in the plain above, at least 500 feet higher, and at the distance of about three-quarters of a mile. In one part of this ravine was a mass, 200 feet high and about 400 feet circumference at its base, which had been detached by some former earthquake. It is well attested that this mass travelled down the ravine nearly four miles, having been put in motion by the earthquake of February 5. Hamilton, after examining the spot, declared that this phenomenon might be accounted for by the declivity of the valley, the great abundance of rain which fell, and the great weight of the alluvial matter which pressed behind it. Dolomien, also alludes to the fresh impulse derived from other masses falling and pressing upon the rear of those first set in motion.

“The first account sent to Naples of the two great slides or landslips above alluded to, which caused a great lake near Terranuova, was couched in these words:—‘Two mountains on the opposite sides of a valley walked from their original positions until they met in the middle of the plain, and there joining together, they intercepted the course of a river,’ etc. The expressions here used, resemble singularly those applied to phenomena, probably very analogous, which are said to

have occurred at Fez, during the great Lisbon earthquake, as also in Jamaica and Java at other periods,

“Not far from Soriano, the houses of which were levelled to the ground by the great shock of February, a small valley, containing a beautiful olive grove, called Fra Ramondo, underwent a most extraordinary revolution. Innumerable fissures first traversed the river plain in all directions, and absorbed the water until the argillaceous substratum became soaked, so that a great part of it was reduced to a state of fluid paste. Strange alterations in the outline of the ground were the consequence, as the soil to a great depth was easily moulded into any form. In addition to this change the ruins of the neighbouring hills were precipitated into the hollow and while many olives were uprooted, others remained growing on the fallen masses and inclined at various angles. The small river Caridi was entirely concealed for many days; and when at length it reappeared it had shaped itself a new channel.”*

It is said again that—“On the mainland near Lima and on the neighbouring island of San Lorenzo, Mr. Darwin found proofs that the ancient bed of the sea had been raised to the height of more than 80 feet above water within the human epoch, strata having been discovered at that altitude containing pieces of cotton thread and plaited rush, together with seaweed and marine shells. The same author learnt from Mr. Gill, a civil engineer, that he discovered in the interior near Lima, between Casma and Huaraz, the dried-up channel of a large river, sometimes worn through solid rock, which instead of continually ascending towards its source, has in one place a steep downward slope in that direction, for a ridge or line of hills has been uplifted directly across the bed of the stream, which is now arched. By these changes the water has been turned into some other course, and a district once fertile and still covered with ruins and bearing the marks of ancient cultivation has been converted into a desert.”†

In another place it is mentioned that—“At several thousand places in Jamaica, the earth is related to have opened. On the north of the island several plantations with their inhabitants were swallowed up, and a lake appeared in their place, covering about a thousand acres, which afterwards dried up, leaving nothing but sand and gravel, without the least sign that there had ever been a house or a tree there. Several

* Vol. ii. page 129.

† Vol. ii, page 158.

tenements at Yalows were buried under landslips, and one plantation was removed half a mile from its place, the crops continuing to grow upon it uninjured. Between Spanish Town and Sixteen-Mile-Walk, the high and perpendicular cliffs bounding the river fell in, stopped the passage of the river, and flooded the latter place for nine days, so that the people concluded it had been sunk as Port Royal was. But the flood at length subsided, for the river had found some new passage at a great distance.”*

My idea is that the Lake of Wan, which is very salt,† was not in existence when the narrative of the Garden of Eden was written; but through either an earthquake or a volcanic eruption it came into existence, together with the conical sublime mountain that lies on its north side, called by the natives Soobhan-Dagh.‡ At the base of that mountain lumps of obsidian are found in great abundance, of which I brought a specimen. To the west of the lake, above Bitlis, there is another mountain called “Nimroud Dagh.” or mountain of Nimroud, on the top of which there is a large sweet-water lake containing abundance of fish. According to tradition that lake has no bottom, and it is supposed to communicate with a subterraneous, unfathomable abyss!

Not a few lakes and ponds are found in different parts of Armenia and the adjoining districts bordering on it, especially towards the north.

As for rivulets, springs, and natural wells, they are innumerable all over Armenia, Coordistan, and the highland of Assyria. The great puzzle that presents itself to a traveller who has visited the sources and the mouths of the Euphrates, the Tigris, and the Zab, is to account for the consumption of the hundreds and thousands of rivulets that feed those rivers; and yet, when the latter reach the plains of Assyria and Mesopotamia, not a tenth of the volume of water that comes down from the tributaries of those rivers is noticeable below.

Mr. Ainsworth, already referred to, gives a very interesting account of the country around the Lake of Wan, and as his scientific notices about the volcanic nature of the rocks there bear upon the theory I am mooting, it will

* Vol. ii, page 162.

† The country around Wan abounds with salt springs, which, however, do not run above ground.

‡ This name is a compound of two words; the first is Arabic which means “Divine,” or “He who is worthy of praise”; and the second is Turkish, Coordish, and Persian, for “mountain.”

not be out of place, I think, if I quote his words. He says, "We had to proceed beyond the head-waters, at nearly the same level, to the foot of the Nimrud Tagh, a group of nearly conical mountains, having on this, its southern front, six distinct summits, all essentially of volcanic origin, and in part clad with brushwood of deciduous oak. We then turned to the left over the plain of Tacht Ali (the throne of Ali), when we began our descent towards the sources of the Kara Su, and the extensive plain of Mush.

"Hitherto, as previously remarked, till the publication of the map accompanying Mr. Brant's memoir, the Nimrud Tagh has universally been adopted as the great mountain chain of Southern Armenia; as at once the easterly prolongation of Taurus, and corresponding to the Mons Niphates of the ancients, but it is not so; the great chain here alluded to is the Ali Tagh, the Nimrud Tagh being a local volcanic group rising out of the upland beyond. In Armenia as in Kurdistan, and in Lesser Asia, the great rivers tributary to Euphrates and Tigris, or flowing direct to the sea, as the Seihun and Jaihun, pass through the main chain of mountains, which is here, as just said, the Ali Tagh, and to confound which with the Nimrud Tagh, does not lead simply to a verbal, but also to a geographical error, by which the range of Armenian Taurus is made to course north of Betlis, instead of south of that place."*

In another place the same author says—"Passing the large Kurdish village of Nurslin, we arrived at a kumbet or tomb, standing in an isolated burial-ground. It is a very pretty edifice, with a semi-circular dome, and pointed arched windows, with a bevelled basement of black, the upper part being constructed of red lava. This tomb is erected in the immediate vicinity of a fountain which constitutes the head-waters of the Kara-Su. We were surprised to find a natural artesian spring coming up from a deep circular hollow in volcanic rock. The waters poured out in two abundant rivulets, over the opposite lips of the crater, each stream being upwards of 30 feet in width at its origin, and both uniting shortly afterwards. The crater itself was 220 feet in circumference, and at an elevation of 4,540 feet above the level of the sea. It is curious that Mr. Consul Brant, who must have passed close to this spring, did not hear of it from his guides. The Rev. Mr. Southgate, who also travelled this road, notices, however, a tradition of fountain of unknown

* Ainsworth's *Travels in Asia Minor*, vol. ii, page 374.

depth, said to exist on the summit of Nimrud Tagh, and which communicates with the source now in question. Thus it appears, as is often the case, that local tradition coincides with the results of physical investigation. St. Martin also notices this fountain on the authority of Armenian writers, as being near the Nimrud Tagh, and being very remarkable. The waters at their issue are very clear and pure, but being soon spread over a wide district of marsh, the Kara-Su becomes afterwards one of the few rivers that are so called and are entitled to the epithet.”*

He again writes, with reference to the same subject, thus: —“I have previously remarked that the main features and leading points of contrasted configuration in the great Armenian upland are derived from the alteration produced in a country of recent sedimentary deposits reposing on low hills of schistose rock being broken up by one or more great eruptions of volcanic rocks. The Terktob, or Barmahsiz Tagh, is an example of simple upraised sedimentary deposits; the Chekmah Tagh, of the volcanic rock occurring in dykes in micaschists, even to the crest of the hills, while on the acclivities are upraised and altered limestones. The Bingol Tagh is a vast mass of volcanic rocks, with altered formations.

“This Mountain of a Thousand Lakes, concerning which many ridiculous traditions are current among the Armenians, is not so much a distinct mountain, as a long crest upon an upland district. From these circumstances, although at so considerable a height above the level of the sea, it gives no impression of loftiness from the uplands around. Its long continuous crest, protected at the same time by bluff ridges of volcanic rock, is more favourable to the perpetuation of glaciers and snow patches than an isolated cone like that of Supan Tagh,† which is also visible from Khinis. Hence the Bingol Tagh may be considered as somewhat below the lower limit of perpetual snows in these parallels, although it has snow patches (whence its numerous lakes and water rills) all the year round, while probably the Supan Tagh expresses the height of the same inferior line pretty accurately.”‡

* Ainsworth's *Travels in Asia Minor*, vol. ii, page 376.

† Soobhan Dagh, *vide* two pages *ante*. (Si'pan in Govt. Survey.)

‡ Ainsworth's *Travels in Asia Minor*, vol. ii., page 386.

Mr. W. J. Blandford, of the Persian Boundary Commission, mentions in his work on the geology of Persia, that volcanic rocks are of unimportant extent in the southern districts, “but occupy a considerable tract near the Lakes of Wan and Urumiah, and culminate in Mount Ararat.”—*Eastern Persia, Zoology and Geology*, vol. ii, page 444.

I feel convinced that if a scientific research be conducted in the country that lies in the highlands of Armenia, Asia Minor, and Coordistan, it would be found that the source of the four rivers of Paradise was shattered either by an earthquake or a volcanic eruption, and dispersed the original "heads" into a thousand streams. There is no doubt that the courses of the four rivers below the mountain range are the same to-day as they were when they parted from the main source,—the river of Eden, but through some derangement that took place some time or other at the fountain-head (as it happened at Antioch in 115 A.D.), thousands of streams were created thereby which found their way into new channels.*

The present sources of the Euphrates and the Tigris consist each of two main streams; those of the former start from the north and north-west of Lake Wan, distinguished on the map as east and west Moorad, a name given by the natives, which means "desirable," and those of the latter issue from the west of the lake. The largest which passes Diarbekir rises from within a few miles of the east Euphrates, and the other comes down from above Bitlis, and joins the Diarbekir branch about 20 miles below Saart, at a place mentioned by Xenophon as Centritis, when he, with "the ten thousand" Greeks, was met by a formidable host of Armenians, Mygdonians, and Chaldeans, who opposed their passage.†

There is, on the way between Swairak and Diarbekir, on Karrach Dagh,‡ an old bed of a river which must have passed through that part as tributary to the Tigris or Euphrates, because the latter runs within 20 miles to the south of

* In a note upon the *Rivers of Eden*, Genesis, chap. 11, verse 10, Dr. F. Delitzsch makes the following remark:—"That the continents of our globe have undergone great changes since the creation of the human race, is a truth sustained by the facts of natural history and the earliest national traditions, and admitted by the most celebrated naturalists (see the collection of proofs made by Keerl). The changes must not be all attributed to the flood; many may have occurred before and many after, like the catastrophe in which the Dead Sea originated, without being recorded in history as this has been. Still less must be interpreted, chap. xi. 1 (compared with x., 25) as Fabir and Keerl have done, as indicating a complete revolution of the globe, or a geogonic progress, by which the continents of the old world were divided and assumed their present physiognomy."—(*Commentary on the Pentateuch*. Keil and Delitzsch, vol. 1., page 81).

† *Anab*, Book iv., chap. 3.

‡ Two Turkish words which mean "rugged mountain."

Swairak, on its way down from the highlands of Armenia in most extraordinary circuitous windings, and seems as if it was not following its proper primitive course. It starts about 60 miles to the north of Wan, and, after it proceeds almost in a straight line for 180 miles south-westerly, it winds round and takes a south-easterly direction for 60 miles longer to within 20 miles of the Tigris, and then it proceeds on its downward course to the plain of Padan-Aram,* in Northern Mesopotamia, the land of Abraham, the faithful Patriarch's nativity.†

Having now concluded what I had to say about the contested site of the Garden of Eden, I must intrude upon your patience, to bear with me a little time longer, in placing before you some particulars in connection with the disputed landmarks of the native country of Abraham, Job, and Balaam.

Doubtless, you are all aware, that from time immemorial the position of "Ur of the Chaldees" has been shrouded in mystery, as it was only mentioned in the Old Testament in connexion with Abraham's call. In this case also we must take the Sacred Record as the foundation of our reasoning, because all other notices of the land of his nativity were only opinions and deductions arrived at by later critics.

In the 20th verse of the 11th chapter of Genesis we are told that "Haran died before his father, Terah, in the land of his nativity, in Ur of the Chaldees;" and in the 31st verse it is recorded that "Terah took Abram his son, and Lot, the son of Haran, his son's son, and Sarai, his daughter-in-law, his son Abraham's wife; and they went forth with them from Ur of the Chaldees to go into the land of Canaan, and they came into Haran and dwelt there." In the first verse of the next chapter (Gen. xii), it is thus written:—"Now the Lord had said unto Abram, get thee out of thy country, and from thy kindred, and from thy father's house, into a land that I will show thee." We are not told how long Abram remained at Haran before he went into Canaan, but we know from the preceding chapter that he was there with his father, and it is therefore to be taken for granted, that when he was commanded to leave *his country*, *his kindred*, and *his father's house*, that he was not in a foreign land as the case would have been if he had gone there from the neighbourhood of the Persian Gulf, about 700 miles to

* Gen. xxv., 20; xxviii., 6 and 7; xxxi., 18; xxxv., 9, 26.

† Gen. xxiv., 4, 10.

the south-east. For at Haran he left his father's house with Lot, and not in "Ur of the Chaldees," as it is shown by future allusions to Abraham's country. In the 4th verse of the 24th chapter of Genesis, Abraham unmistakably looks upon the country of Nahor as his own, and as that part of Mesopotamia is called variably in Holy Writ Padan-Aram and Aram-Nahrain there cannot be the least doubt that Southern Babylonia could ever have been his native country, as it was not in what was known to the Hebrews as Aram.

Had "Ur of the Chaldees" been situated near the junction of the Euphrates and the Tigris, 200 miles below Babylon, Terah could have travelled about 300 miles along the Euphrates, through fertile and richly cultivated country as far as Heet, the ancient Is, and then branched off at a convenient spot for the Land of Promise, without the necessity of going about 400 miles northward out of his way, seeing that we are not told that he had had any particular object for doing so.

As for the idea that, because a certain word pronounced *Uru* or *Uri* has been found in an inscription discovered at a mound called *Mokayir* or *Mogayir*, in Southern Babylonia, we are to conclude that it meant "Ur of the Chaldees," from where Terah migrated, nothing can be more misleading. For in the first place no Assyrian scholar can definitely declare that the etymology of both is derived from the same source; and, secondly, that this Babylonian *Uri* was really the Hebrew אור כשדים "*Aor Cashdecem*." It is not at all improbable that the fact of Abraham's Aor being called "of the Chaldees," or the "Chaldees Aor," there must have been another Aor in existence, just like saying Richmond of Surrey and Richmond of Yorkshire, or Kingston of England and Kingston of Ireland.*

* In asking Mr. Theophilus Pinches again for his opinion about the word Ur or Uru he replied as follows: "I do not think that it is necessary that this Uru [Moogayir] should be the same as the Hebrew אור. As you know, I have already, in a note to one of your papers (*Babylonian Cities*), read before the "Victoria Institute," put forward the theory that Ur of the Chaldees was Akkad, that district being called *Uru* or *Uri* in Akkadian. It seemed to me that Ur of the Chaldees must have been so called to distinguish it from some other Ur. Now I hold that Ur = مقدير was neither in Akkad nor in Chaldea. Ancient Chaldea was the district immediately to the south of the city of Babylon. Delitzsch, in his map attached to *Wo lag das Paradies?* makes Kasdu (= Chaldea) to be immediately to the north (or, rather, north-west) of Ur, but he sprawls the

In the Septuagint, instead of *Ur* of the Chaldees it is translated *country* of the Chaldees, which agrees with the apology of St. Stephen the martyr, before the High Priest, when he said, "The God of Glory appeared unto our father, Abraham, when he was in Mesopotamia, before he dwelt in Charran, and said unto him, Get thee out of thy country, and from thy kindred, and come into the land which I shall show thee. Then came he out of the land of the Chaldeans, and dwelt in Charran."*

Moreover, in the Book of Joshua (chapter xxiv, 2, 3) it is plainly shown that Abraham had crossed from Mesopotamia to the Land of Canaan; and as I said before that *Aram*, of the two rivers, was never understood by the Hebrews to mean Southern Babylonia, but merely confined to the land bordering on Assyria, as far as Tikreet on the Tigris, it is contrary to reason to suppose that Aram-Nahraim of the Bible meant the Land of Shinar.†

word Akkad out so that it gets mixed up, so to say, with Šumer (= Shinar). In my opinion the following terms are equivalent:—

Akkadian *Kingi-Uri*.

Assyrian *Šumer and Akkad*.

Hebrew *Šhinar and Kasdim (eres Kasdim)*.

The Hebrews only knew of a city of Akkad, which they described as being in the land of Shinar. This is not quite correct. The city of Akkad was in the land of Akkad, whose southern, or south-eastern boundary was Šumer or Shinar. This error was probably, however, popular and widespread. Šumer or Shinar is always mentioned first in the inscriptions, and this makes it seem as if, at one time, it was the more important district. The *Kaldū* or *Kaldā* (Chaldeans) and the *Aramū* (Arameans) occupied, with a portion of the Babylonians proper, the land of Akkad, and Ur-Kasdim, "Ur of the Chaldees" may have been so named to distinguish it from the city of Ur, the مقير [Mokayir] of the present day which in my opinion (and Delitzsch's map rather supports this), was not situated within the borders of Chaldea or of Akkad."

* Acts vii, 2, 3, and 4.

† Dr. Franz Delitzsch, the great Hebrew scholar, is of opinion that "Ur of the Chaldees" is to be sought in Northern Mesopotamia, and that "it was in Haran that Abram first received the divine call to go to Canaan (xii, 1—4), when he left not only his country and kindred, but also his father's house. Terah did not carry out his intention to proceed to Canaan, but remained in Haran, in his native country, Mesopotamia, probably because he found there what he was going to look for in the land of Canaan. Haran more properly Charan חרן is a place in north-western Mesopotamia, the ruins of which may still be seen, a full day's journey to the South of Adessa (Greek Καρρα, Lat. Carræ) where Crassus fell when defeated by the Parthians. It was a leading settlement of the Sabians, who had a temple there dedicated to the moon, which they traced back to Abraham.—(Commentary on the Pentateuch, Keil and Delitzsch, page 179.)

In writing on the antiquity of the Jews, Josephus mentions, on the authority of Nicholas of Damascus, that Abraham came from the land of the Chaldeans above Babylon,* but in the Talmud we are told that he and his family "went forth from Ur Chaldee, from the city of Babel."

There is another remarkable proof that Abraham and his kindred were in nationality Arameans, for not only Bethuel and Laban were called Arameans,† but even Jacob was so styled by Moses, on the occasion of his command to the Israelites when they were to offer "the first of all the fruit" of the earth to the Lord. His instructions were thus: "and thou shalt speak and say before the Lord thy God, an ארמי Aramee ready to perish was my father, and he went down into Egypt, and sojourned there with a few, and became there a nation, great, mighty, and populous."‡

There is no doubt that the Chaldeans and Arameans at one time or another belonged to the same race, but through their dispersion and amalgamation with other nations, they inherited other tribal distinctions. I take the Arameans to have been like the Anglo-Saxon race of the present day, who are spread all over the world, and go by the name of Americans, Canadians, Australians, &c., and if we take into consideration the disadvantages the primitive nations laboured under when they were devoid of the art of printing and general culture of our day, it is most astonishing that those ancient people have handed down to us, even in a limited degree, a part of their history, and not an inconsiderable portion of their literature and language. It is worthy of note that the present Chaldeans of the rural districts still retain the primitive Aramean language, akin to the Chaldee of Ezra and part of Daniel, though from long association with the Medes, Persians, and Arabs, their language has been in some measure corrupted, as is the case with other languages.

With reference to the tradition that the Ur of the Chaldees was at Orfa (the ancient Edessa) there are many arguments in its favour, the greatest of which is the position it holds in the country (known in former days as Padan-Aram), and it is well worthy to be the capital of that grain-growing district.

* Josephus, *Antiquity of the Jews*, I., 7.

† Gen. xxv., 20; xxviii., 5; and xxxi., 20 and 24.

‡ Deut. xxvi., 5. The dubious rendering of Aram into Syria and Aramaic into Syriac by the Greeks, now adopted into the European languages, has created the confusion existing as to the meaning of this strange appellation.

The Fathers of the Church knew Orfa by the name of Urhoi, which they identified with Ur of the Chaldees, and there is a ruin of a church there dedicated to St. James of Urhoi. In all what are called Syriac manuscripts the place is designated by that name, and even the Arabs know it by no other appellation than Ur-Riha. Whether this name is derived from Ur or Awraha, which the peasant Chaldeans pronounce for Abraham, is not certain.*

As for the position of Orfa, it is one of the most picturesque towns in Mesopotamia, and had it been under any other government but that of the apathetic Turk, it would have vied in beauty and wealth with the most flourishing cities in the world. Being situated on an eminence with copious rivulets running in all directions and commanding extensive fertile plains, stretching far and wide, its produce of corn and fruit might prove a source of incalculable riches. Its annual export of cereals to Europe even now, when scarcely one-fifteenth part of the land is under tillage, is very great. Nearly ten miles of the soil in front of the town is studded with public and private gardens, and in the town itself there are a number of the houses of the well-to-do inhabitants decked with arbours and orchards.

I believe that Padan-Aram was also the native country of both Job and Balaam, as I shall try to show briefly. They might have been of mixed nationalities, but of Aramean origin, like the Edomites, Moabites, Ammonites, and Ish-mæelites; also the sons of Abraham by Keturah, whom their father sent away to the east country.† Most probably Job lived long after Abraham and might have been descended from Nahor and Milcah, as we read that she bore unto him Uz, Buz, and Kemuel the father of Aram.‡ Uz most probably was the founder of the district bearing that name, from where Job was said to have come. Doubtless Balaam had faith in the true God, as Abraham, Nahor,§ and even Laban,|| though the latter, like the former, through his love of worldly gain, forfeited the divine favour. As for fixing an exact limit to the habitations of the different ancient nationalities it would be utterly useless to do so, because in those days, especially amongst small and unimportant tribes,

* All the Chaldeans pronounce the 𐤁 beth in their Alphabet like na o waw unless it occurs in the beginning of a word like 𐤁 bar (son). For instance, they pronounce Awa for Abba (father), Awd for Abd (servant), and Kthawa for Ktabba (a book).

† Gen. xxv, 6; ‡ xxii, 20 & 21; § xxxi, 53; || xxxi, 49.

the change of Government and localities must have been so frequent by emigration, wholesale arbitrary deportation, and such like, that at one time a certain people who were occupying one part of the globe would be found some years afterwards in quite a different spot. I have not to go far to prove my argument, as I can point out a few cases by way of illustration to show you how easily the names of nationalities and countries are changed in Asia through either conquests, or mere accident, like the present Coords and Arabs. The mountains of the former were, before the Christian era, part of Media, Assyria, and Armenia; but now that tract of land is called Coordistan, and its Moslem inhabitants, who are mostly of Assyrian and Median origin, are now known merely by the name of Coords. Then the Mohammedan population of Assyria, Mesopotamia, Syria, Palestine, the three Arabias, Egypt, Tunis, Algiers, and Morocco, all style themselves *Arabs*, though in reality they are a mongrel race, composed of all kinds of Biblical and other nationalities, not excepting even part of the twelve tribes of Israel. We may enter further into ancient history and find that there were Chaldeans in Southern and North-western Mesopotamia, and in the mountains of Assyria and Media; the Sabeans used to inhabit Padan-Aram; now their name is not even known there, but a small remnant of them are to be found at present in Southern Babylonia; the Arabs, the Midianites, and Aramean races used to be found sometimes near the Persian Gulf, then in Northern Mesopotamia, and in the country which is known in Europe as "Syria." As for the Assyrians their name extended wherever their political influence reached.

A great deal has been written about the philology of the Book of Job, and different opinions expressed not quite sound in principle. Unfortunately a great number of men of learning have only learnt the Semitic dialects through study, without the natural tuition of a native-born Hebrew, Arab, or Chaldean. All languages have their own peculiarities, and a word may mean one thing in the dictionary and express quite a different sense when it is used colloquially. For instance the word "affection" in English is applicable to an unpleasant as well as pleasant state of the mind, and supposing in an old record two or three thousand years old we read that such a king had died from affection of the heart, I fear it would be difficult for any modern scholar to say exactly whether his majesty died from heart disease or from a disappointed love; and in the using of the word "let" it would not be easy for a foreigner to understand

whether it meant to give leave for a positive act or to retard and hinder.

As for the dependence upon the root of Semitic words that is also misleading, because anything may be construed from two or three letters. As an example, I will only quote a few Arabic words consisting of two letters, and you will see at once how difficult it is to determine upon the sense of a word by a person who has never heard the language spoken, or mixed with the natives of the country where Semitic is the vernacular language.

The word **كل** Kl, consisting of two letters equivalent to K and L, means all, eat, and, be quiet; the word **من** Mn, M and N, means from, manna, who, and a certain weight; and **بل** Bl, B and L, means but, to moisten, quarrelsome, and, to unite.

Moreover, the different Semitic languages have undergone so many changes for the last two thousand years that one might write thousands of words used in one place which would not be understood in another. If an Arab of Algiers or Morocco would be taken to Arabia Felix he would be difficult to understand; like the difference existing between the Latin and its cognate languages, the Italian, Spanish, and Portuguese. We must, therefore, take into consideration the provincialism of the land of Uz, at the time when the Book of Job was written, and place it in the same category with other Semitic languages of that time.*

I am fully convinced that the land of Uz lies to the north-west of Orfa, and its capital was where the present peculiar ruins of Wairan Shahir exist. It was a Chaldean city, and it must have been destroyed by an earthquake, as the shops, houses, and churches, which were built of huge basalt stone, are all thrown down as if by a supernatural convulsion.†

* Let us take, as an example, the present tongues of the Turks, Persians, Hindustanis, and even the Abyssinians, called Amharic, and we shall find that the association and intermixing of those races with Arabic-speaking people have corrupted their original languages to such an extent that it would be quite impossible for their progenitors, if they were living, to understand them. We know that Constantinople is not either in Arabia, Persia, or Tartary, and yet, the predominant race which sways the sceptre there issues its edicts and literature, not in a European, but in a mongrel patois composed of Arabic, Persian, and Tartar dialects.

† Mr. Ainsworth remarks on the site of Wairan Shahir as follows:—

“We identified this ruined town and stronghold with the Lacotena or Lacobena of the Tables, which is evidently the same as the Lavinianesina

Within six miles of Wairan Shahir, and 80 miles to the northwest of Orfa, there is a reputed shrine of "the prophet of God, Job," which is held with great sanctity by the natives of that district, especially the Mohammedans, who allege that the remains of that man of God are interred there. It has a "Takia," consisting of a few Mohammedan Darweeshes, who are supported by endowments and voluntary religious contributions. The "Takia" is a kind of monastery, where there is generally a shrine of a prophet or a saint, and though the Moslems have no monks, or any order sworn to celibacy, yet those who are appointed to guard places of sanctity lead the life of a recluse.

We are told in the Book of Job that bands of both Chaldeans and Sabeans had plundered his camels and cattle; it is not unreasonable, therefore, to suppose that both those nationalities inhabited then that district or the country around, especially as we know that Haran was at one time a Sabean settlement, and the Chaldeans occupied part of Cappadocia. The majority of the inhabitants of that district consist of two powerful Moslem tribes, called "Millee" and "Kara Gaitchee," whose men are fine-looking and of noble mien. They all live in tents, and lead a semi-nomad life. On seeing them I could not help fancying that Job and his friends had occupied the same country in days gone by.

There has also been an endless controversy regarding Balaam, his country, his divination, and the meaning of his name and that of his father. Many of the arguments adduced seem to me unwarranted by the plain narrative represented to us in the Book of Numbers. One opinion is that Balaam was a Midianite (*see Smith's Dictionary of the Bible*), because "he was mentioned in conjunction with the five kings of Midian;" but the writer, it appears, has quite overlooked the fact of the mention made in the Book of Numbers (xxii, 5) that Balaam was sent for "to Pethor which is by the river of the land of his people," and that Pethor was in Aram-Nahraim (Mesopotamia), Deut. xxiii, 4.

The Midianites alluded to were occupiers of the country bordering the promised land and neighbouring the Moabites; but according to the testimony of Balaam (Numb. xxiii, 7),

of Ptolemy. In the subdivision of Cappadocia into ten provinces by Strabo, Lavinianesina is noticed as one, and further on he mentions a prefecture of Cappadocia by the name of Lavinianesina, both of which refer to the same district." (*Ainsworth's Travels in Asia Minor*, vol. i, page 259.)

he was fetched by Balak "from Aram out of the mountains of the east" in Mesopotamia, which was to the north of Padan-Aram and about 400 miles to the north-east of Moab.

I believe Balaam was an Aramean of the same country and nationality as those of Terah and Job, as we see it recorded in Genesis (xxix, 1) that "Jacob went on his journey and came into the land of the east;" but as, most probably, hundreds of years intervened between their respective times, their language and tribal distinctions underwent a material change, like the Assyrians and Chaldeans whose language was Aramaic (*see* Isa. xxxvi, 11, and Dan. ii, 4).*

The word קדמ, Kkdam, east, mentioned throughout the Old Testament, has also caused perpetual etymological discussion, but in reality there is nothing mysterious about the meaning of the term if we take it in the sense it is understood in Europe, as the *Orient*, whether it is rendered in Hebrew as מזרח, mazrahh (sun-rising), or קדמ, Kkdam (front).

When a person talks in England of going to travel in the East, no one would, I presume, think that he meant to visit the eastern counties, or France, or Germany; nor by saying that a man was an Oriental, would the term be considered applied to a native of Margate or Ramsgate. So if a man comes from Armenia, Mesopotamia, India, China, or Egypt, he would be called an *Oriental*, though those countries are not situated exactly to the east of Greenwich. In like manner the Hebrews applied the term East to all the nationalities and countries situated on the eastern side of the Euphrates, whether Armenia or Babylonia.

In Syria, Mesopotamia, and Assyria, they only apply the term شرقي Sharkkee (Oriental or Eastern) to the inhabitants of those lands, but not to any nationality eastward of them. They would call those Persians, Indians, or Chinese.

† As for the meaning of the name of Balaam and that of his father בעיר Baaor, about which some comments have been made by different scholars, it had nothing to do with the

* It is interesting to relate that the present Chaldean Christians of Assyria, and the only remaining Gentile nation inhabiting Southern Babylonia, called Sabeans, speak, with some exceptions, the same Aramaic or Chaldee as is found in the Old and New Testament.

† NOTE.—*Biblical Criticism* being outside the Institute's objects any references thereto in pp. 120-1 are necessarily excluded from discussion.

former's mission, as we are not told that they were nicknamed from a peculiar act they had committed. We might just as well imagine that there is a particular meaning to the names of Korah, Dathan, and Abiram (Numbers xvi) because they had rebelled against God, or that there is a mysterious signification to the name of Esau because he had sold his birthright for a mess of pottage (Gen. xxv, 33), whereas in that particular case we are plainly informed (Gen. xxv, 30) that Esau was nicknamed Edom (red) from the colour of the lentils of which the pottage was made.

With reference to the difference between the Βοσὸρ Bosor mentioned by St. Peter (2nd Epistle, ii, 15) and the Hebrew Baaor, it can easily be explained that the former was written in Greek, in which alphabet there is no guttural letter γ as exists in the Semitic languages.

The supernatural power of Balaam has also been misunderstood by many commentators such as Philo, Ambrose, and Augustine, who have regarded him merely as a wizard and a worshipper of idols, compelled by God, against his will, to give utterance to blessings upon Israel instead of curses. It is incomprehensible to me how this opinion was arrived at after reading the 8th verse of the 22nd chapter of Numbers, when Balaam tells the Princes of Moab that he would inform them of what the Lord (Jehovah) commanded him to do; and in the 18th verse that follows he mentions the Lord (Jehovah) as *his* God. Moreover, a wizard or false prophet would not utter the words mentioned in the 16th verse of the 24th chapter of Numbers, wherein Balaam enumerates the attributes of God Almighty, and ends by uttering the remarkable prophecies that follow.

Balaam, no doubt, knew and acknowledged the Lord Jehovah as his God, the same as Abraham and Job, with this difference, that he chose the wages of sin in preference to placing implicit confidence in his God, as faithful Abraham and Job did, and sold his divine inheritance for the mammon of unrighteousness in lieu of depending on God's bounty, as his ultimate fate proved, when he preferred the enjoyment of voluptuous living with the Midianites for a season, rather than lean upon the omnipotent guidance of the Most High.

I have always entertained the belief that the Arameans and Assyrians possessed a knowledge of the true God, but worshipped Him under peculiar names and attributes. This is proved by the Divine mission of the prophet Jonah to Nineveh, and the way Laban and Bethuel spoke of the

existence of the Lord (Jehovah) and blest the future seed of Rebekah their sister (Gen. xxiv, 50 and 60). Moreover, in all our discoveries in Assyria we found no trace of any representation of revolting sacrifices, which were practised by other Gentile nations; but, on the contrary, on the bronze gate of Shalmanesar II, which I discovered at Balawat in 1878, there can only be seen offerings of bullocks and rams, the same as the animals offered by Balaam and those that were ordered for sacrifice in the Mosaic law.

It is probable that the wise men or Magi, mentioned in the second chapter of St. Matthew, who offered gifts of gold, and frankincense, and myrrh to our infant Saviour, were notable Aramean diviners of the same race as Nahor, Job, and Balaam, and held independent positions in the land. Of course the country, nationality, and position of those magnates have also been the element of much comment ever since the beginning of the Christian dispensation; but the majority of the critics have agreed that those Magi were natives of Persia, on the mistaken supposition that the word *Magi* pertained solely to a certain priestcraft of that country. Why and wherefore such a notion was arrived at, it is beyond my comprehension to understand. We know of no other Gentile nation, excepting those whose language was Aramean, who have had any connexion with Divine measures such as the family of Terah, the repentance of the Ninevites, and the prophetic calling of Balaam. The very fact of the allusion made by St. Matthew that the Magi had gone to Jerusalem *from the east*, and not from any known country in particular, seems to me to accord with other passages of Scripture which point to a certain locality without referring to any point of the compass. It must have meant then as having, "seen *his star in the east*," the same as "Sephar a mount *of the east*" (Gen. x, 30), Abraham sent the sons of the concubines "eastward into the *east country*" (Gen. xxv, 6), Jacob "came into the land of the children *of the east*" (Gen. xxix, 1), Balaam was brought "out of the *mountains of the east*" (Num. xxiii, 7), Job "was the greatest of all the *children of the east*" (Job i, 3), etc.

There is also another notable connexion between the prophecy of Balaam (Num. xxv, 17) and the *star* alluded to by the wise men (Matt. ii, 2) which they said they had seen *in the east*. The word *east* here, surely, could not have meant a point of the compass, as opposite to west? It must mean that part of Mesopotamia which was known to the Hebrews by repute as the *east country*, as we now call certain parts of

Turkey, the Levant and Asia Minor. It is very remarkable that the Turks term the latter province Anatoley *اناطولي*! the same word *ἀνατολή* which is used in Greek in St. Matthew (ii, 2) for the east, the country of the Magi.

I am also of opinion that the prophecy alluded to in the 10th verse of the 72nd Psalm was fulfilled by the Magi; and although the exact land of *Sheba* is still shrouded in mystery it seems to me that it will not be extraordinary to suppose that, as one of the grandsons of Abraham by Keturah, named *Sheba*, was sent to the "east country" by his grandsire, a province in Northern Mesopotamia was called after him.

I may conclude my lecture with a few words on the subject of our Assyrian and Babylonian researches, as I know that this Institute has always taken a deep interest in them.

Since my explorations were stopped at the end of 1882, owing to the expiration of my firman, no excavations have been allowed to be carried on in Assyria and Babylonia on the same condition as I was permitted to enjoy. Consequently the four important sites which I was anxious to examine in Babylonia, Assyria, and elsewhere, are now lying dormant for want of proper representation at headquarters.

I am grieved beyond measure that the remainder of the palaces and temples which have been discovered by us, are now lying buried underground, and, worse than all, that in Babylonia, especially, valuable records are being destroyed daily, through the clandestine excavations of the Arab diggers for the sake of selling what they find to native brokers for European purchasers, who smuggle them out of the country.

The Porte does not permit now any antiquities to be exported, but those who wish to make researches are only allowed to take squeezes and copies of any object found. This proposal was made to me as far back as 1876, but I refused to have anything to do with such a one-sided benefit. When Sir Henry Layard was appointed ambassador at Constantinople, however, he at once used his influence with the Sultan, and I was then allowed to send to the British Museum all antiquities discovered, but gave all the duplicates to the Ottoman authorities.

I feel confident that if our ambassador at Constantinople would use his influence with the Sultan, His Majesty will not say No to a proper representation to him, especially when he

knows that what we want is not new sites, but merely the recovering the remnant of the collections which we have already discovered through his bounty and that of his father, Sultan Abd-Almajeed.

The French, Germans, and Americans have been excavating for the last two years in Babylonia, but without any material benefit either to themselves or to the Ottoman Government, but in a number of ancient sites unauthorised excavations are carried on by the natives without let or hindrance on the part of the local authorities. It is impossible to estimate the priceless records that have been and are being destroyed by the Arab diggers, who are obliged to carry on their nefarious practices at night, or in a hurry, for fear of being detected. I think it is a great shame that steps are not being taken to protect those valuable monuments from destruction. Both for the sake of literature and history the researches in Assyria, Babylonia, and the Holy Land ought to be conducted on an international principle, and without jealousy or clashing interests. I feel convinced that there are inestimable treasures still buried underground in Asiatic Turkey, which will, if unearthed, throw a great lustre on the already discovered records of the past.

The PRESIDENT, Sir G. G. STOKES, Bart., M.P., P.R.S.—I will ask you to return your thanks to Mr. Rassam for his very elaborate paper. Of course he being a native of and having long lived in the East, and studied all the features of the country himself, and engaged in the excavations, he is an authority on the subject of which he speaks. (Applause.) I will now call upon those who wish to make remarks upon the paper to do so.

Mr. THEOPHILUS G. PINCHES.—I feel that we ought all to be very much obliged to Mr. Rassam, who is a native of that country of the Assyrians spoken of in the Bible, for having given us his opinion upon the difficult question of the position of the Garden of Eden, a question upon which I myself have not a very clear idea; but this paper of Mr. Rassam's will, let us hope, help to settle the question. It agrees with a preconceived idea I had, and it also agrees, to a certain extent, with the views of the illustrious father of Friedrich Delitzsch (Professor Franz Delitzsch), who is now

dead. The tablets containing cuneiform inscriptions unfortunately give no information whatever upon the subject, although the present Professor Delitzsch (the son of the famous old Professor of Hebrew at Leipsic) claims to have founded his views about it upon them. Professor Delitzsch's opinion as to the position of the Garden of Eden, viz., that understood as Babylonia, rests on the fact that one of the Akkadian words for country is Edina, and the Assyrian form Edinu, the same as Eden.

There is an additional weight lent to this statement by a fragment of a tablet which was acquired by the Rev. Dr. Hayes Ward, in Mesopotamia, when exploring there some years ago. He allowed me the privilege of reading the fragment. It gave, in four lines, the words *Sipar* (or *Sippar*); *Sipar* (or *Sippar*) *Edina*, i.e., *Sipar of Eden* (to adopt Professor Delitzsch's translation); *Sipar* (or *Sippar*) *Uduua*; and *Sipar* (or *Sippar*) *Šamaš* (*Sipar of the Sungod*).

I am inclined to the view that Babylonia had some legend of the Garden of Eden, as the Hebrews had, but they tried to locate that Garden of Eden in their own country, and this is the Garden of Eden which Professor Delitzsch has discussed, or rather it is that of which he treats in his book entitled *Wo lag das Paradies?*

With regard to the Ur of the Chaldees, I am inclined to agree with Mr. Rassam. The position of Mugheir I regard as too far south—I may be wrong. Mr. Boscawen just now whispered to me that Mugheir must be Ur of the Chaldees because it was the city of the worship of the Moon-god, and so was Haran. I fail to see the exact reason for that—that is to say, I fail to see why, on that account, Mugheir should be the Ur of the Chaldees, but I hope to have an opportunity of examining the matter, and perhaps in an additional note on this paper I may be able to say something about it; but what Mr. Rassam says about the family of Abraham having to travel from the extreme south portion of Babylonia so far north-west has great weight, and if my suggestion be a correct one, that Ur of the Chaldees is the same as Uri, the native name of Akkad, it would enable Ur of the Chaldees to be located from 120 to 150 or more miles higher up in the direction of Haran, and would shorten the distance to be traversed by the family of Abraham to that extent.

I may add that an additional argument in favour of Mr. Rassam's theory that Mugheir is *not* Ur of the Chaldees is, that the native

Akkadian name of Mugheir is given as *Urima* (or *Uriwa*), and that the Hebrew form ought to show *some* traces of the ending *-ima* or *-iwa*—we ought to have at least *Uri* instead of the simple *Ur*. The Assyrian form of the name Mugheir is *Uru* (*Uri*), and, as an adjective (“*Urite*”) *Urû*, fem. *Uritum*. It may be objected that the Hebrew form is borrowed from the Assyrian weakened one, and that, as the final vowel is not long, except in the adjective form, it may have disappeared. This, however, would depend upon whether the Semitic population of Mesopotamia regarded it as radical or not, and that they did so regard it is implied by the presence of the vowel *i* (*Uritum*) in the feminine form, which would otherwise have been *Urtum*. These facts are at least worth considering. (Applause.)

Mr. W. St. C. BOSCAWEN.—I had the pleasure of reading the paper through a little while ago, but I am afraid I cannot agree with all of it. My own opinion is that I do not think we shall ever fix the position of the Garden of Eden; there are so many traditions about it, the oldest concrete tradition being in connection with Babylonia, where we have indications of two of the rivers. With regard to the other two rivers I behold strongly with Professor Delitzsch. At the time he was writing his book he and I both worked on the subject, and I cannot but agree with his conclusions. With regard to the city of Abraham I must again differ from Mr. Rassam; I think the evidence is strong that Mugheir was one of the earliest settlements in Babylonia. As to the location of the Garden of Eden there are traditions concerning it in India Persia, and elsewhere.

Mr. G. BERTIN.—Mr. Rassam has brought forward so many points that it would be difficult for me to discuss them all, on some it is possible I might differ from him, but his paper is very interesting and of great value, being written by one who knows the country, for, as Mr. Rassam has said, most of us study these questions out of books and can be easily misled, whereas he can bring his practical knowledge and experience to bear upon the subjects on which he writes.

The HONORARY SECRETARY (Captain F. PETRIE, F.G.S.)—I am somewhat anxious that we should not lose sight of one fact to which Mr. Rassam has alluded, namely, that his paper was not written with the intention of introducing a new theory regarding the site of the Eden of the Bible, but rather of proving where it

was not. The Garden of Eden of the Bible having existed in the earliest days of the human race, we can have no other record of it except that revealed in Holy Writ. That the early Babylonians, *after the flood*, had their Garden of Eden, in imitation of the traditional one, we may well believe, but certain modern investigators, like the one whose statements in *Wo lag das Paradies?* Mr. Rassam controverts, must not call upon us to regard it as the original one; history furnishes examples of traditional and historical places having modern namesakes.

The AUTHOR.—At this late hour I will only return you my thanks for the kind way in which my paper has been received.

The Meeting was then adjourned.

REMARKS ON THE FOREGOING PAPER.

Major C. R. CONDER, R.E., D.C.L., LL.D., writes:—

I believe with Mr. Rassam that the idea of putting Eden in Babylonia is quite impossible, and ought never to have been put forward. It has deluded many on account of Dr. Delitzsch's reputation as a scholar, but seems to me to bear no reference to the plain words of Genesis.

I have always supposed it clear that the head waters of Tigris and Euphrates, somewhere near Lake Van and Ararat, were intended to be understood.

Of course there was another Eden which is noticed in the Bible, and many Paradieses, since the word only means "garden," but this latter word is Aryan, and not used in the Bible.

I set forth these views, which I think are those of all sober students, in my "Primer of Bible Geography" in 1884.

That the Zab should be the Pison seems very likely, but I do not see the necessity of supposing earthquakes, and removing the Gihon to the distant Piramis. The main affluent from a lake near Ararat into the Araxes might be the fourth river. We do not know how large was the enclosure intended by the word *gan Eden*.

The word Kusa for Cush is of value, but Cush was long ago

recognised in this region in the name of the Cosseans, and may have had a considerable extension.

I do not myself believe that the land of Uz in the Bible is intended to be east of the Euphrates. Uz is mentioned (Lam. iv, 21) as in Edom, and Teman, whence Job's friend came, is also mentioned in Edom (Jer. xlix, 7), in connection with Esau (verse 10). I think, therefore, the region near Petra is Job's country, and that this agrees perfectly with the natural history of the book.

In the story of the Chaldean deluge the Chaldean ark builder is said to have been taken away by the gods—

ina pî nâratî,

“By the mouth of the rivers,” but I do not see that this has any connection with the Garden of Eden.

I regret General Gordon's theory as much as I admire his character. When I was shown the MS. before it was published, I advised that it should not be printed.

The region round Lake Van, as described by Palgrave, is remarkable for its fine climate and sturdy native races.

[It has been objected by a distinguished correspondent that the neighbourhood of “Lake Van would have been rather cold for our first parents,” but (even if the climate has not altered since) it might be urged that there are instances in the present day of the natives of very cold countries appearing to us remarkably insensible to the absence of warmth.—ED.]

Sir J. W. DAWSON, C.M.G., F.R.S., writes:—

Referring to the geological evidence relating to the condition of the Babylonian Plain in the antediluvian or post-glacial period—“There is the best reason to believe that this plain was more elevated and was well wooded at that time, while its four rivers, the Euphrates, Tigris, Kerkban, and Karun, corresponded with those of the writer of Genesis. These facts are now well known in geological grounds, and must have been known to the writer of Genesis from history or tradition. They have been fully explained in my work *Modern Science and Bible Lands* (Chapter IV in connection with the general discussion of the early human or second continental period in other chapters).”

The Rev. Canon R. B. GIRDLESTONE, M.A., says:—

“The description of the position of Eden (Gen. ii, 8-14), is evidently a very ancient piece of geography. Some years ago Mr. H. Rawlinson read a paper on ‘The Site of the Terrestrial Paradise,’ in which he discusses the passage. He suggested that *Gan-eden* (Garden of Eden) answered to the old Babylonian *Gan-duniya*, and that the four rivers of Eden answer to the four which are associated with Babylonia in the oldest inscriptions. If this be the case we must go a step further, for the Eden of the Bible is very high, having watershed in four directions; and we are led to the conclusion that the Babylonians had travelled down from a mountainous region to the comparative level in which they lived in later ages. My present business is simply to call attention to the antiquity of the description as we have it (in the Bible).” (*Foundations of the Bible*, p. 128.)

Professor A. H. SAYCE, D.D., writes:—

The position of the Garden of Eden has been settled in my mind since the discovery (of which Mr. Rassam does not appear to be aware) of the fact that the plain of Babylonia is called in the cuneiform inscription *Edinu*, from the older Akkadian *edin*, “a plain.” The “Garden” of *Edinu* was in the neighbourhood of the ancient city of Eridu (now Abu Shahrein). In the midst of the garden rose the famous world-tree, an account of which is given in a Babylonian poem which I have translated in my *Hibbert Lectures*.

Havilah “the sandy-land,” could never have been a designation of the rocky country eastward of the Tigris. Moreover its situation is defined in the Old Testament as being in Northern Arabia.

Kush may be the Kasai of the inscriptions, the Kossæi of classical geography, who lived to the east of Babylonia.

According to a cuneiform tablet the Euphrates in one part of its course was called the 𐎶𐎵 khan, which, as I have shown in my *Hibbert Lectures*, must be read *Gikhan*.

Has there been any volcanic action in Armenia during the quaternary period?

There may have been more than one Ur, though I doubt it. But the birthplace of Abram is defined as belonging to the Kasdim, and therefore in Chaldea. The name is not found in one inscrip-

tion only, as Mr. Rassam seems to think, but is of repeated occurrence.

Mr. Rassam is supported in his view that Balaam was of Aramaic origin by the Assyrian inscriptions from which we learn that Pitru or Pethor lay on the western bank of the Euphrates, close to its junction with the Sajur.

THE AUTHOR'S REPLY.

May, 1892.

From what I have read of the remarks made by different gentlemen upon my paper, it seems to me that there is very little to comment upon, but I must reply briefly to three or four points mooted by Major Conder, Sir J. W. Dawson, and Professor Sayce.

First, I beg to remark with reference to Major Conder's allusion to "Uz," mentioned in Lam. iv, 21, and "Teman," referred to in Jer. xlix, 7, that I have already explained in my lecture that it was not uncommon in ancient days, nor indeed at the present time, to give the same name to cities and districts in different parts of a country, as it is the case now in Biblical lands. There is a large Arab tribe in the south of Assyria called *Tai*, and another one which bears the same name, and has no connection with it, inhabits northern Mesopotamia.

Moreover, if we are to follow Major Conder's theory that "Uz" and "Teman," mentioned in the Book of Job, were located in Edom, how are we to get over the difficulty of the mention of the *Sabeans* and *Chaldeans* in connection with Job's affliction? (Job i, 15 and 17.)

There is no historical record of those two nationalities as having occupied any part of Arabia, whereas, we are told by more than one ancient historian that the *Chaldeans* and *Sabeans* occupied at one time the country bordering on the upper part of the Euphrates, in what was known as *Aram-Nahraim* and *Cappadocia*.

As to the theory about the situation of the river Gihon where the Piramis now flows, I have been led to it by the fact that *Cappadocia* was formerly called "Cush," and the "Gihon" had encompassed it. (Gen. ii, 13.)

I am gratified, however, to find that Major Conder agrees with me as to the main points in my paper.

Secondly, I am sorry to dissent from the opinion expressed by Sir J. W. Dawson that there is any indication of the plain of Southern Mesopotamia having been more elevated than it is now ; on the contrary, it is supposed that the sea had extended in ancient times as far as the junction of the Euphrates with the Tigris. As regards the four rivers, viz., "Euphrates, Tigris, Kerkban, and Karun," one has only to look on their respective sources in any map and will find that they come down from diametrically different localities, the present positions of the sources of the first two rivers being about 700 miles apart from those of the latter.

With regard to Professor Sayce's contention about the position of the traditional Garden of Eden, I regret that I am unable to agree with him that the plains of Southern Babylonia have been the abode of our first parents. I do not dispute that the plain of Babylonia was called in the cuneiform inscription "Edinu," but I maintain that that name has no connection with the Eden of the second chapter of Genesis. It is quite incomprehensible to me how, in the face of such a glaring evidence as the existence of the two Biblical and classical rivers, the Euphrates and the Tigris, whose sources lie about 800 miles to the north and about 5,000 feet above the plain of Southern Mesopotamia, there can be any doubt as to the original site of the Biblical Garden of Eden.

With reference to the word "Havilah," as I pointed out before, it is not uncommon to find all over the world places having the same name, and as regards the derivation of the word very often in Semitic languages, as Professor Sayce knows, the same number of letters represent different meanings.

Then with regard to the birthplace of Abraham, we can only rely upon the historical record of his family which points to "Aram Nahrain" as the land of his nativity, and there is no doubt that the Hebrews never considered these words to mean Southern Mesopotamia. Even if we take Mesopotamia of the Greeks to mean Southern Babylonia, the ruin of "Mogayir" cannot be the *Ur of the Chaldees*, as that site is not situated between the two rivers, nor could it have ever been.

TWENTY-FOURTH ANNUAL GENERAL MEETING.

(HELD AT THE HOUSE OF THE SOCIETY OF ARTS.)

The President,

Sir GEORGE GABRIEL STOKES, Bart., LL.D., D.C.L., P.R.S., M.P.,
IN THE CHAIR.

[The Report read at this meeting, held Monday, 14th July, 1890, was circulated among the Members at the time, but its insertion in the Journal has been delayed in the hope that the Address then delivered might have accompanied it as usual, but the author has, to his great regret, been unable, as yet, to complete the MS.—As soon as it reaches the Council it will be published.]

Captain FRANCIS PETRIE, F.G.S., &c., Hon. Sec., read the following Report:—

Progress of the Institute.

In presenting the TWENTY-FOURTH ANNUAL REPORT, the Council desires to congratulate the Members and Associates on the steady progress of the Institute, especially abroad; this is due, in no small degree, to the increasing personal interest taken in its welfare by its supporters.

This personal interest has been apparent—in the small number of retirements that have taken place, in the many instances of those who had once been Members applying to rejoin, and of Associates expressing a wish to become full Members; in the efforts of local Members to bring the work of the Institute before others, getting local libraries and public bodies to subscribe (as Associates) for the Journal, lecturing from the papers in the Journal, translating the papers into the language of the country in which they are resident, and in many other ways promoting the objects of the Institute.

2. The Victoria Institute is year by year doing good service in opposing the spirit of infidelity, by its careful and impartial investigation of those questions in which Science is alleged to be in conflict with the truths of Revelation,

and in this work it has the aid of many of those men of Science who have not as yet formally joined its ranks.

3. The *Journal of the Transactions* reaches Members in India, in most of the Colonies, in the United States, and many foreign lands; and the old arrangements have been maintained whereby the most distant supporters may not only contribute papers, but also take a part in the discussions by communicating opinions in MS. This has added to the interest and value of the Journal, and has helped to increase its circulation among the general public.

4. It is gratifying to note the increase in the number of home and foreign Scientific Societies exchanging or purchasing the Transactions.

5. The Library of reference is increasing, but its value to Members renders it most desirable that the Library Fund should be largely augmented.

6. The following is the new list of the Vice-Presidents and Council, according to the voting papers received:—

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Sir George Gabriel Stokes, LL.D., D.C.L., M.P.,
President of the Royal Society.

Vice-Presidents.

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Sir H. Barkly, G.C.M.G., K.C.B., F.R.S.
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E. J. Mordahead, Esq., H.M.C.S. (*For*
Corresp.)

Alfred V. Newton, Esq.

William Vanner, Esq., F.R.M.S.

S. D. Waddy, Esq., Q.C., M.P.

Alfred J. Woodhouse, Esq., M.B.I.,
F.R.M.S.

Rev. Principal Rigg, D.D.

H. Cadman Jones, Esq., M.A.

Rev. W. Arthur.

Rev. Principal J. Angus, M.A., D.D.

J. Bateman, Esq., F.R.S., F.L.S.

D. Howard, Esq., F.C.S.

Professor H. A. Nicholson, M.D.

F. Bisset Hawkins, M.D., F.R.S.

The Bishop of Wakefield.

Rev. Dr. Tremlett.

Surge-Gen. Gordon, C.B., M.D.

His Excellency Dr. Gunning, F.R.S.E.

Rev. Preb. Wace, D.D.

Rev. J. J. Lias, M.A.

Gen. G. S. Hallowes. (*Cor. Sec.*)

Rev. A. I. McCaul, M.A.

Capt. Creak, R.N., F.R.S., &c.

Rev. F. A. Walker, D.D., F.L.S.

Dr. Chaplin.

Admiral Grant, C.B.

Rev. Canon Girdlestone, D.D.

It will be observed that since the death of Mr. R. Baxter the list of trustees has been increased to four, the Council

having strongly recommended that number in preference to the former number of two.

7. The Council regrets to announce the decease of the following twenty-seven valued supporters of the Institute:—

R. Baxter, Esq., *F.M.*, Vice-Patron, and one of the Trustees of the Institute since its foundation (whose kind counsel was always at the service of the Institute); Isaac Braithwaite, Esq., *F.R.G.S.*, &c., *F.M.*, and Vice-Patron; Miss Broke, *F.A.*; Sir G. Burns, Bart., *L.M.*; Dr. S. C. Butler, *A.*; T. B. Dale, Esq., *M.*; Rev. C. Deane, *D.C.L.*, *F.A.*; Colonel P. A. Elphinstone, *A.*; Sir W. Ewart, Bart., *M.*; Rev. F. W. Gotch, *LL.D.*, *M.*, *L.A.*; Rev. J. Jenkyns, *A.*; Rev. C. C. Lacy, *M.A.*, *Oxon.*, *J.P.*, *A.*; General Sir J. H. Lefroy, *R.A.*, *K.C.M.G.*, *C.B.*, *F.R.S.*, *M.*; Right Hon. Lord Magheramorne, *A.*; H. S. Mitchell, Esq., *A.*; Rev. J. Morris, *A.*; Principal E. S. Nunn, *M.A.*, *LL.D.*, *M.*; Rev. J. Reynolds, *A.*; T. H. Richardson, Esq., *A.*; Right Rev. Bishop Sargent, *D.D.*, *A.*; Protheroe Smith, Esq., *M.D.*, *F.M.*; Rev. W. H. B. Stocker, *B.A.*, *A.*; Right Rev. the Bishop of Tuam, *A.*; Rev. G. W. Weldon, *M.*, and Member of Council; Rev. Preb. E. H. Harcourt Vernon, *S.C.L.*; Rev. E. N. Willson, *A.*; Rev. C. Hebert, *M.A.*, *D.D.*, *L.A.*

F. Foundation. *M.* Member. *A.* Associate. *L.* Life.

8. The following is a statement of the changes which have occurred:—

	Life		Annual	
	Members.	Associates.	Members.	Associates.
Numbers on 1st July, 1889	57	43	343	759
Deduct Deaths	3	2	7	15
„ Retirements, changes, &c.	—	—	5	16
	54		— 12	— 31
			331	728
Changes	3	-2	2	-3
	57	39	333	725
Joined to July 10, 1890	1	1	26	71
	58	40	359	796
	98		1155	
Total	1253			
Hon. Correspondents number 134	Total		1387.*	

Finance.

9. The Treasurer's Balance Sheet for the year ending December 31, 1889, duly audited, shews a balance creditor of £10 17s. 8d. The amount invested in 2½ per cent. Consols is £1,365 18s. 9d.

* Founded in 1865. The total number in 1871 was 200.

The Council desires to urge the great advantage it would be were Members to remit their Subscriptions during the first half of the year, as a large proportion already do. Were this the rule with all, the whole machinery of the Institute would work with an ease that would greatly promote its success. Forms for the payment of the Subscriptions through a banker are used by a large number, and may always be had.

10. The arrears of subscriptions are as follow:—

	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Members	3	3	3	2	2	6	4	12
Associates	7	1	4	10	11	19	12	20
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	10	4	7	12	13	25	16	32

MEETINGS.

- MONDAY, DECEMBER 9, 1889.—“Instinct and Reason.” By Dr. C. COLLINGWOOD, M.A., B.M., M.R.C.P., F.L.S.
- MONDAY, JANUARY 6, 1890.—“Iceland.” By the Rev. F. A. WALKER, D.D., F.L.S.
- MONDAY, JANUARY 20.—“Ancient Eastern Laws in Regard to Land.” By the Rev. J. NEIL.
- MONDAY, FEBRUARY 3.—“On the Dispersal of Plants as illustrated by the Flora of Keeling Atoll.” By Dr. GUPPY, F.G.S.
- MONDAY, FEBRUARY 17.—“Iceland.” By the Rev. F. A. WALKER, D.D., F.L.S.
- MONDAY, MARCH 3.—“Chinese Chronology.” By Rev. JAMES LEGGE, M.A., &c, Professor of Chinese at the University of Oxford.
- MONDAY, MARCH 10.—*At the House of the Society of Arts.* “On the Monism, Pantheism, and Dualism of Brahmanical and Zoroastrian Philosophers.” By Sir M. MONIER WILLIAMS, K.C.I.E., D.C.L., &c, Boden Professor of Sanscrit at the University of Oxford.
- MONDAY, APRIL 14.—“Organization by Creation.” By JOSEPH HASSELL, Esq., A.K.C.
- MONDAY, APRIL 21.—“The Science of Rectitude as Distinct from Expedience.” By Rev. H. J. CLARKE, A.K.C.
- MONDAY, MAY 5.—“God in Nature.” By Prof. EDWARD HULL, LL.D., F.R.S., &c, Director of the Geological Survey of Ireland.
- MONDAY, MAY 19.—Paper by N. WHITLEY, Esq., C.E., in regard to the Evidence in support of the Remote Antiquity of Man.
- MONDAY, JUNE 23.—“The Garden of Eden and Biblical Sages.” A Criticism.—By HORMUZD RASSAM. (*At the House of the Society of Arts.*)
- MONDAY, JULY 14.—The Annual Address. By the Rev. Prebendary H. WACE, D.D., Principal of King's College, London. (*At the House of the Society of Arts.*)

Publications.

11. The Twenty-Third Volume of the Transactions has been issued. It contains papers and communications from

men whose names and the value of whose scientific researches are a guarantee for the "full and impartial" character of their investigations, and for the manner in which they have considered the mutual bearing of the various scientific conclusions arrived at in the several distinct branches into which Science is now divided, in order to get rid of contradictions and conflicting hypotheses, and thus promote the real advancement of true Science. Such work so carried on must tend to the advantage of Science, and to the right interpretation of the Book of Nature; and we may well be sure that when the truth in regard to that book is arrived at, it will not be found to clash with that other book, the Book of Revelation.

The People's Edition.

12. Some years ago it was arranged that twelve of the most popularly written papers in the *Journal of Transactions* should be published in a cheap form in a "People's Edition," and this was brought before the public most successfully in the Australian Colonies, and to a certain extent in Canada, South Africa, and the United States. This year it is hoped that the Council may be supported in making an effort to bring this edition before the people of India. The expense of so doing has hitherto been greater than it was thought wise or prudent to enter into, but this year the urgency of the matter has so pressed itself on the executive, that as the Institute possesses the matter to be circulated, it seems culpable not to make a beginning. The sum of £150 now would meet the expenses, and a Member has just contributed £20 towards this.*

* The People's Edition consists of twelve pages—written by men of eminence in such a style that they may be comprehended by all—reprinted from the *Journal of Transactions*. The Edition was started by some Members in the year 1873, and first attracted attention in other quarters to the need and importance of works of the kind. The papers in this edition are often accompanied by the objections and criticisms brought forward in discussing the subjects, many home and foreign correspondents having urged the value of including these. The papers are published in neat covers, and are sold at a nominal price (sixpence) by the Institute's organization of bookseller agents in the United Kingdom, the United States, Australasia, Canada, and South Africa. Single copies are supplied *gratuitously* or at cost price to individual lecturers against that

Conclusion.

In conclusion the Council desires to express its thankfulness for the Institute's past success in the great cause it was founded to advance. It has year by year become a more perfect organization, and were each Member and Associate to seek to add to the number of its adherents, the hands of the Council would be immensely strengthened in its unceasing efforts to increase the Institute's power for usefulness; and surely no higher incentive can be found to impel each individual supporter to do so than that expressed in its motto: *Ad majorem Dei gloriam.*

G. G. STOKES,

President.

SPECIAL FUND.

	£	s.	d.
Harries, G., Esq.	40	0	0
Hawkins, B., Esq., F.R.S.	5	0	0
Dent, Hastings, C., Esq., F.L.S.	1	1	0
De Bergue, Mrs. S. R.	1	0	0
Harrison, Miss G.	0	10	0
Thornhill, E. B., Esq.	0	10	0
	<hr/>		
	£48	1	0
	<hr/>		

infidelity which arises from a misapprehension of the true results of philosophical and scientific inquiry, including those of the London City Mission, the Christian Evidence Society, and similar bodies at home and abroad.

ANNUAL BALANCE SHEET.

		RECEIPTS FOR 1889.	£	s.	d.	£	s.	d.
Balance	.. .. .					27	11	0
Subscriptions:—								
2 Life Members	.. .. .	42	0	0				
1 Life Associate to Member	.. .. .	10	10	0				
5 Life Associates	.. .. .	52	0	0				
					104	10	0	
1 Member, 1886	.. .. .	2	2	0				
3 Members, 1887	.. .. .	6	6	0				
4 " 1888	.. .. .	8	8	0				
211 " 1889	.. .. .	443	2	0				
6 " 1890	.. .. .	12	12	0				
1 " 1891	.. .. .	2	2	0				
18 Entrance Fees	.. .. .	18	18	0				
2 Associates, 1885	.. .. .	2	2	0				
3 " 1886	.. .. .	3	3	0				
9 " 1887	.. .. .	9	9	0				
23 " 1888	.. .. .	24	3	0				
465 " 1889	.. .. .	488	5	0				
26 " 1890	.. .. .	27	6	0				
1 short, paid 1889	.. .. .	1	0	0				
					1,048	18	0	
Div. on £1,365 18s. 9d. 2½ p.c. Consols	.. .. .				38	5	8	
Donations to Special Fund..	.. .. .				48	1	0	
Sale of Journals, &c.	.. .. .				47	0	9	
					£1,313	16	4	

		EXPENDITURE.	£	s.	d.		
Printing and Postage, &c.	.. .. .	412	2	9		
Binding	.. .. .	26	1	0		
Reporting	.. .. .	29	8	0		
Stationery	.. .. .	55	1	2		
Advertising..	.. .. .	32	1	2		
Expenses of Meetings	.. .. .	20	11	0		
Travelling Expenses	.. .. .	11	13	7		
Salaries for Year	.. .. .	146	17	7		
Rent to Christmas, 1889	.. .. .	171	5	0		
Housekeeper	.. .. .	18	10	6		
Coals, Gas, and Oil	.. .. .	3	6	6		
Water Rate..	.. .. .	0	15	0		
Insurance	.. .. .	0	12	0		
Sundry Office Expenses	.. .. .	4	17	0		
Library, Books, Repairs, &c.	.. .. .	49	17	8		
Organizing Expenses	.. .. .	315	0	0		
Banker's Charges	.. .. .	0	14	9		
Subscription paid in error, returned	.. .. .	4	4	0		
Balance, Cr..	.. .. .	10	17	8		
					£1,313	16	4

We have examined the Balance-Sheet with the Books and Vouchers, and find a Balance in hand of £10 17s. 8d.

G. CRAWFURD HARRISON, }
JOHN ALLEN, } *Auditors.*

W. N. WEST, *Hon. Treas.*

Mr. J. B. BRAITHWAITE.—I feel it a great privilege to move: “That the report now read be received, and that the thanks of the members and associates be presented to the Council, Honorary Officers, and Auditors for their efficient conduct of the business of the Victoria Institute during the year.” May I say that I have been specially struck with the value of the papers which have been read of late, and I trust that we may all be stimulated to give fresh and increased effect to the work of this Institute, and in that spirit which is expressed in a sentence of the Report which I will take the liberty of reading: “Such work as is carried on by this Institute must tend to the advantage of science and to the right interpretation of the book of nature, and we may well be sure that when the truth in regard to that book is arrived at, it will not be found to clash with the other, the Book of Revelation.” I trust that we are all interested in that sentiment, which is of special importance in the present day. Our Heavenly Father cannot contradict Himself, and if we believe, as I trust we all do, that each of these Books—the Book of Creation, and the Book of Redemption proceed from Him as the one Author, we must feel that there can be no contradiction between them. I have very great pleasure in moving the adoption of this Report. (Cheers.)

Mr. J. R. MOSSE.—The objects of this Institute appear to me to be most valuable. In the first place it is impossible in the present day to ignore the fact that sundry difficulties in respect to the relations of religion and science do present themselves to the minds of men, and therefore a society that considers those difficulties must be of great advantage to inquirers. I hold it to be a very sad thing that so many people pooh-pooh, if I may use a common expression, those difficulties. So many think that because a man has difficulties he must be an unbeliever, I do not think that that is at all the case. These difficulties do present themselves, and a society of clergymen and of scientific men who are also believers in the Revelation of God, is of most signal benefit to all such inquirers, and ought to be supported by everybody who values science, and who values also the Revelation of God. I am exceedingly glad to find from this Report that the Institute is progressing and that it is doing such good work, not only in England, but also abroad. And I am often surprised that it is not more generally supported. A subscription list of only £1,000 a year seems to me to be very small for a society of such value, and

I should hope, indeed, that its importance will be more and more appreciated. There is not the slightest doubt, as the mover of the resolution just said, that the Revelation of God and creation cannot and will not be found to be different: it would be absurd to suppose that it could be the case. The great value of this Institute, I consider, is that it leads men of the highest position and knowledge in theology and science to show that they are one, and that there are more difficulties, in fact, in unbelief than in belief. I have great pleasure in seconding this resolution. (Applause.)

The resolution was carried *nem. con.*

Mr. DAVID HOWARD, D.L.—On behalf of the Council, I have to thank you for the expression of confidence in connection with the transactions and general business of the Institute, which has been passed. Their work is always interesting but always anxious. They have sought (however imperfectly) to ensure that the work done shall be sound and permanent. May I add with regard to the 12th section of the Report, that the Council feel strongly the importance of the wider circulation of certain papers which have been published in a "People's Edition." There are many valuable papers in the Journal which are well fitted for the reading of the intelligent public, and I do not say that a very learned paper, on Chinese Chronology for instance, would meet with much acceptance in a working man's club, but there are twelve useful papers well suited for popular reading in our "People's Edition," and it would be an admirable thing if we were able more thoroughly to circulate these. It is most important that intelligent men, of less education than ourselves, should have the opportunity of learning the right side of the question—as well as the wrong, for there is plenty of opportunity for the latter I can assure you from my knowledge of the East End. On the other hand, they are able and willing to receive the right side if it were put before them. Another thing I may remind you of is that fashions travel slowly. Fashions in dress, which are pretty well exploded in the West End, are in great force in the East End, and exactly in the same way, exploded theories, of which even their defenders are ashamed now in the more educated world, are in full force, unfortunately, in the East End. Therefore do not think that because a theory has exploded in your world there is no need to explode it in their world.

I have now to move: "That this meeting authorises the President,

Hon. Treasurer, and Hon. Secretary of the Institute, to carry out the re-investment of the funds now standing in the names of Sir R. N. Fowler, Bart., M.P., and the late R. Baxter, Esq., and such further sums as the Council may order, in the names of the four Trustees now elected, who shall have the usual powers of Trustees in regard to investment"; and also, as a rider to that—as there are certain rules which have never been acted upon, and which would now be surplusage in the face of that resolution—"That as the scheme for a supplementary endowment fund proposed 15 years ago was not found practicable and hence not acted on, the reference to it in Sect. 14A and 14C be struck out of the rules."

Mr. H. CADMAN JONES.—I have great pleasure in seconding that motion.

No amendment having been offered, the resolution was put to the meeting and carried *nem. con.*, as also was the rider.

[Some remarks having been made in regard to the mode of filling vacancies in the list of Trustees which might occur in the interval between annual general meetings.]

The PRESIDENT.—I think the motive of the Council in recommending so many as four Trustees was to provide for the case of a casual vacancy occurring in the interval between the annual meetings; so that the Trust should go on as before. Of course if there should unfortunately be an unexpected number of deaths amongst the Trustees, it would be possible at any time to call a general meeting; but the number, as I say, was so fixed as to render any such necessity very improbable.

[The ANNUAL ADDRESS was then delivered by the Rev. Prebendary H. Wace, D.D. See commencement of Report.]

Mr. WALTER CARGILL.—Mr. President, Ladies, and Gentlemen:—I have much pleasure in moving: "That our best thanks be presented to Dr. Wace for the Annual Address now delivered, and to those who have read papers during the Session."

Rev. F. DU SAUTOY, M.A.—I have very great pleasure in seconding the resolution, and especially on account of the value of the Address just delivered, for it shows that no one can charge those who place faith in the truth of Holy Scripture with being too credulous; Dr. Wace has proved, from a new source, how passing rich is that mine of evidence which justifies the Christian in his belief.

The resolution was carried unanimously.

The Rev. Prebendary WACE, D.D.—Permit me to return thanks on behalf of those who have read papers during the Session, and also to express my own for your kind resolution.

Mr. H. CADMAN JONES.—I beg to propose “that the thanks of the meeting be given to the President for his conduct in the Chair.” (Cheers.) It is always with the greatest pleasure that I have to move anything connected with him; we were at Cambridge at the same time, and were friendly rivals, though he became a great scientific man. I am sure the meeting will have the greatest pleasure in passing a resolution to this effect. (Applause.)

Captain CREAK, F.R.S.—I rise to second this resolution. We all know that our President is a friend to science, for few have ever attained so high a position in the scientific world as he has, and his presence here shows that he has faith as well. (Applause.)

The vote was passed unanimously and conveyed to the President.

The PRESIDENT—I rise to return my thanks to the Meeting for the way in which they have received this resolution. I feel, indeed, and confess that I have done but little of what a President might naturally be called on to do, but to do that little and to preside at your meetings, has afforded me great pleasure. In conclusion, I am sure I heartily wish that the ideas which exist in some minds, of the discrepancies between faith and science, may be removed, and all effective work done towards their removal is, I am sure, a good work.

The Meeting was then adjourned.

ORDINARY MEETING.*

SIR JOSEPH FAYRER, K.C.S.I., F.R.S., V.P., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Elections were announced :—

MEMBERS :—E. W. Beckett, Esq., M.P., Leeds ; Professor N. M. Eberhart, Ph.D., Dean Coll. Sci., Chicago, U.S.A. ; Rev. T. J. Gaster, London ; Rev. Principal A. Westcott, M.A., India,

ASSOCIATES :—Rt. Rev. the Bishop of Travancore and Cochin ; Major-General W. Stirling, C.B., R.A., &c., Kent ; W. Gunn, Esq. L.R.C.P. and S.E., Pacific ; W. Miller, Esq., Scotland ; Rev. J. Mitchell, B.D., F.R.A.S., Chester ; H. A. Spalding, Esq., F.G.S. West Australia ; N. A. Trenow, Esq., J.P., Breconshire ; Rev. G. Lyon Turner, M.A., London ; Rev. T. Vincent Tymms, London ; Rev. R. W. B. Whiteway, Sheffield.

Also the presentation to the Library of the following work : “ Mines and Mining,” by J. Postlethwaite, Esq., F.G.S.

The paper read on this occasion with the discussion and communications thereon is not ready for publication.

* April 6, 1891.

It is the religion of Egypt and of the whole of the Sûdân, and its professors may be found not only in Zanzibar, but at Lake Victoria Nyanza. We find it again in the Niger Basin, in the regions of Haûsa and Sokoto, and it is not unknown at Sierra Leone. The Tawâriks and other fierce tribes of the Sahara profess a belief in Muḥammad, and the Arabian "Prophet" is acknowledged by sovereigns and people alike throughout Tripoli, Tunis, Algiers, and Morocco. To what extent this faith is still being spread in Africa it is difficult to say precisely, but it is already the dominant religion of fully one half of the entire continent. Nor must we imagine that the Muslims in general care but little for their faith. On the contrary, commended to its professors not less by its many half-truths, and its apparent* simplicity, than by its warlike spirit and lax moral code, Islâm has long exercised, and even now exercises, over the hearts and lives of many millions of Muḥammadans a very powerful influence indeed.

Nor has this influence been entirely confined to those who have professed the religion of Islâm. The number of works bearing upon the subject which have appeared on the Continent and in England during the present century, show that much interest exists with reference to this religious system. To Geiger, Sprenger, Dozy, Weil, and many others on the Continent; to Lane, Carlyle, Rodwell, Draper, E. Deutsch, Sir W. Muir, Bosworth Smith, and Dr. Koelle, in our own language, we owe volumes of great interest, and in many cases of much value. An attentive student of these writers, however, is struck by the fact that the opinions expressed by them regarding Muḥammad himself and the

* Some modern writers represent Muḥammadanism as a faith which has neither mysteries nor miracles, nothing which the human mind cannot readily grasp. Nothing can be further from the truth. The miracles related in later Muslim writings as wrought by Muḥammad are very numerous and very absurd. Those attributed in the Qur'ân to the prophets mentioned in it are of the same nature. No religion which, like Islâm, recognises a Creator and a Creation, sin and righteousness, Heaven and Hell, can possibly be free from the element of mystery. In reality, Islâm is simple only with reference to its evidences, which consist in Muḥammad's own *assertion* of his prophetic claims.

† It is needless to dwell on the method of the propagation of Islâm, acknowledged by Arabic historians such as Al Wâqidî, etc. *Vide* also the injunctions regarding the Jihâd or Holy War in the Qur'ân (e.g., Sûrahs IV, VIII, XLVII, etc.), and in the *Mishkâtul Maḥâbiḥ* (*Kitâbul Jihâd*), etc.

faith which he founded, are very far indeed from being in accord with one another. Some authors are inclined to attribute Muhammad's system, taken as a whole, to something very similar to Satanic inspiration,* while others would venture to claim for him the honour of being "a very Prophet of GOD."† It is but fair to say, however, that those who take the latter view are, generally speaking, persons who have little or no personal knowledge of Muhammadan countries, and who, being ignorant of Arabic and other languages of the Muslim world, derive all their information at second hand from other authorities, or are indebted for it to a considerable extent to their own imagination. Those whose personal acquaintance with the subject alone entitles their opinions to much weight, are almost, without exception, opposed to the favourable views so very prevalent at the present time among many people in this country. The so-called liberalism of the day is too often based upon hasty and ill-weighed conclusions, and a determination to oppose Christianity‡ at any cost. Not a few of our fellow countrymen, who are loud in their praises of Buddhism and Muhammadanism, would be unable to speak as they do if they had really *studied* the religions which they so much admire.§ I purpose in the present paper, so far as my limits will permit, to inquire into the origin of Islâm in the first place, and then to endeavour to estimate the degree of credit due to its claim to be the last and most perfect Revelation of GOD.

I. What then is Muhammadanism, or, as it is more properly called, Islâm?¶ Some have called it a reformed Christianity,

* Among others, Sir W. Muir, "Life of Mahomet."

† Bosworth Smith, "Mohammed and Mohammedanism," 2nd Edition, p. 344. Cf., also Carlyle, "Heroes and Hero-Worship," lecture on Mohammed.

‡ *Vide* Prof. Grau: "Ursprünge und Ziele unserer Kulturentwicklung," concluding chapter, pp. 245, *seqq.*

§ Nothing strikes one acquainted with the East and with Eastern thought on revisiting England, so much as the astounding degree of ignorance still prevalent on these subjects in this country; especially among those (speaking generally) who endeavour to extol such religions as Buddhism and Islâm at the expense of Christianity.

¶ This is the name given to the religion in the Qur'ân: e.g., Sûrah III, 17:—

أَنَّ الدِّينَ عِنْدَ اللَّهِ الْإِسْلَامُ .

and even ventured to speak of the movement in Arabia which gave rise to the religion as "the Southern Reformation,"* and to regard it as parallel to "the Northern Reformation" under Luther and the Swiss and English Reformers of the sixteenth century! Such a view needs for its refutation only the very slightest acquaintance with the tenets of Muhammad. Another opinion rather widely held is that Islâm is a Christian† heresy, and that it may be compared with the Arianism of early times. A very cursory study of the subject will show how far this idea also is from the truth. In reality we can hardly describe Muhammadanism more correctly in few words than by saying that it is a corrupt form of late Judaism,‡ with which ideas and practices derived from Arabian and Persian heathenism, and in one or two instances from heretical books, have been mingled. This will be apparent if we investigate the origin of the religion—not a very difficult task, since, as has been remarked by a recent writer on the subject, Islâm is almost§ the only great religion whose origin and growth we can historically trace.

1. At the outset we must admit that the religion of Islâm owes very much to the personality of Muhammad|| himself, without whom, had it arisen, it would undoubtedly have been very different from what it is. In fact, it is not too much to say that, in the religion of the Muslim, Muhammad practically holds very nearly the same place as our Lord Jesus Christ does in that of the Christian. Divine honours are not, it is true, accorded to him, but he is entitled the Seal¶ of the Prophets, the last, greatest, and most perfect of

* *Eg.*, Dr. Draper, in his most unfair though cleverly written book, "The Conflict between Religion and Science."

† Carlyle for instance, "Heroes and Hero-Worship," says: "Islâm is definable as a confused form of Christianity."

‡ *Vide* Rabbi Geiger: "Was hat Mohammed aus dem Judenthume aufgenommen?" I cordially agree with Hauri's remarks on the subject (*Der Islâm*, pp. 43, 44): "Abgesehen von einer Reihe christlicher und persischer Vorstellungen, finden wir im Koran wesentlich *jüdische* Gedanken."

§ Of course Christianity, too, is an exception to the rule here implied.

|| Bosworth Smith, "Mohammed and Mohammedanism," p. 12.

¶ Of Muhammad's very numerous titles perhaps the most usual are:—

رَسُولُ اللَّهِ, "the Apostle (or Messenger) of God;" نَبِيُّ اللَّهِ, "God's

the Messengers of GOD, summing up in his own person, in a far superior degree, all the peculiar virtues of every one of the Prophets who preceded him. In everything except the exercise of the peculiar* privileges accorded to him in virtue of his prophetic office—about which the less said the better—Muhammad is the Divinely appointed model for the imitation of all men. Prayers must be offered just in the very postures he adopted on such occasions. His habits in respect to personal cleanliness, and the most private matters of domestic life, have been carefully observed and written† down for the reverential observance of all true Muslims. In India, at least, it is the custom of the most devout to carry this system so far that they even dye their beards the same colour as their “Prophet’s.” It has been truly said that Christianity is not a religious system, but a life; that it is *Christ*. With almost equal truth it may be affirmed that Islām is Muhammad. Certainly his spirit is infused into the religion which he founded, and still animates to an almost incredible extent the hearts of its professors in every Muhammadan land.

With reference to the various doctrines in the Religion of Islām as taught by Muhammad, we may fairly conclude *a priori* that he did not invent them for himself, but borrowed his materials to a great extent from pre-existing‡ systems of religion, though he built these various materials into a more or less harmonious whole according to his own plan and the exigencies of his position. A candid examination of Islām, as it is taught in the Qur’ān and in the authoritative Tradi-

Prophet;” خَاتَمُ النَّبِيِّينَ, “the Seal of the Prophets;” and الْمُصْطَفَى, the Chosen.”

* *Vide* Qur’ān, Sūrah XXXIII, 49–51. (Flügel’s edition of the Arabic text.)

† In all the great collections of Traditions, a vast number are of this description; *cf.* Mishkātu’l Maṣābiḥ, *passim*. Every rule of conduct, of ritual, of daily life, is deduced from those observed by Muhammad. As examples of his claims may be quoted the words ascribed to him by Tradition:—

انا قائد المرسلين... انا خاتم النبيين - انا اول شافع ومشفع -

انا اكرم الاولين والآخرين على الله - انا سيد ولد آدم يوم القيامة الخ

Mishkāt, pp. 505, *sqq.* (Bombay edition.)

‡ *Vide* Renan, “Études d’Histoire Religieuse;” Sayyid Ahmad, “On the Religion of the Pre-Islāmic Arabs;” Sayyid Ameer Ali, “The Spirit of Islām.”

tions of the "Prophet," and a comparison of it with those other religious systems with which Muḥammad was brought more especially in contact, will enable us to learn the measure of originality which may be ascribed to it. Muḥammad himself claimed for it none; for, though asserting that the Qur'ân contained GOD'S last and most perfect revelation to man, and was revealed to himself word by word by the Angel Gabriel, he yet affirmed that the religion which he promulgated was that of Abraham, and in fact of all the prophets,* declaring of the Father of the Faithful, the "Friend of God," that he himself also was neither a Jew nor a Christian, but an orthodox Muslim.†

2. When Muḥammad appeared, although he found religion in a very corrupt state among his fellow-countrymen, yet they had by no means entirely lost all belief in the One True GOD. It has been well pointed out‡ that the ancient and primeval religion of the Semites was monotheistic. Many Semitic tribes, it is true, as for instance the Assyrians, the Phœnicians, and even the Hebrews themselves at more than one period of their history, fell into polytheism and idolatry. Yet this process was a very gradual one, and in many cases the names of the deities worshipped are sufficient to prove that they had their origin in Monotheistic conceptions.¶ The Northern Arabs, especially, seem to have preserved their pristine faith without very much corruption up to a comparatively late period. We find among them no such deities as the Baal, Ashtoreth, Moloch, Ammon, worshipped in Canaan. Herodotus¶ informs us that the Arabs of his own day worshipped two principal deities, Orotál and Alilát. The former of these names is doubtless a corruption of** *Alláh Ta'ála'* (GOD

* *E.g.*, Súrah X, 20 (*vide* Muḥammadan commentators on the verse) Súrah II, 118-120; Súrah III, 89; Súrah IV, 124, etc.

† So called by Muslims also. *Cf.* Súrah IV, 124; *Mishkát*, p. 505, etc.

‡ Súrah III, 58-60; and Súrah VI, 162.

§ *E.g.*, by Ernest Renan, "Histoire Générale et système comparé des Langues Sémitiques," vol. i.

¶ Renan, *op. cit.*

¶ Herod., Lib. III, cap. viii:—Διόνυσον δὲ θεὸν μόνον καὶ τὴν Οὐρανίην ἡγεῖνται εἶναι . . . ὀνομάζουσι δὲ τὸν μὲν Διόνυσον Ὀροτάλ, τὴν δὲ Οὐρανίην Ἀλιλάτ.

** This (الله تعالى) is one of the commonest titles of GOD among the Arabs, the אֱלֹהֵי עֵלְיִין of Gen. xiv, 18, 19, 22.

Most High), while the latter is the goddess Allât* mentioned in the Qur'ân as worshipped by the heathen Arabs. The name Allâh Ta'âla', in which the word Allâh is the exact equivalent of ὁ Θεός in Greek, is significant of the fact that the One True GOD† was still acknowledged by the Arabs in Herodotus' time. The same fact is clear from the name *Beitu'llâh*, or "House of GOD," given from very early times to the Ka'abah at Mecca,‡ a shrine to which Diodorus§ informs us that all the Arab tribes in his time paid great respect. And in the celebrated collection of Arabic poems termed *Mu'allagât*, which have come down to us from pre-Islâmic times, we find the name of GOD with the article (Allâh) repeatedly occurring.¶ Again such

* Sûrah LIII, 19, ^{اللآت}, probably "the Goddess."

† In speaking of the pre-Islâmic Arabs, Weil says:—"Hörten aber dabei nicht auf, an ein höchstens Wesen zu glauben, welches vor Mohammed schon Allah taala genannt ward." ("Mohammed der Prophet," p. 18.) Sir W. Muir, "Life of Mahomet," p. xvii, *note*, agrees with this.

‡ Vide Sayyid Aḥmad, "Essay on the History of Mecca," p. 6; Sûrah II, 119.

§ *Ἱερὸν ἀγιώτατον ἱδρύται τιμώμενον ὑπὸ πάντων Ἀράβων περιπτώτερον.* (Diodorus Siculus, Lib. III.)

|| *Eg.*, An Nâbighah (Diwân, poem I, verses 23, 24):—

لَهُمْ شَيْمَةٌ لَمْ يُعْطِهَا اللَّهُ غَيْرِهِمْ مِنْ الْجَبَدِ وَالْأَحْلَامِ غَيْرِ عَوَازِبِ
مَحَلَّتْهُمْ ذَاتُ الْإِلَهِ وَدِينِهِمْ قَوْمٍ فَمَا يَرْجُونَ غَيْرِ الْعَوَاقِبِ

Again, Poem III, verses 9, 10:—

أَلَمْ تَرَ أَنَّ اللَّهَ أَعْطَاكَ سُورَةً تَرَى كُلَّ مَلِكٍ دُونَهَا يَتَذَبَذَبُ
إِذَا تَطَلَّعَ شَمْسٌ وَالْمَلُولُ كَوَاكِبُ إِذَا تَطَلَّعَتْ لَمْ يَبْدُ مِنْهَا كَوَكِبُ

Labid also says:—

لِعَمْرٍكَ مَا تَدْرِي الصَّوَارِبِ بِالْحَصْلِ
وَلَا زَاجِرَاتِ الطَّيْرِ مَا اللَّهُ صَانِعُ

names as that of 'Abdu'llâh, Muhammad's father,* bear testimony to Arabic monotheism. Ibn Ishâq, the earliest biographer of Muhammad, whose work has come down to us, in speaking of the religion of the ancient Arabs, tells us that the tribes of Kinânah and Qureish, when performing the ceremony termed *Ihlâl*, used to address the Deity in words which asserted their belief in His Oneness.† Various local cults prevailed in different parts of the Peninsula, yet monotheism was, in most if not in all parts of Arabia, at least theoretically recognised. Ash Shahrîstânî's testimony‡ on this point is conclusive. The Arabs of pre-Islamic times, he tells us, may with reference to religion be divided into various classes. Some believed in a Creator and a creation

* *Vide* Ibn Hishâm, *Stratu'r Rasûl*, Abû'l Fidâ, "Life of Muhammad," etc., on Muhammad's parentage. 'Abdu'llâh died some months before Muhammad's birth.

† Muhammad's earliest biographer, Zuhri, died A.H. 124. His work is no longer extant. Ibn Ishâq (died A.H. 151), was his disciple, and he also wrote a work on the same subject, large fragments of which are preserved in Ibn Hishâm's *Stratu'r Rasûl* (died A.H. 213). I quote the Egyptian edition of the latter.

‡ Ibn Hishâm, *Stratu'r Rasûl*, Part I, pp. 27, 28 (Egyptian edition):—

فكانت كنانة وقريش اذا اهلوا قالوا لبيك اللهم لبيك لبيك
لا شريك لك الا شريك هولك تملكه وما ملك

§ *Ibid.*—في وحدونه بالتلبية—

|| Ash Shahrîstânî (in his work entitled *الممل والنجل*, quoted by Abû'l Fidâ, "Hist. Ante-Islamica," Fleischer's edition, pp. 178-181; *vide* also Krehl, "Über die Religion der vorislamischen Araber," pp. 4, *sqq.*), says:—

والعرب الجاهلية اصناف فصنف انكروا الخالق والبعث وقالوا
يا طبع المحيي والدهر الممضي كما اخبر عنهم التنزيل وقالوا ما هي
الا حياتنا الدنيا نموت ونحيا وصنف اعترفوا بالخالق وانكروا
البعث وصنف عبدوا الاصنام وكانت اصنامهم مختصة
بالقبائل فكان ود لكلب وهو بدومة الجندل وسواع يهذيل ويعوث
لمذحج ولقبائل من اليمن ونسر لذي الكلاع بارض حمير ويعوق
لهمدان واللات لتقيف بالطائف والعزى لقريش وبني كنانة ومناة

produced by Him out of nothing, but yet denied the Resurrection and the return to GOD. Others believed in a Creator, a creation, and some kind of a return to GOD for judgment, but denied GOD's Prophets and worshipped false gods, concerning whom they believed that in the next world they would become *mediators* between themselves and GOD. Regarding the latter class of Arabs, Sayyid Ahmad admits that their doctrines, "*plus* the doctrine of revelations, were very nearly identical with the main principles of Islām."* Ibn Ishâq and Ibn Hishâm inform us that idolatry had been introduced into Mecca only about fifteen generations before Muḥammad.† The Arabs were doubtless conscious that it

للأوس والخزرج وهبل أعظم اصنامهم وكان هبل على ظهر الكعبة وكان
أساف ونائيل على الصفا والمروة وكان منهم من يعبد إلى اليهود
ومنهم من يعبد إلى النصرانية ومنهم من يعبد إلى الصابئية ويعتقد
في أنواع المنازل اعتقاد المنجمين في السيارات حتى لا يتحرك
الأنثى من الأنواء ويقول مطرنا بنوء كذا وكان منهم من يعبد الملائكة
ومنهم من يعبد الجن وكانت علومهم علم الأنساب والأنواء والتواريخ
وتعبير الرويا وكان لابي بكر الصديق رضى الله عنه فيها يد طويل
وكانت الجاهلية تفعل أشياء جاءت شريعة الاسلام بها فكانوا لا
ينكحون الأمهات والبنات وكان اقبح شيء عندهم الجمع بين
الاختين وكانوا يعيبون المتزوج بامرأة ابيه ويسمونه الضيزين وكانوا
يحججون البيت ويعتمرون ويطوفون ويسعون ويقفون المواقف
كلها ويرمون الجمار وكانوا يكبسون في كل ثلث اعوام شهراً ويعتسلون
من الجنابة وكانوا يداومون على المضمضة والاستنشاق وفرق الرأس
والسواك والاستنجا وتقليم الاظفار ونتف الابط وحلق العانة
والختان الخ

* Sayyid Ahmad, "Essay on the Religions of the Pre-Islamic Arabs," pp. 5, 14.

† *Stratū'r Rasūl*, pp. 27, sqq. They say (on Muḥammad's authority) that 'Amr bin Lahī was the first to introduce idolatry into Mecca:—

انه كان اولاً من غير دين اسمئيل فنصب آلاتاً

was an innovation upon the faith of those ancestors of whom they were so proud. This being the case, and remembering* that the worship of the One True GOD had never entirely ceased in the country, we can readily understand how Muḥammad could come forward in the name of the Supreme GOD of the nation, the GOD of Abraham, Who had been merely cast into† the background by the overgrowth of local cults.

Most of the rites and ceremonies which play so important a part in the Religion of Islām, were practised in the country from time immemorial. The Arabic historian Abû'l Fidâ states that "The Arabs of the Time of Ignorance used to do things which the religious law of Islām adopted. . . . They used to make the Pilgrimage to the House (the Ka'abah), and to visit holy places, and wear the *Ihrâm* and perform the *Tawwâf*, and to run (between the hills As-Safâ and Al-Marwâ), and to stand at all the Stations, and cast stones (at the Devil in the valley of Minâ), and they were wont to intercalate a month every third year."‡ He adds that the ceremonial washings, religious cleansing of the teeth, and the practice of circumcision, were also in vogue among the Arabs long before Muḥammad's time.§ Then as now the pilgrims to the Ka'abah had to kiss the famous *Hajarul Aswad* or

* It would be quite incorrect to describe the polytheism of the pre-Islamic Arabs as at all similar to that of the Greeks and Romans. It was rather similar to the saint-worship of the Eastern Churches at the present time. The inferior deities were worshipped as *mediators* with God. (Ash Shahristânî, quoted above; Ibn Hishâm, p. 127; Sale, *Prel. Disc.*; Sayyid Ahmad, "Essay on Manners and Customs of Pre-Islamic Arabs," p. 13.) Weil ("Mohammed der Prophet," p. 18), well says:—"Übrigens betrachteten die Araber vor Mohammed ihre Götzen, welche theils Menschen- oder Thiergestalt hatten, theils als rohen, von dem Tempel zu Mecca herrührenden Steinen bestandet, nur als Götter *zweiten Ranges*."

† Grau, "Kulturentwicklung," pp. 137, 138.

‡ "Hist. ante-Islâmica," Fleischer's edition, p. 180. (See the passage quoted at full length note ||, pp. 8, 9.)

§ Similarly Ibn Ishâq says (*Strat'ur Rasûl*, Part I, p. 27):—

وفيه على ذلك بقايا من عهد إبراهيم يتمسكون بها من
تعظيم البيت والطواف به والحج والعمرة والوقوف على عرفة
والمزلفة وهدى البدن والاهلال بالحج والعمرة مع ادخالهم فيه
ما ليس منه - الخ .

Black Stone, in token of deep reverence if not of actual worship.

3. The Jews held in Muhammad's earlier life a position of great power and influence in Arabia.* They constituted several very numerous tribes, as the Banî Qureidhah, the Banî Qeinuqâ'a, the Banî Nadhîr and many others. Although they do not seem to have been distinguished for learning,† yet they undoubtedly preserved their ancestral veneration for the books of the Old Testament, and many Talmudic legends and tales lived in the mouths of the people. Muhammad found that their possession of inspired books gave the Jews a position of great religious importance in the eyes of his countrymen, which was augmented by the fact of their direct descent from Abraham, of their own connection with whom the Arabs were so proud. He could not doubt that the Jews still preserved the Religion of Abraham, for which his predecessors the Hanîfs‡ had resolved to search. The monotheism of the Jews and their aversion to idolatry would also exercise a very favourable influence upon Muhammad's mind, and would predispose him to endeavour to ally them with himself in his campaign against the corruptions which he discovered to have crept into the religion of his fellow countrymen. The Qur'ân shows§ in the clearest manner possible how much of his teaching Muhammad borrowed from the Jews. Again and again he professes that his religion is the same as that which the "People of the Book" had received by Divine¶ revela-

* *Vide* Siratu'r Rasûl and all Arabic historians; also *cf.* Rabbi Geiger, "Was hat Mohammed aus dem Judenthume aufgenommen?" pp. 6-9, *et alibi*.

† *Ibid.*, p. 10.

‡ Regarding whom see an interesting account in Ibn Hishâm, Part I, pp. 76, *sqq.* The chief of these *Hanîfs* or "Orthodox Believers" were Waraqah bin Naufil, 'Ubeidu'llâh bin Jahsh, 'Uthmân bnu'l Huweirith, and Zeid bin 'Amr.

§ See this proved at length in Rabbi Geiger, "Was hat Mohammed aus dem Judenthume aufgenommen?"

¶ أهل الكتاب ^ص ^ع; the Jews, Christians, and perhaps Sabaeans, are so called in the Qur'ân *passim*, but the epithet is most commonly used in reference to the Jews especially.

¶ This is most fully confessed in the Qur'ân in many places, *e.g.*, Sûrah II, 130:—

قُولُوا آمَنَّا بِاللَّهِ وَمَا أُنزِلَ إِلَيْنَا وَمَا أُنزِلَ إِلَىٰ إِبْرَاهِيمَ وَإِسْمَاعِيلَ

tion. He was not, however, personally acquainted with the Hebrew Scriptures, and his Jewish instructors Waraqah,* Habîb bin Malik, and above all 'Abdullâh ibn Sallâm,† were far better instructed in tales from the Talmud than in their Canonical Scriptures. This accounts for the fact that many of the stories told in the Qur'ân regarding Scripture characters agree far more closely with Talmudic fables than with Old Testament history. The resemblances are, in fact, so great as to preclude any possibility of accounting for them except by plagiarism on Muhammad's part, although he professed to receive his teaching from Divine inspiration. A few examples‡ will suffice. The narrative given in the Qur'ân§ concerning Abel's burial, and how a raven taught Cain how to bury him, agrees exactly with the account given in the "Pirke Rabbî Eliezar," except that in the Jewish legend the raven gave Adam and not Cain the lesson in question. Such blunders in details are not uncommon in other similar plagiarisms in the Qur'ân. Again Muhammad's account¶ of how Abraham in his youth was cast into the fire by Nimrod's order, and miraculously delivered from it, is in almost every detail borrowed from the "Midrâsh Rabbâh."*** R. Abraham Geiger has

وَإِسْحَاقَ وَيَعْقُوبَ وَالْإِسْبَاطِ وَمَا أَوْتِيَ مُوسَى وَعِيسَى وَمَا أَوْتِيَ النَّبِيِّينَ
 مِنْ رَبِّهِمْ لَا نَفَرِقَ بَيْنَ أَحَدٍ مِنْهُمْ وَنَحْنُ لَهُ مُسْلِمُونَ .

* Waraqah for a time professed Judaism, as Ibn Ishâq tells us (*op. cit.*, Part I, pp. 76, *sqq.*).

† Abû'l Fidâ, "Annales Moslemici," Part I, 283; *cf.* Geiger, *op. cit.*, p. 24.

‡ These are all borrowed from Rabbî Geiger's work, where the Chaldee texts may be read in the original.

§ Sûrah V, 30-35. The *names* of Cain and Abel, however, do not occur in the Qur'ân. Muslims call them Qâbil and Hâbil.

|| Chapter XXI; Geiger, p. 103.

¶ Told in a fragmentary way in Sûrah XXI, 52-72; Sûrah II, 260; VI, 74; XIX, 42-50; XXVI, 69-79; XXIX, 15; XXXVIII, 81-95; XLIII, 25-27; LX, 4, etc.

** Midrâsh Rabbâh on Genesis, § 17; Geiger, pp. 123, 124. Muhammad does not mention Nimrod by name, but Muhammadan commentators do, following Jewish tradition. He also calls Abraham's father *Azar* instead of Terah, by a corruption of Zârah (his name in the Talmud).

pointed* out a number of Aramaic words in the Qur'ân which have much puzzled Arabic commentators, and which form another unmistakable proof of Muḥammad's indebtedness to Talmudic lore. Among other minor matters in which the Qur'ân borrows from the same source may be mentioned the existence of seven heavens† and seven hells, the fact that at the Creation GOD'S throne‡ moved in the air over the waters, the existence of a "Prince§ of Hell," of Al A'râṭ|| or the partition between heaven and hell, the prophecy that the Resurrection¶ will be ushered in and helped forward by a great rain, the assertion that hell is never** full, the information that evil spirits hearken behind a curtain‡‡ to GOD'S counsels, and many other similar absurdities. What Muḥammad relates of Hârût‡‡ and Mârût, two angels that sinned, is precisely what the Midrâsh Yalkût tells us of the angels Shamḥazai and 'Azâêl. His assertion§§ that at the Deluge "the oven boiled up," is an echo of the Rabbinical saying that "the generation that lived at the time of the Flood were punished with *hot water*."

It was not merely such traditions as these that Muḥammad borrowed from the Jews of his own time. He learnt from them to assert his belief in the Prophets of the Old Testa-

* *E.g.*—⁵ تَوْرَاةٌ = תּוֹרָה = תַּבּוּת = תְּיִבוּתָא = תְּיִבָּה : תְּיִבָּה = جَهَنَّمَ =
 = فِرْقَانٌ : مُعَذِّبٌ = טַעוּת = טַעוּת : שְׂכִינָה = סְכִינָה : יִרְדּוּנוֹס =
 מַלְכֻת = מַלְכּוּת : מַעוֹן = מַעוֹן : שְׂמֵן, שְׂמֵן, שְׂמֵן, פְּרִקוֹן :

(Geiger, pp. 41-60). For the Syriac words I am myself responsible.

† Sûrah XVII, 46, 88; Chagigah IX, 2.

‡ Sûrah XI, 9; Rashi on Gen. i, 2.

§ Called Mâlik by the Muslims (Mishkât; *Bâb Sifat'u'n Nâri wa Ahlihâ*,

section ii), and by the the Rabbins merely גִּידְהוֹנוֹס .

|| Sûrah VII, 44; *cf.* Midrâsh to Ecc. vii, 14.

¶ Tract *Taanith*, *initio*; Berêshith Rabbâh; Pocock, "Not, in Port Mosis," pp. 117, 255.

** Sûrah L, 29; *cf.* Ôthiôth de Rabbi Aqibâ, VIII, 1.

‡‡ Sûrah LVII, 5; XXXVII, 7; XV, 17, 34, etc.; *cf.* Geiger, pp. 83, 84.

§§ Sûrah II, 96 and Yahya's comment. *in loc.*, quoted by Sale; Midrâsh Yalkût, cap. XLIV; Geiger, p. 107. Jonathan's Targum calls them Samḥasai and 'Uzziêl.

§§ Sûrah XI, 42, and XXIII, 27; Rôsh Hashanah, XVI, 2; Sanhedrin,

108:—⁵ وَفَارَ التَّنُّورُ, דָּרַר הַמְבוּל בְּרוֹתְחִין גְּדוּנוֹ—

ment, of whom he often* makes mention in the Qur'ân, and concerning whom he tells some marvellous tales, of which Solomon's† conversation with a lapwing, his armies of genii and men and birds, and the tale of the *Ifrit* bringing him Queen Balkis' throne, are fair specimens. It is beyond dispute, moreover, that Muhammad's belief in the One True God, though not learnt directly from the Jews, was much strengthened by his intercourse with them. We may infer that his iconoclasm owed something to the same influence. But the impress which Talmudic‡ Judaism, as it then existed in Arabia, has left on the religion of Muhammad is deeper still. Arabian Judaism at that time was the direct offspring and the development of the Pharisaism into which the Jews of our Lord's day had corrupted the religion of the Prophets. It was a faith which attached an extreme value to outward observances, such as fasting, pilgrimages, ceremonial rites, washings, fixed times of prayer, etc. Muhammad§ was very naturally therefore led to deem these things of very great importance. The Pharisaism of the Jews thus became the parent of that which is now manifested in Islâm. Muhammadans themselves at the present day are often struck on reading the New Testament (when they can be persuaded to do so) by observing how completely the spirit, and much of the form also, of their own faith accords with that of the Pharisees condemned by our Lord. No attentive reader of

* *E.g.*, in Sûrah XIX, 42, *sqq.* Vide also his references to Aaron (II, 249, *sqq.*), Abraham (II, 130, *et passim*), David (XXXIV, 10, etc.), Enoch (XIX, 57, etc.), Elisha (VI, 86), Elijah (VI, 85), Ezra (IX, 30), Job, Jonah, Joseph, Joshua, Noah, Solomon, Zacharias, etc.

† Sûrah XXVII.

‡ The Talmud was completed about a century before Muhammad's time, the Babylonian Gemara having been finished about A.D. 530, the Jerusalem Gemara about A.D. 430, and the Mishna about A.D. 220 (Gfrörer's "Jahrhundert des Heils," pp. 11-44). R. Geiger (*op. cit.*, pp. 9, 10) says: "Dass die jüdische Glaubensansicht eine völlig durchgebildete und ganz in das Leben aller Gemeindeglieder eingedrungene schon damals gewesen sei, lässt sowohl ihr Alter nicht bezweifeln als auch vorzüglich die schon zu Stande gebrachte Beendigung des Talmuds."

§ Hauri ("Der Islâm," pp. 43, 44) says: "Das ganze Leben ist in religiöse Formen eingeschlossen: tägliche Gebete, Festtage, Wallfahrten, Fasten, Enthaltung von gewissen Speisen und äussere Reinigungen. Das ist die Religiosität, mit welcher Mohammed bekannt wurde, und sie hat auf seine Stiftung so grossen Einfluss geübt, dass wir sagen müssen: Der Islâm ist nicht eine neue Religion, auf ein neues Princip gebaut, sondern nur eine Vermengung des einseitig gewordenen Judenthums mit arabischem Heidenthum."

the Qur'ân can fail to notice how completely the book breathes throughout the spirit of this corrupt and slavish form of Judaism. Hence a recent writer* well terms Islâm "the Religion of Revelation translated into flesh," in order to show its servile and carnal character, its professors being—in keeping with Muḥammad's descent from Ishmael and Hagar—children of the bondwoman and not of the free.

4. From orthodox Christianity Islâm borrowed little. Although in the Qur'ân there are no less than 131 references to the Holy Scriptures by name, yet there is only one† direct quotation from the Old Testament and another less direct‡ from the New, together with the assertion that Christ predicted the coming of a prophet called Ahmad, the same name as Muḥammad. The "Prophet" could learn little he cared to know from the corrupt Eastern Church of his time. But there lingered among the many sects of Christians and Christian heretics then to be found in Arabia, Syria, and

* Grau, "Kulturentwicklung," p. 138; "Keineswegs aber ward im Islam das Heidenthum vollständig überwunden; vielmehr ist er nur die ins Fleisch übersetzte Religion der Offenbarung, das Kind der Magd und nicht der Freien, wie Ismael."

† Vide each such passage quoted in the original and commented on in Sir W. Muir's "The Coran" (S.P.C.K.).

‡ In Sûrah XXI, 105:—

وَلَقَدْ كَتَبْنَا فِي الزَّبُورِ مِنْ بَعْدِ الذِّكْرِ أَنَّ الْأَرْضَ يَرِثُهَا عِبَادِيَ
الصَّالِحُونَ

(The quotation here is from Ps. xxxvii, 11).

§ Sûrah VII, 38:—

وَلَا يَدْخُلُونَ الْجَنَّةَ حَتَّى يَلْمَ الْجَمَلُ فِي سَمِّ الْخَيْطِ

(Cf. Matt. xix, 24).

|| Sûrah LXI, 6:—

وَإِنَّ فَارَيسَى ابْنَ مَرْيَمَ يَا بَنِي إِسْرَائِيلَ إِنِّي رَسُولُ اللَّهِ إِلَيْكُمْ
مُصَدِّقًا لِمَا بَيْنَ يَدَيَّ مِنَ التَّوْرَةِ وَمُبَشِّرًا بِرَسُولٍ يَأْتِي مِنْ بَعْدِي
اسْمُهُ أَحْمَدُ

Muḥammad evidently meant to refer to John, xvi, 7, *sqq.* He no doubt misunderstood the word Παράκλητος, and imagined it meant what Περικλυτός does, of which *Ahmad* is a fair translation.

Egypt, many marvellous tales connected with our Lord and His Apostles and the saints and martyrs of the past. Many of these are still extant in the Apocryphal Gospels, several of which are of considerable antiquity.* Mixing with men who loved to recount such tales, and being ignorant of the canonical New Testament, Muhammad adopted many silly legends and incorporated them into the Qur'ân. As an example we may quote that of "the Seven Sleepers," whom he calls "the Companions† of the Cave," and whose absurd tale he tells at full length as Divinely revealed to him. Regarding the Virgin Mary, Muhammad assures us that her mother before her birth dedicated‡ her to GOD's service, that she was reared in the Temple under the care of Zacharias,§ where GOD sent angels|| to feed her, and that lots were cast with rods¶ to decide who should take charge of her as she grew up to womanhood. Again, on one occasion when she was hungry a date palm** lowered its head and offered its fruit to her. All these and many other such tales are taken from the "Protevangelium of James," the "Pseudo-Matthew," the "Gospel of the Nativity of Mary," and similar apocryphal works.†† So also of our Lord Himself we are told in the Qur'ân as well as in the "Gospel of the‡‡ Pseudo-Thomas"

* *Vide* Giles' "Codex Apocryphus Novi Testamenti," 2 vols.; also Cowper's "Apocryphal Gospels," Introduction, Section IV; and Tischendorf, "On the Origin and Use of the Apocryphal Gospels."

† Sûrah XVIII, 8-26.

‡ Sûrah III, 31; *cf.* "Protevang. Jacobi," iv: *Εἶπε δὲ Ἄννα, Ζῆ Κύριος ὁ Θεός μου, ἐν γεννήσῳ εἶτε ἄρρον εἶτε θῆλυ, προσάξω αὐτὸ δῶρον Κυρίῳ τῷ Θεῷ μου*; *cf.* also "Evang. de Nat. Mariae," cap. i; also "Pseudo-Matthew," ii.

§ Sûrah III, 32; *cf.* "Protevang. Jac.," cap. viii, *sqq.*

|| Sûrah III, 32; *cf.* "Evang. de Nat. Mariae," cap. vii; "Protev. Jac.," cap. viii; "Hist. Nat. Mariae," cap. vi.

¶ Sûrah III, 39; *cf.*, "Protev. Jac.," cap. ix, "Evang. de Nat. Mariae," cap. vii and viii; "Hist. Nat. Mariae," cap. viii.

** Sûrah XIX, 23, 25; *cf.* "Hist. Nat. Mariae," cap. XX (connected, however, with the Flight into Egypt—another of Muhammad's blunders!).

†† Tischendorf thinks that the "Protev. Jac." belongs to the middle of the second century; Cowper is uncertain whether it existed before the fourth century. The "Pseudo-Matthew" (otherwise called "Hist. Nat. Mariae") may belong to the fifth century (Cowper). The "Gospel of the Nativity of Mary" belongs to the fifth or sixth century (Cowper).

‡‡ An early work, attributed by Cowper to the middle of the second century. Much of it is incorporated in the present form of the "Arabic Gospel of the Infancy."

and the "Arabic Gospel* of the Infancy," that Jesus spoke when an infant† in the cradle, and that as a boy he gave life to a bird‡ made of clay. Following in the footsteps of the Valentinians, Basilides,§ and the Manichæans, Muḥammad denied our Lord's crucifixion,|| asserting that someone else had died in His stead. He rejected, however, the Docetism upon which this idea was based,—another example of the strangely composite nature of his doctrines and of his blunders. He evidently believed the Virgin Mary to be, in the opinion of Christians, the Third Person¶ in the Trinity, and identified her with Miriam, the sister of** Aaron! This is almost paralleled by his statement that the Hebrews in the Wilderness were persuaded *by a Samaritan*†† to make the Golden Calf!

5. The religion of Zoroaster again has left its mark upon Islām, owing to the not inconsiderable number of ideas which Muḥammad borrowed from it. In his early manhood the Persians exercised sovereign sway over many parts‡‡ of Arabia. Their tales were very popular among the Arabs, and are referred to in the Qur'ān.§§ Along with the heroic legends of Irān it was natural that some of its religious tenets

* This work in its present form, however, is in a late style of Arabic; it is probably a translation of a Syriac work, which may itself have been of Coptic origin. *Vide* the text in Giles' "Cod. Apoc. N. T.," Vol. i, pp. 12, *sqq.*

† "Ar. Evang. Infantiae," cap. i; *cf.* Sûrah XIX, 30, 31, *sqq.*; also Sûrah V, 109; Sûrah III, 40, 41, etc.

‡ "Pseudo-Thomas," cap. ii (Giles, *op. cit.*, Vol. I, pp. 48, 49): "Ar. Evang. Inf.," cap xxxvi; Sûrah III, 43; Sûrah V, 110.

§ Irenæus, "Adv. Hæres.," Lib. I, 23; August., "Hæres.," IV, etc., etc.

|| Sûrah IV, 156.

¶ *Cf.* Sûrah IV, 169 (*vide* also Al Beidhâwî, Yahya, and Jalâlu'ddîn's commentaries *in loco*). *Vide* also Sûrah V, 76-79, 116, and Jalâlu'ddîn's commentary.

** Both *Miriam* and *Mary* are in Arabic (as in Hebrew) the same word—

in Arabic it is ^{مريم} *مريم*. Hence the confusion. The mother of Jesus is called "Sister of Aaron" in Sûrah XIX, 29.

†† Sûrah XX, 87, *sqq.*

‡‡ Especially over the kingdom of Hirah in the north-east, also over the Arabs of 'Irâqu'l 'Arabî (Abû'l Fîdâ, "Hist. Ante-Islamica," ed. Fleischer, p. 126). The Persians had also in Muḥammad's time succeeded the Abyssinians in the sovereignty of Yaman (Ibn Ishâq).

§§ Sûrah XXVII, 70; *vide* also Ibn Hishâm, Part I, p. 124.

should also gain access to their minds. Much that the Qur'ân tells us of the *genii*,* beings made of subtle fire and intermediate between angels and men, is clearly traceable to this source.† The very word جِنِّي (jinni) by which such a being is called is the Avestic *جندرد* (*jaini*), a wicked (female) spirit.‡ The *Hûr* (ح) or *houries* of the Muhammadan Paradise are unmistakably identical with the *سودردود* § *Pairikas* of the Avesta (in modern Persian *Peris*), "female genii|| endowed with seductive beauty, dwelling in the air and attaching them-

* Cf. Sûrah VI, 100, 128 ; XV, 27 ; XXVI, 212 ; XLI, 24, 29, etc.

† Much that is related of Solomon in the Qur'ân is almost identical with Persian legends about Yima Khshaeta (Avesta), or in Modern Persian *Jamshid*. These legends were current among the Arabs of his time, and were regarded by Muhammad as true and (apparently) as recorded in the inspired writings of the Jews! There is a curious old Persian book not long since re-discovered, written in Pahlavi in the Persico-Arabic character, but with an amplified translation in the Dari form of Persian. It is called the "Heavenly Dastûrs" (in the original *دساتیر آسمانی*).

Every treatise in it is attributed to a different prophet, and the *second* sentence in each treatise runs thus: — *فہ شید شمتای ہرشدہ ہر ششگر* :— = "In the Name of God the Merciful, the Gracious,"—the very formula used at the beginning of every Sûrah but one in the Qur'ân, in

Arabic *بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ* : The *first* clause in each treatise is

نَعْدُ بِاللّٰهِ الخ identical with the Qur'anic *نَعْدُ بِاللّٰهِ* الخ

Al Beidhâwî and Jalâlân (comment, on Sûrah XXV) tell us that the

اساطیر mentioned in Sûrahs XXV, XXVI, 70 ; XLVI, 16 ; LXVIII, 15, was a book well-known in Mecca before Muhammad's time, and in which the doctrine of the Resurrection was taught. Is there any possibility of a connection between the *دساتیر* and the *اساطیر*?

‡ The word occurs, e.g., in Yasna X, 4, 2, 53. A great number of evil spirits of various kinds are mentioned in the Avesta, among which are:— *Jainis, Jahis, daevas, drujes, nasus*, the *yâtus*, etc.

§ Yasna IX, 61 ; Yesht X, 26, 34, etc.

|| C. de Harlez, "Manuel de la Langue de l'Avesta," *sub. voc.*

directly through Jewish fables, is indirectly borrowed from Persia, where he was known in Avestic times as 𐬨𐬀𐬎𐬌𐬎𐬎𐬀 or 𐬨𐬀𐬎𐬌𐬎𐬎𐬀 * *Vidātus* or *Astōvidhotus*. To the same religion Muḥammad was indebted for his Road, or Bridge† (الصراط) over Hell, which the ancient Persians called *Chînavat* (in mod. Persian چینود). Many of the strange and absurd ideas found in more recent Muḥammadan works may be traced to the same source, as for example the theory that the earth is sevenfold, or built in seven‡ storeys, one above the other. These seven storeys of the earth are the seven (𐬨𐬀𐬎𐬌𐬎𐬎𐬀 or 𐬨𐬀𐬎𐬌𐬎𐬎𐬀) *Karshvares*§ of the Avesta, and to a great extent correspond, and are certainly of common origin with the seven (दीपः) *dvîpas* of the Hindûs. It is remarkable as showing the extent of the influence which Zoroastrianism had even before Muḥammad's time exercised upon Arabia, that the word for "the faith" or "Religion" most frequently used in the Qur'ân (دين) *dîn*, is not a pure Arabic word at all, but is the Avestic (𐬨𐬀𐬎𐬌𐬎𐬎𐬀) *daëna*, which is used quite as technically in the early Zoroastrian Scriptures as its Arabicised form is in the Qur'ân.¶ In fact nearly all that Islâm teaches about the angels, the work and nature of evil spirits, and kindred subjects, is derived either directly from a Zoroastrian or Magian source, or indirectly so through the medium of later Jewish legends which were deeply coloured through the influence of Persian myths.

* Yesht X, 93; Fargand V, 25, 31.

† Penrice ("Dict. of Koran," s.v.) says that صراط comes from no verbal root in the Arabic language. It is just the form the Persian word would take when introduced into Arabic.

‡ 'Arâisu't Tijân, pp. 5-9; Qiṣaṣu'l Anbiyâ, pp. 4-6, etc.

§ Yasna LXIV; Yesht X, etc.

¶ Fargand II, 1-3; Yesht XVI, etc. The word in the Avesta means primarily *law, doctrine*. Ahura Mazda is represented as giving his *daëna* to Yima and afterwards to Zarathuštra (Zoroaster). Hence the Arabic meaning of the word = *Religion*.

Thus nearly every leading doctrine of Islâm can be traced with perfect certainty to some Pre-Islâmic creed. Even in Muḥammad's lifetime he was accused of deriving from human teachers the revelations he professed to receive from GOD through the Angel Gabriel. This he strenuously denied, asserting that his wonderful acquaintance with the history of the Old Testament Prophets was a manifest proof of his Divine mission!

II. We have spoken above of the great influence which Islâm exerts over many millions of our race. The secret of its might lies to a great extent in the amount of truth incorporated in it and derived from Judaism and primitive Semitic tradition. Muḥammad discovered not a single new truth, nor did he inculcate a single moral precept which had not been much more forcibly taught in the Old Testament. The more perfect moral system, and the completed revelation of GOD, contained in the New Testament he either ignored or denied* in set terms. Instead of being an advance on Christianity, therefore, as it must necessarily be if it were (as it claims to be) a later and perfect revelation, Islâm has retrograded far behind the limit reached by the Prophets of Israel. It has no priesthood, no sacrificial system, no atonement for sin, no blessed hope of a coming Redeemer, no clearly-defined moral code, no glorious past ennobled by holy and devoted Prophets, no sinless future promised in its Qur'ân. It has lost much that GOD had revealed previously, and gained instead only heathen myths, Jewish Pharisæism, and the Arabian fatalism and love of war. Yet in spite of all this Islâm has retained enough of truth, though somewhat distorted, to give it the influence of which we have spoken. The Creed of Islâm,† or of Unity, as it is called, well illustrates the character of the religion. It consists, as Gibbon remarks,‡ “of an eternal truth, and a necessary fiction,” “Lâ ilâha ill' Allâhu; Muḥamadur Rasûlu 'llâhi,” “There is no GOD but

* I do not mean that he rejected the *Injil* (Εὐαγγέλιον) as he calls the New Testament. On the contrary, it is again and again in the Qur'ân spoken of as Divinely inspired. But most of the truths taught in the New Testament, e.g., our Lord's Divinity, His atoning Death, etc., are denied, and Muḥammad shows no knowledge whatever of the moral system taught by Christ.

† In Arabic كَلِمَةُ الْإِخْلَاصِ.

‡ Vol. IX, Cap. L.

GOD; Muḥammad is the Apostle of GOD.* The grand and simple monotheism of the first part of this formula commends itself to all minds, while the concluding portion, if accepted on the authority of the first, suffices to quench every lingering doubt about the minor doctrines of Islām, resting as they do wholly and entirely upon the assertions of Muḥammad.

1. The chief truths† retained in Muḥammadanism are :—(1) The Unity of GOD and His distinctness in Nature and Attributes from the Creation which is the work of His hands. (2), Man's dependence upon his Creator, his need of a Divine Revelation, the fact that GOD has revealed Himself through certain great Prophets in inspired books, and that He hears and answers prayer. (3), The certainty of an after-life of rewards and punishments according to our deeds done in the body. Regarding these great doctrines Islām gives no uncertain sound, and we may thank GOD that they are so powerfully urged and so frequently insisted on both in the Qur'ān itself and in the Traditions of the "Prophet," the two great sources whence the doctrines of the religion are drawn. Yet it would be an utter mistake to suppose that these points which we have mentioned are recognised by Muslims as forming in themselves the fundamentals of their faith. They may be all classed under the first clause of their creed, but the *kalimah* contains two clauses, and it is the second that, in the opinion of the Muslims, distinguishes it from the creeds of less perfect religions. The first clause formed, they tell us, an integral part of the creed of both Jews and Christians; but while the former‡ were Divinely authorised to add to this

* In the Qur'ān both clauses virtually occur; the first in Sûrah III,

55:—^{مَا مِنْ شَيْءٍ إِلَّا عِنْدَنَا خَزَائِنُهُ وَمَا مِنْ شَيْءٍ إِلَّا عِنْدَنَا مِزَانُهُ} مَا مِنْ إِلَهٍ إِلَّا اللَّهُ— and the latter in Sûrah XXXIII, 40 :—

مَا كَانَ مُحَمَّدٌ أَبَا أَحَدٍ مِنْ رِجَالِكُمْ وَلَكِنْ رَسُولَ اللَّهِ

† It is unnecessary to adduce quotations from the Qur'ān and the traditions to prove that these truths are taught in the Muḥammadan faith. They are found in almost every page.

‡ This is the account given in such works as the 'Arāisut' *Thjān*, and is current among Muslims in different lands. Other traditions, however, state that the Muḥammadan *Kalimah* or Creed was written by GOD before the creation of the world on the base of the Celestial Throne

(العرش). It is also inscribed on the Seal of God. Cf. *Mishkātul*

the words "Moses* is he that conversed with GOD," and the latter the phrase "Jesus is the Word of GOD," the concluding section of the Muḥammadan creed has now finally, by the Divine decree, taken the place, for all true Believers, of the previous temporary and imperfect conclusions. Hence no one can in any true sense be a Muḥammadan who accepts the three great truths we have above enumerated but refuses to give his adherence to all the rest of Muḥammad's† teaching. It would be manifestly incorrect, therefore, to regard these truths as the foundation upon which the faith rests. On the contrary, it is based entirely upon Muḥammad's unsupported claim to be the last and greatest of the Prophets. Muḥammad is reported to have summed up the chief doctrines and injunctions of his religion in the following‡ words:— "Islām is founded upon five points: (1), the testifying that there is no God but GOD, and that Muḥammad is His Servant and His Apostle: (2), the offering of prayer: (3), the payment of *Zakāt* (alms fixed by Divine law): (4), the Pilgrimage§ to Mecca: (5), and Fasting during *Ramadhān*.

Muḥammad's teaching, even with reference to the three great truths previously mentioned, is not free from grave defects. It is the glory of Islām that it teaches that GOD alone should be worshipped, that it recognises GOD as Personal, Omniscient and Almighty, the Creator and Preserver, the Master and Judge of all Creation. But of a GOD of infinite holiness, of infinite justice, and of infinite love, Muḥammad had no idea whatever. Among the ninety-nine Titles or Names|| of GOD repeated by Muslims, the name of *Father* does not occur. Not only so, but the use of such a

Maṣābiḥ, Bombay (Arabic) Edition, p. 487, etc.; also *Qigāṣūl, Anbiyā*, near beginning.

* *Vide* Mishkāt, pp. 505, 506.

† *Cf.* "Rusūm-i Hind," Muḥammadan portion (Pl. II), p. 261: "In the opinion of Muslims, Faith is the pivot upon which all kinds of good works turn, and the root of all acts of worship. And its great support is to believe in and trust with sincerity of heart to whatever things his Excellency Muḥammad stated."

‡ Mishkāt, Bk. I, p. 4.

§ Mr. Bosworth Smith's contention that the Hajj or Pilgrimage to Mecca is no essential of Muḥammadanism is thus incorrect. As we see, it is, on the contrary, one of the fundamental matters insisted upon by Muḥammad. This one matter will serve to show (what it is hardly necessary to demonstrate at full length) that Islām is as purely *local* a faith as Judaism originally was.

|| Given fully in Mishkāt, *Kūḍb Asmā-illāh ta'āla'*, p. 191, *sqq.*

term with reference to GOD seems to the Muslim to be most terrible blasphemy. Muḥammadan theologians tell us that the gulf between GOD and Man is so immeasurable that no inferences with regard to GOD'S dealings can possibly be drawn by considering what our intuitions with reference to justice or holiness may require.* A modern writer well says, "There† is no creed the inner life of which has been so completely crushed under an inexorable weight of ritual. For that deep, impassable gulf which divides man from God empties all religious acts of spiritual life and meaning, and reduces them to rites and ceremonies." Hauri writes, "However‡ much he" (Muhammad) "discourses about GOD'S Righteousness, His Wrath against sin, His Grace and Mercy, yet Allāh is not holy love, not the negation of all self-seeking and sensuality. Neither in Holiness nor in Love is He just. Towards the ungodly, Love does not attain to its right. Allāh is quick and ready enough to punish them, to lead them astray and to harden their hearts; His Wrath is not free from passion. Towards Believers, that Holiness which can love nothing impure is defective. Allāh can permit His Prophet to do things that would otherwise be objectionable: to the rest of the Believers also He can permit what is not of itself good. . . . The commandments which Allāh gives are not the expression of His Nature; they are arbitrary and can therefore be retracted and replaced by others. Thus the GOD of Muḥammad leaves upon us the impression of an arbitrary Oriental despot, who makes His enemies experience His wrath in a terrible manner, and loads His faithful servants with benefits, besides winking at their misdeeds." The one attribute of GOD which to the Muslim mind towers above and almost overshadows all others is His almighty *Power*. Islām may with reason be called the Deification of Power. This Power may be exercised in the most arbitrary manner, and is unrestrained by any law of Holiness or Justice existent in the very being of GOD. Hence it is that Muḥammadans entirely fail to see the moral obliquity of many of their

* Al Ghazzālī, *e.g.*, says: "Nor is His justice to be compared with the justice of men, because a man may be suspected of acting unjustly by invading the possession of another; but no injustice can be conceived of God, who can find nothing belonging to any other besides Himself." (Quoted by Ockley, "Hist. of the Saracens.")

† Osburn, "Islām under the Khalifs of Baghdād," p. 4.

‡ "Der Islām," p. 45.

“Prophet’s” actions. “If *we* were to do such a thing, it would be murder or adultery, as the case may be,” they say; “but when Muḥammad the chosen, the Apostle of GOD, acted thus, he committed no sin, for *God* commanded him to do so.*” The fact that it is a moral impossibility for GOD to sanction, much less to command, the commission of distinct breaches of the eternal Moral Law is quite beyond their comprehension, and the enunciation of such a statement seems to them to be a blasphemous denial of the Omnipotence of GOD.

One of the leading features in the Religion of Muḥammad is the belief it inculcates in an inexorable Fate† by which all things are ruled for time and for eternity. A Tradition declares that before creating the world GOD caused to be written down all that should happen on earth, even to the extent of the movement produced by the rustling of a leaf upon a tree. The happiness or misery of every man in the next world was decided by the Divine decree long before his creation. The Qur’ān represents GOD as saying, “Verily§ I will fill Hell with men and genii,” and makes Him declare that He created them for this very|| purpose. “GOD,” we are repeatedly assured, “misleadeth¶ whom He willeth, and guideth aright whom He willeth;” and He says of Himself in

* Mr. Bosworth Smith (“Mohammed and Mohammedanism,” pp. 143–4) says that the Jewish Rabbis also held that “a Prophet who was properly commissioned might supersede any law.” If so, this may be another Rabbinical idea borrowed by Islām. But certainly the Old Testament shows us that not even David or Solomon could transgress the *moral* law with impunity. How far Islām in this matter falls behind the morality of the Jews, even in the times of the Kings, is well seen by comparing what the Bible says of David’s adultery with Bathsheba, and what the Qur’ān says of that of Muḥammad with Zeinab, the wife (divorced for his sake) of his adopted son Zeid. (Cf. 2 Sam. xi, xii, with Sûrah XXXIII, 37–40. See also Al Beidhâwî’s commentary.)

† Vide Mishkât, *Bâbu’l Īmân bil Qadr*, pp. 11, *sqq.*; Sûrahs VI, 123, 125; VII, 177, 185; X, 99; XI, 120; XIII, 27, 30; XVI, 39, 95; XVII, 14; XVIII, 16; XXXII, 17; LXXIV, 34; LXXVI, 29, 30; LXXXI, 28, 29; XCV, 4, 5, etc.

‡ “Qisâsu’l Anbiyâ,” p. 4.

§ Sûrah XI, 120, and Sûrah XXXII, 13.

|| Sûrah XI, 120; VII, 178.

¶ Sûrah LXXIV, 34;—

يُضِلُّ اللَّهُ مَن يَشَاءُ وَيَهْدِي مَن يَشَاءُ

the Qur'an, "As for every* man, We have firmly fixed his fate (*lit.* his bird) upon his neck." It is unnecessary to dwell upon this point as it is so well known. The word "Islâm" denotes *self-surrender* or *resignation*, but it is resignation to such a Deity as this, the resignation of impotence, of terror, and of despair. The proper and fitting attitude of the pious Muslim towards GOD. Muḥammadan theologians tell us, is that of the corpse when in the hands of the washers of the dead.† The evil results which this blighting and soul-deadening doctrine has produced in every Muḥammadan country can be appreciated by none but those personally acquainted with Eastern lands.

Although the obligation to offer Prayer to GOD is most fully recognised‡ by every Muslim, yet Islâm fails to realise what Prayer really is. It is regarded as a duty imposed by the arbitrary§ *fiat* of GOD, rather than as a spiritual means of refreshment and of enabling the worshipper to hold communion in spirit with GOD. Indeed, of such communion Muḥammad never even dreamed.|| The worshipper is required to offer his homage to his Master at certain fixed times in the day, and in doing so he must use definitely prescribed genuflexions and prostrations, and he is obliged to follow with the utmost precision the appointed ritual. If he fails in this, his prayer is ineffectual, no amount of heart devotion can render it acceptable to GOD, nay rather it is turned into sin.¶ "Resting on the arms while at prayer is pleasing to the people of Hell," said the "Prophet." The amount of merit attached to a prayer is greatly dependent

* Sûrah XVII, 14 :-

وَكُلِّ إِنْسَانٍ أَلْزَمْنَاهُ طَائِرَهُ فِي عُنُقِهِ

† Hauri, "Der Islâm," p. 76.

‡ Vide Mishkât, Kitâbu's Ṣalât; Qur'an *passim*; also A. von Kremer, "Kulturgeschichte des Orients," Vol. II, pp. 30, *sqq.*

§ Vide the account which Qatâdah gives of how GOD commanded Muḥammad during his "Night Journey" to command his people to offer fifty times a day their prayers, but how on Muḥammad's entreaty the number was reduced to *five*, whereupon a heavenly herald proclaimed in GOD's name, "I have completed My injunction and removed a burden from My servants." (Quoted by Sayyid Aḥmad, "Essay on Shaq-i-Sadr and Mi'râj," p. 31.)

|| Mr. Bosworth Smith acknowledges this (*op. cit.*, p. 199, etc.).

¶ Vide on the whole subject Mishkât, *Sifat'u Ṣalât* and *Bâbu'l Masâjid wa Mawâdhi' i's Ṣalât*.

upon the place where it is offered. "A prayer in this Mosque of mine,"* said the "Prophet," "is better than a thousand prayers anywhere else, except in the Holy Mosque" at Mecca. At another time he said, "A man's prayer† in the congregation exceeds in value twenty-five times his prayer in his own house." Public prayers must always be in Arabic, even though the great mass of the worshippers may be utterly unable to comprehend the words they utter. Even when offered privately, the prescribed prayers at the five stated times of worship each day must be in Arabic, though when he has offered these the worshipper may then, if he will, address GOD in any other language he pleases.

2. One of the gravest defects in Islâm is the very shallow conception of sin‡ which it inculcates. Sin is, a Muslim holds, the transgression of an arbitrary decree passed by the Deity, which He may rescind at His pleasure. Thus many actions which are sinful, because prohibited here, will be perfectly innocent in the next world. For example, there are indications in the Qur'an that Muḥammad regarded a *very* great excess of unchastity on earth as a sin; and yet in the same volume he encouraged his followers to exertions in the cause of their "Prophet" by promising them as a reward a practically unlimited indulgence in this vileness in Paradise,§ even before the very throne of GOD! *Why* GOD should have seen fit to forbid such conduct here on earth no Muslim can tell, but *if* we deny ourselves in this matter here, we shall, as a reward, be permitted the unlimited indulgence of our lower appetites|| in the unending After-life! Again, the

* Mishkât, p. 59.

† *Ibid.*, p. 60.

‡ This is well shown in Dr. Hooper's "Christian Doctrine in contrast with Hindûism and Islâm," pp. 5-28.

§ Cf. Sûrahs XLVII, 13, 16, 17; LV, 46-*fn.*; LVI, 11-39, etc.

|| What a great influence such promises of sensual pleasure have had upon Muslims ever since the "Prophet's" time, Arabian historians bear witness. Another evidence is afforded by the care with which every (genuine or not) Tradition bearing on the subject has been collected and recorded. Many of these Traditions greatly exaggerate the pictures drawn in the Qur'an, but are of the same kind for the most part. Attempts have been made to explain away all these things by understanding them in a spiritual sense, but this is not possible, nor is it at all to the taste of the orthodox Muslim, though it may please the Mystic. A good example of such attempts is afforded by Muḥiyu'ddin's commentary on, e.g., Sûrah LVI 11, *sqq.* So also Al Ghazzâlî. The author of the controversial work "Mizânu'l Mawâzin," however, can only urge in defence of such passages that they are "supported by the Gemara and Talmud."

Qur'ân and the Traditions prove that Muḥammad held that good deeds, and even the due observance of the prescribed ritual, would suffice to do away* with sin. "If there be at the gate of any one of you," he said† one day to his companions, "a river in which he bathes five times every day, will any pollution remain upon him?" They answered in the negative. "Then that is what the Five Prayers are like," said he; "by means of them GOD wipes out sin."

The true character of Islām and the divorce which it, in common with all other false faiths, makes between Religion and Morality, cannot be better exemplified than in the picture which it presents to its professors of the bliss reserved for the saved in Paradise. The verses in which these sensual gratifications are again and again enumerated in the Qur'ân‡ are unfit to be read aloud to a Christian audience. How very attractive Muḥammad's followers found these things may be inferred not only from history, but also from the eager care with which some of their most learned doctors have treasured up every tradition§ which represents Muḥammad as describing these pleasures in what they doubtless regarded as still more glowing colours. A single sentence from these Traditions will here suffice:—"And verily every man among the people of Paradise shall surely wed 500 Houries, and 4,000 virgins, and 8,000 divorced women." In one place in the Qur'ân|| "a more abundant reward" is promised to the best among Muslims, but it is not stated what this reward is. Those Muḥammadan doctors who have felt how degrading¶ such descriptions of Paradise as those we have referred to are, have endeavoured to introduce a higher element in virtue of this phrase. They** quote a

* Cf. Sûrah II., 273; Mishkât, *Kitâbu's Şalât*, Sect. III.

† Mishkât, *ibid.*, Sect. I, p. 49, where see many more such Traditions.

‡ E.g., Sûrah LVI, 11-40; LV, 46 *sqq.*, etc.

§ Vide the accounts in Al Bukhârî's "Aṣ Şaḥîḥ," etc., also (summarised)

in Mishkât under such headings as صفات الجنة ("Descriptions of the Garden," *i.e.*, of Paradise).

|| Sûrah X, 27 :—

لِّلَّذِينَ أَحْسَنُوا الْحُسْنَىٰ وَزِيَادَةٌ

¶ E.g., Al Beidhâwî endeavours to prove that the friendship between the *Houries* and the pious in Paradise is merely Platonic. We leave those who can reconcile this idea with such descriptions to do so.

** Al Ghazzâlî, for instance, supports the text (quoted by Pocock in "Not. ad Port. Mosis," p. 305).

Tradition in which Muḥammad promises as the highest of all rewards the *vision of GOD Himself. This idea, if it really occurred to Muḥammad, was evidently derived from Christianity,† or from the Jews.‡ But an attentive study of the passages in which the promise is given represents it in a more genuinely Muḥammadan, if to us less attractive, light. One of them, however, will suffice for the present: “The§ Apostle of GOD said, ‘Verily the least of the inhabitants of Paradise in rank is he who shall indeed behold his gardens, his wives, and his pleasures, and his servants, and his couches, extending over the space of 1,000 years’ journey, and the most acceptable unto GOD among them shall look upon His face night and day.’” Then he recited (Sûrah LXXV, 22, 23): ‘Faces in that day shall be bright, looking upon their Lord.’” Here we perceive that the very same passage which tells of the Vision of GOD, mentions also the carnal delights already referred to, and represents GOD as approving of His servants’ indulgence in them. Such an idea is not more dishonouring to GOD than it is certain to prevent the very possibility of true purity of heart, nay all desire to attain to it, among the orthodox followers of the “Prophet.”

Space will not permit us to dwell on the many other weaknesses in the Religion of Islâm, on its innate intolerance,|| its unscientific¶ cosmogony, its assertion of the truth and

* Mishkât, *Kitâbu-l-Fitan*, *Bâbu Ru'yatillâh*, pp. 492, 493.

† *E.g.*, Matt. V, 8; 1 Cor. xiii, 12; 1 John iii, 2, 3; Rev. xxii, 3, 4, etc.

‡ *E.g.*, Isaiah xxx, 17.

§ Mishkât, p. 493:—

قال رسول الله - أن ادنئى اهل الجنة منزلة لمن ينظر الى جفانه
وازواجه ونعيمه وخدمته وسريره مسيرة الف سنة وكرمهم على الله
من ينظر الى وجهه غدوة وعشية - ثم قرأ - وجوه يومئذ ناضرة
الى ربها ناظرة .

|| Sûrah V, 37; Sûrah IX, 5, 29, etc.

¶ *Cf.* Mishkât, 'Arâisu't Tijân, Qisasul Anbiyâ, etc. In the latter book, *e.g.*, we are told on the authority of Muḥammad that the earth was originally made out of the foam of a wave which GOD created from a gigantic pearl, and that He made that pearl out of primitive darkness. The colour of the sky is said to be due to the fact that over the earth towers a gigantic mountain named Qâf, which is made of emerald, and is

inspiration of both the Old and the New Testament, coupled with the statement of matters quite inconsistent with what they teach, its entire *absence of proof*.* That it is an essentially anti-Christian creed is abundantly evident from many passages, of which it suffices to quote only one (Sûrah V, 19), "Verily they blaspheme who say, 'GOD is truly the Messiah, Son of Mary.' Say thou: 'Then who would possess any claim upon GOD, if He wished to destroy the Messiah, Son of Mary, and His mother, and all that are in the earth?'"† This is perhaps the latest pronouncement of the "Prophet" on the great central truth of the Christian faith.

3. It remains for us to consider very briefly the nature of the influence which Islâm has exerted over the public and private life of its professors. However much or however little truth any religion may incorporate in its dogmas—if its practical results are bad, destructive to what is noblest in our common humanity, having a tendency to encourage the free developement of our lower nature and to prevent mental and moral progress,—then such a faith cannot be the revelation of the GOD of Love, of Holiness and of Justice.

As to the political condition of all Muḥammadan lands at the present time there is no room for much difference of opinion. Misgovernment, tyranny, extortion, an absolute Monarch and an enslaved people are everywhere found in these countries. Of the condition of agriculture, the fine

2,000 years' journey in circumference. A snake of the same length lies coiled around the earth. The seven storeys of the earth rest between the horns of a bull named Kajûta, which has 4,000 horns, each of the latter being 500 years' journey distant from every other. His feet rest on a fish that swims in water forty years' journey deep!

* The *only* proofs are (1), Muḥammad's assertion of his prophetic office, and (2), the (supposed) supernaturally beautiful style of the Qur'an in the original.

لقد كفر الذين قالوا إن الله هو المسيح ابن مريم قل فمن يملك من الله شيئاً إن أراد أن يهلك المسيح ابن مريم وأمه ومن في الأرض جميعاً .

arts, commerce, engineering,* science,† and kindred subjects there is no need for me to speak. Slavery‡ is sanctioned for all time in the Qur'ân, and servile§ concubinage with all its concomitant evils is not only tolerated but authorized for all Muslims by the example of their "Prophet" himself. The position of woman among the Muslims may not be lower than it was among the Arabs in Pre-Islâmic times, but it is certainly far more degraded than that held by Jewish and Christian women in Eastern lands. Woman is regarded as man's slave and his plaything. The idea of her having been created by GOD to be man's help-meet, the sharer of his joys, the partner of his sorrows, seems never to have entered Muḥammad's mind, though he *might* have learnt it from the Jews, had he so chosen. It is not too much to say that such a principle is hostile to the genius of Islâm. Even to the present time, wherever the precepts of the "Prophet" are

* In most Muḥammadan countries even wheeled carriages are either unknown or are imported from other lands. This is the case, *e.g.*, in Persia at the present day.

† Dr. Draper and others have lavished epithets of praise upon the Muslims of the past for their services in the cause of Science. But where is all this Muḥammadan Science now? Why (if it is due to Islâm) did it never rise upon purely Muḥammadan ground? The lands where Muslim culture reared itself most proudly in the past were precisely those, like Mesopotamia, Egypt, and Spain, that had long been the seats of learning and civilisation. Their philosophy and science came almost exclusively from the Greeks, nor could the Muslims even render the works of the *literati* of Greece into their own tongue. This was done for them by Syrian Christians. (Renan, "Langues Sémitiques.") Gibbon admits that the Arabs made no advance in Geometry beyond Euclid, and that they confess that they learnt Algebra (in spite of its Arabic name—from

الجبر) from the Greek Diophantus. They still hold to the Ptolemaic system in Astronomy, as the Qur'ân indeed compels them to do. Such attainments as they made were not the result, moreover, of Orthodox Islâm. This has always been *hostile* to progress. Science flourished at Baghdâd under the House of 'Abbâs, all of whom were infidels, and perished when an orthodox Muḥammadan revival took place. See on the subject Osburn's "Islâm under the Khalîfs of Baghdâd."

‡ The difference between the spirit of the Gospel and that of the Qur'ân in this respect is well illustrated by the fact that, although as early as Justinian's time the Gospel doctrine of the Fatherhood of God and the brotherhood of men had so leavened the Roman world and affected the stern conservatism of Roman law, that in the "Institutes" (Just. Instit., Lib. I, tit. iii, § 2), slavery is defined as something "contrary to nature," yet up to the present time no Muḥammadan legislator has done as much.

§ Cf., *e.g.*, Sûrah XXXIII, 52.

faithfully obeyed, there is no true family life. The wife never eats with her husband. She either waits upon him at his meals, if the household is a poor one, or takes her food in the seclusion of the *haram*, while her husband is attended upon by his slaves in his own part of the house. Each believer *may* have four* wives at a time, and may divorce† them at will and marry others in their stead. In Persia, temporary marriages for a month, a week, or even shorter periods, are sanctioned by the religious authorities. Although the Sunnis regard such marriages‡ as illegal, they are said to be of frequent occurrence at Mecca itself during the pilgrimage. It is impossible and undesirable to detail all the evils to which the Religion of Muḥammad thus gives rise—to tell of the divisions in families, the jealousy and hatred between half-brothers, between two legal wives of the same husband, the slanders, the crimes thus brought about. Nor does such a very “liberal” moral code prevent worse evils, for the most unnatural vices and nameless crimes are of frequent occurrence. It is painful to refer to these things. Suffice it to say that, throughout a large portion of the world, Islām has rendered the very conception of a high and pure family life impossible. A faith that thus degrades the gentler sex, and fails altogether to revere or even acknowledge the innate nobleness of feminine humanity and the dignity of wifehood and motherhood, is its own condemnation among all enlightened men of whatever class or creed they may be.

4. After what has been said above it is hardly necessary to say that it is impossible for anyone who has carefully studied the subject to affirm that Islām has any claim to be considered to have come from GOD. Islām does not and cannot satisfy the deepest longings of the human heart. It does not reveal GOD in His Divine Fatherhood, in His Love, His Justice, or His Holiness. It does not show Man his true position in GOD’s sight, nor does it teach him what sin is and how to gain release from its power. Islām is opposed to all freedom of thought, to all true progress, whether moral or intellectual, political or religious. It is only in Muslim lands at the present day that the profession of Christianity means the convert’s death at the executioner’s hands. Such being

* Sūrah IV, 3.

† *Vide* Mishkât, “Bâbu ’l khul’ wa’ttilâq,” pp. 285, *seqq.*

‡ Mishkât, p. 264. Such a marriage is called ^{سكوة} *سكوة* in Arabic.

the case, it is evident that Muhammadanism cannot, with advantage to any section of the human race, take the place Divinely assigned to Christianity. To talk, as some do, as if the Religion of the "Prophet of Arabia" were well suited to the Semites, or to the Mongol and Turkish races, or again to the Negro—is merely to show one's self culpably ignorant at once of human nature, of Christian truth, and even of Islâm itself. Such platitudes will never satisfy anyone who has at heart the highest interests of his fellow-men.

Just as was the case at Rome at the close of one of the great *æons* in the world's history, so now among ourselves, there are men, priding themselves on their enlightenment and liberality of sentiment, who—as their prototypes worshipped Isis and Serapis, or again followed Epicurus or Plato, according as the varying fashion of the day might impel them—are ready to call themselves now Agnostics, now Buddhists, and now Muhammadans, as the fancy may strike them. Such men may perhaps bolster up Islâm for a time, and thus for a time retard its inevitable downfall. But, in spite of their utmost efforts, the true nature of this religious system will become generally known, and will then be seen to be indefensible. Muhammad is in every way unfitted to be the ideal of a single human being. In spite, therefore, of its many half truths borrowed from other systems, it is not too much to say that Islâm has preserved, in the life and character of its Founder, an enduring and ever active principle of degradation and decay,

APPENDIX.

After the proof-sheets of this paper were in my hands, there appeared a very important book entitled "The Spirit of Islâm" (Syed Ameer Ali), which constitutes in itself a sign of the way in which orthodox Islâm is losing its hold on the minds of thoughtful Muslims who have come in contact with Western thought. The author professes (*Preface*) his hope that his book "may assist the Muslims of India to achieve their intellectual and moral regeneration," and may at the same time "help in the diffusion of Islâmic ideas in the West."

It is unnecessary to say anything here with reference to the readiness with which the author accepts modern Rationalistic theories regarding the origin of some of the leading doctrines of Christianity, and how decidedly he manifests his opposition to the truth of the Deity of our Lord, and other cardinal doctrines of the Bible. No one would expect to find him an authority upon such matters as these. But he claims to be received as such when he treats of Islâm. And yet anyone at all acquainted with the Qur'ân and the Traditions (Ahâdith) may readily perceive that in reality the Sayyid represents orthodox Muhammadanism as it actually exists and has existed from the "Prophet's" time to the present, *about as fairly as Strauss, Baur, De Wette, and others of the same school, may be taken to represent the Christianity of the New Testament!* Any Western student of Muhammadanism who trusts to "The Spirit of Islâm" as an exponent of Muslim belief will find himself woefully mistaken. A careful reader may observe this for himself by reading between the lines. A few examples, however, of the gulf which separates Ameer Ali and the modern "reform" party in India from Muhammad's own teachings may be noted. The God of Muhammad is the Almighty Creator, Ameer Ali repeatedly professes Pantheism, or quotes with special approval Pantheistic passages (*Introd.*, p. 664, &c.). Muhammad professed to receive the Qur'ân directly from the Angel Gabriel by Divine inspiration, and taught that every word and letter was of Divine authority. Ameer Ali tells us that Muhammad taught an eclectic faith, and confesses that he borrowed from the Docetism of Christian heretics (pp. 56-58), from Zeid the Hanif (p. 80, *note*), from Zoroastrianism (pp. 387, 394), and that his teaching shows a gradual development (pp. 398-400). In this I quite agree with him: but no orthodox Muslim would consider this other than gross blasphemy.

The Sayyid has so far profited from Western thought that he is able to declare himself the foe of polygamy and slavery. But he demands too much from our credulity, or depends unduly on the crassness of our ignorance of the Qur'ân, when he ventures to tell us that *Muhammad* agreed with him in all this. His attempt to explain Muhammad's many marriages as being formed only from motives of the purest and most unselfish charity (p. 331, *sqq.*), is admirable as an example of able casuistry. The method in which he strives to rescue his master's memory from the stain of cruel and cowardly murder is ingenious in the extreme, if not ingenuous, but is

by no means convincing to those who have even the very slightest acquaintance with Ibn Hishâm and Muḥammad's other Arabian biographers (p. 162, *sqq.*).

The Sayyid endeavours with great ability to show that the spirit of Islâm has ever been forward in the encouragement of learning and science. But he (quite unintentionally) refutes himself by confessing that *the very dynasties (e.g., that of the Fâtimides in Egypt, and the 'Abbâsides in Mesopotamia) under which Muḥammadan (so-called) learning flourished were devoted followers of the Itizâl and similar schools of philosophy*, which he himself compares (and rightly) with the Rationalistic movement in Modern Europe (pp. 496, 520, 571, 610, *sqq.*, 646). "Distinguished scholars, prominent physicists, mathematicians, historians—all the world of intellect in fact, including the Caliphs, belonged to the Mutazalite School" (p. 610). A little further on he adds:—

"When Mutawakkil was raised to the throne the Rationalists were the directing power of the State; they held the chief offices of trust; they were professors in colleges, superintendents of hospitals, directors of observatories; they were merchants; in fact they represented the wisdom and wealth of the Empire; Rationalism was the dominating creed among the educated, the intellectual, and influential classes of the community" (p. 646). When these heretics lost their political power and orthodox Muhammadanism (styled *Patristicism* by Ameer Ali) again asserted its authority, the short but brilliant period of intellectual growth and progress in Muslim lands swiftly passed away. It is unfair, therefore, to attribute to *Islâm* results which ensued from the cultivation of Aristotelian philosophy and Grecian science, and which disappeared for ever when the true Spirit of Islâm re-asserted itself. The result of the latter in every Muhammadan land has been what the author well states regarding one part of the Muslim world:—"A death-like gloom settled upon Central Asia, which still hangs heavy and lowering over these unhappy countries" (p. 589).

The CHAIRMAN (D. HOWARD, Esq., D.L., F.C.S.).—We have to thank Mr. Tisdall for a very valuable paper, one of a kind that is much needed now. In spite of our pride as to the advance of

science, there is a terrible tendency to neglect the very conditions of exact science ; when we get beyond physical science, in which those advances have been made, instead of the verification of facts and theories we too often substitute pure deductions from our own ideas for actual facts ; and this has been very much the case in dealing with foreign religions, and with Islam, perhaps, more than any.

We have pictures of Muhammadanism which are founded, as has been truly stated, not on an accurate knowledge either of the literary source of Islam, or even by a study of the Koran in the original, but on second or third hand means of knowledge eked out by imagination. It is a terrible result of civilisation when it turns back upon itself in the path of progress to seek something strange and new in the field of imagination. It is a feature of our boasted later civilisation, no doubt, that because a thing is unknown we turn to it rather than to that we have known.

Undoubtedly it is right to be just to our antagonists, as the author of this paper is, but in regard to Islam we have more even than mere history to go upon. We may learn of Muhammadanism what is actually found to be its working on those who adopt it, and that is a sound basis of knowledge to go upon.

The following letters from members unable to be present were then received :—

From Sir THEODORE FORD :—

I should not have ventured to make an observation on this paper had it not been for the request made that anyone who has made the subject of Islam an object of study should, if practicable, take part in our customary discussion on papers read to us. The more I consider the treatment of the subject by the Rev. W. St. Clair Tisdall, the less opportunity I feel there is for discussion. The conclusion drawn as to the sources from which Muhammad framed his religious system seems one proved almost to demonstration from the authorities cited, strengthened as those are by the consideration of the extreme *a priori* probability of the case ; and if I venture to say anything, it is rather in confirmation of the writer's opinions as to the moral products of Islam, than with a view to add to, confirm, or detract from the results of the historic examination which he has made of the sources and character of Islam itself.

A good many years' residence in countries where a very large, and sometimes major, proportion of the population are followers of

Muhammad, and a not inconsiderable insight into their social and family life which a judicial position gave, enables me to speak with some confidence on the moral effects of the two systems, Christianity and Islam. Deplorable as we must all feel to be the decadence from the moral standard of their creed of but too numerous a multitude of the disciples of Christ, whether regarded from the standpoint of the individual or from their corporate existence as constituting a Christian Church, it yet remains true that the normal practice of the Christian is on a much higher moral level than the normal practice of the Muhammadan; and even in particular cases where a more favourable judgment would be given, the standard and practice of the "good Muhammadan" falls greatly short of one who comes within a *measurable* distance of living up to the moral teachings of Christ. This truth runs through the family as the individual life. These are, at least, the opinions which some little experimental acquaintance with the question has led me to form, and as such are offered by way of a confirmative contribution to the views expressed by Mr. Tisdall on pages 170 and 174 of his paper.

From the Very Rev. E. M. GOULBURN, D.D., late Dean of Norwich:—

I have looked through Mr. Tisdall's paper, and it seems to be a most learned, exhaustive, and valuable treatise on a subject on which many well-meant but shallow views have been entertained.

I have not observed in the notes (although it may be there) any reference to Forster's "Mahometanism Unveiled," a book which had a deserved popularity in its day, but which is now forgotten, though doubtless obtainable at bookstalls. As far as I remember it exhibited very powerfully the truth set forth in the sentence opening up the second section of the paper, as to *the secret of the success* of Mahometanism (for I cannot accommodate myself to the modern method of spelling), and drew out in a masterly way how Ishmael was a sort of debased copy of Isaac. The author, Bishop Jebb's Chaplain, was a man of mark in his day.

From Mr. HORMUZD RASSAM:—

I need not say that the author has handled the subject most admirably, and exposed the so-called revelations of the Korân in a plain and tangible manner.

The CHAIRMAN.—There are many here who are well qualified to speak on the paper, and I will now ask them to give us the benefit of their views.

Rev. HENRY LANSDELL, D.D., M.R.A.S.—I feel very strongly the force of what our Chairman has said as to the exceeding value of this paper, because it has so truly worked out and given us

reference to the various authorities against which it speaks; I came here to-night to say a few words upon the subject, but from a very different standpoint. I have seen, as a traveller, a very large portion of those parts of the world where Muhammadanism obtains—as you will see from the map here exhibited, the lines on which represent my journeys. In Russian Turkistan, one sees Muhammadanism in a certain form. Again in the valley of the Tarim you see sundry variations. Then coming down into India you find remains of what appears to have been a superior Muhammadan civilisation to that in Turkistan. Going up the valley of the Euphrates I continued through Palestine, observing certain phases of Muhammadanism there, and then went on to Tripoli, and visited the famous Muhammadan town of Kairouan. Thence I continued through Algiers and across to Spain, where I visited the Muhammadan remains at the Alhambra and in other towns. Having seen then, as a traveller, a good deal of the countries where this religion obtains, I am bound to say that almost everything in the paper is in accordance with what I have witnessed. I cannot go to anything like the depth that the paper does, nor do I approach the subject as an Arabic scholar, or from any wide extent of reading, but rather from what struck me in Muhammadan countries, and what I have read in the Koran. If Muhammadanism be tested by this book, it seems to show great literary weakness. Its pages struck me as singularly wanting in coherence. I believe a considerable portion of it was written on bones, the shoulder blades of sheep, and substances of that kind, and one might almost think that Muhammad had handed them over to a copyist without reference to order. One cannot help comparing the Koran with the writings of the New Testament. Take, for example, the Epistle to the Romans. There, you evidently have the writing of a man who understood logic and rhetoric, and who knew how to frame his arguments. His first chapter is different from his sixth, and occupies a different place in his reasoning. The author has a line of thought to go upon and to work out; but nowhere in the Koran could I see this. You take a chapter which begins with a flourish of trumpets, perhaps after a battle, but as you proceed you do not get a subject argued out, or an appeal to reason, but certain statements are thrown down, and you are expected, without questioning, to believe and accept them. Again, I was struck by the absence of pathos and of connected stories,

if I may so put it. It would be quite easy to find half a dozen passages in either the Old or the New Testament which are universally recognised as beautiful in their literary composition. Take the parable of the Prodigal Son, containing I suppose about five hundred words. I should be exceedingly sorry for anyone to require of me, as a literary exercise, and using only five hundred words, to write a story with as much detail, as much pathos and beauty as in this pearl of parables. I could not do it, and I doubt whether any living writer could; but I am bold enough to think that you could find plenty of English authors who could write as good a book as the Koran, so wanting is it in literary power and in argument; whilst, as the writer of the paper has shown, its want of originality and its plagiarism are patent. I had observed this in reference to the Old and New Testaments, but I did not know the plagiarism was so wide as the writer of the paper has shown. There is another point of difference compared with the writers of the Old and New Testaments. You never catch one of them incorporating a myth or making a palpable blunder, whereas in the Koran you have a man telling you "that the Hebrews in the wilderness were persuaded by a Samaritan to make the Golden Calf." Then if you take Muhammadanism as tested by its results, one sees in it the lower instincts of man developed—a love of war and of lust. As to the degradation of women, one does not know where to begin. You have heard a little about it; but the most horrible thing I have ever known is the system of temporary marriages practised in the valley of the Tarim, especially in Kashgar. The Russian Consul told me that during the five years he had lived there, he had known many girls to have twenty husbands before they were twelve years old! Temporary marriages are sanctioned for a week. I am not sure whether they are not for a day, and it is common for men there to change their wives five or six times a year; and that, be it observed, is in a place where Muhammadanism has had full sway for a great many years, and where, if the system were good, it ought certainly by this time to have shown itself. The writer of the paper says "the Sunnis do not allow the legality of these marriages," I do not presume to contradict him, but, it is the practice in Kashgar. It may be that they do it in spite of the law rather than in the keeping it. Again, I notice in Muhammadanism a neglect of the higher faculties of man. You look in vain for mercy to the slave. Everywhere there is slavery in

Muhammadan lands, and we never hear of a Muhammadan putting forth his hand to stop that curse. Pity, again, for the sick is almost unknown. I can scarcely remember a native hospital or an institution of the kind founded by Muhammadanism. Again, I notice in Muhammadanism an absence of one of the grandest features in Christianity, viz., of self-denial for others. Therefore it seems to me to be highly unsuitable as a religious system for the human race. Its standard of morality is palpably low, and those who want such a standard may well be pleased to become Muhammadans. Again, it lacks a perfect model. Look at the man Muhammad, and the very thought of taking him as an example should be wholly and utterly disgusting to any right-minded or pure man or woman. So that if we judge the religion by its book, or by what it has produced in the countries that profess it, Muhammadanism is certainly found wanting.

Rev. Dr. KÆLLE.—I desire to join in expressing the pleasure I have felt in the reading of this paper. Perhaps the author will not object to a little criticism.

I will begin with the three words of which the author denies the Arabic origin, viz., *jannat*, a garden, *jinnī*, spirits, and *dīn*, religion. All these three words the learned lecturer said were of foreign origin; *jannat* he traces to Hebrew origin, and the two others to Avestic origin. That is a mistake, because all these three words have clear and distinct roots in the Arabic language. *Jannat* is derived from *janna*, to cover, shelter, or as we call it, *pro-tect*. It means a protected place, or as in English, a garden, *i.e.*, a guarded place. This root, it is true, exists in Hebrew, but it is equally an Arabic root, and there is no reason to suppose that Muhammad went to the Hebrew for a word which he had in his own language. So with regard to *Hūr* or *Houriēs*, the young ladies of Paradise, that has not only an Arabic (*Hara*), but a general Semitic root, in Hebrew *Khūr* and *Khawar*. Now, what does it mean? It means to be white, brilliant; and simply designates a lady with a very white skin and with black eyes of fascinating brilliancy and lustre. It was known that the tawny races considered it the height of human beauty to have an excessively white skin. Even now it is notorious how the Turks esteem the Circassian beauties for the same reason. *Dīn*, religion, is a perfectly Arabic word; and there is no reason why we should go to another language for its source. *Dīn* comes from *dāna*, to owe,

to serve. It means a debt (*dein, dina*) which a man owes to his God, and it is therefore identical with our word *religion*, if derived from the Latin *religare*. This meaning is also reflected in the whole nature of Muhammadanism, which looks on all religious acts as a debt which a servant owes to his master. These are trifles; but I should like to make a few other remarks of a different nature.

There are three omissions I observe in the paper, one in each of the three points concerning Islam, viz., "Its origin, its strength, and its weakness." As regards its origin, the author abundantly showed how Islamic doctrines were to be found in pre-existing religions; but he merely takes it for granted that therefore they must have been taken from previous religions. Now I should have been very glad to hear him explain how and why the relics of previously existing religions came to form the substance of a religion which professes to have been expressly revealed by the angel Gabriel to Muhammad. This forms a very interesting psychological and historical question, and it is one upon which we ought to have heard something. The second omission is as to the strength of Islam. The author devotes three pages to its strength, and he tells us that it consisted in the truths or half-truths borrowed from other religions. But what does it mean—to speak of the strength of Islam and not even once to mention the *sword*? It certainly is one of the sources of the strength of Islam, if not the chief source. As soon as Muhammad's power began to be established in Medina, that place became too hot for the Christians, and they had to seek safety by emigrating to Mecca. The two great Arab tribes of Medina, the Awsites and Khazrajites, submitted to the new power from anything but religious motives; and very many of them, wholly unconvinced, yielded to the force of circumstances, and embraced the militant religion, as the earliest Muhammadan historian tells us, "to save themselves from *death*." They were the large party known as "hypocrites." Not regard for truth, but dread of the sword made them Moslems. At Muhammad's death all Arabia had been subjected to Islam. But whilst he lay still unburied such dissensions broke out in Medina, that Saad, the leader of the opposing party, was nearly killed, and order was only restored with the greatest difficulty. As soon as the news of Muhammad's death reached Mecca, Islam was openly repudiated, and his representative, Attab, had to hide himself for

days, from fear of being slain, till one of the leading men who formerly had received from Muhammad the present of 100 camels, came forward and declared, "Many of you say that the death of Muhammad will be the death of Islam; but I tell you, it will only be the means of making Islam stronger: for we shall not hesitate to cut off the head of anyone whom we suspect." Throughout Arabia the Islamic yoke began to be cast off; and Abu Bekr's fanatical troops had the greatest difficulty, and suffered several defeats, in finally restoring the Muhammadan supremacy. The terrorism then started has prevailed ever since in the world of Islam; and it is notorious that even now in its decrepitude every Mussulman who relinquishes his religion thereby forfeits his life. But for the use of the sword, we should probably never have heard either of Muhammad or of Islam. It is therefore an inexcusable omission, in setting forth the strength of Islam, to ignore its sword and its terrorism.

I also think the author might have said more about the anti-Christian character of Muhammadanism. It professes to supersede and to replace Christianity. This is the gravest charge against it. These things I think it would have been well to have dwelt upon, especially as there are means enough in the present day to have assisted in so doing; but the paper itself, so far as it goes, is good, clear, and useful.

Professor ORCHARD.—This paper, to my mind, is one of the most able and satisfactory contributions to the subject of Islam. I think the author has certainly shown that there is such a difference, not to say opposition, between Islam and Christianity, that Islam can never in any sense become a true substitute for Christianity, nor can it ever prepare the way for Christianity. Some of the fundamental conceptions of the two systems are not only different, but absolutely irreconcilable. A system that has the idea of God which Islam has—and that idea of sin which Islam has—that idea of the relation between God and man which Islam has—a system which knows nothing whatever of the need of the covering blood of God's own Lamb, can never be in any real or true alliance with Christianity.

I could have wished that the author had said a little more about what seems to me to be *the* characteristic feature of Islam, that is to say, its fatalism. It is very much through its fatalism, I think, that the system has obtained the immense hold it has on so

many of the human family. Why should fatalism be welcomed? It is opposed to experience, to logic, and to our intuition; and yet it is liked, and why? Because fatalism does away with free-will, and free-will is the necessary element for obedience or disobedience to God. Hence, Islam, in doing away with free-will, does away, logically, with sin, and that being done away with, responsibility is gone, and there is no reason for living so as to please God as the God of holiness and as the God that hates sin. That is one reason why Islam had such an acceptance, not only was it propagated by the terrors of the sword, but it pandered to the lowest passions of men and did away with responsibility.

Rev. O. BEVEN, M.A.—While welcoming the earnest language that has been used as to the Islam conception of God, so utterly unlike the Christian conception, and also the Islam conception of sin, I would refer to Dr. Mosely's remarks on the point in the Bampton Lectures, for like most of what he wrote, it is very forcible. A point in the system to which no allusion has been made, and one that seems rather to contradict these features is, that Muhammadanism inculcates and fosters a very strong sense of brotherhood. This may seem utterly incompatible with their dealing in slaves, but it is a fact that I have noticed in Ceylon where Muhammadanism is strong.

Dr. T. CHAPLIN.—I beg permission to say a few words, because for some twenty-five years of my life I have been in almost daily intercourse with Muhammadans in various classes of society. One or two things seem to me to have been omitted or passed over too lightly in this very valuable paper; one is in connection with the strength of Muhammadanism.—It has been said that too little weight has been given to the consideration that Muhammadanism was propagated by the sword and upheld by the sword. That, no doubt, is true, but I think we cannot shut our eyes to the fact that although this was the case in the past it is not the case at the present time. Unless I am misinformed there are something like forty or fifty millions of Muhammadans enjoying the protection of the British Crown, and there would seem to be no reason why those forty or fifty millions of Muhammadans should not give favourable consideration to the doctrines and claims of Christianity. There must be some reason which does not lie on the surface, why the teaching of Muhammad has taken such a hold on men's minds, especially in Eastern countries; and it seems to me

that not quite sufficient stress is laid on the security that Muhammad promises for his adherents in the next world. Over and over again it has been said to me by Muhammadans, "You ask me to throw over my religion and to embrace the doctrine of Christianity. Why should I? I am in a position of absolute safety for the future. When I turn to Christian books I find that Christians are never secure of their future till the day of their death. My destiny in the future does not depend upon my course of life here or upon anything I do, but it is secured by the fact of my being a believer in the doctrine of Muhammad, while you Christians must not only believe in Christ but you have to deny yourselves year after year during the whole course of your existence, and are taught to believe that you may fail at last."

There is another point to which I would allude, and that is that the history of Muhammadanism affords most instructive proof of the fact that a system that is false can *never* be a stepping-stone to a system that is true. We do not find that Muhammadan truths or half-truths lead men to Christ—on the contrary, they form an almost insuperable barrier to Christian truth.

I think that the discussion on this valuable paper teaches us a lesson, as Christian men and women, that there is a great responsibility resting on us in reference to the Muhammadan world. I have not time to more than refer to one thing that is uppermost in my mind as to the strong hold of Muhammadanism on Western Asia, which is the condition and practice of the Christian Churches. Whatever we may think in our charity with regard to those whose views differ from our own, it is certain that Muhammadans in Western Asia think that Christians are the worshippers of Mary, that they are guilty of other idolatries besides, that in fact their whole system is a system of idolatry; and this is a terrible hindrance to the progress of Christian truth amongst Muhammadans, who regard God as an invisible and immaterial being.

A VISITOR.—I have had much intercourse with well educated natives of all kinds of religions during my long sojourn in Western Asia, and I have come to the conclusion that one of the causes of the want of the success of Christianity there is greatly due to the brusque manner of Western Christians in their intercourse with the natives, whose manners are of a very opposite

kind. Moreover, Christianity is represented there by so many opposing sects.

The CHAIRMAN.—I will now call upon the author to reply. Some of those who have criticised the paper certainly seem to be agreed upon one point, namely, the wish that we had more of the paper.

The AUTHOR.—I must in the first place avail myself of the opportunity of thanking those who have so kindly criticised my paper, and still more those who have criticised it adversely.

With regard to what Dr. Lansdell has said as to the legality or otherwise of temporary or ^{متعه} marriages among the Sunnis, I am aware that the law is broken in certain places, even at Mecca itself during the pilgrimage. But the Sunnî doctors certainly regard these marriages as illegal (*vide* traditions collected in the *Mishkâtu 'lMaşâbih*), though the Shî'ahs sanction them.

Dr. Kœlle has very justly referred to many omissions in my paper. No one can be more conscious of its numerous shortcomings than I myself am. But I may fairly plead that it was impossible for me in a single paper to deal at all fully with the whole field covered by the word Islâm. That subject is such a wide one that I thought it best to confine myself strictly to the consideration of *orthodox* or Sunnî Muhammadanism. This entailed the omission of all detailed references to particular sects and to the vast and deeply interesting field of Muslim Mysticism, which is a study apart and of itself. For this cause I have not attempted to deal with Muhammad's life and character, nor have I spoken of the reason for the spread of Islâm. My subject was "Islâm; its Origin, its Strength, and its Weakness," and to this I have endeavoured to confine myself. Those who desire to see the subject fully dealt with cannot do better than to consult Dr. Kœlle's own admirable work, "Mohammed and Mohammedanism." Among my other omissions Dr. Kœlle has pointed out the fact that I have not dwelt upon the psychological phenomena presented by the development of the faith in Muhammad's own mind. I confess to the impeachment, for I felt that matter to be beyond my depth, and have therefore acted on the principle, "*Ne sutor ultra crepidam.*" But I may add that Dr. Kœlle has admirably treated the question in the book to which I have referred.

I designedly omitted all reference to the sword and to the spread

of Muhammadanism owing to that, its most trenchant argument. Everyone is aware that it is not the sword which *now* upholds Islâm. This has been ably pointed out by Dr. Chaplin. Yet I have stated that any Muslim who openly professes Christianity still does so at the risk of his life. I fancied that all would observe the distinction between *strength* and *power*. The former word—as is clearly seen in the phrase “Their *strength*” (not *power*) “is to sit still”—denotes the defensive as opposed to the offensive aspect of the religion. This will perhaps suffice to show that my title is not a misnomer. I cannot plead guilty to the charge of having entirely omitted to point out *how* relics of previously existent religions were incorporated into Islâm. I think I did so as fully as the length of my paper would warrant.

I must now answer his criticism on my derivation of the words *jannat*, *jinnî*, *dîn*, and *hûr*. In speaking of *jannat* I did not at all intend to deny that the word is a pure Arabic vocable. I quite agree with Dr. Kœlle as to its derivation. No other idea is tenable. I differ from him, however, regarding the three other words. *Jinnî* cannot be derived from *jannat*, for by the rules of Arabic etymology it would then be *jannî*. Again the *jinn*s have no connection whatever with the Muhammadan Paradise (*jannat*), and are not allowed to enter it.

Dr. Kœlle.—I inadvertently omitted to say that the word *jinnî* (a class of imaginary spirits, the jinn) comes from the same root as *jannat* (garden), viz., *janna*, to cover, conceal, protect. It therefore describes them as invisible beings, who live in the invisible world, and become visible only at times.

The AUTHOR.—If we derive the word *jinnî* from the root *janna* to cover, protect, it is difficult to see why it should not rather be *janîn* (on the analogy of *qalîl* from *qalla*). I therefore prefer the derivation I have given in my paper. With regard to *dîn* the matter stands thus:—In Hebrew, דָּרַן means *to rule*, *to judge*, and the noun דִּין (*Kethîb*) or דִּרָן (*Qrî*) means *judgment*. In Aramaic the root and the noun are the same as in Hebrew, and have the same meaning. In Syriac ܕܝܢ means *to judge*, and ܕܝܢܐ is *judgment*. In Assyrian the word *dayânu*, a judge, shows that the root and its derivatives are of similar significance. In Arabic itself دَانَ means *to judge*, *to owe*, etc., and دَيْن means a debt,

while ^سدين signifies *judgment, condemnation* (cf., Qur'ân, Sûrah I., يوم الدين 'day of Judgment'). But I confess I cannot quite see how *dîn* in the sense of *religion* can come from the same root. It is a word perfectly distinct from *dein* ^سدين "debt," with which Dr. Kœlle connects it. He of course knows that, as opposed to *imân*, *dîn* denotes rather the outward, ceremonial part of religion, the *law* rather than the *faith*. In Avestic the word *daëna* means just what *dîn* does in its second meaning, viz., *law*, then *doctrine, rite* (cf. Yasna xliii, 9, 11, etc.), *ayâ daënayâ*, "selon ce rite" (Harlez, "Gram. de l' Avesta" s. voc.) It is *den* in Armenian still, and comes from $\sqrt{dî}$, Sanskrit $\sqrt{dhî}$, "to see, to consider." [The Avestic word could not be derived from a Semitic word *dîn*, as has been suggested. Many *Pahlavî* words are from Semitic languages, but not *Avestic* ones.] The word *Hûr* may be from a common Semitic root which in Hebrew means *white*, and in Arabic *dark-eyed*. Dr. Kœlle adopts the former idea, while Penrice, in his "Dictionary of the Koran," argues in favour of the latter. That is one of the charms of a Semitic language! I think the derivation from the Avestic *hware*, "brilliant," which in *Pahlavî* becomes *hûr*, is more likely. Yet, even if so, the Arabs would naturally try to connect the word with a root in their own language so as to give it a meaning (cf. "*sparrowgrass*" for *asparagus*, and the Greek fancy that *ᾠασις* should be spelt *αῦασις* and derived from *αῦω*, whereas it is really from ^سوادي).

Another thing that has been pointed out by Dr. Kœlle is the great difference between Islâm and Christianity. This he has done more forcibly than I have. I quite agree with him that the two religions can never exist in harmony with one another. They never have done so and never will.

As Professor Orchard has said, I have spoken very briefly of Muslim Fatalism, because I thought that it was perhaps *the one* fact generally known in this country regarding Islâm. I have, however, devoted about half a page (p. 167) to it,—all that my limits permitted.

As to the feeling of brotherhood among Muslims, to which Mr. Beven referred, I must say that Muhammadans seem to me to have

a feeling of clannishness rather than aught else. Of universal brotherhood they have no idea.

Dr. Chaplin has referred to their assurance of felicity in the next world. It is doubtless true that thoughtless Muslims deem themselves all right as far as the next world is concerned simply because they *are* Muslims. This idea, however, is not exactly in accordance with their creed. There is a tradition to the effect that Muhammad said that his religion must excel all others in everything, and as there were seventy-two sects among Christians there must therefore be seventy-three—or one more—in Islâm. Only one of these numerous sects is entitled to salvation, and each Muslim believes that his own sect is the happy one. Another tradition states that on the Day of Judgment GOD will assign to every Muhammadan, who would otherwise be condemned, a Jew or a Christian to be cast into hell-fire in his stead. Again, any Muslim who has in his heart one grain of faith, although he may be cast into hell, will yet ultimately be delivered from it. But some of the most pious Muhammadans have died in the greatest agony of mind. For there is no Atonement in their religion and no proof of it upon which they can rely. As a thoughtful Muslim said on one occasion after hearing an argument between a friend of his and a Christian, "What a fine religion ours is—until you inquire into it!"

I am glad that attention has been called to our responsibility with regard to Muhammadanism. It does seem to me a most scandalous thing that the Christian Church should have neglected the Muhammadan world as it has done for so many hundreds of years. Christian England rules over a vast number of Muslims. We surely have no reason to be ashamed of our faith, as we show ourselves to be by our carelessness and lukewarmness in this matter. We have as yet hardly more than *begun* missionary work among the Muslims, but whatever slight efforts we have made have been blessed by GOD in a way we could hardly have expected. We can point to able men, like Imâdu'ddîn and Şafdar 'Alî in the Panjâb, who were once champions of Muhammadanism, but who are now preaching the Christian faith which once they opposed.

In conclusion I must thank you all for having so kindly listened to my paper. (Applause.)

The Meeting was then adjourned.

REMARKS ON THE FOREGOING PAPER.

From Major C. R. CONDER, R.E., D.C.L., LL.D., M.R.A.S., &c.

The paper on Islam by Rev. W. St. Clair Tisdall, M.A., is a scholarly and useful summary of what is known as to the real character of the Moslem religion. With exception of one point, the views as to its relationship to earlier creeds are those to which I have called attention from time to time since 1883,* in works with which Mr. Tisdall is probably not acquainted. The Christian and Jewish elements have long been recognised, but I had not come across any account of the Persian element, which appeared to me, when studying the Zendavesta, to be quite as important. In fact, Geiger, when writing his celebrated essay on the Jewish comparison, was not aware that many of the Talmudic legends and fancies are not original in the Talmud, but were clearly borrowed, by the Jews, from earlier Magian beliefs. These ideas do not appear in any Hebrew work until after the time when the Jews came into close contact with the Persians.

I have more than once expressed my belief in the strong personal influence of Muhammad. Of his wild genius and energy, and enthusiastic conviction, I think no student can fail to be convinced. But he had very little that was original to relate; and Islam, while certainly borrowing from all the older Asiatic creeds, is distinguished from them by its *negations* rather than by its *dogmas*. I much doubt if Muhammad read either Jewish works or the gospels of the Gnostic Christians. The vagueness of his information seems to point rather to his having picked up, orally, the legends of Jews, and Persians, and Gnostics, both from the traders with whom he came early in contact, and also from his wives, Rihânah, the Jewess, and Maria, the Coptic slave.

Many Arab tribes were Christian before Muhammad's time (Beni Hanifa, Beni Tai, and others). The Jews had penetrated into Arabia some 100 years before he was born (if we may credit the history of Dhu Nowâs), and the great towns were full of Jews when the new creed was preached. The Persian element was also present, and had so far affected Arab ideas, as to teach some of them to hold the dog as sacred as in Persia.

The evidence quoted is, however, literary only; and, I think,

* See "Heth and Moab," Appendix II, pp. 406-416; 1st Edition, 1883, "Syrian Stone Lore," 1st Edition, 1886, pp. 324-348. "Palestine," 1889, pp. 119-127.

that in some cases monumental contemporary evidence is more important, and gives different results to those which we obtain from Moslem writers, whose own beliefs coloured their statements, and who are, moreover, very late authorities. We have numerous inscriptions from Yemen, some from Northern Arabia, others Nabathean, and others in the Safa alphabet of Bashan (which is Yemenite in origin), which serve to carry us back some 1000 years before Muhammad, and to show us something of what the Arabs of the "times of ignorance" really believed. To this monumental evidence the author does not allude.

There is nothing surprising in the fact that the early Arabs had some knowledge of a single Deity, considering how long the Jews and Christians had dwelt among them before Muhammad came, and considering that the idea was known to the Egyptians at least as early as 1400 B.C., and perhaps quite as early in Chaldea. But I do not think this can be quite regarded as monotheism, because the early Arabs, like the Canaanites, Assyrians, Babylonians, and Phœnicians, were certainly the worshippers of very many gods.

I have not been able to find any evidence, in the monumental texts which refer to these deities, which would support the theory that they were regarded as "intercessors" with God. That seems to me to be rather an attempt of later Moslem writers to explain away the true character of the ancient idolatry, which in no way differed from that of other races. The author says that we do not find Baal, Moloch, Ashtoreth, etc., among Arabs; but this does not quite agree with the monumental evidence. The Himyarite gods included עתתר 'Aththar, whose name has been compared with that of Istar (the later Ashtoreth); דשמוי "the heavenly," is apparently only the old Baal Shemim; and the name of El—the older form of Allah—occurs as a compound in such titles as אלמקה. *Hobal*, worshipped at Mecca, is the old אל הבאל of Mareb—a name perhaps connected with הבעל, or "the Baal" (هبال). The Assyrian and Aramaic influence was strong in Arabia from 700 B.C. downwards, and the exclusively Assyro-Babylonian god, *Sin* (שין), of the moon, was adored even as far south as Hadramaut. These were but a few of the many deities, known monumentally, who were adored as independent powers of Heaven and Hell by early Arabs. Among the Nabatheans the same texts show us that the worship was not monotheistic, but included the two deities, אל and אלה—the Assyrian *El* and *Alat*. So Herodotus couples *Alilat* with *Orotal*; but the proposed explanation of the latter name seems to me very doubtful. The antiquity of the Mecca shrine, where the Arab Venus was adored, was no doubt very great; but Diodorus does

not, I believe, give it the later name of *Beit-Allah*. If Ibn Hishâm says that idolatry was only fifteen generations old in Mecca in Muhammad's time, this only proves that writing 200 years later than the date of the Hegira, he knew very little of the true history of that shrine, which has been very carefully studied.

It should also be remembered that the Korân and the Sunna do not represent Islam in all its aspects. The religion of the Mosque and of the College is not the religion of the peasant, in the remote villages where no Mosque exists. Nor is it the religion of the Sufi mystic, or of the sceptical Moslem philosopher. The study of Moslem historians is not sufficient by itself to show what Islam is, in all its varieties of higher thought, and lower superstition, and of conflicting sects.

With what is said as to the influence of the "religion of Zoroaster," I concur, and have long since so concurred in print; although students of the *Zendavesta* do not appear generally to admit the existence of an historical Zoroaster. The name is the old *Zarathustra Spitama*, or "pure high priest," who was a legendary teacher. In addition to the points of similarity noted, all of which I have previously treated briefly, may be noticed the Moslem idea of the *Kaf* mountain, and of the trees of Heaven and Hell, which appear to be of Persian origin, and several other such comparisons. But it should not be forgotten that the Persians came under Semitic influence in Babylonia, and borrowed many ideas from their conquered subjects. I believe the word *daena* for "religion" is one of these borrowings; and the Pehlevi dialect is full of borrowed Aramaic words for religious ideas. It should also be noticed that the similarities to Persian dogmas are found, not in the Korân itself, but in the Moslem traditions after the conquest of Persia. On the other hand many Talmudic ideas, and notably those which refer to the soul hovering near the grave, appear to be of purely Persian origin. In justice to the great Arab genius, whose wild imagination—full of thoughts of the Day of Judgment and of Hell—was expressed in rude poetry, often magnificent in the original, it should be remembered that most of the absurd legends concerning him are the fancies of later writers, and not found in the Korân. I doubt myself if the Korân, as we have it, is to be solely ascribed to Muhammad. Finally, the Aramaic forms of its dialect are, I think, more probably due to the character of the Koreish vernacular, than to any borrowing from books. Similar forms occur in the dialect of Hadramaut long before the time of Muhammad.

NOTE BY THE AUTHOR, IN REPLY.

It would take too long to answer Major Conder's remarks at all fully. He must pardon me if I hesitate to contradict Arabic historians when they hand down genuine traditions of pre-Islamic worship and religion. Our knowledge of the inscriptions of Arabia is hardly sufficient to warrant us in doing so. Nor are many inscriptions found in that part of Arabia in which Muhammadanism had its origin. Yaman and Hadramaut are of course entirely out of court in this matter. I am, however, thankful for the information contained in Major Conder's note.

The differences between the views expressed by Major Conder and my own are rather in details than in actual facts. I have in my paper stated that Polytheism existed in Arabia before Muhammad's time, and that it was introduced (according to Arabic writers) from Syria. The inscriptions quoted by Major Conder prove this as far as the *Najd*, etc., are concerned. The forms he quotes, e.g., עתהר and דשמוי, are distinctly *Aramaic*, and not Arabic. *Sin* שין is Accadian. This shows that Polytheism, as far as the inscriptions he refers to are taken as authorities in the matter, was not of native origin, but was introduced from other countries. I do not agree with Major Conder's derivation of

הבַּעַל = הבאל = הֵבַל from הֵבַל or הֵבַל. His quotation of אלה and אלה from the monuments, though the forms are not Arabic, tends to prove the accuracy of my suggestion that Ὀροτάλ and Ἀλλάτ were for ^واللہ ^وتعالی and ^واللات respectively. I do not feel certain about the Ὀρο part of the former word, but it must, I fancy, represent either ^واللة or ^وایل.

I am glad to find my views of the indebtedness of Islām to Zoroastrianism supported by Major Conder, though he is correct in his supposition that I am not acquainted with those of his works that he mentions. Had I known them I should have quoted them in my notes. I cannot, however, agree with him in his doubts about the authenticity and genuineness of the Qur'ān. I have already in my answer to Dr. Kœlle replied to Major Conder's suggested derivation of *daëna*. Although the Pahlavi language, as he rightly says, contains very many Semitic words, yet the *Avestic* tongue contains hardly one, if even a single one, that can with any probability be derived from any Semitic stock.

ORDINARY MEETING.

D. HOWARD, ESQ., D.L., F.C.S., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed :—

The following Paper was then read by the Author.

ON THE REALITY OF THE SELF. By W. L. COURTNEY, M.A., LL.D.

THE common language and the formal literature of all nations are full of such terms as “mind,” “soul,” “spirit,” the peculiar possession and the peculiar privilege of man as standing at the head of the animal world. What is this mind? Where is it? Is it a reality, in and by itself, as we ordinarily assume? If so what is its precise relation to the physical organism which is undoubtedly common to other animals besides men? Is man right in thinking and calling himself “a living soul,” or is this the self-deception and the conceit of one who is himself the prophet and interpreter of the world in which he is placed, and who therefore naturally gives himself the pride of place? Is man, as an animal has so often been declared to be, an automaton, a superior sort of machine, wound up, set a-going and kept in order in a fashion, which of course to the machine itself is inexplicable? These are large questions which can only be partially answered: the solutions of such problems involve long chains of argument, the conclusions of which in the time allowed me I must often dogmatically assume.

Of the two questions—*where is the mind?* *what is the mind?* the first *can* be answered, and the second *cannot* be answered in a thoroughly satisfactory manner. If it be assumed that there is such a thing as mind, science will only

allow us to put it in one locality, viz., the brain. More precisely, we can say that the real seat and home of mind is in the cerebral cortex, the rind of gray nervous matter which surrounds and envelops the white matter of the brain. But I must remind you that such language as that the brain is the "seat" or "home" of mind, or, as we sometimes hear, the "organ" of mind, is merely poetical and metaphorical language. No one would pretend that this was a precise and scientific language; it is in reality quite as metaphorical and poetic as the assertion that the body is the "prison" or "tenement" or "tabernacle" of the soul, which Plato thought gave a true account of the relation between the two. But that in some real sense the mind is in the brain—of this there can be no doubt, because we have no recorded instance of thought taking place *without* a brain. We talk indeed sometimes of feeling and emotion—which are conscious states of mind—as belonging elsewhere, to the heart, for example. A "man of heart" signifies a man who is sensitive and affectionate and emotional, and falling in love is in the language of poetry and common life supposed to be some feverish condition of the heart. We even distinguish between "feeling" and "intellect" by ascribing the first to the heart, and the second to the head, as when we say that "morality is rather a matter of the heart than of the head." But except in the language of poets, except to Aristotle and Hobbes, both of whom thought that the heart was the central organ of intelligence, such statements are absurd. The heart is a pump with chambers and valves—a pump and nothing more. The real "seat" of *conscious* mental states—sensations, perceptions, feelings, volitions, ideas—is the brain. Mr. Lewes (*Physical Basis of Mind*) it is true, thinks it proper to say that a certain "soul" belongs also to the spinal cord, because it is by itself capable of reflex activity: but at all events it is not the seat of *conscious* activity, and it is with conscious states that we have to do. The mind is in the brain.

Our other question, however, what is the mind? cannot be thus summarily answered, nor indeed can it ever be answered, except in part. We cannot define by thought that which is thought, any more than a man can say exactly what his own personality means. What is the mind, therefore, is an absurd question, if we want a direct, immediate answer. But we can get some sort of answer if we ask the question in an indirect way, if we ask, for instance, whether there is evidence to prove that there is

a real, substantial, unphysical thing called mind, and if so, what is the relation in which it stands to the substantial and physical thing called brain. By discovering what the mind is not, we can indirectly get at what it is: for the rest, we can only fall back on the verdict of immediate consciousness. *Γνώθι σεαυτὸν* is the only ultimate method of a true psychology.

“ Once read thy own breast right,
 And thou hast done with fears ;
 Man gets no other light
 Search he a thousand years.
 Sink in thyself ! there ask what ails thee at that shrine ! ”

The exact problem before us, together with an attempted solution, is so well illustrated by Descartes that it is worth while to refer to his historic dogma on the subject. Is mind real? Nay, is it not the only reality? Such is practically the outcome of Descartes' celebrated “*Discours de la Méthode*.” Descartes had determined amid a changing sea of doubts, to find some solid rock or even some floating spar to which to cling. What is the one reality, the one unchanging fact in all that a man knows and thinks? It is that he is conscious, and that therefore he exists. All thought testifies at least to this fact—even the sceptical doubt itself, for it too is a conscious attitude or phase which also argues existence. *Cogito ergo sum, je pense donc je suis*—here is at least a fixed point of certainty which no scepticism can shake. Whatever else a man may doubt, however much he may mistrust the evidence of his senses in telling him of the world in which he lives; however much there may be in him “the blank misgivings of a creature, moving about in worlds unrealised,” still on one point there can be no shadow of a cloud—that his existence is proved by his thinking. Is this but a meagre result? But see how much is involved for Descartes in this dogma. I think therefore I am. There must, therefore, be a self, this self is real, and the real essence of this real self is thinking. It follows that man is a living, thinking soul, which is immaterial and imperishable. Such conclusions can no longer be called meagre, for there is in them the foundation of a psychology and even of a religion. Nor did Descartes hesitate to localise the soul thus proved; it exists in the brain, in that small lobe or gland which is called the pineal gland or the conarion.

But if the mind, with all its characteristic modes of activity, be thus of a nature absolutely distinct from the body or material brain, the one being spiritual and immaterial, while

the other is corporeal and mortal, how are the relations of mind to body to be satisfactorily explained? There are obvious interactions between the two elements; the body affects the mind, when we suffer for instance from a headache, and the mind affects the body, as for instance when we will to move an arm or a leg. If the two elements are absolutely antithetical, how can they thus influence one another? It was left to the acuteness of a woman to put this difficulty to Descartes: the objection is found in one of the letters which that royal blue-stocking, Elizabeth, the Princess Palatine, wrote to the philosopher. But no answer is forthcoming, until the followers of Descartes, Geulincx and Malebranche brought forward their singular theory of Occasionalism. The solution propounded is this:—It is God who unites the two dissimilar things, body and soul. On the occasion of a physical stimulus, God suggests to the mind the appropriate sensation, and on the occasion of a volition, God suggests or brings about the appropriate muscular movement. Thus the Divine Being is held to be always interfering, as it were, to keep human life and activity going. All action is his action, just as all mental states are his states. It is a desperate theory, but unless one is frankly disposed to accept a dualism of ultimate principles, it is in some shape or other not an unusual one. Leibnitz proposes a variation of the theory in his celebrated “*consentement préétabli*” or pre-established harmony. In order to get rid of the necessity of constant and repeated interference, Leibnitz proposes to regard body and soul as two clocks which are wound up so as always to keep time with each other. The immediate action of God is thus that of the clockmaker who originally winds up and sets the two timepieces. Then for the rest of their respective lives they exactly correspond, and the possibility of interaction between body and soul is resolved into an exact equivalence and correspondence of respective functions.

In a modern world, as might be expected, men of science and philosophers have grown impatient of explanations like these. They either tell us not to ask impossible questions and to be content with noting down and tabulating the various relations which experience gives us as existing between mind and body (such is the position of what is generally called Positivism) or else they frankly cut one member of the antithesis and bid us regard mental activities and the whole sphere of consciousness as in some sense *produced by* or the *result* of material movements or finally as

the *shadow* of those material movements in consciousness. Thus sensation becomes the effect of which molecular agitation in the nerves is the cause. This is usually called Materialism. But it is in reality useless to tell us not to ask questions which science stigmatises as impossible and absurd. Impossible questions will nevertheless be asked, and science and philosophy will appear to have failed, unless some sort of answer is forthcoming. If then we turn to the more definite answer of Materialism, we have to try to imagine how mental states can be the products of movement in material molecules, just as a carpet is the product of the loom. Is Thought a secretion of the brain, just as perspiration is the secretion of sudatory glands, and tears the secretion of the tear-ducts? But the secretory product of the brain is the fluid found in certain of its cavities, and this fluid is no more like a mental process than the deficiency in gastric juice is like a feeling of indigestion. And if we put the theory in a more refined form and say that nerve-commotion is the product of the molecular activity of the brain, still a neural shock or nerve-commotion is not what we are conscious of in sensation. The language of the Materialists appears thus almost meaningless, as an explanation of all those mental processes of which we are intuitively aware. And so some of these scientific psychologists, as, *e.g.*, Mr. G. H. Lewes and Mr. Bain, seek to amend their theory somewhat, and speak of *equivalence* and *identity*, rather than of causation and production. The mind and brain stand to one another, they tell us, as convex and concave sides of the same arc. The two aspects are of one identical thing. Viewed from one position the arc is concave, from another it is convex: and so viewed from different standpoints the same phenomenon is now a material motion, and now a conscious process of the mind. We ought to speak of a "double-faced unity" showing itself both as mental and as corporeal, having one aspect which is spiritual and another which is material. This is plausible at all events; nor is there any way of either proving or disproving the theory, unless we have grounds for saying that the mind has a reality of its own apart from the material embodiment, and that we have evidence to show it to be within its own sphere distinct and supreme. Can we bring any arguments to bear upon this reality of mind, separate and separable from the nervous mechanism? I think we can, and these arguments shall be drawn from different sources, and illustrate different aspects of the question.

I. In the first place let me refer to a doctrine which is generally considered to support the materialistic thesis. It is that of the development of mind, which may perhaps be held to be the great "discovery" of the modern psychologists. It is clear that just as there is a development of the physical frame and the nervous activities, from the ascidian up to man, so too is there a development of intelligence. In man's case, too, as he grows in body, so does he grow in mental power, and as he decays in body so, too, does his mental vigour decay. But this is only true when stated generally and if we look a little more closely, the facts hardly seem to warrant the conclusion which the Materialist urges that the development of the mind is the development of the nervous system. At certain epochs of life the evolution of the brain seems to stand far in advance of the mind; at others, the mind appears to have overtaken and passed by the stage reached by its physical substratum. During a long period of life the growth of mental powers is constant and solid, while the growth of the physical basis has nearly ceased. Take the case of a child. When it is born it has a far more complete and advanced nervous organism than the most fully equipped of other young animals. But judged by its sensations and its perceptions, it is much more stupid and insensate than the puppy or the kitten. The human infant has apparently a mental condition something like a dreamless sleep varied by unmeaning sensations, and yet it possesses a nervous mechanism complex and active enough to do anything. In a few years the mind has suddenly blossomed forth in a marvellous way, but there has been but little change in the so-called physical basis. No new organs have been formed within the cranium; there is an increase of the brain substance, but it is a gradually diminishing increase which by no means corresponds with the enormous mental growth. Take again the case of maturity, the "middle life" of man. During this time the nervous matter undergoes scarcely any discernible development. Nothing that the microscope or electro-meter can detect distinguishes the brain of the man of twenty-five from that of the man of fifty. A few grammes of weight have perhaps been added to it during the whole period. But is there not usually a considerable development of mind during this time? Has not the judgment widened and the mental powers expanded? Or again, old age presents us, it is true, with a steady decline of the physical vigour, but it is doubtful whether the decay of the mental powers in any sense keeps pace with it. On the contrary, while the old man is getting

physically feebler day by day, while he can daily do with less sleep and less exercise, less food and less excitement, as might be expected in one in whom the forces which make for life are already spent or fast waning, is it not the fact that his mental vigour remains comparatively unimpaired and that his judgment and his kindness and his toleration are such that the younger gladly seek counsel from his maturer mind? It is then absurd to say that the evolution of the mind *is* the evolution of the nervous system, if it be meant that each mental phase, whether of increase or decrease, keeps time and pace with nervous growth or decay: for it is clear that the stages of the development of mind do not fully correspond with those of the development of the nervous mechanism any more than its gradual failure corresponds exactly with the failure of nervous energy. And thus the concave and convex theory, the subjective and objective aspect of one identical phenomenon or double-faced unity, does not appear to be exactly true to the facts.

II. There is, however, much greater and more significant evidence to prove that the mind has laws of its own, which are not those of the physical mechanism. It appears that there are certain elements which necessarily enter into what we mean by an intelligent consciousness which have nothing like them in the nervous material mechanism. According to Kant, knowledge can only arise if two elements are contributed to its growth: on the one side there is a material factor, on the other side there is a formal or mental factor. The mind has laws of its own, in accordance with which it works, and these laws are *not* the laws of that material element which it assimilates and on which it feeds. So in the same way we can assert that consciousness involves powers, faculties and elements which depend upon itself, and these cannot be accounted for by any enumeration of material mechanical processes. There are, for instance, certain mental products for which it would be difficult to find correspondent nervous processes. What nervous process could be held to correspond to the feeling of moral obligation or duty, or the sentiment of justice, or the love of truth, or the higher æsthetic feelings, or deliberate choice and acts of will in the higher sense? But there are humbler and more ordinary phenomena than these, which are exemplified in all our daily life, to which it is worth while to pay attention.

1. We will begin with a very elementary element in the acquisition of knowledge, viz., Attention. It is, of course, plain, that unless we pay attention to the phenomena that

come before us, they will come and go without leaving any trace, or communicating any data to our stock of mental acquisitions. But elementary though Attention may be, it is, notwithstanding, very difficult to explain its functions and its character. Psychologically, Attention seems due to a more or less conscious effort of mind which is directed to the more striking characteristics of the sensations which come before it. But again, there is nothing so capricious as Attention. Sometimes we by no means attend to the merely striking characteristics, but to any chance quality which for some reason or other engages us, to the exclusion of other qualities. Sometimes, again, Attention is apparently habitual or only semi-conscious; at other times, it appears impossible without a serious volitional effort. But, though we may labour to explain Attention psychologically, it is a far harder task for the physiologist. If all mental conditions were the material result or effect of molecular agitation within the nerves, it is very difficult to say why some forms of nervous agitation should produce "Attention," while other forms exactly similar, so far as their material character goes, should fail to get themselves registered within the brain. We are looking upon some scene or landscape, or, to talk a scientific language, various nerve messages are proceeding from the end-organs of sense, which have been excited by external stimuli: we attend to some features in this landscape; we notice a particular tree, or figure, or colour, not always because it is striking, but for some capricious fancy of ours. How can this be, if there be not a mind within us, with laws of its own, which has indeed a nervous mechanism, but is not the slave of the mechanism? Otherwise, one would think that all nerve-messages ought either to have equal values or to stimulate attention in equal proportion to their vividness—neither of which is the case. The only law, itself somewhat doubtful, is *Weber's Law*, which may be expressed as follows: Some ratio, although quantitatively different, is believed to exist for every sense. That is to say, it is true of every sense that not every change in objective stimulus occasions a change in subjective sensation, but that every change in stimulus must bear a certain definite ratio (varying in the different senses) to the already existing stimulus, before the intensity of the sensation, as a conscious state, changes. Differently stated, not absolute stimuli are felt, but only relative.

It is all very well to tell us that the seat of attention and concentration lies in the motor centres

in the brain, but this does not explain its activity. And if the answer of the physiologist be that there are certain associations set up between particular nerve-currents, and that when these run together they rouse all sorts of subsidiary commotions—just as in a telephone wire one might hear not only the voice of the speaker but the church bells of the spire near which it passes—then it must be said that nerve-associations however “dynamical” they may be declared to be, are yet not trains of thought. How absurd, in point of fact, is much of this quasi-scientific language when applied to the mind! We might, perhaps, understand how material nervous tracts are “associated” or “agglutinated,” or subject to an “organic nexus:” but what on earth is the meaning of the “organic nexus” which binds one phase of consciousness to another? Is thought something which can be tied on to another thought so that the two can now hang together? Or is it not rather a complex idea, a unity of fused or transformed elements, which can only be due to the activity of a real and independent and immaterial mind?

2. We pass to another mental faculty, with which long habit has made us familiar, but the exact operation of which is hardly short of a mystery—I mean the faculty of memory. It is memory, of course, which renders possible any accumulation of knowledge. It is equally memory which renders possible any large exercise of constructive and imaginative skill. In its two forms it lies at the foundation of what we understand by consciousness, its passive form being that which is called retentive or organic memory, and its active form, reproductive. It is by means of memory that those laws of mental association become possible which have been made of such use in explaining the train of our ideas and our processes of thought. Association works either through similarity of impressions or contiguity, whether in time or space. That is to say, we either associate together ideas or impressions which resemble one another, or which have come into our consciousness near each other, in neighbouring parts of space or successive moments of time. But only on the presupposition of memory can either form of association be realized.

Now can there be any physical explanation of memory? At first sight the answer seems certainly, yes. We are able to revive past impressions because of the existence of those nervous tracts or channels through which the ordinary impressions reached us. That there is a physical basis for memory

seems extremely probable. But that we can thus explain the whole operation of memory is a very different question. We must here distinguish the two forms of memory mentioned above, the passive or retentive function and the active or reproductive. With regard to the first of these the physical basis is obvious. For it is probable that every action of a stimulus or an end-organ of sense, and every transmission of energy through nervous fibres and cells, considerably, and perhaps permanently, affect the general nervous mechanism, just as in photography a plate of dry collodion, after a brief exposure to the sun's rays, retains for weeks in the darkness the effects of those delicate changes which it has undergone. We can get at this result by several commonplace experiments. We are jolted all day in a train, and for the next day and sometimes for succeeding days the same jolting motion continues in our consciousness, as a sort of abiding companion of all our other mental states. In the case of vision, there is an after image impressed, as it were, on the retina which we can call up into consciousness for some time whenever we will. Or again, it is difficult to explain how certain actions become habitual without supposing some permanent alteration in our nervous energies. Thus knitting, or playing on the piano, which at first involve a series of acts of will, finally proceed with such regularity that we become unconscious of the accompanying nervous processes. There can be no doubt that there is every kind of interaction between the cells and fibres of our sensory and muscular system. Every activity leaves its mark or trace in an altered capacity or acquired tendency. And the many freaks of memory of which we have daily experience seem themselves to argue a physical and material explanation in the relative position of certain neural processes. That all this proves a physical basis for memory, so far as it is a retentive function, seems certain. Still it must be remarked that while such explanations show why we remember one thing rather than another, *granted that we can remember at all*, they hardly render clear and precise the possibility of memory itself. For the retentive function, so far as it is unconscious, is not what we mean by memory. Conscious memory doubtless presupposes all the range and sphere of retentive capacity. Still, unless it is conscious, it forms no more a part of what we include in our mental life than that vague phantasmagoria of dreams which we leave behind us when we rise from our beds.

What can we say, however, of active, reproductive memory? Can we give any physical explanation of this?

The problem and mystery of memory is that that mental state which we recall is both present and absent at one and the same moment. It is present because we remember it and because it enters into our immediate consciousness; yet it is absent, because it is some past state which we experienced yesterday or a week ago. How can we say that some after image resembles some original impression when that impression *itself* has gone and can never be recovered? By what proximity of nerve tracts can we explain this wonderful power? For its essence seems to lie in the capacity to annul the conditions of time. The past is not the past for us, when we remember, but the present. On the other hand, all those intimations which we derive through our senses are subject to the conditions of time; they have their before and after, and their natural sequences. Yet the active memory defies the conditions of its own data. It defies time itself, and seems to be above it. How can such a phenomenon be explained? Is not the obvious explanation also the necessary one, that the mind has laws of its own apart from those laws which enter into that physical organism of which it makes so much use?

3. I will refer to only one more fact of our mental life, which is the largest and most comprehensive of all. We know now many of the conditions on which consciousness seems to depend, albeit that consciousness itself being the condition of all our internal experience is necessarily incapable of any definition. We can speak of the organ of consciousness, just as we can point out its physical pre-requisites. Consciousness is clearly dependent on the character and amount of blood supply; for to stop the supply is to put an end to consciousness, and to corrupt it is to depress and disturb consciousness. Moreover the character of the circulation of the blood seems to affect profoundly the phenomena of consciousness, quickened circulation meaning more acute perception, and slower circulation involving tardier mental processes. We have learnt, too, to fix on the brain, in the case of man, as pre-eminently the organ of consciousness; only meaning, however, by such an assertion that the activity of the nervous matter within the cerebrum is intimately connected with all mental phenomena and that outside things can only affect consciousness, if they get themselves as it were imprinted upon or represented by cerebral processes. But if from consciousness, in the general sense of the term, we pass to *self-consciousness*, the problem is altered. For the marvellous thing about *self-consciousness* is that in it the

mind recognises itself as the subject of its own states, and recognises these states as its own. The mind, as it were, appears to itself and links every mental state together by the bond that they all belong to its one self. What does any man mean by speaking of his own personality, except that he is conscious of himself as being the one identical being who has had every kind of experience and undergone various mental phases and knows them all as his own? How can there be any material substratum, analogous or correspondent to self-consciousness? The question is almost absurd. How can any physiological process represent this faculty of self-consciousness, when we can conceive of no relation between them which could bring them into any intelligible correspondence—when one remains a process, while the other is a flash of self-identifying power? We hardly know what it is which we are going to set about to attempt to describe. Self-consciousness is the unique property of a mind which is so real that it can appear to itself.

We must not shrink from the conclusion to which these and many other considerations which might be mentioned seem to tend. If we were to say that there was by the side of the physical and nervous organism, a real mind with conditions of its own, and developing according to laws of its own, we should seem to be relapsing into the old dualism of Descartes, and be exposed to the difficulties of understanding how two alien natures could act on each other. That may be so: and perhaps we have not even yet got much further than the assertion that the spiritual is not the physical and the physical not the spiritual. But one dogma I think we can hold fast; that if there be a real being in the universe, it is not the physical but the mental which alone throws light on the physical and enables us to understand it. The real is the mind, over and above all other realities. Further questions as to mind and matter and their mutual relations, and whether we can find some ultimate point or power which comprehends them both, and in which they become fused—whether that point or that power be called Absolute Spirit or God—would lead us into some of the most abstruse problems of Metaphysics and make us far overpass the bounds of our present subject.

The CHAIRMAN (D. HOWARD, Esq., D.L., F.C.S.).—We have all listened with very great interest to Dr. Courtney's admirable Paper, and I am sure I may present to him our best thanks. (Applause.) It is somewhat disheartening to find the very old doubts about personality and about self-identity coming back as the result of our modern learning, and yet on the other hand it is, perhaps, encouraging to find that they are the *same* old doubts. When one finds that the doubts about personality which existed at the time of Buddha and the Yogas, that the very problems which perplexed the mind 2,000 years ago and a good deal more, are brought up as the result of our nineteenth century science, I think it is encouraging to know that they cannot be the necessary result of modern science, because they existed so long ago. They may be brought into prominence by it, but they cannot be the result of it as they pre-existed so long, and it is well to have brought to us, clearly and distinctly, as we have in this Paper, how little modern discoveries about the brain and consciousness from the physical side really affect the question. It is well to remember that the old difficulty of the problem put by Descartes, about the mind and the physical basis of the mind, is not the only perplexity. It is no worse perplexity than that of attempting really to understand how the sun's light reaches the earth through a medium which we call ether, but of which we know absolutely nothing—the properties of which are so perplexing that if we reason about them we arrive at the conclusion that it is an absolutely non-elastic solid. When we find these hopeless perplexities in the best understood branches of science, no wonder in the more obscure ones there should be quite as great perplexities. Therefore I think we may take comfort from that.

It is well that we should frankly acknowledge that the mind is so much connected with the brain that it is hardly too much to say that the brain's connection with the mind is as intimate as the dependence of a violinist on his violin. It would be easy to give him one so bad that it would be impossible for him to play on it, and yet nobody in their senses would say that the violin was the cause of Joachim's wonderful playing. It is the necessary organ thereof, but certainly not the cause of it, and one does not confuse in one's thoughts the violin and the violinist.

I am specially struck by the explanation on the point so clearly put in the Paper in reference to attention. We must remember

that it is not merely the power of seeing or listening to one thing or another, but at the same moment different people may be, with exactly the same sounds reaching their ears, attending, at their will, to totally different things. Take the case of a string quartet—four people are sitting together at an equal distance from the performers, and therefore the actual physical impressions on their ears must be exactly identical, and those four may each of them attend to each of the parts and at a given moment they may agree to attend to other parts—all of them with the same physical cause of hearing of one or another of the parts. That is merely one example of the problem of Attention which those who maintain the merely materialistic view of the mind have to get over.

The points raised in the Paper are all very clearly and admirably put, and it does seem to me to be a subject that we cannot too boldly face. The mind is so intimately connected with the brain that it is absurd to ignore the connection, but on the other hand we cannot too clearly bear in mind that all that has been offered us by physiologists does not bring us one atom nearer the understanding of self than the perplexities of Buddha, on the one hand, or the arguments of Descartes on the other. There are a good many here who have thought on and studied the subject, and I hope they will give us the benefit of their experience.

Mr. A. H. ELWIN.—It is not my intention to criticise the Paper, but I would like to call attention to an important theory that has not been fully touched on this evening; I have heard it called one of Professor Huxley's theories of *thought-molecules*. It so happens that I have very good reason to know that this thought-molecule idea was in vogue over forty-six years ago, but of course in a different form. We had not got so far at that time as to put it into present-day scientific language, but if I understand the thought-molecule idea rightly, or what I prefer to call the sensation-molecule idea, for that is more comprehensive; it means that for every sensation which is received, whether by the ears, eyes, or feeling, some kind of image (not necessarily a picture), but some little thing is formed in the brain somewhere, or connected with the brain, and not so material as the brain itself, and perfectly indestructible, that forms a record. I think in that idea we get an explanation of memory, in fact, of all the phenomena referred to this evening.

Mr. T. BARKWORTH.—It is of course impossible for so vast and complex a subject as the nature of mind to be dealt with adequately within the compass of a single Paper. More especially is this evident when we come to consider the various systems and almost countless works that have been produced in connection with the question, What is Mind? Nor is the result encouraging to the study of Metaphysics. For the only sure progress that seems to have been made, leading to ascertained conclusions, is in the direction of inductive research, and the mode of investigation has necessarily become the property of the physiologist rather than of the metaphysician. Nevertheless there is one important category of mental phenomena without considering which no survey of the nature of mind can be regarded as complete—I mean the automatic processes of mental action. It has been too much the fashion to speak of the mind in relation to consciousness, and to disregard those unconscious actions which nevertheless occasionally display a very high order of intelligence. When the author speaks of the mind, does he mean the mind that directs these unconscious proceedings, or the mind that is preoccupied and absorbed simultaneously with a totally different subject? To take one or two examples by way of illustration. A man is threading his way through a crowded street while his mind is deeply engrossed with some scientific or political question; he pays no attention to the state of the thoroughfare, and will very likely end by finding himself at some more familiar destination than the one he intended to make for.

Again, mental automatism is even more interesting than physical. Thus, it has been found possible to add up long columns of figures, or play through a piece of music at sight, while the attention is so absorbed in a train of thought, that the individual is unconscious not only of what he is doing, but even of where he is. Is it the conscious or unconscious mind which is the real self? These and similar instances would alone have been sufficient to throw doubt upon any view of mind which regarded it as a single homogeneous entity. I cannot enter further into this interesting subject to-night. But the dualism of mind in the form of a primary and secondary consciousness, or, as I should prefer to call them, an active and passive personality, which may be broadly classified as volitional and ratiocinative on the one hand, and automatic and emotional on the other, may, I think, be now considered as established, not

on the basis of metaphysical speculation, but on that of experimental research, and of results which may be repeated as often as is required for purposes of demonstration.

Rev. G. LYON TURNER, M.A.—At the outset, I should like to say that, unlike the previous speaker, I am prepared, on the whole, thoroughly to agree with the position taken in the Paper, but I should like to ask Dr. Courtney whether, in reference to Kant's position on page 201, he has not expressed himself in a way which would rather mislead those who are not acquainted with Kant's system. The distinction between formal and material elements of knowledge is not a distinction that corresponds with mental and material in the ordinary sense of the word. In Kant's phraseology, the words "form" and "matter" are used as the names of the two elements which form an empirical intuition. Both of these elements, like the intuition which they form, in their nature, are mental or immaterial; but the "matter," according to Kant's own putting of it, is sensation. The forms "material" and "immaterial" in this connection, therefore, are both used in a very peculiar sense; so that, I think, any one reading that paragraph of the Paper for the first time, without a previous acquaintance with Kant's system, might form an erroneous idea of his position. With some portions of the first part of the paper, however, I cannot agree; and it is mainly to insist on those points being put with as great accuracy as possible, that I draw attention to them. In reference to the two questions raised by Dr. Courtney, "What is Mind?" and "Where is it?" I must confess I should be inclined to answer them in the opposite way to that in which Dr. Courtney has given his answer. (i.) "What is Mind?" I think Dr. Courtney has shown very clearly that that is a question we can answer precisely and satisfactorily as far as we can go. Negatively, it is not material, and this the whole Paper goes to prove, I think, in a very masterly way, so that it cannot be identified with the brain which is only its natural organ. Positively, we can say it is that immaterial or spiritual something which feels, thinks, desires, and wills, as Dr. Courtney said at the end of the Paper, which as a whole contains a great deal that is valuable and worth thinking over. (ii.) The question, "Where is Mind?" I would submit, is a question which in the very nature of the case is unanswerable—a question to which no answer can be given. All the arguments proving it to be immaterial, put that

question wholly out of court. And for this reason. The question "Where is a thing?" means—"in what place" is it to be found? That again means—"what particular portion of space" does it occupy? But such a question can be answered only of the material. In fact, the one characteristic of matter as contrasted with spirit, or everything that is immaterial,—such as different kinds of forces,—is its occupancy of space. That is the most specific characteristic of all things belonging to the order of things which we call matter; and the fundamental law of all material things is that each material object or atom, at any one moment of time, occupies one particular portion of space, and is unable at the same time to occupy any other. So that every material object at any one time has one particular place. That is its "*where*," or its position. You can ask the question "Where is it?" and, pointing to the position in space where it is to be found—that precise portion of space which it occupies,—you may say in answer, "It is there." Further, as occupying a definite limited portion of space, it has a certain size, which in answer to the question, "How much space does it occupy?" and a certain shape; which is an answer to the question, "What is the geometrical character of its *space-limit*?" But none of these questions, from the very nature of the case, can be put in reference to mind or things mental; because they are immaterial. You cannot assign to anything mental—say sensation, thought, or wish—any definite shape or size, so that you could say, "taste is round," and "sound is square," nor can you say of any of them that they measure so many millimetres in length, and so on. And much less can you say any of these things of the mind itself. Shape and size it has none. But if so neither has it position; simply because, in its intrinsic nature, it has no space-relation whatever, and, therefore, there can be no space-relation between mind and body. We cannot then be too careful to avoid apparently materialising the mind while we are seeking to establish the fact that it is immaterial and spiritual. Those things which involve space-relation can only be said of its material organism, which is that particular parcel of matter with which we (*i.e.*, each "mind" or "self") are connected more closely than any other. As to the relation between the two, it is an old-standing puzzle which I suppose will never be solved. One expression, used by Dr. Courtney, I think, may be selected as on the whole the

best for all scientific as well as practical purposes; and that is, that the body or the brain is the "organ" of the mind. Provided only we use it in the sense of the Greek term "organon"; defining "organ" as the material condition or *sine quâ non* of its self-manifestation and communication with the world around it, both in material objects and mental personalities.

MR. ARTHUR BOUTWOOD.—There is one important aspect of the question before us which has not been noticed this evening—I mean the relation in which it stands to the philosophy of Religion. Religion is concerned with the relations between the Divine and the human. God and the human soul, these are the two ultimate realities which it presents to us, and with the relations between which it deals. To-night we are asked to consider questions concerning the reality of one of these two related terms, the soul, and according as we are or are not able to furnish a reasonable account of our belief in the reality of the self—of our belief that it actually is something not less real than any of the objects around us, and not some merely hypothetical existence—shall we be able to lay the foundation of an adequate philosophy of religion.

In the first place, let us ask "What do we mean by reality?" and "How do we learn about it?" An abstract definition of reality is perhaps impossible, but in answer to both questions, we may say that reality is made known to us in and by experience. If we could analyse our knowledge—our knowledge, I say, as distinguished from our opinions and beliefs—and throw it into a series of propositions, we should, I think, find ourselves face to face with statements like this, "I perceive this thing, A," and in the experience or consciousness which these propositions would express, we should find our sole ground for affirming the existence of anything—the sole basis of our knowledge of reality. The two questions I have just mentioned are philosophical rather than scientific, and we can seek for the answer to them only in the realm of self-consciousness. There, among the primitive data of consciousness, we find revealed the existence of independent but related realities belonging to two categories, on the one hand we have the perceiving self, on the other, the perceived things. The consciousness of reality, whether pertaining to subject or object, is ultimate and unanalysable, but that unique experience is the only ground we have for affirming the existence of any reality,

and it is a valid ground for affirming the reality of the perceiving self precisely in the same degree as it is for affirming that of the things perceived. The reality we affirm for the self is of precisely the same kind as that which we affirm for the object of perception, for the constituents of the external world of things. The predominant influence of physical science often leads men to speak as though evidence of reality must lie in something visible, tangible, material. In the last analysis it will be found that, even for the things of nature,—for the objects with which physical science deals,—the sole test and evidence of reality lies in that inner consciousness of reality which is available in the same manner and to the same degree for the immaterial self. It should be remembered that much of the language of physical science is largely hypothetical or suppositional, arising from the speculative interpretation, rather than from the positive observation of Nature and experience, due in short to the process which the Byzantine logicians called *suppositio*.

As to Professor Huxley's contention that the ultimate proposition of psychology is "thoughts, feelings, and volitions exist," I will only say that it indicates the straits into which the exigencies of an arbitrarily preconceived theory may lead a man. It is, as Lotze remarks, singular that those who profess to be positive and empirical in method should, at the very outset, arbitrarily mutilate the real ultimates of psychology as they are given in experience, and thus start their speculation from a basis as unreal as any adopted by the thinkers they condemn.

Dr. Courtney's Paper was largely occupied with a defence of our affirmation of the reality of the soul. Now, this is doubtless of great importance, but I think we should constantly keep very clearly in mind the distinction between declaring the ground of an affirmation, and defending that affirmation from adverse criticism. We are apt, I fear, to lay too much stress upon the work of defence, and too apt to embark upon long trains of professedly demonstrative ratiocination. We should remember that the instruments of dialectic will never lead us to the apprehension of reality, this can only be given by and through experience. The ultimate truths with which we are concerned are *premises*, not *conclusions*, and are to be sought among the data of consciousness, rather than among the results of our reasoning. They are given antecedent to and not consequent upon the operations of reason.

Reference was made by the speaker who preceded me to an argument which is put with the greatest force and clearness in the works of the late T. H. Green. That writer, indeed, seems to have said almost the last word upon the subject we are considering this evening. Particularly valuable is that part of his *Prolegomena to Ethics* which deals with "the spiritual principle in Knowledge." In one place Mr. Green points out that our knowledge is a knowledge of related things and events, of things and events, past and present, which stand in certain definite relations one to the other in time and space. "We speak," he says, "of a world of things," of "a universe of things," thus indicating our belief that the objects of Nature around us form parts of an organised system of related things, and he urges, with great force, as it seems to me, that the subject which embraces the data of its experience in the unity of such a system must be something different from any of the objects with which it thus deals. No member of a series of objects or phenomena can, he contends, be knowledge of that series as a series. Further, in dealing with memory, he points out that it is not simply the revival of a past sensation, but something very different, namely, the recollection that, at a certain time, and in a certain place, I had such an experience. May I add that in considering this question I have derived much indirect assistance from a careful study of Rosmini's *Origin of Ideas*.

The AUTHOR.—I ought to begin by thanking those who have spoken for the kindness with which they have received the few remarks I have been able to make on this subject; and I think they fully recognise, as I certainly do myself, how difficult it is to get into a short Paper the various considerations which would occur to one in dealing with a subject of this complexity and immensity.

The point which is of extreme interest to all of us exists in the relation, which has been touched on by one of the speakers, between unconscious and conscious force of mind—between automatic functions and those which cannot be described as automatic. In the illustration given by Mr. Barkworth it was urged that a man can walk through the streets of London without being conscious of where he is, though all the time he gets straight to his destination. That is true, and it is in regard to all those phenomena of ordinary life that I tried, if I may say so frankly, to give as much as I could possibly conceive of the physiological

side of the argument, and this it was which got me into trouble with another of the speakers on the question of the mind's locality. Returning to that illustration, the question, to my mind, is simply this. If you take your man, walking, say through the streets, and going through a number of particular automatic processes, let us bring him to his counting house or office, or whatever it may be, and let him have presented before him a sudden problem, or difficulty of trade or business, or what not, with which he deals; I want to know which is the real man, the one who has been walking through the street, or the one who is suddenly confronted with such a problem?—which is his real mind?—or rather, which are the processes with which psychology should deal? There can be no doubt that the real man is the man who in consciousness deals with the new problem which comes before him and to which he devotes all the attention he can. That is the real man. It is the life of consciousness and intelligence that throws light on the automatic without which intelligent life cannot proceed, as I have tried to show in the Paper.* I am

* It would require another lecture to put the difference between Mr. Barkworth and myself clearly. It is the whole difference between a man who believes in a spiritualistic hypothesis and one who regards the mechanism as at least as important as the informing intelligence.

Every one recognises that there are unconscious automatic acts. Why not? We have a body which in its structure and in its functions is simply a mechanism of a higher kind. What difficulty is there in its often working in a purely mechanical fashion? This is all that Mr. Barkworth's illustration seems to me to prove, and when he asks me, whether I mean by "mind" that which directs these unconscious proceedings or that which is preoccupied with a different subject, I answer neither and both. The mind does not always direct unconscious proceedings any more than the engineer is always directing separate bits of machinery. In the last resort, however, it is the engineer who is mainly responsible, as we see directly he has a different piece of work to turn out. Why the possession of an organism with a nicely balanced adjustment of means and ends, should disprove the existence of a rational soul I cannot conceive.

The ordinary staff could bring out a daily newspaper five days out of six, but if a particular policy is to be inaugurated, the presence of the editor is required. W. L. COURTNEY.

aware that it is almost impossible to frame one's language so as to avoid materialistic suggestions. I do not intend to concede so much, perhaps, as appears in print—I do not wish to define mind at all in the terms of matter—I do not wish to bind myself rigidly by the phrase that the mind is in the brain. I merely mean to state this, that anyhow we have to acknowledge that there is no thinking without the brain, and however we frame our conception of mind we must fall back on some material basis for those laws which apply to these automatic processes, and which everywhere accompany intelligence.

Another point which was suggested to me was a possible arrangement of words which might lead to confusion in regard to the theory of Kant, and I am very much obliged for having it pointed out to me. At the same time, perhaps, if you compare and consider the bare process he calls aesthetic with that which he calls analytic and intelligent, you will see the difference. "Material" is no doubt used in a way that may lead to confusion in the sentence referred to, but I only used it as an illustration, and only desire to do so. The question, I think, of thought-molecules is an extremely interesting point, and, as far as I know, I think it is useful to compare Professor Clifford's theory about mind-stuff and brain-stuff, but I am afraid I do not know sufficient of the subject to say much.

Let me add one word. Of course I wish it quite clearly understood that the whole position intended to be suggested by this Paper is that, granting all that you like about "explanation of mind-processes," so far as it goes, there remain certain characteristics and things about this self of ours which can *not* be put in materialistic language, but which can be understood as a revelation of spirit to spirit. That is a view which I cannot get rid of myself, and one which I desire to maintain to the utmost of my powers, and I owe much to those (and I think there are a good many who are in that position) who sympathise with me in it. (Applause.)

The Meeting was then adjourned.

REMARKS ON THE FOREGOING PAPER.

The Rev. H. J. CLARKE writes:—

I cannot hope to be able to do justice in a few words to the able and profoundly thoughtful paper, "On the Reality of the Self." The writer, as it appears to me, has successfully exposed the fallacy of the materialistic theory in dealing with the two questions he has undertaken to answer.

In considering, however, *where* the mind resides, I am hardly disposed to allow that, in speaking of the brain as "its seat" or "home," we are using language which is "*merely* poetical and metaphorical;" for on the assumption that there is a subject of sense and consciousness distinct from the organic conditions by which they are determined, science teaches that its immediate interactions with the organ by means of which it exercises these functions, take place within the brain.

With respect to the question, *what* is the mind? I think that, in commenting on the theories of "Occasionalism" and "Pre-established Harmony," the writer might have made it apparent that they are *gratuitous*. For if the absolutely antithetical dissimilarity, in regard to essence, between spirit and matter may be held to admit of the conception that the latter is ruled by an Almighty and Eternal Spirit, it cannot be alleged that interaction in the case of a spirit and an organised body is inconceivable. The intellectual difficulty which seemed to necessitate one or the other of these theories, exists only for the *imagination*. If we endeavour to apprehend the process of change in space-occupying substance, it resolves itself intimately into re-arrangement effected by movement in space; but we cannot picture to ourselves movement produced otherwise than as communicated by impact from something which occupies space. In mental *pictures*, origination and spontaneity can find no place: they are cognisable only in our consciousness, whereby we are made acquainted with truths which are fundamental, and too deep to be reached by any effort of imagination.

The writer makes valuable remarks in showing that there can be no adequate physical explanation of memory. The real existence and continuity of the individual appear to me to be demonstrated by his ability to resume in consciousness experiences through which he passed in years long gone by, and thus to recognise as his own states of thought and feeling which, from the materialistic point of view, were those of another person. Unless there be an underlying soul, which receives the impressions made upon the brain, it is not apparent how the reproduction of the latter can bring about identification.

The Rev. J. J. LIAS, M.A., writes :—

Mr. Courtney's reputation stands too high for any one to venture upon the attitude of a "superior person" towards him. I must therefore content myself with a few humble suggestions.

The thanks of us all are due to Mr. Courtney for his habit of eschewing verbiage, and going straight to the root of the matter. Nevertheless I would venture to express a doubt whether he is quite right in saying that mind can only be defined in part. As regards abstract metaphysical definition he is no doubt right. As I have myself said before the Institute, abstract metaphysical definition seems to be an impossibility. You have only to require the definer to define each term he uses in his definition to reduce all attempts at definition to an absurdity. But definition by examples is always possible. And mind can thus be defined as the force or energy which produces certain results. The nature of that force or energy may be inferred from those results and from the mode in which they are obtained. And without attempting to carry this line of inquiry further (which is to me impossible at present) it would seem clear that mind belongs to the same category as force, and to be, as far as we are able to judge, outside the sphere of matter altogether, although continually acting upon it, and known to us chiefly through the medium of such action. I say chiefly, not exclusively, because the action of mind is also known to us through our consciousness, and consciousness, although also expressing itself through physical media, appears also to rest on a basis outside the world of sense. I confess, therefore, that on page 196 I should have preferred to have used the term "organ" in preference to "seat" in regard to the relation of the brain to conscious mental states. I mean that I look upon the brain not as the ultimate home of consciousness, but as the medium whereby facts are transmitted from the ultra-physical to the physical world. So again when Descartes is represented (page 197) as saying that the soul "exists in the brain," it would surely be more in accordance with facts to say that it operates through the brain. Again (pages 197-8), I would ask if the words "absolutely distinct" and "absolutely antithetical" can be fairly considered as synonymous. I am "absolutely distinct," in regard to the process of volition, from any other human being; yet I trust I am not therefore "absolutely antithetical." And if not "absolutely antithetical," there is no reason why I should not influence another. So with matter and mind; they are "absolutely distinct" in their essential nature. But that does not preclude relations between them, though we may be quite incapable of understanding how such relations are produced. The phrase "absolutely antithetical" seems to assume the impossibility of such relations, and therefore to be in direct opposition to the facts.

But these are but spots in the sun. The rest of Mr. Courtney's paper seems to me unanswerably to demonstrate the existence of an order of being beyond the material world.

Mr. JOSEPH JOHN MURPHY writes:—

In regard to Dr. Courtney's Paper there are but two subjects on which I wish to offer a few remarks.

The reality of the self is not a question. Self is constituted by the consciousness of self. The fact we have to do with, is a self which is conscious of itself as having thoughts, and of being related to the past in memory and to the future in expectation.

Much however may be said on the way in which this self-conscious self has been developed out of the germ of sensation, and on the nature of the relation in which it stands to the world of matter which surrounds it. This latter is identical with the world-old question of the relation between mind and body.

On this latter subject Dr. Courtney says, "The mind and brain stand to one another, Lewes and Bain tell us, as convex and concave sides of the same arc. The two aspects are of one identical thing. Viewed from one position the arc is concave, from another it is convex; and so, viewed from different stand-points, the same phenomenon is now a material motion, and now a conscious process of the mind. We ought to speak of a double-faced unity showing itself both as mental and as corporeal. This is plausible at all events." I quote this in order to point out that, even if it is accepted as perfectly true so far as it goes, it is scarcely an appropriate illustration, and appears to me to throw no light on the question. To such intellects as ours, the convex and concave sides of an arc imply each other and suggest each other, and the properties of the one side are deducible from those of the other. But to such intellects as ours, motion and thought do not suggest each other, and the properties of the one are not deducible from those of the other. In other words, the convex and the concave sides of an arc belong to the same sphere of thought and the same order of being: motion and thought, whether or not they belong to the same order of being, certainly do not when considered objectively, belong to the same sphere of thought.

THE AUTHOR'S FINAL REPLY.

The only thing, I think, I need add—apart from my gratitude for extremely friendly criticisms—is that I am inclined to think that I was wrong in introducing, as though they were parallel questions, the question of the *locality* of mind and the question of its *nature*. The two inquiries are, of course, really incommensurate to anyone who adopts a spiritualistic hypothesis. The “place where” is answered in terms of space and time: the “essence” or “innermost nature” has nothing to do with either temporal or local conditions.

ORDINARY MEETING.

SIR JOSEPH FAYRER, K.C.S.I., M.D., F.R.S., V.P., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed.

The CHAIRMAN.—I have now the pleasure of calling upon—I wish I could say Dr. Gordon—to read his most interesting Paper; but as unavoidable circumstances have prevented his being present to-night, he has an excellent representative in his son. The Paper seems to me to be unusually full of interest, and especially to anyone connected with India.

NOTES ON PHILOSOPHY AND MEDICAL KNOWLEDGE IN ANCIENT INDIA. By Surgeon-General C. A. GORDON, M.D., C.B., Q.H.P., &c.

SUMMARY OF CONTENTS.

Origin of the Hindoo People—Aryans—Castes—Non-Aryans—Races—Manu's Code—Systems of Philosophy—Nature—Creation of Man—Theory of Man—Senses—Mythology—Vedic Gods—Manu and Moses—Village System—Personal Hygiene—Scriptural Illustrations—Medicine—Conclusion.

THE origin of the Hindoo people is accounted for after this manner: we are told “Eaphs,” otherwise Japhet, “according to the desire of his father,* turned his face to the north-east, where he had many sons and daughters.” The name of his first-born was Turc, of his second Chin, and of the third Rus, from each of which sprang the several nations thus indicated. “Ham, by the order of his illustrious father, turned his face to the south. He also had many children,” of whom the three eldest were named respectively Hind, Sind, and Habysh. “Hind, turning eastward, possessed himself of the paradisial regions of Hindostan, where he laid the foundation of his monarchy. Sind, turning to the south-east, took possession of the fertile plains of the river Indus, founded the city of Tatta, and ruled the kingdom of Mooltan.” Habysh, according to Mahomedan writers, was the progenitor of the Abyssinians.† Such is the *legendary* account, to which alone reference can now be made.

Hind had four sons, named respectively Purib, Bang,

* Noo or Noah.

† Dow's *History*, vol. i, p. 9.

Deccan, and Nerwaal. These first inhabited the countries known to this day by their respective names. To Deccan was born three sons, amongst whom he divided his kingdom, and from whom sprang the three great tribes of the Deccan, namely, the Marhattas, Conherias, and Telingas. Nerwaal had also three sons, Beroge, Camboge, and Malrage. Bang had many children, who lived to inherit the kingdom of Bengal. Purib, the first-born of Hind, had 42 sons, who in a short time multiplied exceedingly; but among them, one whose name was Krishen (Krishna?*) exalted himself above his brethren, and ultimately became first monarch of Hindostan. The approximate date at which we have thus arrived is B.C. 2100.†

From these traditionary accounts, let us briefly refer to the more recently expressed views on the same subject. According to them, in very ancient times the great river plains of India became the theatre on which a nobler race (than the aborigines) worked out its civilisation. That race belonged to the Aryan or Indo-Germanic stock, from which the Brahman, the Rajput, and the Englishman descend. Its earliest home in Central Asia, whence certain branches started for the East, others for the West. From the Eastern stream, powerful bands descended by the Himalayan passes to the Punjab, and spread themselves as Brahmans and Rajputs over India.

We know little of these noble Aryan tribes in their early camping ground in Central Asia. It is inferred that there they roamed over the grassy steppes with their cattle, making long halts to crops of grain. They had tamed most of the domestic animals, were acquainted with some metals, understood the arts of weaving and sewing, wore clothes, and ate cooked food. They lived the hardy life of the temperate zone.

From all antiquity the Hindoo people have been divided into four great tribes,‡ each of which comprised various inferior castes. These tribes neither intermarried, ate, drank, or otherwise associated with each other;§ nor do they at the

* A man of wisdom, but not the Krishna whom the Hindoos worship.

† *Loc. cit.*, p. 10.

‡ Castes appear to have existed among the Egyptians, Etruscans, and Israelites. Among the Israelites, particular trades descended in certain families.

§ Mr. Chandra Sekhar Sur says: "Anciently they used to intermarry, eat, drink, and associate with each other; of course excepting the Non-

present day. Briefly, the principal of those castes or tribes are thus enumerated: 1, Brahmins, the emblems of wisdom, or priests, who, like the Levites among the Jews, alone officiate in their sacred capacity; 2, the Kshatriyas, the emblem of strength, or military caste; 3, the Vaisiyas, or epitome of nourishment, who, for the most part, follow commercial pursuits; 4, the Sudras, the emblem of subjection, who perform the more menial kinds of work.* There is no such an occurrence as that of an individual born in one caste rising to or being admitted into another, but once to fall is to be utterly exorcised in person and descendants.† On the other hand, proselytes are not admitted into any of the families or castes enumerated.

With reference more particularly to the first class named, or the Brahmins, it is observed that the order of priesthood produced no obstruction to population; marriage in that class was not only permitted, but ordained, nor could a Brahmin "retire to the woods," in other words, become a "jogee," that is, monk or mendicant, until he had given children to the community.‡

Exclusive of the occupations in early ages assigned to the sacerdotal class, numbers belonging to it are now to be met with in the army and engaged in commerce. This they are permitted to do under special "dispensation,"§ "in times of distress to seek a subsistence by the duties of the inferior classes, when it cannot be procured by their own." Under this provision comes the entire period from the first Arab entry into India, A.D. 664, to the present day—a period which, by Hindoo casuists, is considered to be "a time of distress" in which individuals are held to be justified in seeking subsistence or fortune by occupations from which they were originally excluded.

The aboriginal or pre-Aryan peoples by whom India of those distant times was chiefly inhabited appear to have left no written records. Their only works which have come

Aryan Sudras. *Anulom* marriage was when a man of a higher caste married a woman of a lower one, and *Pratilom* marriage, the reverse. The offspring of the latter form were looked down upon and reckoned as outside the society of the three higher classes."

* Craufurd, vol. ii, p. 336.

† Mr. Chandra Sekhar Sur says: "Promotion took place for high attainments and piety; for instance, Vishwamitra Rishi, though born of Kshatriya parents, was made a Brahmin on account of his vast knowledge."

‡ Craufurd, vol. i, p. 35.

§ Namely in the Laws of Manu.—See as above, vol. ii, p. 338.

down to our days are rude stone circles and upright slabs or mounds beneath which they buried their dead. In contrast to the lighter skinned Aryan invaders, those more ancient races were dark, or even black, as their descendants continue still to be. That they were Mongolian in feature appears from various allusions which occur in early poetry. One Vedic singer speaks of them as "noseless," or flat-nosed, while another praises his own "beautiful nosed" gods. Other epithets more or less scornful were applied to them; thus they were designated *Dasyus*, or "menials," *Dasas*, or "slaves," "disturbers of sacrifices," "raw eaters," "not sacrificing," "without gods," "monsters," "demons," &c.

Whence came those pre-Aryan representatives of more ancient population? It is said of them that they preserve dim memories of a time when the tribes dwelt under the shadows of mightier hill ranges than any to be found on the south of the river plains of Bengal. Their languages are held to indicate that they belonged to the three great stocks known as the Tibeto-Burman, the Kolarian (*i.e.* Sontal), and the Dravidian, the latter chiefly represented by the people of extreme Southern India.

Of the races or tribes thus alluded to,* some important particulars are contained in a recently-published *Handbook on Indian Art*;† although they refer to a period estimated to be a thousand years subsequent to the Aryan invasion of the Punjab, and to a date subsequent to that, when, about B.C. 1500, as Brahminical Hindoos, they had acquired the tract of country then called *Brahmavata*, which extended to a point about 100 miles north-west of Delhi, namely, the Kurus inhabited the country about Paniput, the *Matsyas* that about Jeypore, the *Panchalas* the Gangetic Doab and Rohilkund, the *Surassenas* the country about Muttra. But I regret my inability to obtain particulars in regard to the ethnic relations of the peoples indicated by these names. The subject is one for further investigation.

The most ancient known work pertaining to India is the book of the Hindoo Scriptures, named the *Veda*, *i.e.*, "Divine knowledge," the approximate date of which is the 10th to 14th century B.C. There are various statements as to the origin of the Vedas. One is that the hymns emanated like breath from *Brahma*, the soul of the universe. It is agreed

* Approximate dates, B.C. 1500 and 1000. Some scholars carry back their dates another thousand years.

† By Sir George C. M. Birdwood, K.C.S.I., vol. i, p. 36.

that they were revealed orally to the Rishis, or sages, whose names they bear; and hence the whole body of the Veda is known as Sruti, or "what is heard." The Vedas are four in number: (1) *Rig*, (2) *Yajur*, (3) *Sama*, (4) *Atharva*; but the last-named is of comparatively modern origin. The other three are spoken of by Manu as the "three Vedas," and are said to have been "milked out" as it were, from fire, air, and the sun. The doctrines therein contained and the code of laws based upon them are said to have been of divine origin, revealed by Brahma to Manu, and afterwards arranged in its present order by a learned sage who obtained the name of Vyasa or Veda-vyasa, *i.e.*, compiler of the Vedas. In the work so named instructions are contained with regard to the performance of all the various duties of life, including such as relate to religious and moral observances, and to ethics. Nor have the instructions so formulated in distant antiquity in any respect failed, even at the present day, to be held in reverence by the orthodox Hindoos.* In A.D. 1794, a translation of that code was published by a learned Englishman,† and still more recently it has claimed the attention of some of our most distinguished students of Oriental literature.‡

Whatever be the date assigned to the code of laws so named,§ there is reason, based upon analogy, to believe that the principles therein contained embody the results of practical experience extending to and from still more remote periods. Looked at from the modern and Western point of view, the ordinances alluded to, although not free from blemishes, yet breathe a spirit of sublime devotion, of benevolence to mankind, and of tenderness to all sentient creatures.|| In its policy, both civil and religious, that code

* According to legend, Vivasvat (the Sun), a Kshatrya by caste, was the seventh of the name of Manu, and it was he who compiled the Code to which the latter name attaches. Eminent Sanscrit scholars write that Manu, or Satyavrata, whose patronymic was Vaivaswata, or Child of the Sun, otherwise Saturn, reigned over the world in the earliest age of Hindoo chronology. As brother of Manu, ancient mythology enumerates Yama, named also Darham Rajah, the judge of departed souls, otherwise Minos. From this Manu, named Swayam-bhuva, or *Sprung from the self-existing*, came six descendants or other Manus, or *perfectly understanding the Scriptures*. Each of the latter "gave birth" to a race of his own, and all were exalted in power. Among these sons was Bhrgu, to whom, under the name of Vyasa, or Veda-vyasa or compiler of the Vedas, the task was assigned of communicating Manu's code to Marichi and the other Rishis or holy sages. (See Craufurd's *Hindoos*.)

† Sir William Jones.

‡ See works by Max Müller.

§ *Viz.*, B.C. 1400 and B.C. 900.

|| Craufurd, vol. i, p. 27.

favours population, agriculture, and commerce. It directs that in time of war, and with a view as much as possible to mitigate its horrors, the produce of the field, the work of the artizan, the city without walls, and the defenceless village shall be sacred and inviolable. In actual conflict also, rules were to be observed such as some 30 centuries subsequently were to be adopted under the Geneva Convention.* The practice of virtue was inculcated "as necessary for procuring happiness even in this transient life. Of the laws as a whole, it has been observed that they tended to procure peace and promote happiness; to prevent violence, to encourage benevolence and charity, to keep the people united among themselves, and to prevent their tranquillity from being disturbed by the introduction of foreign innovations.†

At a date some six or seven centuries prior to that of our era various systems of philosophy had sprung up among the Hindoos of ancient India, but of the whole two only were important in respect to the number and influence of their disciples, namely, the Vedanta and the Nyaya.‡

Of these the first named, Vedanta, or "orthodox," and the oldest of which record is available, had for its founder the sage, Kapila,§ whose doctrines in part resembled those of Pythagoras, in part those of Zeno. The second, Nyaya, or logical school, was said to have been founded by Gotama, otherwise Gautama, a sage who, according to eminent writers, was mentioned in the Vedas, and who accordingly belonged to an earlier period than Kapila. In it metaphysics and logic were presented in such a manner as to be "better accommodated than any other anciently known in India to the natural reason and common sense of mankind."¶ There exists in India a tradition that the (heretical?) Brahmins communicated this system to Callisthenes, from whom it was adopted by Aristotle.¶

Both systems equally inculcate the practice of virtue, that in their actions men should be guided by the dictates of reason, namely, that faculty "which enables us to distinguish

* Birdwood, *Industrial Arts of India*, i, 16. But prior to the Convention so called, similar rules were inculcated by Saladin during the Crusades, A.D. 1186—92.

† *Ibid.*, vol. ii, p. 320.

‡ See Appendix A.

§ Mr. Chandra Sekhar Sur holds that the author of the "Vedanta" (the supplement of the Vedas) is not known, and that Kapila was the author of the "Sankhya Philosophy."

¶ Craufurd, vol. i, p. 219.

¶ Callisthenes, born B.C. 365; Aristotle, born B.C. 385.

truth from falsehood, and what may be proper or unfit in our desires and affections." The Nyaya philosophers made the operation of reason in regard to action to consist in observing a just medium between extremes; between cowardice on the one hand and presumptuous rashness on the other; between avarice and profusion; while as with the one school, so according to the other, extreme temperance in the gratification of desires and appetites is inculcated.

The Vedantas consider the occupations of life as retaining the soul "in the prison of passion and affection." In the common acts of life, say they, it is incumbent on man to attend to religious duties and rites. Renunciation of the world does not require that a person should cease from the acts and duties of life, but only that he should preserve his mind in a state of perfect indifference and tranquillity. Purity in speech and thought was inculcated.

Some of the Hindoo philosophers consider the *vital soul* as separate and distinct from the great universal soul. They thus account for the memory and intelligence possessed in different degrees by the animal world, while others account for the same differences by their system of metempsychosis or transmigration of souls. According to others,* man possesses two souls, namely, the divine and the vital. The former is a pure spirit; the latter is more immediately united with our corporeal substance, and possesses desires and affections.

What we understand by Nature was personified in ancient Hindoo mythology, and introduced into their poetry under the names of Maya and Prakriti,† these names being nearly synonymous. Action in Maya was said to be introduced by the effect of the "supreme pervading essence." Then again, all things were said to be produced by the union of Prakriti and Purusha, the first male. The eternal and universal pervading spirit, by which is implied the Supreme Being, was considered as presenting four modifications or modes of existence of ether; 1, as it appears clear and limpid in the vault of heaven; 2, as it is confined in any given space; 3, as the sky is reflected in water; and 4, as it is obscured by clouds. Creation, say they, "is not considered as the instant

* Namely, the sect of the Jainas.

† Prakriti also bears the name Arya. In the Vedas Arya expresses "believers in the gods," in contradistinction to their enemies, called Dasas or Dasyus. Query, does this circumstance explain the application of that term to the ancient Hindoo immigrants into India? See Craufurd, vol. i, 225.

production of all things, but only as the manifestation of that which exists externally in the one universal Being. According to another section of philosophers, "there is neither creation nor dissolution; the world has ever existed in the same visible form it now exhibits."

In the legendary account of man's creation contained in the sacred writings of the Hindoos, there is much that is poetical and beautiful. For example:—"Brahm," otherwise the supreme divinity, otherwise "God, seeing the earth in full bloom, and that vegetation was strong, from its seeds, called forth for the first time *Intellect*, which he endowed with various organs and shapes to form a diversity of animals upon the earth. He endowed the animals with five senses, namely, feeling, seeing, smelling, tasting, and hearing. But to man he gave *reflection*, to raise him above the beasts of the field. The creatures were created male and female." Various creative acts by *Brahma*, the first of the human race, are subsequently related.*

"The superiority of man" over animals, it is added, "consists in the finer organisation of his parts, from which proceed reason, reflection, and memory, which the brutes only possess in an inferior degree on account of their less refined organs."†

According to the doctrine held by the sect of Sankhya,‡ "Every animal, from the highest of the species down to the meanest insect, has existed from all eternity, and will continue to do so, though it may undergo changes from a higher to a lower rank, or from a lower to a higher."§ What is this but the doctrine of Evolution, alternating with that of Devolution?

Only a very few of the theories expressed by Gotama on certain points relating to physiology can here be touched

* Dow's *History of Hindostan*, vol. i, pp. xlii et seq.

† *Ibid.*, p. ix.

‡ According to Craufurd, Buddha was born B.C. 1364. He was the son of a Rajah of Magatha or Behar. The name Buddha corresponds with one of the titles given to the Hindoo deity which corresponds with the god Mercury (namely Budh), vol. i, p. 266.

§ In the *Mahabharata* it is related of Yudissthira, that being asked by Indra to enter heaven "wearing his body of flesh," he refused unless his faithful dog might bear him company, "notwithstanding that Draupadi and his friends were there already." Also, that "Jatayus, the king of the vultures, and son of Vishnu's bird Garuda, having been killed by Ravana, his soul arose from his dead body, and by four celestial messengers was carried to Vaikuntha, the heaven of Vishnu." *Arts of India*, by Sir G. Birdwood, vol. i, pp. 22—29.

upon.* Intellect, according to his doctrine, is formed by the combined action of the senses, of which five are external, and one internal. The last-named† seems to mean conscience, in which are comprehended reason, perception, and memory. Of the senses he says:—*Sight* arises from the *Shanskar* or repulsive qualities of bodies, by which particles of light which fall upon them are reflected back upon the eyes from all parts of their surfaces; but, he adds, “unless the soul fixes its attention upon the figure in the eye, nothing can be perceived by the mind.”

Hearing is the appreciation of sound which is conveyed through the purer element *akash*, or ether, and not by the air.

Taste is the sensation of the tongue and palate by the particular form of particles which compose food.

Smell proceeds from the effluvia which arise from bodies to the nostrils.

Touch is occasioned by the contact of dense bodies with the skin, and the whole body except the bones, hair, and nails is the organ of that sense. And then is given this further explanation, to which the attention of modern scientists may appropriately be directed, namely:—

“There run,” said Gotama, “from all parts of the skin very small nerves to a great nerve. This nerve is composed of two different coats, the *one sensitive, and the other insensitive.*” The point which here merits our attention is the reference made to the double functions of certain nerves at a date variously estimated at 500 to 1000 B.C. The fact was recognised, although the theory based thereon was erroneous.

According to the Shastras, otherwise the sacred ordinances of the Hindoos, “As a tree, the lord of the forest, even so, without fiction, is man; his hairs are as leaves, his skin as exterior bark. Through the skin flows blood, through the rind sap; from a wounded man blood gushes as from a tree that is cut. His muscles are as interwoven fibres; the membrane round his bones, as interior bark, which is closely fixed; his bones are as the hard pieces of wood within; their marrow is composed of pith.” From all of which expressions the conclusion appears inevitable that a certain extent of knowledge of the tissues so enumerated is thus indicated.

But let us continue our extracts: “Since the tree, when felled, springs again from the root, from what root springs

* For details see Dow's *History*, vol. i, pp. lxi *et seq.*

† *I.e.*, Manus.

mortal man when felled by the hand of death? Who can make him spring again to birth? God, who is perfect wisdom, perfect happiness." So wrote the sages of ancient India.

With reference to this part of our subject, the remark seems appropriate that, according to the chronology of the Hindoos, of the four Yugs or Ages pertaining to man's existence, three have already passed away, namely, the Satya, the Treta, and the Dwapar, the fourth, or Kali* being that which is now in progress. The several periods so named are believed to correspond respectively with the Golden, the Silver, the Brazen, and the Iron ages of Greek and Roman classical writers, and like them to express a progressive decline from purity to baseness; otherwise a retrogressive process in man from a higher to a lower condition of intellectual and moral standing. Thus Satya means truth and probity. During the age so named, and the two succeeding, the Brahmins tell us that "Men were greatly superior to the present race, not only in the length of their lives, but in the powers of their bodily and mental faculties; but, in consequence of vice, they gradually declined, and, at last, in this the Earthen age or Kali yug, degenerated to what we now see them."†

The entire system of mythology of ancient India is comprised in the two great epic poems in which is vividly pictured life as it then was among the predecessors of the races whom it is customary to designate our Aryan brethren. The poems in question are well described by a modern writer‡ in these terms:—"They are the charm which has stayed the course of time in India, and they will probably continue for ages yet to come to reflect the morning star of

* The commencement of the Kali yug is considered to date from 2 o'clock, 27 minutes, and 30 seconds, A.M., 16th February, B.C. 3109. According to M. Bailly, there occurred at that time a conjunction of the planets. But the astronomical time of the Brahmins is dated from an eclipse of the moon, which appears to have happened then. According to some writers, the circumstance which marked the period was the death of Krishna, otherwise Vishnu, in one of his incarnations. Others assign the date to the time of death of a famous and beloved sovereign, Yudhisthira. Whichever of these explanations be the correct one, if either, the Hindoos evidently looked upon the event referred to as a great calamity; they distinguished it by beginning a new age, to which, as an expression of their feelings, they gave the name already mentioned, otherwise "the age of unhappiness or misfortune."

† Craufurd, vol. i. pp. 174, 216; vol. ii, p. 6.

‡ Birdwood, *Arts of India*, vol. i, p. 33.

Aryan civilisation, fixed, as it were, in the heaven of Indra, and irremovable. Neither the Persian nor Greek invasion, the Afghan and Mongol conquests, not even the growth of Buddhism, has left a lasting effect upon the native mind of India; on the contrary, the effects of each in its turn have yielded to the mighty magic of Manu's code, and poetic imagery of the *Ramayana* and *Mahabharata*."

The Vedic gods were mere abstractions, intangible and illusive personifications of the attributes and powers of nature, including space, the heavens, firmament, sun, earth, day and night, twilight, dawn, wind, rain, storm, and sunshine; all ministering to the divine care of man, in the breathing air and radiant light, the fleeting moon and constant stars, the rising mists and falling dews, the rivers which flow down from the hills through the fruitful plains, making with the flocks and herds, and woods and fields, one ceaseless voice of praise and adoration.* Vedic worship was itself simply the natural expression of men for their daily bread at a time prior to the institution of an order of priesthood apart from members of the ordinary community.

In the *Puranas*† the Vedic gods assumed distinct personality, and individual character, such as we find conventionally represented in figures with which those of us who have resided in India are familiar. The definite statement occurs with respect to those figures that "they are merely allegorical," although "the more ignorant Hindoos, it cannot be denied, think these *subaltern* divinities do exist." But the unity of *Brahm*, the supreme deity, was always a fundamental tenet of the uncorrupted faith of the more learned Brahmins.‡

In these and other writings on the Mythology of the Hindoos we shall find the original of almost the whole of that of the Greeks and Romans. To this day the Deity is adored by names derived from the same old Aryan root by Brahmins in Calcutta, by Protestant clergymen at Westminster, and by Roman Catholic priests in Peru. Some particulars may be modified, but the principal features of the

* Birdwood's *Industrial Arts of India*, vol. 1, p. 46.

† *Puranas*, i.e., the *old* or sacred writings. They treat of five topics, namely:—1. The creation of the universe. 2. Its destruction and renovation. 3. The genealogy of the gods and patriarchs. 4. The reigns of the Manus. 5. The history of the Solar and Lunar dynasties, including the wars related in the *Ramayana*. The works so named appear to belong to different historical periods.

‡ See Dow's *History*, vol. i, p. 49.

system may be traced through them all.* This part of my subject is entered upon more at length in the Appendix to this paper marked B.

In the remarks which are now to follow, certain affinities will be indicated as existing between the Mosaic code of sanitation and practical medicine and that to which the name of Manu is attached. Eminent Oriental scholars† have ascertained that long prior to the date of Moses (*i.e.*, B.C. 1571) there existed free communication between the Egyptians and Brahmanic India, that Egyptian priests from the valley of the Nile visited the territories situated between the Ganga and Yamuna, otherwise Ganges and Jumna. The circumstance of the priests of Mizraim having travelled to the seat of Indian science may be held to support the belief that their object was to acquire knowledge, while probability is equally against the impression that the self-sufficient Brahmins were in those distant times any more disposed to accept teaching from foreigners than they are at the present day. Be this as it may, the fact remains that through many generations prior to the time referred to the condition of the Hindoos had been that of a highly civilised and advanced people. Distinguished as they were in philosophy and in science, history relates that they were not less so in the study of means to succour the maimed, to alleviate pain, to treat disease, and to preserve health. "The wisdom of the East" was referred to in connection with that of Egypt by the sacred historians.‡

Although little was known of the Hindoo nation prior to the conquest by Alexander, in the 4th century B.C., the fact is on record that the Greek surgeons who accompanied that expedition were somewhat surprised to see that medical knowledge among the inhabitants of North Western India was in advance of that possessed by themselves.

According to tradition, rather than actual history, an offshoot from Hindoo society migrated westward at a very early period, notwithstanding the circumstance which we are justified in assuming that such a migration was then opposed to the rules of the community, as it would be at the present day. For example, the Brahmins affirm that the Jewish religion, like the much more recent faith of Mahomed, is a heresy from what is contained in the Vedas.

* *Edinburgh Review*, No. 29.

† Sir W. Jones, &c. See also Craufurd, vol. ii, p. 321.

‡ Kings iv. 30; about B.C. 1000.

Rajah Tura, say they, who is placed in the first ages of the Kali yug, had a son who apostatised from the Hindoo faith, for which he was banished by his father to the West. This apostate fixed his residence in a country called Mohgod, and propagated the Jewish religion.* The inference, accordingly, is that other social rites and observances, besides such as were purely "religious" in their nature, were similarly transmitted. In the sacred records of the Hindoos, a system of medicine is shown to have existed among that people from an antiquity far beyond the period to which history is supposed to extend. Inasmuch, however, as human nature exhibits a general resemblance among all nations, the absence of absolute identity among peoples being accounted for by the influence of climate, habits, customs, and political state, so from similar necessities, speculations and practices directed towards the well-being of individuals and communities may be considered to have gradually sprung up and developed among them; also that in the earlier ages to which our remarks refer, nationalities and civilisations presented many closer affinities among themselves than exist in modern days. Hence it has doubtless come about that a remarkable similarity is traceable as having existed between the sanitary and medical codes of Moses, and of Manu.

The particular rules of Manu's code which more especially relate to personal hygiene and public sanitation are intimately associated with religious observances. Those rules apply to the individual from the moment of his birth.† Notice occurs of the ceremonies to be observed at the baptism of the infant on the tenth or twelfth day after birth, of the tonsure, investiture with the Brahminical sacred cord, betrothal, marriage, and wedded life. Much importance is attached to the performance of funeral rites. Stringent rules are inculcated in reference to domestic morals and economics, including employments, amusements, ablutions, giving and receiving alms, &c. Diet and purification are placed under restriction, as is also indulgences and dissipation in their several phases.

The village system of communities is detailed much as it exists at the present day, each as a little community managing and conducting its own affairs, with its staff of

* Dow's *History of Hindostan*, vol. i, p 7. It would be interesting to identify the country alluded to in the text.

† They relate also to the period of gestation.

hereditary officers, among whom was the barber-surgeon and the health officer*—a system which is described as subversive of all sense of nationality and of public spirit, but as having rendered the country proof against revolution within itself. As facilitating local government in its various branches, it presents many obvious advantages.

According to the medical Shastras, it is the duty of the physician to instruct persons not only in the method of treating, but also in that of preventing, disease, for, said Manu: "As bodies are cleansed by water, the mind is purified by birth, the vital spirit by theology and devotion, and the understanding by knowledge."

Under the system of hygiology, instructions were comprised under two separate sections, the first of which included relative duties, the second such as were personal. The rules laid down under the former of these refer to climate and season, the characteristics of persons according to the region in which they were born and had lived; the clothing, food, and general mode of life appropriate to dry climates and to hot, and to each of the four seasons, namely, the cold, the spring, the hot, and the rainy. The diseases incidental to each were also enumerated.

Under the heading of personal duties, instructions given refer to rising from bed in the morning; cleansing the mouth; anointing the body; exercise; shampooing and rubbing the body, otherwise massage, of which we hear so much as if it were a recent development of modern science; bathing; clothing; food; and sleeping. Of such instructions, a few examples must here suffice.

Exercise increases strength, prevents and cures diseases by equalising the humours; it prevents laziness and fatness; and strengthens the firmness of the body. It removes grief, increases the internal fire, and renders the body lighter, more vigorous, and ready to work. Walking is the form of exercise considered best by the Indians of old. It was directed to be always used by those who live on rich food, and especially in the morning and evening.†

In ancient India the practice of anointing was observed not only for purposes of consecration and inauguration,‡ but also for guests and strangers, and for health and cleanliness.

* Namely, an accountant, watchman, money changer, potter, carpenter barber, shoemaker, astrologer, &c.; in some villages, also a dancing girl. and a genealogist or bard. *Ibid.*, p. 44.

† *The Hindoo System of Medicine*, by T. S. Wise, M.D.

‡ Exod. xxiv.; Lev. iv. 3, 5, 16; vi. 20; Psalm cxxxiii. 2.

In all these respects similar customs were observed by the ancient Egyptians, and were inculcated by the Mosaic code, and at a much later period by the Romans.

With the Brahminical Indians, as with the Arabians ancient as well as modern, the anointing of the body was believed to strengthen and protect it from the heat of the sun, and by filling up the pores of the body to prevent that too copious transpiration which enfeebles the frame.

Like all other Orientals, the Hindoos were, and still are, persuaded of the sanatory properties of oil. Under this impression, they anointed the sick, and applied oil to wounds.*

Reservoirs existed around the most ancient temples in India as in ancient Egypt, so that priests and people might perform therein the ablutions connected with their religious worship. The head was shaved and kept clean for the prevention of insects or other filth.

Ablution of person and of clothing was enjoined as the concluding rite of purification—as after touching a dead body, or a leper, or that after childbirth (such as were enjoined by the Mosaic law).—Lev. xii-xv.

The cleaning of brazen and other vessels was very carefully observed, and articles of earthenware of little value were then broken, as they still are, after use—the rules for these proceedings being much as described in the Mosaic laws (Lev. vi. 28; xi. 32-36; xv. 23).

Although not altogether pertaining to sanitation, the following further illustrations of Scriptural allusions to corresponding manners and customs among the Hindoos may conveniently be added, namely:—

They have ever considered that the want of children renders all other blessings of no esteem (Gen. xv. 2; xvi. 4).

Travellers and guests may be seen eating under the shade of trees. The house of a Hindoo serves for sleeping and cooking, and for secluding the women, but never for eating (Gen. xviii. 4).

A young Hindoo has no choice in the selection of a wife (Gen. xxiv. 4).

In Bengal it is the universal practice for women to go to tanks, wells, or rivers, to draw water (Gen. xxiv. 11.)

A Brahmin sometimes goes to a house, sits down, but refuses to eat till he has obtained the object he had in view (Gen. xxiv. 33).

When a daughter is leaving her father's house to live

* Psalm cix. 18; Is. i. 6; Mark vi. 13; Luke x. 34; James v. 14.

with her husband, a common address to her is, "Be thou the mother of a son. Be thou the wife of a king" (Gen. xxiv. 60).

The Brahmins anoint their images with oil before bathing (Gen. xxviii. 18).

A person might become a slave on account of love, or to obtain a wife (Gen. xxix. 18).

The Hindoos avoid giving a younger son or daughter in marriage before the older (Gen. xxix. 26).

When friends meet after long absence, they embrace and "fall upon each other's necks" (Gen. xxiii. 4).

Hindoos always change their clothing previous to eating or worship (Gen. xxxv. 2).

Dishes or "messes" at meals are sent by the host to each guest (Gen. xliii. 34).

At the conclusion of a feast each guest is presented with a new garment or piece of cloth (Gen. xlv. 22).

In times of famine many children were wont to be sold to prevent them from perishing (Gen. xlvii. 19).

Natives of India never enter a house with their shoes on* (Exod. iii. 5).

Hindoos often made a vow, and devoted to an idol the first born, whether child or kid (Exod. xiii. 2; 1 Sam. i. 11).

Dancing before an idol takes place at nearly every Hindoo feast (Exod. xxxii. 19).

A Brahmin never allows the fire he kindled at his investiture to go out (Levit. vi. 13).

A Hindoo widow generally returns to her father's house (Levit. xxii. 13).

The Brahmin priest uses "holy water" in the "trials by ordeal" (Num. v. 17, 24).

Having made a vow, he omits to cut the hair during its term; at the expiration of the period of the vow he shaves the hair off (Num. vi. 18).

Ancient Indian kings employed sages to curse their enemies (Num. xxii. 6).

While in a state of uncleanness, Hindoos are interdicted from feasts, &c. (Deut. xxiii. 10).

Brahmans will refuse food from inferior castes, but will accept money from all (Joshua vi. 18, 19).

It is a common practice for Hindoos to plant trees in the names of themselves and friends (Judges iv. 5).

* This remark applies of course to conditions as they existed in *pre-modern* times.

In soliciting a favour a Hindoo proffers a present of fruit or sweetmeats (1 Sam. ix. 7).

Servants sleep in the verandah or porch (2 Sam. xi. 9).

Some of the Hindoo Sunyassees or Fakeers besmear their faces with ashes (1 Kings xx. 38).

A contention as to the superiority in efficiency of certain sacred rivers in India is not uncommon, although the superiority is always accorded to the Holy Ganges (2 Kings v. 12).

Numbers of poor Brahmins are fed from the houses of the rich (Ezra iv. 14).

The Hindoos for the most part were clothed in white raiment (Eccles. ix. 8).

For fuller particulars with regard to these matters, and various cognate subjects, reference may be made to the work on the *Hindoos*, vol. ii, by the Rev. W. Ward, dated 1817, that author being one of the three* great pioneers of missionary work in India.

Adverting to the subject of medicine proper, we learn that the first of the Upa Vedas, or Ayur Veda, delivered to man by Brahma, Indra, Dhanwantari, and five other deities, comprises the theory of disorders and medicines, with the practical methods of treating diseases, as also the practical art of surgery.† Various medical works in Sanscrit, so we learn, contain the names and descriptions of Indian plants and minerals, with their uses, discovered by experience in curing diseases.

It was directed that "all the tracts on medicine must be studied by the Vaidyas,‡ or those who are born physicians," that is, of the class or caste that exclusively professes the study and practice of physic.

In the ancient works, it is stated that the teachers of medicine were Rishis, or ascetic sages; that "the feet of the teacher is the origin of all happiness, and, like a light in a dark room, he will illuminate the contracted and dark mind of the pupil;" that the student should be the son of a respectable and ancient family, who is either the son of a practitioner, or of one who respects the medical profession. Then follow a series of minute rules in regard to the duties of the physician and the patient towards each other. It is pointed out that "there are four circumstances required in

* The other two, Carey and Marshman.

† Craufurd, vol. i, pp. 233, 241.

‡ See *Med. of the Hindoos*, by Wise, p. 11.

the cure of a disease, namely, a physician; a disease that is known; a reasonable patient; medicines, instruments, and attendants—all of which points are fully entered upon. In reference to the physician, it is said in the Ayur Veda that “money will be the recompense bestowed by the rich; friendship, reputation, increase of virtue, prayers, and gratitude, will be that of the poor.*

Under the head of “Anatomy and Physiology” are considered “the theory of the elements; beginning and growth of the body; nature of the corporeal, vital, and spiritual parts, the temperaments, and death.” Pharmacy and materia medica are next considered. Remarks follow “on simple medicines from the vegetable and animal kingdoms.”†

The frequent accidents incidental to the pursuit of hunting, agriculture, and war induced the Hindoo sages to pay attention to surgery in its various divisions. In the Vedas surgery was considered as the first of the eight departments of medical science.

Hindoo mythology peopled the heavens, the earth, the waters, and all animated nature with innumerable tribes of imaginary beings, arrayed in tints borrowed from the fervid imaginations of tropical climates. Some of those supposititious beings were beneficent, others malignant, and to the latter the occurrence of diseases and frightful dreams was attributed, as, long subsequently, the origin of these evils came to be similarly accounted for in the philosophy of Pythagoras. Thus it came about that everyone had some deity to fear, to solicit or propitiate.‡

Particular gods were supposed to superintend different parts of the body, and to them prayers were offered up before operations were performed or medicines were exhibited. The following is a list of the principal among them, and of the parts “superintended” by them respectively, namely:—*Ugni*, or fire, the tongue; *Bayu*, air, life; *Indra*, the firmament, strength; *Baruna* (*Varuna*), water, understanding; *Surya*, the sun, sight; *Chandra*, the moon, understanding; *Vishnu*, the preserver, courage; *Brahma*, the creator, soul; *Samudra*, the ocean, the umbilicus; *Dhruba*, the stars, eyebrows.

At the present day, the visitor to Benares, the sacred city

* Wise, p. 29.

† In the time of Solomon (B.C. 1015-975) drugs from India were largely exported by the ships of Tarshish.

‡ Craufurd, vol. i, pp. 144, 184.

of the Hindoos, may observe, close to the holy Gunga, two shrines dedicated respectively to the presiding deities over small-pox and cholera, the two great scourges of the population. In Southern India also, on the occasion of the outbreak of cholera, the goddess Maha Maree was quite recently propitiated by noisy ceremonial and sacrifice. A representation of that deity, obtained by me on the spot, is in my possession.

Reference has already been made to the similarity, not to say identity, which may be traced between observances hygienic and medical, as directed in ancient Hindoo writings and as enjoined by the Mosaic Code. This remark applies with much force in the case of leprosy. Hindoo writers distinguished three forms of that dire malady, and indicated the diagnostic characters of each, together with the causes to which they were severally assigned. The subject of treatment was elaborately dealt with, including diet, external applications, and internal remedies. "Lepers in one life," it was said, "are born again with the complaint, and the disease is supposed to be communicable by contact, by breathing the same air, by eating together, by wearing the clothes or ornaments of a person labouring under the disease."* In other words, the malady was hereditary, as also contagious and infectious.†

With time exhausted, and, I fear, interest and patience of my hearers wearied, I bring this paper to an end. Fragmentary and imperfect in themselves, my remarks have embraced no more than a few out of the many points in respect to which knowledge in ancient India had attained a high standard of progress, ages before the date when history first took notice of Hellenic civilisation. That even then, in those distant ages, India was not alone in respect to arts and sciences conducive to the comfort and well-being of the people is doubtless true, for did they not exist, highly perfected, in Assyria, in Egypt, and, though in a modified degree, in China? Suffice it that conditions as they existed in India were of indigenous growth, their subsequent progress being westward, through Arabia and Persia, even to Continental Europe and the British Isles, whence by example and precept by our fellow-countrymen and countrywomen. It is now, in an ever-increasing degree, our duty as a people

* *Hindoo Medicine*, by Wise, pp. 258, *et seq.*

† For summary of Mosaic Regulations, see Appendix C.

and a nation to restore them brightened and purified to the length and breadth of Hindostan, their original home and starting point.

APPENDIX A.

Schools of Philosophy.

Six different schools of Hindoo philosophy are enumerated; all of them have one and the same starting point, namely, *ex nihilo nihil fit*; and all the same ultimate object, namely, the emancipation of the soul from future birth and existence, and its absorption into the supreme soul of the universe. These schools are:—

1. *Nyaya*, founded by Gotama; called also the Logical School. It is said to represent the sensational aspect of Hindoo philosophy.

2. *Vaiseshika*, founded by the sage *Kanada*, about the same date as the preceding. It is called the Atomic School, because it teaches the existence of a transient world composed of an aggregation of atoms.

Both of these schools recognise a Supreme Being.

3. *Sankhya*, founded by the sage *Kapila*. It is atheistical in its teachings, and takes its name from its numeral or discriminative tendencies.

4. *Yoga*, founded by *Patanjah*, whose name it also takes. It is theistical in its teachings. It asserts the existence not only of individual souls, but of one all-pervading spirit, which is free from the influences which affect other souls.

5. *Purva-mimansa*. 6. *Uttara-mimansa*. The prior and later mimansas; they are both included under the general term *Vedanta*, "the end or object of the vedas." The former was founded by *Jaimini*, a disciple of *Vyasa* (arranger of the vedas); the latter by *Vyasa* himself. The principal doctrine inculcated in both is that "God is the omniscient and omnipotent cause of the existence, continuance, and dissolution of the universe; that creation is an act of his will, that he is the efficient and material cause of the world; that, at the consummation of all things, all are resolved into him. He is the sole-existent and universal soul, and besides him there is no second principle."

The period of the rise of these schools is assumed by Indian scholars to be about the fifth century B.C. and even

later. With reference to the doctrines expressed in them, it has been questioned whether they were more or less due to Greek influence; but Mr. Colebrook, the highest authority on the subject, is of opinion that in this instance the Hindoos were the teachers, not the learners.

Besides the six schools enumerated, there is a later system, known as the *Puranik*, and the Eclectic. The doctrines therein expressed have been obtained from the Mahabarata. They inculcate the doctrines of *Bhakti*, i.e., faith; and exalt the duties of caste above all other obligations, including those of friendship and kindred. Its philosophy is pantheistic; but it claims "adoration as one with the great universal spirit pervading and constituting the universe."*

APPENDIX B.

Comparative Mythology.

Between the mythology of the Hindoos and that of the ancient Greeks and Romans an affinity has been discovered of so conspicuous a character as in the opinion of various competent writers to point to the existence of a distinct connection between them. A few examples must here suffice—

In *Ganesa*, the god of wisdom of the Puranas, we discover some characteristics of *Janus* of the Romans. *Manu* or *Satyavrata*, child of the Sun, otherwise Time personified, represented by *Saturn*.

Yama or *Dharma Rajah*, god of the dead brother of *Manu* or Time, otherwise *Minos*, supposed son of *Jove*. The triple divinity of Brahma, the great law-giver, *Vishnu*, the preserver, and *Siva* or *Mahadeo*, the destroyer or regenerator, as *Jupiter*, "father of gods and men," that trinity being worshipped under various names. As *Siva* destroyed the *Daityas* or children of *Diti* who rebelled against heaven, so *Jupiter*, in his capacity of avenger or destroyer, overthrew the *Titans* and *Giants*. As *Vishnu* is sometimes represented as riding on *Garuda*, a species of eagle, as Brahma presented *Siva* with fiery shafts, so did an eagle bring lightning and thunderbolts to *Jupiter*. *Siva* is represented as having had three eyes; a statue of *Jupiter* (*Zeus*) is said to have been discovered at the capture of Troy, B.C. 1184, having a third eye in the forehead, signifying that he reigned in heaven, in the infernal regions, and over the waters. *Siva* also, as *Mahadeo*

* From Dawson's *Dictionary of Hindoo Mythology*.

the destroyer, corresponds with the Stygian *Jove*, or *Pluto*. *Kali*, or Time personified, consort of *Siva*, subsequently to appear as *Proserpine*. Furthermore, in his capacity as regenerator or producer, *Siva* is represented as riding on a white bull, a circumstance which leads to the question, does the myth typify the approach of *Jupiter* in the form of a white bull to *Europa*? Yet another question presents itself: Does *Mahadeo* represented with the trisula prefigure *Jupiter Marinus*, otherwise Neptune with his trident? The veneration paid all over India to the buccinum or conch-shell, especially that in which the convolutions are reversed, recalls to mind the musical instrument of the *Triton*. *Bhawan*, consort of *Mahadeo*, has been reproduced, so it is at least suggested, in *Venus Marina*, and the *Runbah* of *Indra's* court, who sprang from the froth of the churned ocean, in the popular *Venus* as goddess of beauty, who rose from out of the sea foam, also as *Juno Canixa* or *Lucina* of the Romans. Under the name of *Iswara* she seems to have affinities to *Osiris* and *Isis* of the Egyptians; under that of *Doorga* to resemble *Minerva* as *Pallas*, while the unarmed *Minerva* as patroness of science and genius is considered as corresponding to *Suruswatee*, the daughter of *Brahma* and wife of *Vishnu*. The *Minerva* of Athens was named *Musica*; *Suruswatee* presides over melody, and is usually represented with a musical instrument in her hand.

Cuvera, named also *Vetesa* and *Pancastaya*, the Indian *Plutus*, is represented as being borne through the sky in a splendid car, and is himself described as "a magnificent deity."

Cama, or *Camadeva*, the Indian god of love, was the ideal of *Cupid*, otherwise *Eros*. The Hindoos represented *Camadeva** as riding on an elephant; the *Eros* of the Greeks was mounted on a lion.

Krishna, believed by pious Hindoos to have been an incarnation of *Vishnu*, and to have come among mankind as the son of *Divaci Vasudeva*, in his manifestation as *Gopal*, or the shepherd, was believed to be represented by the pastoral *Apollo*, *Nomius*, or *Pan*. When a boy, *Krishna* slew the terrible serpent *Kaliya*. *Nomius*, who fed the flocks of *Admetus*, slew the serpent *Python*.

* In some representations of his elephant, the body, limbs, and trunk of the animal are composed of the figures of young women, entwined in so whimsical but ingenious a manner as to exhibit its shape. Craufurd, vol. i, p. 112.

Agni (*Ignis*), the personification of fire, named also *Pavaca*, or the purifier; represented as having been uncreate, was one of the Vedic deities, the other two being respectively *Indra*, called also *Vayu* and *Surya*. *Agni* appears to have affinity to the *Vulcan* of Egypt, who was a deity of high rank, whereas the *Vulcan* of Greece, otherwise *Hæphaistos*, was merely a forger of arms. According to other authors, *Viswacarma*, the fabricator of arms used in the wars by the Dewatas against the Assours, otherwise by the good spirits against the evil, more closely coincides with the characteristics assigned to the Egyptian *Vulcan*. The Persians held fire sacred prior to the date B.C. 2066, namely that of Zoroaster. The pyrtanoi of the Greeks were of the nature of perpetual fire.

Swaha, the sacti, spirit, or wife of *Agni*, seems to correspond to the younger *Vesta* of the Romans, or *Vestia*, as the Eolians pronounced the Greek word for hearth.

Indra, or *Iswara*, god of the visible heavens, also the sky and rain, represented as having had a father and a mother; of endless forms; of a golden or ruddy colour; armed with a thunderbolt and a net; his golden car drawn by two tawny horses; attended by his dog, *Sarama* (or the dawn?), himself drinking the intoxicating *soma*, the *amrita*, or water of immortality; his terrestrial residence, the Himalayahs, or Mountains of Snow. In these characteristics, *Indra* is believed to have been represented by Jupiter and Olympus.

Vayu, personification of the wind, and is generally associated with *Indra*. Also called *Pavana*, the purifier, *Gandha Vaha*, the bearer of perfumes, *Satatu-Ga*, the everlasting, and *Vata*, the wind.

The Hindoo *Ayodhya*, or the conqueror *Dionysius*, is believed to correspond to *Bacchus*. The story of Rama and *Sita*, representing the expedition of this hero against *Ravana*, King of Lunka or Ceylon, is believed by some modern writers to have supplied the type of the abduction of Helen by Paris, and subsequent Trojan War. *Surya*, or the Sun, was believed to be represented by *Phæbus* and *Apollo* of the Greeks. *Surya* is represented as sitting in a car drawn by a horse with twelve heads, and preceded by *Arun*, or the dawn. Each of the two sons, *Aswinan*, of *Surya* are considered to have had the character of *Esculapius*, or of *Apollo*, in his healing quality; and, moreover, from *Surya* is considered to have descended the higher Hindoo, or, as they are proudly called, the great Solar race of men. The wife of *Surya* was *Sangya*, the mother of the river Jumna.

Chandra, or the Moon, was considered to be a form of *Isvara*, the god of nature (masculine *Isani*), his consort, in one of her characters the type of *Luna* of the Romans, *Lunus* of the Palmyrans.

Kali, the wife of *Siva*, appears to have been represented by *Hecate* and by *Proserpine*, daughter of *Ceres*, the transposition being accounted for by the fact that the apparent destruction of matter signifies no more than that the same matter is reproduced in a different form. As *Bhawani* she has been already mentioned; other names she bears are *Parvati* and *Durga*. As emblematical of eternity, by which her husband, or time, is destroyed, the representations of *Kali* and *Siva* are for the most part associated in sculptures and pictures. In Egyptian symbolic inscriptions the snake has ever been the emblem of eternity. As *Parvati*, many of the qualities of the Olympian *Juno* occur in *Kali*; she is usually attended by her son *Kartikya*, who rides on a peacock.

Kartikya, with his six faces and numerous eyes, bears some resemblance to *Argus*. He is considered to be the same as *Orus* of Egypt, *Cupid* of the Romans, and *Apollo* of the Greeks. Like the latter, he was skilled in the healing art.

Nared, a son of *Brahma*, has been compared with *Hermes* or *Mercury*.

Lakshmi, daughter of *Bhrigu*, wife of *Vishnu*, and goddess of beauty; named also *Myrionyma*, *Sris*, and *Sri*. Her representations are very similar to those of *Ceres*; also to those of *Venus Aphrodite* of the Greeks, and to *Isis* of the Egyptians. Among the Hindoos *Lakshmi* is looked upon as the goddess of harvests and abundance. She is represented as "sitting upon a lotus, and resplendent as the sun." The lotus (*Nymphaea lotus*) is held sacred to her in Hindostan, as the same plant, or the *Nelumbium*, is also sacred in Tibet and Nepal.

The *Lingam* is believed to have been represented by *Phallus*, son of *Bacchus* and *Venus*, worshipped at Lampsacus, on the Hellespont. The seven lamps used when that emblem was worshipped by Brahmins "exactly resemble the candelabra of the Jews, as seen in the triumphal arch of Titus."*

* Craufurd, vol. i, p. 140.

APPENDIX C.

Mosaic Regulations.

(From Kitto's *Encyclopædia*.)

Section I. Ten laws about animals, clean and unclean, for food. Leviticus xi. 2, 9, 13, 20, 24, 27, 29, 39, 41, 43, 45.

Section II. Ten about uncleanness from child-bearing, and leprosy in person and dress. Lev. xii. 2; xiii. 2, 9, 18, 24, 29, 38, 40, 42, 47.

Section III. Ten about cleansing the leper. Lev. xiv. 2, 4, 5, 11, 12, 14, 15, 16, 20, 21, 32.

Section IV. Ten laws about leprosy in houses. Lev. xiv. 34, 36, 38, 39, 40, 41, 43, 46, 47, 48, 53.

Section V. Ten laws about uncleanness by issues in man. Lev. xv. 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 15.

Section VI. Ten more on the same subject in women. Lev. xv. 16, 17, 18, 19, 20, 21, 22, 23, 24, 30.

Arrangement of camp and march. Numbers i. 1, 4, 8; ii. 1; iii. 5, 11, 14, 44; iv. 17, 21, 49.

The CHAIRMAN (Sir JOSEPH FAYRER, K.C.S.I., F.R.S.).—I am sure we must all feel that our thanks are due, not only to Dr. Gordon for his most interesting Paper, but also to his son, for so carefully rendering it. It seems to me to be a singularly interesting Paper in so short a space, giving an epitome, as it does, of the ancient history, philosophy and medicine of India. Before making any further remarks I will invite discussion.

Mr. CHUNDRAS EKHAH SUR.—There is one point in regard to distinction of caste upon which I would like to make a remark. Brahmins eat and drink together, but there is no such thing as an Indian born in one caste rising to or being admitted into another.

Mr. T. H. THORNTON, C.S.I.—All I can do is to bear general testimony to the fact that the Paper is a very interesting *resumé* of facts regarding India. Of late many circumstances, and especially railway travelling, have tended greatly to modify the strict exclusiveness of caste. Strictly speaking no Brahmin should sit in the vicinity of a person of the lowest caste; and I remember when railways were first projected in India it was feared that an enormous number of classes would be necessary in order to enable the different castes to have carriages for themselves; but in practice there is not the slightest difficulty; in a railway carriage a Brahmin of the highest rank will gladly sit next to a Sudra of the lowest caste if he can save sixpence by so doing. I have noted one or two other points in the Paper to which I take exception, for instance, "on the other hand, proselytes are not admitted into any of the families or castes enumerated." Theoretically that is perfectly true, but practically, as Sir Alfred Lynn has shown, in some parts of India the aboriginal races are being admitted in large numbers to castes of Hindoos. They are first admitted into an exceedingly low caste, and after a time by a little payment and intermarriage, they gradually work themselves up into a higher caste. Again the author says at page 231, "The village system of communities is detailed much as it exists at the present day." Well, that is not exactly the case, because there is a very remarkable difference between the communities, as they exist in the present day, and the communities as depicted in the Vedas, and it opens up a very interesting question. In the Vedas the villages are represented as consisting of an aggregate of holdings in severalty, and there is a remarkable omission of what constitutes now a very interesting feature in the villages at any

rate of upper India, *i.e.*, the presence of a large body of proprietary co-sharers of higher proprietary title than many of the cultivators. Well, from the fact that no mention is made of these superior proprietary co-sharers in the Vedas, we infer that these sharers were an after-growth, the result of conquest or purchase or some other form of expropriation; and this is specially interesting because it corresponds in a remarkable degree with certain theories that have been advanced regarding the development of the English manor. It was formerly supposed that the lord of the manor created the village, but modern investigation now inclines to the opinion that the lord of the manor was evolved from the pre-existing village community of separate peasant holdings.

These are one or two points that I have noticed in this Paper; but I would commend it generally for its suggestiveness, as containing a summary of interesting facts, which may lead the reader to go deeper into the subject.

Captain PFOUNDEN.—The interesting Paper we have had shows how a writer of ability can condense into a small space a number of interesting facts, and probably but for want of space we should have had more. I do not rise in a captious spirit, but simply to add one or two remarks that have been omitted from the Paper probably for the reason I have forecast. We must admit that the Veda, or *knowledge*, was transmitted orally for many centuries and only committed to writing long after writing was in common use, and no doubt this Veda led and excluded the castes which had the privilege of this oral transmission, and they very earnestly resisted any efforts to quote the Veda to the *Prukriti* or to give it to the common people.

Professor H. L. ORCHARD, M.A.—I have often thought that the Code of Manu is largely derived from that of Moses. I do not mean to say by that, that it is a mere copy of the Code of Moses, but it is essentially, in feature, one drawn from the Mosaic Code with, of course, additions, modifications, and also corruptions; and the same thing, I think, applies to the philosophy and mythology, which, evidently much earlier than that of the Greeks, may also be traced to some tradition or instruction still earlier in the world's history.

Rev. R. THORNTON, D.D., V.P.—I am not deeply read in Indian philosophy, but it appears to me that the Paper, if I might

criticise it, has attempted too much, for really to do justice to the subject would require a large volume; but at the same time we must all agree that a sketch of this kind is very useful and suggestive. My own view of the matter is that in such a Paper we have shown to us the fact, which I believe the Institute has always contended for, and I have always contended for it here, that man had a revelation from God before His written revelation to Moses. I am aware that it is held by some that the first Divine revelation was given to Moses, and that before that time man was left to shift for himself. The wonderful similarities which we find between the various religions of the world and also between them and the revealed religion of Moses and of the New Testament, appear to point to the fact that there was a primeval revelation, or perhaps more than one procedure by which the Almighty revealed Himself to His creatures, and that that revelation was handed down by tradition and not by writing. The first *written* revelation was that we call the Old Testament. That written revelation was completed as far as it went; but its completion was superseded, or rather supplemented and strengthened by the more perfect revelation through Christ.

I think from the facts in this Paper we may to some extent see in the general principles of primeval revelation existing in Hindoo philosophy, such principles as are written for us in the Old and New Testaments. The resemblances between the customs of the Aryans in India, and the Semites in Palestine, are rather curious, but when we consider that both, most probably, had intercourse with Egypt, I think we may fairly assume that those principles in which Mosaic and other systems appear to coincide, are owing to contact with a third party, namely, the civilisation of Mizraim.

The CHAIRMAN.—I have lived in India for many years, am much interested in all that is Indian, and have read more or less on Indian subjects. There is so much in the Paper, that it is like an index to a series of volumes on the ethnology, history, and science of India.

The subject that specially interests me is that which appertains to medicine, and it is one that must most deeply interest any physician who considers it. I look upon it in a retrospective way. I look back and see what is its condition now, as compared with what it was in former days, and as I do so, I do not think only of the condition of scientific medicine as it now exists in India, but of

the whole course of that branch of knowledge, and compare the time when the Veda was itself written, perhaps 1500 years B.C.

Many years ago, when travelling in Italy, I attended a lecture at one of the Universities, and the Professor of Archæology began in this way:—

“L'uomo e sempre stato e sempre sarà lo stesso.”

Now if ever that were thoroughly illustrated it is so in the condition of the Hindoo. It is true, as Mr. Thornton pointed out, that modifications have taken place, and wherever the Anglo-Saxon race goes, in these days of railways, modifications will take place. The great centres of population are affected, but I believe the Hindoos are now pretty much as they were 1500 years B.C.; how long it may take to mould and alter the whole it is quite impossible to say. Medicine seems to have been taught in India scientifically, with a considerable knowledge of anatomy, and some physiology, gained not by looking at pictures but by dissection, for although a high caste Hindoo would not now dissect, in the old days he appears to have done so. In fact, it has been pointed out by Brahminical authority in Calcutta, where a Medical College is established, that there is no reason why a Brahmin should not study dissection as lower castes do. There was knowledge of disease long before Hippocrates wrote. We, in the West have returned, I hope, somewhat of what we got from the East. We are wont to say we got medicine from the successors of Hippocrates and the Greeks; but it existed long anterior to that. The Greeks themselves probably got it from the Egyptians; whether they got it from the Hindoos or the Hindoos from them it is impossible to say.

Dr. Wise's learned translations of and commentaries on Hindoo writings shows how much they knew about disease, how successfully they treated it, and how much they knew about drugs and poisons, about sanitation even, and about many things which in the middle ages were altogether lost sight of, but which have revived again now, and will, I hope, by degrees be further developed by science. I trust we are now restoring to Indians that which came originally from their own country, and it is satisfactory to know how well they take to it. In the study of medicine Hindoos are quite equal in all they do, in their power of learning, to their European brethren. Their curriculum of medicine is severe, and

the students go through their studies most satisfactorily, pass excellent examinations, and become thoroughly good and trustworthy medical officers. They possess many virtues, and nobody knows it better than I do, for I was one of their teachers for many years, and I have a great personal regard for them. They are a kindly hearted and loyal people, and if you treat them well they will treat you well; but it is a mistake to judge men of one race entirely from the standpoint of another; you must give and take and make allowances. The natives of India come here and compete with Europeans and often take good places. Therefore in dealing with that part of the Paper that relates to medicine, and which naturally interests me most, I cannot help taking the medicine of the present day and comparing it with that of the past, and feel that we have no reason to be ashamed of our common ancestry. We speak of our Aryan brethren and there is nothing in our common ancestry that we have any reason to be ashamed of. When our immediate ancestors were painted savages, paddling about in canoes in England, learned Brahmins were teaching astronomy, medicine, and other sciences, which at that time, with them, were ancient studies.

The Paper is very interesting, and embraces an enormous amount of matter which has given rise to some valuable discussion; therefore I ask the meeting to return a hearty vote of thanks to Dr. Gordon, which I hope will be conveyed to him by his son, Mr. Gordon, who has read the Paper so well.

The vote of thanks was carried *nem. con.*, and Mr. Gordon having, on behalf of his father and himself, cordially expressed his acknowledgments to the Chairman and to the Members,

The Meeting was then adjourned.

REMARKS ON THE FOREGOING PAPER.

The Rev. F. A. WALKER, D.D., F.L.S., remarks in regard to Appendix B, ("On Comparative Mythology,") para. 1 :—The cult of Dionysos celebrated in Greece, especially in Athens, where four annual festivals were held, would appear to have been oriental, and not to have commenced in Greece; and this for many reasons. First—the fact that the tiger, lynx and panther (all Eastern animals), were among the creatures sacred to him, and he hated the sight of an owl, the sacred bird held in special reverence in Greece. Secondly, the so-called Theban Bacchus is often seen, in ancient art, seated on one of these Eastern animals. Thirdly, he is represented as a manly god with a beard long and soft, is commonly called the Indian Bacchus, and is represented as an oriental monarch, clad in Lydian robes richly folded. Fourthly, Smith's Classical Dictionary says the extraordinary mixture of traditions respecting the history of Dionysos seems evidently to have arisen from the traditions of different times and countries referring to analogous divinities, being transferred to the Greek Dionysos. The worship of Dionysos was no part of the original cult of Greece, and his mystic worship is of comparatively late origin. Fifthly, the same authorities referring to the deity's legendary history, that before his return to Europe, (when he visited Thrace, Thebes, Argos, and the Island of Naxos in succession, where he incited the inhabitants of those places to frenzy, discreditable orgies, and acts of violence) he went to Egypt, where he was hospitably received by King Proteus; he then proceeded through Syria, where he flayed Damascus alive for opposing the introduction of the vine; he then traversed all Asia, teaching the inhabitants of the different countries of Asia the cultivation of the vine, and introducing among them the elements of civilisation. The most famous part of his wanderings in Asia was his expedition to India, which is said to have lasted several years. Sixthly, another great argument for the Indian origin of the worship of the Wine-God is the fact that after the time of Alexander's expedition to India, the celebration of the Bacchic festivals assumed more and more their wild and dissolute character. Seventhly, at the theatre of Dionysos, in Athens, in its lowest tier, sixty chairs or more of marble, were reserved for the priests of the different shrines, while the populace all sat in lower seats above—the larger central chair being reserved for the priest of Dionysos; this chair rests on lion's paws, as an emblem of the god. The lower portion of its front is carved with two figures, clearly in Eastern dress, and throttling two winged lions, an additional proof that the worship of Dionysos was imported from the East. I may add that there is no possibility of mistaking the said lions for those of African species.

On the second page of Appendix B, the following passage occurs: "Bhawan, consort of Mahadeo," &c.

It is perfectly true that Isis was represented as the Egyptian Venus, with cow horns, and under the title of the Goddess Hathor or Athor, worshipped accordingly in her celebrated temple at Denderah. But it is no less true that her attributes, legendary history and annual cult present quite as great analogy to the popular myths of the Greek Demeter. Possibly it is not always easy to distinguish between Isis as tantamount to Venus, and again as she is represented and worshipped in her likeness to Demeter.

Among the considerations that serve unmistakably to identify Isis with Demeter. Demeter (= γημητρορ) is the earth-producing mother, or, in other words, the Roman Ceres, the goddess of harvest, and similarly in the temple of Isis at Denderah there are various side chambers appropriated to the offerings of the different nomes of Upper and Lower Egypt respectively, to offerings moreover of fruits of the earth. These offerings were also carried by the priests at their solemn feasts to the summit of the temple by the northern staircase, as betokened by its bas-reliefs. Again Demeter and Persephone are not always together; the daughter spends half the year in the lower regions as symbolised by the alternate appearance and vanishing of earth's annual crop. Similarly Isis and her son Horus live apart; according to Egyptian mythology, each pays the other a visit once a year; one half-year Isis comes up stream to visit her son at his temple at Edfou, and during the next half Horus proceeds down the river to see his mother at Denderah; and in one of the chambers of the temple of Isis were kept the four sacred boats which took part in the procession as so frequently depicted in Egyptian mural painting. I am not aware whether others have remarked on the analogy between Isis and Horus and that of Demeter and Persephone, but it has struck me forcibly. Yet again, Isis is the wife of Osiris, that is to say of the Lord of Amenti, the unseen realm. And similarly Persephone is the bride of Ζεὺς χθόνιος, Pluto in other words. Osiris, however, occupies a higher position in Egyptian mythology than that which Hades held in the Greek.

With reference to the last paragraph but one of Appendix B, beginning "Lakshmi," &c.;—The lotus and papyrus are figured together on the capitals of temple columns in Upper Egypt, and dried lotus buds and stalks may be found on the necks of ancient mummies. I have seen a representation of Isis crowned as we may conceive Lakshmi to have been.

ORDINARY MEETING.

SIR JOSEPH FAYRER, K.C.S.I., M.D., F.R.S., VICE-PRESIDENT,
IN THE CHAIR.

The Minutes of the last Meeting having been read and confirmed.

The CHAIRMAN.—I have the pleasure of introducing the Rev. Mr. Wood, son of the naturalist whose name is so familiar to us all, who will now read a Paper on *The Apparent Cruelty of Nature*. I am glad he has used the word “apparent,” and no doubt when he reads his Paper he will explain the meaning he attaches to that word.

The following Paper was then read by the Author :—*

THE APPARENT CRUELTY OF NATURE.

By the Rev. THEODORE WOOD, F.E.S.

THIS question of the Apparent Cruelty of Nature has suggested itself to me as a suitable subject for a paper this evening, partly because of its very great intrinsic interest, quite apart from any bearing which it may have upon matters of revealed religion, and partly because of the frequency with which it is still brought forward by a certain class of infidels as an argument against the wisdom and beneficence of the Creator. The former of these—namely, the inherent interest of the subject—is self apparent, and requires no exposition; to the latter, perhaps—the argument based upon it—a few prefatory words may be devoted.

We are called upon, then, to notice that throughout the animal kingdom, not merely death but destruction is the law and condition of life; that many animals appear to live only that they may be destroyed and devoured by others; that a vast proportion of these are doomed to suffer death in its most terrible and agonizing forms; and that cruelty, in varying degree, appears to be the great and prevailing characteristic of that which we call “Nature.” It is further argued that this suffering is for the most part wholly

* April 6th, 1891.

unmerited, in the broadest sense of the term ; that it cannot, as in the case of man, be in any way regarded as the just retribution for personal or ancestral wrong-doing, or for any disregard of the laws of health or life ; that a wise Creator could have avoided it, and a merciful Creator would have prevented it ; and that, in the face of its existence, to attribute Creation to an essentially wise and beneficent God implies a contradiction so great, that the doctrine in question must perforce be given up by every thoughtful and observant mind.

Now it would, of course, be vain and useless to deny the existence of the main facts upon which this contention is based. To those who are even in a slight degree familiar with the economy of the animal kingdom, it would be almost a platitude to assert that there is an amount of apparent suffering in nature which no human mind can estimate or realize :—

“The mayfly is torn by the swallow, the sparrow is speared by the shrike,
And the whole little wood where I sit is a world of plunder and prey.”

So writes the Laureate ; and he might with equal truth have said the same of the world at large. For, as far as animals are concerned, it is one huge, perpetual battle-field ; one wide, vast, endless scene of almost universal carnage and blood. Might alone is right, and might alone prevails. Thousands are ever dying that one may live, and the battle is always to the strong. And certainly death, in many forms in which it is commonly inflicted, seems terrible and painful enough to substantiate the charge of cruelty against Nature.

There is no group of animals even without its creatures of prey. The cats and the dogs among mammals ; the hawks and owls among birds ; the alligators, crocodiles, and serpents among reptiles ; the sharks and the pike among fish ; the cuttles and the boring whelks among molluscs ; the *Carabidæ* and *Ichneumonidæ* among insects ; the crabs and lobsters among crustaceans ; the sea-anemones among the zoophytes : all these are but a few examples of the ever-recurrent Destructive Idea, which appears and re-appears at frequent intervals throughout the animal kingdom. And with this it is asserted that cruelty, excessive in amount, although perhaps varying in degree, is inseparably bound up. And how, we are asked, can a God, supposed to be essentially wise and beneficent in

character, not only permit such a state of things to exist among His sentient creatures, but even render it necessary and inevitable by the conditions of Creation itself?

I do not propose to enter into the theological question of the Fall of Man as affecting the lower animals, or even to lay any particular stress upon the obvious fact that a very large proportion of such suffering as they may endure is directly or indirectly due to his agency. Man, in his present condition, is *un-natural*; and it is rather my purpose to gather together such evidence and argument as may enable us to judge whether there be any true cruelty in Nature—rightly considered—at all.

THIS line of investigation, of course confronts us, in the first place, with the question of pain. What *is* Pain, physiologically speaking? Perhaps we may best define it as the sensation experienced by the brain as a result of certain injuries to, or affections of, the sensory portion of the nervous system; for we know that a prick in the foot, for instance, is not felt until a sufficient time has elapsed for a message to be telegraphed, as it were, to the brain, and a return message telegraphed back to the seat of the injury. If the spinal cord be divided, again, pain at once ceases to be felt in the parts below the region of severance, owing to the interruption of communication with the brain. Clearly, then, if the sensation of pain be ultimately resident in the brain, the degree of that sensation which can be felt in individual cases must depend very largely indeed upon the degree of perfection attained by the brain, as well as of the nervous system which depends upon it. And the character of *this* must consequently be the groundwork of any investigation which we may make into the existence of the sense of pain in the animal kingdom.

Here, perhaps, it may be as well to divide our subject into three heads, each of which shall claim our attention in turn. These are :—

1. Is the sense of pain present in the whole, or in any extensive portion, of the animal kingdom?
2. To what degree does the sensation of pain extend in those creatures in which it may be proved to exist?
3. Are such sufferings as animals may endure enhanced by the anticipation or recollection of pain, or by the fear and dread of death?

1. WE know, of course, as a fact ascertained beyond all possibility of question, that the nervous system, in different animals, varies enormously, both in extent and in sensibility. At the one extreme of the scale we have man, with almost every part of his body so permeated with sensory nerves that the slightest injury, under normal conditions, is immediately felt, while their sensitiveness is so great that even a mere local chill may be productive of prolonged and almost unendurable agony. At the other end we have the jelly-fish, with a nervous organization so scanty and imperfect, that until the researches of Ehrenberg proved its existence, its presence was not even suspected. Of a corresponding organization in creatures lower in the natural scale than the jelly-fish we know little or nothing, save that the tentacles of certain zoophytes—such as the sea-anemones—appear very sensitive to irritation, although the organs of special sense are rudimentary in the extreme.

But it does not, of course, follow that even in the jelly-fish, in which we know that nerves exist, anything at all approaching to the sensation which we call pain can be in any degree experienced. It is true, no doubt, that many of these lowly organized creatures will contract their tentacles if any outside object should come into contact with them. But, on the other hand, we see a precisely similar phenomenon under similar circumstances in the case of the well-known sensitive plant, in which, of course, there is no question of a nervous system, properly so-called; far less of any sense of pain. And the few nerves which have been detected in the jelly-fish are almost certainly of a strictly motor character. Most of these animals, as is well-known, possess some slight power of altering the form and the relative position of their discs; and this process, which is undoubtedly due to muscular contraction, necessarily implies the existence of motor nerves. Examination proves, too, that the whole of the nervous system, as at present known, is in these creatures more or less intimately connected with the muscular fibres; for the latest investigations tend to prove that the band of sensitive nerves described by Haeckel as surrounding the circular canal in the ball-shaped *Medusæ*, is absolutely non-existent. And it is scarcely necessary to say that no vestige of evidence has ever yet been offered which would support in these remarkable animals an argument for the existence of the sense of pain.

All available testimony, indeed, seems to show that in the

lower forms of animal life the sensation of pain, as we commonly understand the word, is absolutely unknown. When a crab will calmly continue its meal upon a smaller crab, while being itself leisurely devoured by a larger and stronger; when a lobster will voluntarily and spontaneously divest itself of its great claws if a heavy gun be fired over the water in which it is lying; when a dragon-fly will devour fly after fly, immediately after its abdomen has been torn from the rest of its body, and a wasp sip syrup with evident zest while labouring—I will not say suffering—under a similar mutilation: it is quite clear that pain, at any rate among the crustaceans and the insects, must practically be almost or altogether unknown. I have watched, too, the oviposition of an ichneumon-fly in the body of a caterpillar; and nothing in the conduct of the victim showed that it was in any degree conscious of pain, although the sharp lancet of the fly was introduced into its body some fifty or sixty times. All entomologists, too, are familiar with the fact that a “stung” caterpillar continues to feed most heartily, and apparently to enjoy existence, although several hundred grubs are ceaselessly preying upon the non-vital parts of its body.

I may mention, also, that, when collecting *Lepidoptera* as a boy, some of my best specimens were captured upon a fence on which, owing to its peculiar structure, the pill-box could not be used in the orthodox manner. The only way, indeed, in which many a moth could be extracted uninjured from the recesses of this fence, was by passing a pin through its thorax as it sat at rest, and so transferring it to the killing-bottle. This I was often obliged to do; and I did it at first with much reluctance. But I frequently observed—so frequently, indeed, that at last the fact altogether ceased to cause surprise—that the moth seldom moved when the pin was passed through its thorax, although that operation, proportionately speaking, was about equivalent to the thrusting of a lamp-post through the body of a human being. When the insect was lifted from the fence it struggled violently; probably because it found itself supported in mid-air without a foothold. If, however, I replaced it upon the fence, it usually settled quickly down into its former state of quiescence. And the inference was almost irresistible, that, although the pin had passed through a portion of its body containing two at least of the principal ganglia, and more closely and thoroughly traversed by branch

nerves than almost any other part of the frame, the insect had suffered no pain.

It may, perhaps, be argued that these moths, when thus pinned, were sleeping, and that—as has frequently happened in the case of vagrants who have resorted to a lime-kiln for warmth, and have been overcome by slumber—very severe injuries may be received during sleep, of which the sufferer, although of high nervous organization, is entirely unconscious. But cases in which the injury is caused by the sudden application of great bodily violence do not come under this category. One cannot imagine a human being continuing wrapped in slumber while a lamp-post, or even a hedge stake, was being driven through his body. And the further fact that the wounded insects, when replaced upon the fence, frequently settle themselves again to slumber, effectually disposes, I think, of the objection.

There is very little indeed, in fact, to show that insects experience the sensation of pain, as we understand the expression, and very much which tends to show that they do not. Probably the great poet who tells us that—

“the poor beetle that we tread upon,
In corporal sufferance feels a pang as great
As when a giant dies.”

is as incorrect as poets usually are when they venture upon statements relating to natural history.

Upon the molluscs, perhaps, it is unnecessary to dwell. Their nervous organization is very little higher than that of the insects, and susceptibility to pain still appears to be wanting. Even when we pass the half-way house of the animal kingdom, indeed, and ascend from the higher invertebrates to the lower vertebrates, we find that the sense of pain is apparently absent. The seemingly complete indifference of fish, for example, to bodily injury or mutilation, is well-known. Not long ago, in one of the journals devoted to outdoor sports, an account appeared, on the authority of Mr. Cholmondely Pennell, of a perch which in some mysterious manner was hooked through the eye, and managed to break away, leaving its eye behind it. Yet, so little did it appear to suffer from that which in a mammal or a bird would have been a most serious and painful injury, that in the course of a few minutes it returned, and, attracted by its own eye, which still remained upon the hook, swallowed it, and was captured and brought to land!

Instances, again, in which the mouth of a fish has been severely lacerated by the hook, without the result of deterring it from a second visit to the too tempting bait, are well known to every angler.

We have many records, too, of a like insensibility to pain in the case of the shark. Upon one occasion, as described to my late father by an eye-witness of the occurrence, the cheek of one of these fish was torn completely open in a successful attempt to break away from the hook which had passed through it. Although the wound bled profusely, the creature seemed to feel no pain, and in the course of a very few minutes was again fast upon the very same hook which had already proved so disastrous to it.

Among the higher animals, any serious bodily injury at once deadens the sense of hunger. A state of collapse almost immediately results from the shock; and not until some little time after this has passed away can food again be taken. So, too, while a sufferer, from any cause, is enduring intense pain. While that pain lasts, to take food is a practical impossibility. But, in the case of these injured fish, there would appear to have been no pain, no shock, and consequently no collapse, for their sense of hunger was not dulled, and they almost immediately returned to the bait. Yet the wounds which they had received would have rendered a human being prostrate for days. So far, in fact, as we can gather from the present state of the evidence, fish seem practically as insensible to pain as the insects or the crustaceans.

The writhings of an eel's body, of course, after such an injury as the amputation of the head, are so obviously due to reflex action that it is quite unnecessary to take them into consideration.

Even among the reptiles the sense of pain appears to be little, if at all, more developed. For among these animals we find perhaps the most remarkable instances of that singular instinct of self-mutilation in moments of danger to which we have already adverted in the case of the lobster. Our well-known British blindworm, or slowworm, for instance, in common with many other lizards, will voluntarily part with its tail if it be suddenly seized, and thus deprive itself of nearly half of its bodily substance; and the vertebræ at the point of severance are modified in a very remarkable manner, apparently with the sole purpose of rendering this self-mutilation practicable. The lizard itself, after the act of

dismemberment has taken place, creeps rapidly away, and appears to suffer no pain or inconvenience whatever. The wound quickly heals, and the lost member, in due course of time, is reproduced. But, strangely enough, the laceration of the flesh, which appears to have no exciting effect upon the nerves of the body, in which pain might conceivably be felt, throws those of the tail, in which plainly it cannot, into a state of extreme irritation and activity; and for some minutes the severed member leaps and dances in the air as though possessed of independent and vigorous life. Its movements, of course, like those of a decapitated eel or tortoise, are entirely due to reflex action. But it is both interesting and instructive to notice such action taking place in a part of the body wherein pain is by the very conditions of the case impossible, while the very same injury which gives rise to that action seems wholly without effect in a part in which, judging by the analogy of the higher forms of life, suffering of no slight degree would seem to be inevitable.

It may, of course, be argued that Nature, in furnishing these self-mutilating lizards with their curious power of dismemberment, may have also modified the nerves of the region in which severance takes place, in order that the injury may entail no bodily suffering. I do not know, however, that such a theory could be in any way supported by anatomical evidence; while it is certain that none of the members of the reptile race appear to be at all susceptible to suffering, no matter in what particular region of the body an injury may be inflicted.

In the birds, of course, we enter upon entirely new conditions of the bodily structure. They are warm-blooded creatures, with an exceptionally rapid circulation, animated by a vivid and vigorous life, and possessed of bodily senses far exceeding in keenness those of the animals below them in the zoological scale. Alike in sight and in hearing, and most probably also in delicacy of scent, they are far superior to any reptile or fish. And therefore it would seem only natural to suppose that the sense which in the reptiles, fishes, and invertebrates allows merely of some small degree of tactile power would in them be so intensified and developed as to admit of the sensation of pain.

Whether birds are capable of experiencing this sensation, however, in any marked degree, is exceedingly doubtful. For this at any rate is plain, that in the members of the

feathered race the sense of touch—upon the existence of which, in a somewhat highly developed degree, of course, the possibility of experiencing pain absolutely depends—is *not* highly developed. The conditions of the entire structure practically forbid that it should be so. The body is entirely enveloped in a dense coating of feathers; clearly tactile nerves beneath this would be useless. The limbs are clothed either with plumes or with horny scales; and the same result necessarily follows. The mouth, again,—usually a highly sensitive region—is enclosed in a hard and callous beak, which only in such birds as the duck and the apteryx appears to possess anything approaching to delicacy of touch; while even the tongue is encased in a horny sheath, necessarily rendering the sense of taste rudimentary in the extreme. Such being the case, it would seem scarcely possible that birds can ever be conscious of a *keen* sense of pain, although it would be rash indeed to assert that the sensation of pain is altogether unknown to them.

Only the mammals remain to be considered; and there can be no reasonable doubt that these, as a class, are susceptible to pain, although not a few are as densely clothed with scales, spines, or fur as the birds with feathers. To what extent this susceptibility may extend, however, is another and a wider question.

2. This, of course, brings us to the second branch of our subject; the question, namely, of the *degree* of pain experienced by those animals in which sensitive nerves can be proved to exist. In other words, are we justified, when an animal exhibits unmistakable signs of suffering, in ascribing to that suffering a character and degree similar to that which we ourselves should experience under the like circumstances?

But how, we may ask at the very outset of our enquiry, are we to obtain a definite standard for the comparison? for the pain consequent upon an injury to one man is often far more intense and prostrating than the pain consequent upon a precisely similar injury to another. We all know how differently a simple surgical operation—such as the extraction of a tooth—affects different individuals. One endures tortures, both in anticipation and in reality; another scarcely suffers at all.

A very curious case of this character was related to me by my brother, who is a schoolmaster, and who was himself a witness of the operation in question.

One of the boys under his charge fell upon the school-room floor while struggling with a companion, and in so doing drove a tolerably large splinter of wood beneath the entire length of one of his finger nails. He made an attempt to extract it, but without success; and, finding that it did not inconvenience him, said nothing about the matter to the authorities. In the course of a few days, however, the wound very naturally festered, and the boy was sent to a surgeon; a proceeding to which he took exception, on the ground that he felt no pain. The surgeon, however, on examination, pronounced the case to be a bad one, and declared that the finger nail must be removed; an operation which he proceeded then and there to perform. At its close, he looked up at his patient, with a word or two of praise for the remarkable courage with which he had borne the severe suffering inflicted upon him, and was utterly amazed to find that the boy had been watching his proceedings throughout with the liveliest interest, but without the slightest idea that he ought to have been suffering excruciating pain. The removal of the nail, in fact, had caused him no real pain whatever, although he had undergone what is commonly regarded as perhaps the most severe of the minor operations in surgery.

This particular boy, perhaps, may be regarded as somewhat of a natural phenomenon; but it is a matter of common experience among schoolmasters that corporal punishment is as unequal in its effects upon different recipients as can well be the case. To one boy a few strokes with the birch or the cane are nothing—scarcely felt at the time, and forgotten in five minutes. To another they represent an amount of anguish under which nature almost gives way. And there can be little doubt that much of the shrinking from physical suffering which we observe in many individuals of either sex is due to an unusual susceptibility to pain, with which they are endowed by nature, and which can be neither appreciated nor understood by those of more vigorous nervous organization.

But the capacity for appreciating pain, in the human subject, is not only to some extent a matter of temperament; it is also, and very largely, a consequence of (*a*) Civilization and (*β*) Education.

(*a*) It is almost a matter of common notoriety that pain to the savage and pain to the civilized man are so different in character and degree as practically to constitute two totally

different things. I think it is Livingstone who tells us of an accident which befel one of his camp-followers, and which resulted in a broken thigh. A rough litter was constructed, the man laid upon it, and borne upon the shoulders of four of his comrades. Suddenly, in the course of the march, a shout of laughter was heard, and it was found that, through the carelessness of the bearers, the patient had fallen to the ground, with the result of converting a simple into a compound fracture. The bearers were convulsed with laughter at the doubled-up appearance which the wounded limb presented; and the injured man himself was laughing as heartily as anyone.

It is only necessary, again, to mention the Maquarri Dance of the natives of Guiana, the Sun Dance of the North American Indians, and the horrible rites by which the young braves of the Mandan tribe are "initiated" into the enjoyment of the full privileges of their manhood, to show that the nervous organization of the savage is far less susceptible to pain than that of the civilized man.

Dr. Felkin, in a series of carefully planned experiments, for the carrying out of which he enjoyed unusual facilities, arrived at the conclusion that the relative susceptibility to pain in the European, the Arab, and the Negro, was in the proportion of three, two, and one; his attention having been in the first instance directed to the subject by the remarkable fortitude with which patients of the two latter classes endured severe surgical operations. When, indeed—as Mr. Christie assures us happened in a case under his own notice—a Bosjesman can walk into a surgery, exhibit a hole in the crown of his head, due to a blow from a "knob-kerry," which had resulted in the forcing of a piece of the skull down upon the brain, submit to the operation of trepanning, and then walk away as if nothing had happened, it is difficult to believe that the members of these uncivilized races can possess any true sense of pain at all.

(β) In the course of the above-mentioned experiments, Dr. Felkin also discovered that the result of education upon negroes was to increase their susceptibility to pain by one-third. And that such is a result of education is daily manifested by the comparative indifference with which a field labourer, for example, will endure an injury which would lay a brain worker prostrate. For education, in a sense, is only civilization carried on. It results in a considerable development and refinement of the brain, and this, necessarily re-

acting upon the entire nervous system, induces a far higher susceptibility to suffering than would otherwise have been possible. And, as a general rule, it will be found that highly educated men and women are the most susceptible to bodily pain. They obtain, by their studies and mental culture, a great accession of intellectual power; but they pay the price in an increased sensitiveness of nervous organization.

Among animals, too, we find a similar rule prevailing. The highly-bred, highly-trained race-horse or hunter will be thrown into a state of extreme nervous excitement by the merest touch of the whip or the spur. But the cart-horse, which is neither highly-bred nor highly-trained, and may be taken as the representative of equine un-education, plods stolidly on, apparently half unconscious of the blows which its impatient master is raining upon its back. So, too, with dogs; the pure-bred animal—generally speaking, of course—suffers much more severely from a beating than the mongrel. To put the matter briefly, in fact, susceptibility to the sense of pain increases in exact proportion to the degree of perfection attained, through evolution, civilization, or education, by the brain and the nervous system; and where the latter remain undeveloped, the former cannot be felt.

WE have already seen how considerably the power of appreciating pain varies in the human subject; how dependent it is upon the influences of civilization and education; how the degree in which pain can be felt, in fact, is proportionate to the degree of perfection attained by the brain, and (as a consequence) the nervous system. Now let us recollect what a vast difference there is between the brain and nervous system of even uncivilized man, and the brain and nervous system of the highest of the monkeys. In principle they may be similar; but in development how widely asunder! And as we work our way down the zoological ladder, the proportionate size of the brain—to say nothing of the delicacy of its organization—decreases at almost every successive step, until from man, with a brain of perhaps one-fortieth of his entire weight, we come to the carp, with a brain of only one eight-hundredth; while in the lancelet, the lowest of all the vertebrates, there is absolutely none. Would it not seem logically to follow, on this one ground alone, that the capacity for appreciating pain must be far lower in even the highest mammals than in man, and that it must decrease still further in proportion as the interval between the two increases?

It is hardly fair, of course, to adduce the known susceptibility to pain of horses and dogs as an argument upon the other side of the question; for these, by long domestication and careful selection, have become civilized, so to speak, with their mental powers, and consequently their capacity for suffering, increased in a proportionate degree. To them Nature *cannot* be cruel, for the simple but sufficient reason that they have been elevated by the agency of man to a position which is wholly unnatural. And therefore, considered in this respect, they are outside the scope of our inquiry.

So far, then, our line of investigation has tended to show that pain, as we usually understand the expression, must be almost, if not altogether, unknown to the invertebrates, the fish, and the reptiles; that by the birds it can scarcely be experienced in any great degree; and that even in the higher mammals it cannot be what it is in the human subject. That pain can be felt by mammals, however, it would be idle to deny; and therefore it remains for us to see whether, in its infliction upon the members of even this comparatively small division of the animal kingdom, Nature can consistently be described as "cruel."

The "cruelty" in question, of course, would be caused by the teeth, claws, or other weapons of creatures of prey, to which, probably, the vast majority of deaths in the animal kingdom are due. And we have to see to what extent the injuries inflicted by these are likely to be productive of suffering.

PREDACEOUS birds, as a general rule, kill their victims instantaneously. The sharp, curved talons, which are invariably the weapons of offence, are practically automatic in their action, and are driven, by the mere weight of the body pressing upon the limbs at the moment of seizure, deeply into the vitals of the prey. In such cases, little or no pain can be inflicted. But when the flesh is lacerated, as by the claws of the larger cats, suffering in no slight degree would appear to be inevitable. And as these animals do not in all cases kill their victims before proceeding to devour them, that suffering would frequently seem to be of lingering character, as well as of great intensity.

Whether such is in fact the case, however, is more than doubtful. Even in the human subject, severe local injury commonly deadens the sense of pain for a time. The im-

mediate result of a bruise, very often, is to numb the nerves in the part affected, and pain is not felt for some minutes. And that such is the case also in more serious injuries I have had some slight personal experience, for I was once unfortunate enough to fracture the larger bone of my leg, and felt absolutely no pain whatever until the limb was set more than an hour afterwards.

Soldiers in action, too, are said to be frequently unconscious of the reception of wounds of great severity until weakened by the consequent loss of blood. This fact has been accounted for as due to the great mental excitement under which they are labouring; but I have been informed by a near relation that in closing a pocket-knife he once cut his forefinger to the very bone, and was quite unaware of the fact until a sensation of faintness overcame him. And this man, as a general rule, was perhaps unusually susceptible to bodily suffering.

This temporary insensibility to pain, of course, attends only such injuries as are suddenly inflicted; but of this class, in almost every case, are the wounds received by animals attacked by the creatures of prey. All the members of the cat tribe, for instance, take their victims by surprise; the first intimation of their presence is a blow from the death-dealing talons. And hence it might, perhaps, be inferred that the sufferings which these animals seem to inflict may be more apparent than real.

That such is actually the case is proved—although from a perfectly different standpoint—by the well-known experience of Dr. Livingstone, which—although, no doubt, familiar to all present—I may perhaps be permitted to cite as so admirably illustrating this branch of my subject. I quote his own words:—

“Starting and looking half round, I saw the lion just in the act of springing on me. I was upon a little height; he caught my shoulder as he sprang, and we both came to the ground below together. Growling horribly close to my ear, he shook me as a terrier dog does a rat. The shock produced a stupor similar to that which seems to be felt by a mouse after the first shake of the cat. It caused a sort of dreaminess, *in which there was no sense of pain or feeling of terror*, although I was quite conscious of all that was happening. It was like what patients, partially under the influence of chloroform, describe, who see all the operation, but feel not the knife. This singular condition was not the

result of any mental process. The shake annihilated fear, and allowed no sense of horror in looking round at the beast. This peculiar state is probably produced in all animals killed by the carnivora; and, if so, is a merciful provision by our benevolent Creator for lessening the pain of death."

In referring to this same passage, my late father mentions a very similar experience undergone by a German nobleman in Bengal. In this case a tiger was the assailant, and its intended victim describes his mental condition while in its power in terms almost identical with those employed by the great African traveller. "The chief sensation," he remarks, "was that of a pleasant drowsiness, rather admixed with curiosity as to the manner in which the brute was going to eat me." "Only by his reasoning powers, which remained unshaken, could he feel that his position was one of almost hopeless danger, and that he ought to attempt escape."

I believe that I am right, also, in attributing to Sir Edward Bradford, the present Chief Commissioner of the Metropolitan Police, an even more remarkable adventure with a bear, in which the flesh of his left arm was literally torn away by the infuriated animal. Even this rough treatment, however, under the peculiar fascination induced by the act of seizure, appears to have caused no pain at the time, and Sir Edward remarks that his chief sensation was one of extreme disgust at the evident enjoyment with which the brute smacked its lips over its meal!

In a recent issue, too, of a popular serial appeared an article from the pen of a well-known Indian traveller, who therein narrates his own experience of capture by an elephant. The animal, quite a young one, apparently did not know how to kill him, and contented itself with kicking him backwards and forwards from foot to foot, and then leaving him lying upon the ground. Although very severely bruised and shaken, the writer declares that he felt no pain whatever until after the animal had left him—a fact the more interesting inasmuch as his injuries were not inflicted by any of the ordinary beasts of prey.

When we remember, indeed, how very powerfully the susceptibility of the nervous system is affected by mental emotions, we can well understand that the sudden and violent shock due to seizure by a beast of prey may well influence the nerves in such a manner as to render the sensation of pain for the time inappreciable. Probably the

result of such a shock is to induce some kind of hypnotic condition. And, since we know that a similar condition can often be artificially engendered merely by gazing intently at some bright object, it may, perhaps, be that the gaze of the animal's eyes has some influence in bringing it about.

In this connexion the question of serpent fascination, and its supposed dependence upon the steady gaze of the eyes, will at once occur to us.

3. THE question which constitutes the third part of our enquiry—namely, whether animals suffer by recollection or anticipation of past or future pain—may be unhesitatingly answered in the negative. It is true that some few domesticated animals do occasionally appear to remember bygone sufferings, but only, as a rule, when those sufferings are in some way called to their minds. Dogs, too, undoubtedly suffer at times in anticipation, and clearly dread the beating which they know will follow some act of mischief. These, however being domestic animals, are *ipso facto* unnatural, and beyond the limits of our enquiry.

In Nature, properly considered, there is nothing of the kind. Pain past is pain forgotten and done with; possible pain to come never clouds the enjoyment of the moment. Wild animals, in fact, seem to live entirely in the present; and suffering, when it comes, has neither been dreaded nor foreseen.

Neither have animals any terror of death, of which, indeed, as concerning themselves, they seem to know absolutely nothing. If a wild animal meets with the dead body of even one of its own kind—domesticated animals sometimes behave differently—it either passes it by as an object utterly devoid of interest, or it inspects it with a languid curiosity, or it hails it with delight as affording the material for a substantial meal. But it never seems to draw from it the inference that its own decease must one day take place. Farmers hang up dead rooks to scare living rooks from their fields, and game-keepers suspend the carcasses of weasels, stoats, cats, hawks, and owls as a warning to other "vermin." But even these worthies themselves would hardly assert that such warnings are ever effectual.

We must not, of course, omit all reference to the instinct of self-preservation, which might perhaps be considered as implying the existence of a knowledge of pain or death.

Such, however, does not follow at all. An instinct with an animal *is* an instinct pure and simple. The creature does what it does, not knowing why it does it. The young squirrel, for example, lays up its winter store of provisions, with no possible knowledge that a foodless season of frost and snow is to follow. And if an instinct taught an animal more than this, it would be an instinct no longer—it would be reason.

We ourselves possess the same instinct of self-preservation, and often act upon it without the smallest thought of the consequences which may ensue if we do not. There is no time for thought; but the instinct does its work. Clearly, then, the presence of that instinct in an animal does not necessarily imply anything beyond it; and all available evidence tends to show that nothing more is possessed.

BRIEFLY to review, then, the line of my argument:—

The lower animals, and, indeed, the vertebrates, as far at least as, and including, the reptiles, appear to possess no sense of pain whatever. And this deduction is based partly upon the very undeveloped character of the brain and the nervous system, partly upon the inference which must necessarily be drawn from ascertained facts. In the birds, the almost total absence of tactile nerves would seem to imply also the absence of sensitive nerves—the sensation of pain being only intensified touch. In the mammals, however, a capacity for suffering clearly exists; but the analogy of the human subject leads us to infer that even in them pain, when felt, must be far less in degree than that to which our own nervous organizations are subject, while the remarkable experiences of Dr. Livingstone and others seem to prove that predaceous animals, apparently the principal authors of pain in the natural world, inflict no real sufferings upon their victims at all. No dread of death to come, lastly, overshadows an animal's life; and, therefore, it seems only just and reasonable to conclude that no accusation of cruelty can be substantiated against Nature and Nature's God.

Much, on the contrary, may be said on the other side of the question. The law of destruction, and the incessant conflict waged between creatures of prey and their victims, practically ensures the survival of the strongest and healthiest forms. The slightest tendency to disease is at once eliminated, although by the rough surgery of the

death of the sufferer; physical deterioration is prevented; and the standard of the race is maintained. As the natural world is constituted, in fact, the so-called cruelty of Nature is cruelty only in appearance; in reality, it is a blessing and a boon.

The CHAIRMAN (Sir JOSEPH FAYRER, K.C.S.I., F.R.S.).—I am sure you will agree with me that we are much indebted to the Rev. Mr. Wood for his thoughtful and interesting Paper. The subjects of which he has spoken so well have always interested me. I have no hesitation in pronouncing the physiology of the Paper to be good, and the deductions drawn from his observations and researches fair, but I do not quite agree with him when he excludes the possibility of pain from the lowest animals. That invertebrates do not suffer pain as vertebrates do, I believe. They respond to stimuli, but they do not feel as higher animals do. We should not feel so intensely if we were not so highly organised, and subject to many artificial conditions which are apart from our original constitution. As the Author has told us, savage races suffer less than others. We ourselves frequently do not feel pain when we meet with injuries that are sudden and unexpected. A man so injured may scarcely know what has happened to him and not feel the effect till afterwards. I have known men wounded by a sword thrust who have not been aware of it, and of men being shot through the limbs, who felt no pain at the time.

Speaking of wild animals, not long since I saw an officer who, when in India, was anxious to shoot a tiger, and having made his arrangements, had a machaun or native bed put up in a tree on which to sit at night with his attendants, with a young buffalo tied up to attract the tiger. He sat there waiting some time and did what is so often done on such occasions—fell asleep. He was aroused by one of his men, and saw two tigers coming up to the buffalo. He was much excited, and took up his rifle to fire, when his man prevented, him, saying "Don't fire yet." Presently he fired, and one tiger rolled over. The other disappeared,—the wounded tiger rolled down on to lower ground. He was most anxious to follow, but his man prevented him. He waited till

day dawned and got down, the man following him amongst the long grass. Suddenly he became conscious that he was in the presence of the tiger, seeing its yellow face looking at him from the grass. He fired, and they fell together. He heard the bones of his shoulder crunch, but felt no pain. He said he was so stunned that he hardly knew what occurred, but remembers wondering whether he was going to die. He then heard a sort of sigh from the tiger, and his man, who was near him, pulled him out of the tiger's mouth. The man said, "For God's sake, fire, the tiger is moving again!" He raised the rifle to his shoulder and felt the crushed bones as he fired. It was all done in a dreamy, semi-conscious state. He was carried home, where he remained for months, and was at last sent to England, exhausted by suffering, with the shoulder crippled and a wasted arm with bone exfoliating. This is an instance of a man suffering no pain under severe injury; but it is not to be supposed that pain is never felt on infliction of a serious injury.

I remember on a critical occasion during the siege of Lucknow, talking to an officer, who, half an hour after our conversation, was shot dead. A man had been shot somewhere in the spine, close to us, and his sufferings were intense. My companion said, "I hope when my time comes, I shall not suffer like this," and within an hour he was dead, with a bullet through the head.

Whether it be correct to speak of cruelty in connection with Nature, I think is questionable. To be cruel, implies a conscious intention. An animal cannot be cruel, I take it; man can be. A wolf is not cruel; he only obeys his instincts.

I think the Paper is most interesting, and the Author's remarks on the lower animals are very true. False sentiment should not be thrown broadcast throughout the world; it hinders the advance of knowledge, and leaves our nation behind others in the march of science. Some persons, without hesitation, will impale one creature and drag it through the water till it impales another on a hook, then go home and sign a petition against vivisection. I am glad this paper has been written. People see an invertebrate creature writhing on the ground, and think that it suffers pain, when it is merely reflex action. Reflex action is often mistaken for pain or suffering. After certain injuries to the spine, you may see a man lying in bed paralysed—you tickle the sole of his foot, and his leg is drawn up, but he does not feel it. The

lower animals of the mammalia suffer in proportion as they are highly organised; but I do not think they have any apprehension or anticipation of suffering. I often wonder if sheep, when they see their relatives hung up in that disgusting way, feel it, or understand it: I hope not, but I have seen instances where, from the smell of blood or from some instinct which we cannot explain, animals have shown a dread and horror at being near the place where they were to be slaughtered—an instinct of self-preservation. I will not detain you further, but ask you to discuss this most interesting paper.

The HON. SECRETARY (Captain F. PETRIE).—Two brief letters have been received from those not able to attend.

The first is from Dr. D. BIDDLE, M.R.C.S.E., who writes:—

I believe the cruelty of Nature to be more *apparent* than real, and that the largest share of horror is contributed to it by the imagination; sudden catastrophes are never so full of pain as an anticipated calamity. At the same time there is much mystery about the subject, for the carnivora seem to have been constructed to devour animated victims.

The second letter is from Dr. GERARD SMITH, M.R.C.S.E. He writes:—

“The Apparent Cruelty of Nature” is indeed an important subject to make clear, for so many are satisfied with a superficial knowledge of Nature, that they are unable justly to balance the two columns of the account. I feel, with Darwin, after his long and careful life of study, “that on the whole, pleasure decidedly predominates.” Death comes to animals, as a rule, quickly; they have none of the mental and moral struggle and sorrow of man, and if we examine the accounts given us by those who have escaped from the jaws of wild beasts after injury, it would appear probable that even the mouse feels little pain when the cat plays with it (*vide* Livingstone and the lion). Personally, I look to *man* as the agent intended to modify the pain of the lower animals. Man’s dominion over them, God-given as it is, should be exercised in doing all he can to make them happy; but still we see the *apparent* cruelty of Nature, added to by the *actual* cruelty of man; though, thanks be to God, this latter is less day by day. Our use of the lower animals was never intended to include such acts as useless and merely curious vivisection, and the barbarities of unskilled sportsmen and clumsy butchers.

Mr. D. HOWARD, F.C.S., &c.—It seems to me that the Chairman has admirably added to the Paper exactly what is wanted to complete it. We all have a natural anthropomorphic instinct, and attribute to animals our own thoughts and feelings, and every child naturally

fancies that animals think and talk. This feeling has an important bearing on the question of cruelty, and I believe it is quite right to sternly put down cruelty to animals, for, apart from the question whether they feel or otherwise, there is nothing more demoralising than the wanton infliction on animals of what would give pain to ourselves. Scientific researches stand on quite another ground. I do not think there is any fear of such studies increasing cruelty to animals. The difference that has been shown between educated animals and wild animals is of great importance. It is wonderful how contact with the human mind changes the characters of animals. We must not argue that the sensitiveness of the race-horse, for instance, is a measure of the feeling of the undomesticated lower animals, it is a totally different thing—you cannot argue from the one to the other. Of this I feel sure that *if it be taken rightly, such a Paper as this will not justify any wanton cruelty on the part of any careless or cruel person, old or young.*

REV. F. A. WALKER, D.D.—I see one of the first Entomologists in the country present to-night, and I hope Mr. Kirby will favour us with some remarks on this very interesting Paper. As regards my own views, I cordially agree with a great deal of Mr. Wood's Paper, but there are some points in it upon which I hesitate to do so. I cannot help thinking that the feeling of pain is rather underrated in Nature. Mr. Wood brought forward, for example, the case where the ichneumon fly exerts its ovipositor on the body of a moth. The caterpillar of the Puss moth (*Cerura vinula*) when pierced, so far from remaining quiescent under the operation, evidently uses its forks and not unfrequently drives away the fly, which then awaits an opportunity to renew its attack. With regard to the higher orders of Nature, there are, I think, abundant instances of whales suffering intense pain from the persistent attacks of sharks, and from the thrasher leaping on their backs, and they are often quite unable to escape or survive the repeated and fierce attacks of their natural foes. The thrasher, when it leaps out of the water, falls with great force on a whale's back, and I understand that on such occasions the whale gives a sickening throb throughout its whole bulk, as though feeling agonising pain, and it ultimately succumbs to the combined attacks of two or three of its foes. As regards birds, I think, from the cry that cocks utter when in fighting they pull feathers out of each other, they must suffer great pain; and the noise a dog makes when a cat claws

him, shows he suffers also; but doubtless the author would say that it is not fair to argue from domestic animals. I suppose it is true that serious and even fatal wounds do not necessarily entail pain. It is said in respect of Charles XII of Sweden, when he received his death wound at the battle of Friedrichshall, that so far from suffering pain, his first instinct was an endeavour to clasp his sword-hilt with his shattered arm.

The CHAIRMAN.—May I add one remark as to a dog dreading punishment and crying out. I was once much struck when grouse shooting in the Highlands. With the keeper were two Gordon setters, dogs that worked well. The keeper was a strict man, and something went wrong. I was a little distance off, heard one of the dogs howling, and saw the whip going in the air. I went up and said, "Why do you beat the dog?" He turned to me and said, "I never touched the dog. I was beating the heather by his side; it answers the purpose just as well."

Rev. A. K. CHERILL, M.A.—I should be glad to say a few words on the controversial aspect of this question which has hardly yet been touched on. The Author pointed out at the beginning of his Paper that attacks upon Christianity and theism in general have been founded on the supposed cruelty of Nature. Objectors say that the Creator cannot be merciful and powerful to have created a world in which suffering so much abounds. Mr. Wood's argument took the form of minimising the amount of suffering, which he did very successfully, showing that the suffering in Nature is not nearly so great as it is often supposed to be. But I doubt whether this goes far enough for a controversial argument, for the man who started the objection that an all-powerful and merciful God could not have created a world in which so much suffering exists, might answer that this only affects the question of degree; why should God create a world in which suffering exists at all? Therefore, to meet the objection fully we require something more than diminished suffering; we require to show that the suffering of pain in itself is not to be set down purely as an evil. I think it was Hans Andersen who wrote a story to show the use that suffering is to man, and the extraordinary evils into which he would fall if he had not the power of feeling or suffering pain. But we do not need fairy tales or stories to illustrate the point, for it seems to me that a strong scientific argument can be advanced to show that the suffering of pain is not really an evil but a good. As the Author

truly pointed out, we cannot suppose that the lowest classes in the animal kingdom are capable of suffering pain, but as we ascend in the scale of animal life, the capacity for suffering increases. If that be so, then evolutionists must admit that the capacity for suffering is one of the products of evolution, and, therefore, that it must be beneficial, because the very principle of evolution is that only those varieties that are beneficial are preserved. Therefore I think the principle of the evolutionists shows that the capacity for suffering pain is not an evil, but, on the contrary, a benefit, and the contention that the suffering of pain is a cruelty falls to the ground, for Nature is no more guilty of cruelty than the surgeon who inflicts pain for our ultimate good.

Professor H. LANGHORNE ORCHARD, M.A., B.Sc.—The fact of pain is, on Herbert Spencer's reasoning, a calamity. Every pleasure, he says, advances and raises the tide of life, and every pain lowers the tide of life. The great aim of life is accorded by him to pleasure. Therefore, the fact that as man becomes more civilised he feels pain more keenly, is an argument against evolutionism. It cannot be denied, I think, that the lower animals suffer pain—very little, probably, but still some; the very fact of weariness is, of itself, a form of pain. No one, I think, can dispute that the lower animals suffer from that form of pain at all events. They suffer from thirst and hunger, and those things are forms of pain; but the existence of suffering in the universe is a very different thing from the existence of cruelty accompanying it. Pain, in fact, has been called the sentinel which attracts attention to some injury in the system which, but for pain, we should neglect and not attend to. In order to establish cruelty, there would have to be proved the intention to inflict unnecessary pain. Unless such an intention can be established, the charge of cruelty against the Author of Nature must fail. The mere infliction of suffering is not cruelty. To pull a person by the hair of the head would ordinarily be considered a cruel operation; but supposing it were to save him from drowning we should no longer call it cruel, but even benevolent. Similarly, an operation by a surgeon is not cruel but benevolent, and why so? Because it is not done with the intention to cause unnecessary suffering, but it is done with a remedial object for the ultimate good of the person. As it is impossible to show that the suffering and pain that occurs in Nature is not for the ultimate benefit of its recipients, the charge of cruelty must fail.

Mr. W. F. KIRBY, F.L.S., F.E.S., &c.—It has always seemed to me that pain is simply calculated to effect a useful end. I think I am correct in saying that it is generally distributed in such a manner as to be a warning when an injury is inflicted, or else to prevent worse injury. Consequently, when a sudden injury, that cannot be foreseen and provided for in the ordinary course of events, is inflicted, pain sometimes ceases to operate, being no longer useful. As to insects, I need hardly go into that question, which the Lecturer has treated so well; but I may say, in the case of beetles, that they will sometimes remain alive for many months with a pin through them, and apparently enjoy themselves. It has been recorded that one beetle remained alive for upwards of two years in this state. A caterpillar will certainly wince at times when attacked by ichneumons, but whether that is from pain, fear, or reflex action, is, of course, open to doubt. I remember reading a story—I think by Professor Jesse—of a pike that was thrown out of the water and injured its head and appeared to be in great pain. A gentleman, who was a naturalist, going by, relieved it and returned it to the water, and the pike always recognised him when he came back to the same place afterwards.

With regard to the cases of human susceptibility to pain that have been adduced, I may say that it frequently happens that when operations have been performed under chloroform, or under the influence of mesmerism (or as it is now improperly called, hypnotism), patients have often been unconscious of it until they have actually seen the wound, and only then have they declared that they felt pain. There are several instances of this kind on record.

The CHAIRMAN.—Before the Author replies, perhaps I may remind you that if you take away the capacity for feeling pain, you take away that for feeling pleasure also; for pain is often the excess of that which in more moderate degree gives pleasure. If invertebrates feel no pain, probably they feel little pleasure, for the mere reflex movement and response to stimuli does not necessarily imply either pleasurable or painful sensations.

The AUTHOR.—I will begin by noticing some of Dr. Walker's statements as to insects and animals.

First as to the *Cerura vinula* caterpillar. How do you prove that it is capable of feeling pain? Is not its action simply

attributable to the instinct of self-preservation? [Dr. WALKER: I suppose it felt something on the penetration of the skin.] That, I think, is only self-preservation, as I instance in the Paper. [Dr. WALKER: It was not a mere wriggling, but it was the vigorous brushing with its two caudal appendages by which it tried to save itself.] I do not see that it was anything more than self-preservation before the piercing really took place. As to cocks fighting, is it certain that it is pain or passion? [Dr. WALKER: Pain, I should say, when the feathers are pulled out.] In some cases of savages screams are emitted which do not seem to apply to pain. As to hounds, of course they are domesticated animals, and cannot be put in the same category as wild animals. Where these have to some extent been civilised, sensation is increased: they are then not wild animals, and you cannot draw any argument for the purposes of this question from them.

As to the piercing the thorax of the insect that I referred to, of course the thorax is closely permeated with large nerves connected with the head, and is therefore a pretty good test. I have known of moths being stuffed—they have been chloroformed and the whole of the abdomen slit open and the interior taken out and replaced with cotton wool and closed—and five minutes after they have recovered from the chloroform, they have been walking about the table, with nothing inside their bodies but the cotton wool. Then as to the dog referred to by the Chairman, which cried when he was not being beaten, I had a similar case in my own dog, a very nervous one and a great humbug. A sister of mine has beaten him with a straw and he has howled as if in agonies, and anyone hearing him would have said he was suffering excruciating pain. Then Mr. Cherrill, I think, spoke of evolution. It is not necessary to treat evolution as a proved fact, but if it brings a sense of pain with it, I do not see that it is an argument against pain being useful; for we know that it warns us that we are receiving injuries, which, if it were not for that warning, might proceed in such a measure as to bring about loss of life. I should suppose, therefore, that the sense of pain would be a benefit.

Then, with regard to the attack made by the thrasher on the whale, and its supposed results. A whale's body is encased throughout in a coating of blubber, varying from eight or ten inches to nearly two feet in thickness. I cannot quite understand how even a blow from a thrasher's tail could be felt through this

blubber; but I *can* understand that the blow would necessarily cause the animal to quiver from head to tail, *not* from any sense of pain, but from the simple mechanical effect of the stroke on a semi-solid mass. And this, I think, amply accounts for the "sickening throb" to which Dr. Walker refers.

I possess records of several cases in which whales have been killed by thrashers, but in every instance the assailants were assisted by sword-fish, which were apparently by far the more formidable of the two.

With reference to the theological aspect of the question. I purposely abstained from entering thereon on this occasion. Of course we all grant, as Christians, that, God being beneficent, there can be no cruelty in Nature; but in a Paper of this description it is necessary to meet the unbeliever on his own grounds, and we must show from facts in Nature that cruelty does not exist. For our own part, we can understand without proofs of this kind; but with an unbeliever one must try to confute his statements from facts in Nature. I thank you sincerely for the kind way in which you have listened to my remarks.

The Meeting was then adjourned.

ORDINARY MEETING.

PHILIP VERNON SMITH, ESQ., M.A., LL.M., &c.,
IN THE CHAIR.

The following Paper was read by the Author:—*

DEONTOLOGY. By the REV. H. J. CLARKE. †

THAT the psychic affections to which human nature is subject include a sense of duty, we may affirm without fear of contradiction, and without binding ourselves to determine at what stage in the process of their evolution it first becomes apparent. In ordinary cases it is found to constitute one among sundry characteristics which manifest themselves gradually, in various measures, and under conditions more or less favourable, prominent among the latter being education and hereditary tendencies. When in individual cases no trace of it can be discerned, its absence arrests attention, and, just in proportion as in those instances growth and culture have developed the rest, is accounted abnormal. A man of rare intellect and exquisitely refined tastes, if his conscience own no law superior to what may chance to be his passing inclination, if his conduct be determined by no considerations which presuppose reverential regard for truth and uprightness, is, when contemplated from the ethical point of view, looked upon as a monster. No one expects to find a sense of moral obligation in an infant; if imperceptible in an idiot, it is never missed, nor, however rudimentary and

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of *The Fundamental Science*, &c.

† Vicar of Great Barr, Birmingham, author

feeble its manifestations may be in a savage, does shortcoming in such a case surprise intelligent observers: they would be astonished were they to find it highly developed. But the ordinary phenomena of human life, according as the development of human characteristics progresses, together with those phenomena which have the appearance of being exceptional, render more and more evident that this signally honourable psychic affection is an essential attribute of man.

Now the word *duty* implies that in the matter with respect to which it is used something is conceived as being *due* (debitum). If, however, for *due* we substitute *wanting* (δέον), we get a concept which is preferable, as involving no other assumption than is ultimately reached in the process of analysing the notion which the noun in question represents; and thus, on the supposition that the experiences which originated and have perpetuated the notion afford materials available for the elaboration of a science, Deontology may claim to be accepted as its most appropriate name.

But although duty implies that something is wanting, the *sense* of duty is not an intellectual perception of the deficiency, but a kind of feeling which virtually acknowledges an authoritative command to supply it, to fill up, so to speak, the discovered void. It may, indeed, occur to me to say to myself "I ought," when I am simply taking account of the fact that an object which I have in view, but which, as it may seem to me, is, so far as concerns my intervention, without moral significance, presupposes in the chain of its conditioning antecedents some possible act of mine. My wish, for instance, being to ensure accuracy in some arithmetical calculation I have made for my amusement, my thought perhaps may be "I ought to proceed now by some other method, and then compare the second result with the first." Phrases which, strictly speaking, point to duty are frequently employed in reference to acts wherein, rightly or wrongly, the only laws whereof cognizance is taken are but delimitations of what is practicable, together with such rules as define what the agent imagines to be conducive to his profit, pleasure, or convenience. Although, however, metaphorical applications may render words equivocal, and in the habitual and unstudied use of conventional phraseology their proper meanings are liable to escape attention, the genuine sense of duty has a character peculiar to itself, and, where it has once found place, admits of no guileless confusion with any other kind of experience. The nature of the case, I need hardly remark, forbids that, having made this assertion, I

should be challenged to support it by adducing more conclusive evidence than is to be found in an indeterminate aggregate of confirmatory testimonies and of seemingly accordant ethical phenomena. Everyone who perceives it to be indisputably true has discovered in himself its only sure, its absolutely certain ground. In some such cases as I thus assume, a sentiment of reverence for a fellow man may cause in others, subjects or disciples, or profound admirers, the impression that obedience, partial or complete, is due to him. On this supposition there may be those whose sense of duty recognizes no authority superior to his will; but if, apart from, or in the absence of, reverence for the man himself, he is obeyed, and still from an imperative, that is a real, sense of duty, a higher will is, not indeed distinctly, or even consciously, recognized as a matter of course, but, it would seem, virtually acknowledged.

To confirm this yet unproved assertion, and from it, proceeding to others more precise and definite, to arrive at the full truth to which it points, there needs some investigation of phenomena that indicate in certain of the lower animals a psychic affection, which, perhaps, in common opinion simulates, but, as it appears to me, may properly be called, a sense of duty. No one at all observant of the habits of dogs can fail to have remarked how any of these creatures, if adequately intelligent and duly trained, invariably behave when detected in acts of disobedience to such authority as they have learned to recognize. The manifestation of fear may possibly in such a case be insignificant, or even nil; but if that be so, another kind of feeling becomes the more evident, betraying itself by various symptoms, which human observers, even children, taught by their sympathetic moral sense, instinctively interpret. The indications of a sense of shame are unmistakable. But a sense of shame implies a sense of duty; and in a dog the sense of duty is the sort of feeling under the impulse of which, after he has attached himself to an owner, he in effect submits to hold the position of a bondservant, and, if trained in congruity with the possibilities of his nature, instinctively slides into the habit of subordinating in some measure his natural appetites to commands, which, in this assumed position, it is his nature to recognize as having for himself the might and urgency of a supreme authority. This sense of duty underlies the distinction he makes between his master's right to be obeyed, and any claim a stranger may seem bent upon enforcing by an aggressive manifestation of formidable

power. The latter he furiously resents and obstinately withstands, to the former he submissively yields, even when the tone of voice in which the word is uttered and the accompanying gestures are not adapted to excite a sympathetically responsive affection likely to prove stronger than opposing inclinations. This, he does, plainly, in many a case, from no fear of measuring the brute strength he feels in himself against his master's ability to resist it, but from what, unless some designation more appropriate can be found, may, I think, be fitly named a sense of duty.

But sense is not consciousness, nor does it by any means presuppose this in its operation as a motive. That such is the case, the actions of the lower animals render evident. To all appearance the most intelligent among them exercise no discernment whatsoever of an introspective kind; an inferior nature subject, it would seem, in this respect to rigid conditions, hides from them entirely the springs of intellectual and emotional movement, and their mental activity is, in its very restricted range, exclusively objective. That the restrictive conditions to which I allude are as rigid as they seem to be, I do not take for granted, nor do I hold myself at liberty to assume that they will never give way in the process of a continuous evolution. At present, I am simply describing phenomena, and what I have just asserted is the experienced impossibility of awakening in the mind of any creature on earth, below the rank of man, the faintest perception of the fact that it has a mind, and that there the motives are to be found from which it acts. To condense into a brief and comprehensive statement the substance of what, as it appears to me, I have shown sufficient warrant for affirming in respect to animals of the inferior races, I would say, that some are gifted with a sense of duty, but none with what may properly be called a conscience.

Now, the endowments of the human mind include a capacity for introspection. Man can look into his own mind and observe its operations. If they involve conflicting emotions of ethical importance, the interior action may be, and often is, more than a mere struggle, resulting in the victory of the strongest: such is his mental constitution, that he has power to arbitrate between them, and in so doing to determine for himself which of them ought to prevail. Herein, he possesses a privilege which he may be forced at times to exercise in spite of efforts of reluctant will, while still exempt from absolute constraint to carry into execution the judgment he has pronounced, though subjected to self-

condemnation in every yet unexecuted sentence which remains, rightly or wrongly, unrevoked. The operation of the sense of duty in the mind of man, determined, as it is, by the discharge of these superior functions, discovers itself by indications which, in common opinion, but, as is obvious, not completely, find their interpretation in the term *conscience*. A man, in so far as, in conjunction with his sense of duty, his reflective faculty has been evolved, not only feels the obligation to control resisting inclinations, but *knows* that he feels it, and why he feels it, and, instructed by this experience, forms the *conception* of duty. That what he has conceived is no phantasy, he cannot but be well assured, since the knowledge which his firm persuasion, if well founded, presupposes is the immediate perception of relations which his mind's eye, introverted, has discerned in contemplating the phenomena it has seen within. A conscientious desire to fulfil all duties admits, and indeed from the first gives rise to, the consciousness of an undefinable amount of ignorance relatively to innumerable particulars included in this comprehensive obligation; but it precludes all doubt as to what duty itself is, considered simply as such.

How then, we may now ask, does conscience operate in those who are endowed with it in determining the scope of their sense of duty, and the various obligations which demand their recognition? This sense, as I have pointed out already, is, so far as it can be detected in any of the lower animals, a species of affection in which they feel the pull, so to speak, of an authoritative will. It does not, however, appear that they have the capacity for being thus affected immediately and directly by any higher will than is discovered to them in the actions of man, the creature whose privilege it is to exercise lordship over the brute creation, and in reference to whom the following well-known clause in a sacred charter may, I think, in this connection be cited as appropriate: "The fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea, into your hand are they delivered." (Genesis ix, 2.) But a man, if both his sense of duty and moreover his intelligence are adequately developed, is capable of perceiving that the authority to which he is ultimately responsible is not the will of a fellow creature, however eminent the station which the latter may have reached in consequence of character or talents, or may owe to fortune. Under conceivable circumstances it may become his deep conviction that he is bound to deviate from

the path of an habitual obedience to some visible authority. If so, what causes him to feel, as in the sort of case I am supposing he does feel, that he is authoritatively commanded to do this? And how is it that, in the event of his respect for the visible authority proving stronger than the conscientious feeling which had risen up against it, he has the impression of having incurred blame? It is no explanation of the state of his mind to say that he blames himself. Why should he blame himself? That is precisely what we want to know. For how can he rationally hold that it is to himself he is responsible? Why should he, with a view to self-accusation, establish a court within his conscience? And if he has absolute authority there, if he alone within that sphere of jurisdiction has the right to call for an account of his own actions, to determine what are faulty, and to visit guilt with censure, is he not entitled to forbear to exercise it? Yet if he be thoroughly conscientious, nothing is more certain than that he will not only lay no claim to such a right, but will, with all his heart and soul, reject as impious the notion that he does possess it. The more closely the phenomena of conscience are investigated, the more apparent it becomes that every act of mind in which it is brought into exercise is in effect a recognizing of the jurisdiction of a real and objective judicial authority from which there can be no appeal.

But the impressions made upon that kind of sense which may be said to hear a voice commanding with authority are unmistakably distinct from those in which there is the recognition of mere power. It is one thing to give way to force, it is quite another to submit as to authority, and to respect and reverence it as such. What, then, is it which receives submission when the characteristically human sense of duty is at work? The question, it is evident, has reference to facts: it is with these we have to deal, and not with abstract notions, nor with metaphors that overstep strict truth. Something there appears to be to which a prevalent affection of the human soul, a sense indisputably normal, and incalculably powerful among the mightiest of the agencies that sway the lives of individual men, and bear the whole world onward to its destined goal, ascribes supreme authority. I ask, "What is it?" Surely the reply need not be long in coming. Man can acknowledge no rational obligation to render an account of himself to the material universe, or indeed to any kind of being whose nature is inferior to his own. It is certain, therefore, that the attributes which

constitute the requisite authority must comprehend a will, and (for this of course is presupposed) an intellect. Exception has, indeed, been taken to the transcendental use of any names of human attributes; yet it should be evident that, having represented to our minds an Almighty and Eternal Being, we by no means nullify the concept in our application of such names to aspects of his character and power relatively to our creaturely conditions. Hence, assumed antinomies are nothing more than shadows, and they vanish from our path as we advance by any of those routes of genuine and coherent reasoning which, one and all, converge upon the truth, that whatsoever form of being is conditioned in respect to space and time owes its existence to the fiat of a Sovereign Will, under whose government the universe has been from the creation's dawn, and will continue through all ages. Thus no room remains for doubt that the authority of that All-ruling Will is virtually acknowledged in such actions as are proper to the higher and specifically human sense of duty.

This, then, is the sense of duty which, associated in all men with the capacity for mental introspection and self-government, discharges functions that have been epitomised in the appellation *conscience*, and of which, as must be evident, the range and scope may be inferred from possibilities apparent in the intellectual advance that of necessity takes place along with its development, and is essentially included in the process. Further, seeing that, according as it manifests activity, the subject of it shows an aptitude to recognize, not only intellectually, but with filial reverence, that is, to trust, adore, and love, the Author of his being, it contributes argument for the belief, which is among its most conspicuous concomitants, that men are spirits, being children of a Father who himself is Spirit, and as such act through, not from, that lower nature which connects them for a season with this lower world. But now I find myself in a position to observe that *psychic* is no proper epithet for an affection which is shared by man with none of the inferior animals. A psychic sense of duty he does, indeed, possess, and thus, whereas it should be governed by the underlying nobler sense, the latter, when they chance to be in conflict, is in many a case oppressed and stifled; as may be seen whenever any person, influenced by a will or wills which he is wont to pay respect to, and lacks courage to withstand, betrays confusion if discovered acting in accordance with his higher sense of duty, or allows them, it may be, to shame him into doing something which his conscience disapproves. By way of

illustration, for history suggests to me no incident at once more apposite and pointed—I would instance that inglorious mental struggle which resulted in the feebly resolute command that John the Baptist should be put to death. “The King was grieved; but for the sake of his oath, and of them which sat at meat with him,” (Matt. xiv, 9), he gave the order. His habitual and prevailing sense of duty, it would seem, was of that kind which can apprehend no obligations but such as have their ground in custom, fashion, and tradition. He had so neglected the Divine demand for purity and truthfulness in all the workings of his mind, as to be only fitfully, and not at any time effectually, susceptible of ethical impressions, save as a child of this world. The proverb which asserts that even thieves are wont to recognize among themselves some code of honour, broadly resting as it does, on facts, bears no uncertain witness to the possible existence of a sense of duty quite divorced from conscientiousness, or, after the extinction of the latter, still in some ways active.

The late Professor Maurice, in an allusion he has made to Tennyson's *Northern Farmer*, in his profoundly thoughtful and instructive treatise on the Conscience,* shows, I think, a misconception of the significance of certain words of moral import, relatively to the character portrayed. According to his view, apparently, however low may be the notions which the man has formed regarding duty, his fundamental apprehension of it presupposes that he has in him at least the germ of conscientiousness, a motive principle of noble nature, and requiring only due development and culture. Now there needs no proof that any one who thinks he has a duty *knows with himself* the thought. Thus far, undoubtedly, the *Northern Farmer* manifests a *conscience*. What it indicates to me, however, is a sense of fitness which respects custom and prescriptive right, acquiesces in the inevitable, and in the retrospect of an ungodly and immoral life enjoys a sort of satisfaction which is unalloyed by any consciousness of being guilty, any sense of shame at all. The coarsely heathenish traits of character which, under the conditions imagined, are compatible with this inferior, this psychic sense of duty, have been depicted by the poet with consummate skill, and, in exhibiting it undiluted with the faintest signs of penitence, or of religious aspiration, they show us the more distinctly what it really is. And yet there are conditions under which it may be found alone without

* *Lectures on Casuistry*, Lect. ii, p. 35.

betokening depravity, for it is the form the moral sense must needs assume in its most rudimentary phase; and little else of ethical significance can be discovered in the opening mind of early childhood, or, in fact, until development admits of intellectual distinctness in perceptions of a spiritual kind.

But with strictly scientific propriety it may be affirmed that spiritual things are spiritually discerned; and therefore, seeing that in that process of ethical development which differentiates our true humanity alongside the progressive manifestation of merely psychic attributes, the authority apprehended is spiritual, this epithet, if applied to the susceptibility which is presupposed, declares its nature, and suggests that the specifically human sense of duty should be called a *pneumatic* rather than a *psychic* affection, at the same time leaving it to be assumed that, through the medium of the psychic sense, the indications of the pneumatic gather more or less of colour and complexion. The distinction I am pointing out does not necessitate the notion that the immaterial principle, which through all changes constitutes a man, is not in theory an indivisible personality, but made up of a spirit (*πνεῦμα*) and a soul (*ψυχή*); I am simply using terms respectively appropriate to certain sensible affections that are plainly diverse in regard to nature, and incapable of adequate description otherwise than by the help of words which thus essentially distinguish them. Accordingly, if I am justified in thus discriminating them, that is to say, if the distinction which necessitates a difference in denotation is essential in reality, we are of course precluded from admitting that the Psychic may become through evolution the Pneumatic, consequently from expecting to be able to detect in any actions of the most advanced among the lower animals the merest rudimentary development or promise of that sense of duty which is indispensable to a conception of the fundamental principles of Deontology.

In sketching out what seems to me to be the line along which we may trace a certain evolution of this human sense of duty, I shall avail myself of a familiar illustration to be found in Holy Scripture; not, however, as requiring for the basis of my argument events on record, or divinely sanctioned utterances, but just because I neither know nor can imagine any other illustration so exactly pertinent, so carefully adapted to prevent all misconceptions as to the fundamental truth to which it is apparently intended to give prominence, so vividly, yet so comprehensively, precise, in short so luminous and so profound.

Picture to yourselves, then, human beings who, by reason of original constitution and circumstances, have not as yet experience of any thought or wish which deviates at all from their idea of rectitude. They have potentially, of course, a human sense of duty. How is it to be evolved, that is, as a sense of duty pure and simple, and apart from any such provision as would be inconsistent with an equilibrium between their yet terrestrial, but unsophisticated, sentiments regarding what is right and fitting, and their constitution in respect to appetency? Assume it now to be experienced in the discovery, no matter how, that the Almighty Being, on whose providence and bounty they depend, has laid upon them just one obligation, which affects them in no other way than as it presupposes a privation, such as will be but ideal, should they feel it, yet cannot be so much as felt, unless misgivings take the place of thankful, unsuspecting trust in Him. In their perception of a line which He has drawn, invisible, impalpable, and one that may be passed with perfect ease, but which to step across is to transgress, they have precisely what was requisite that their experiences might be enlarged by the addition of the simplest and the purest human sense of duty, and that they might so conceive of Good and Evil as to see at once what constitutes their fundamental difference.

Now, if they keep the sacred precept, it may be presumed that the relation, which by their obedience they maintain between the Sovereign Will and theirs, allows free room for healthy intellectual growth, and such increase of moral strength as piety, if it becomes established in the way of habit, presupposes. Elevation, therefore, in the scale of being, thus facilitated, is conceivable. But since the Hand that made them has begun to lift them up, they needs must fall, if, in the exercise of moral freedom, they release themselves from its safe-guarding hold: they then will forfeit innocence. This, on the supposition that their proper sense of duty had been suffered to continue dormant, would have been impossible; for, unless the deed, in its relation to the doer, presupposes that there has been awakened in him an ability to take cognizance of its moral character in the exercise of conscience, it is as plainly innocent as any of the actions of the lower animals. It may cause mischief in one way or another, but it cannot render him a sinner.

Relatively to my argument, this rough sketch of the conditions under which we must presume man's conscience to have been evolved I freely leave to be accounted nothing

more than an idealized scheme in which I have presented certain of my inferences from facts, respecting which there can be no dispute. So far as my immediate purpose is concerned, it brings into question the authority of no historic record. In drawing it directly, so to speak, from nature, I have, as may be seen, conformed it to the outlines of the Scripture narrative. I could not have done otherwise; but the relation which the mystic story bears to the hypotheses I find suggested by phenomena is, so far as it has served my purpose, simply that of a profoundly luminous and most instructive allegory. And indeed, that nothing in the way of fiction, even were it so denominable, could have been devised more consonant with facts and nature, will, I think, become still more apparent as, in seeking to bring fully into view the fundamental principles of human duty, we proceed with our investigation of the course of ethical development.

Phenomena of moral import, traceable through ages past, and dating from the initial limit of recorded time, all point distinctly to the probability that the immediate consequence of that development, which made morality in human actions possible, was not improvement, but deterioration. When man had learned to turn his thoughts upon himself, and to discriminate his heart's desires from the behests of an All-ruling Will, the former, we may be certain, he continued to obey, or failed at any rate to subject to persistent and effectual control; the latter he acknowledged, yet remorsefully, reluctantly, and fitfully. The first man, if capacity and latent powers be ignored, "is of the earth, earthy" (1 Cor. xv, 47): as such he has no heavenly aspirations, nor could they by any possibility precede a fundamental sense of human duty. In the development of this, had they accompanied it, he might have risen: as a matter of fact he fell. And thus the naïve, unselfconscious singleness of motives purely natural gave place within him to duplicity, prevarication, evasion, and every other outcome of fruitless efforts he had made to cover with the semblance of consistency the workings of a mind from which the vain attempt at dual government had banished peace.

But, in its bearing upon moral evolution, nothing more significant invites attention than that, through the operation of his conscience, man discovered that he was an animal. Reflection upon self, supposing it had come with aspirations tending heavenward and without self-condemnation, would, we may presume, have issued in the same discovery; but introspection, having been the consequence of terror and

remorse, man's eyes were opened by the consciousness of guilt, and thus ensued a further and a sympathetic sense of degradation. An acute perception of responsibility in things supernal and relations of a spiritual kind interpreted the most distinctive tokens of a nature that was animal and earthly. Hence, among the various races of mankind, according as in moral growth they have advanced beyond the state of infancy, such sentiments prevail, and such proprieties of conduct are enforced by law or custom, as exhibit in their different stages the transition from unconscious animalism to recognition more or less intelligent, of spiritual requirements, bearing thus their testimony to the truth that man is of a rank superior to the nature which maintains for him a transient and provisional dependence on this ever-changing world, and that, accordingly, his lower instincts, which are always tending to assert themselves, and to produce obtrusive proof of an inferior condition, he is bound to thrust back, each into its proper place and office and to hold in strict subjection.

These evidences of superiority constitute an unmistakably essential difference in regard to nature and destiny between man and all the lower animals. There are, indeed, comparative psychologists who think it possible that nothing hitherto has hindered the most intelligent among these creatures from conceiving abstract notions, and ascending thus to higher intellectual grades, except an inability, purely physical, to utter such sounds as might serve for names; and that, had they chanced to be in this respect as favourably qualified for fixing thought by means of vocal signs as certain species gifted with inferior intelligence, if their vocal organs had been on a par with those of talking birds, some would by this time have acquired the faculty of speech, but that, since they are structurally dumb, their psychic evolution is proportionably slow. Yet, even were there ground for the belief that herein lies the obstacle to so enormous an expansion of their reasoning powers as this endowment would imply, it was not by the process of abstraction and of generalisation from observed phenomena, nor was it through communication made to him in words, that man became aware that his condition, relatively to the thoughts which had begun to agitate his soul, was one of degradation. "Who told thee that thou wast naked? Hast thou eaten of the tree whereof I commanded thee that thou shouldest not eat?" (Genesis iii, 11.) Addressed to man, regarded as awakened to a moral consciousness of self, these questions

are interpreted by patent facts which leave no room for doubt what answers should be given. The thought which the word animal expresses can find no place within the minds of creatures that are animals and nothing more, nor is it possible to make them show that they are conscious of humiliating incongruity between conditions under which they find themselves in simply taking for their guide an earthly nature, and any impulse or impression whatsoever which determines for them what is fitting in their actions and their habits. Of that kind of shame which presupposes the capacity for aspiration towards a life superior to that of flesh and blood they are evidently unsusceptible; and, lacking thus essentially the needful stimulus, they cannot become subject to this sort of aspiration, no experience can avail to make them pant and thirst after a nobler state of being than has fallen to their lot. But man has in his self-unveiling consciousness, and in the sobering discoveries to which it opens up the way, the possibility of being raised above the state which he inherits as a creature that begins and ends a brief existence in this transitory world, and of becoming qualified for life eternal, and for the fulfilment of the highest hopes with which the Eternal Father, the GOD of the spirits of all flesh, inspires His children.

That discovery, however, of awaking consciousness, which, so long as man remains an animal, is indispensable to spiritual restoration, and to due development of spiritual perceptions, renders also possible a deeper and a much more perilous fall. The kind of consciousness in which, while shameful actions are distinctly known as such, the reverential and restraining sense of shame is wanting, of necessity tends greatly to accelerate the process of corruption in the soul. So far as it co-operates with sensuality, more mischief is effected than the degradation of mere psychic tendencies, and the habitual animalisation of the human ethos as a whole: a certain pleasurable consciousness is what impresses a specific character upon the preference for moral evil, adding to animalistic pleasure, pure and simple, a peculiar zest, accounting thus for the depravity which shows a morbid taste for such things as are base, impure, unseemly, morally repulsive, and therefore unmistakably betraying *spiritual* wickedness. A *wisdom* which is earthly (*ἐπίγειος*) and animal (*ψυχική*) cannot but be demoniacal (*δαίμονιώδης*). (James iii, 15.) Hence, in the eyes of those by whom this taste has been acquired, to be innocent is to be unknowing, uninitiated, green and raw. They glory in their shame.

From the foregoing considerations it may be readily inferred that in a scheme of human duties, philosophically planned, precedence will be given to those which are fulfilled directly in the act of consciously repudiating the usurped authority which has been exercised by sensual or merely psychic inclinations, and of recognizing as supreme the obligation to obey with filial trustfulness and love the Father of spirits. In the way of truly righteous action, in the only course of life and conduct which our highest reason will approve as absolutely fitting, no step whatever can be taken which has not for its starting point self-consecration to Him. "The wisdom from above is first of all pure." (James iii, 17.) In paraphrastic words, such is its character essentially, that, at the outset of enquiry touching special features, it is to be regarded as excluding everything, of course in thought and sentiment as well as outward act, but what is from the highest point of view becoming, impurity denoting the immediately subjective consequence of any species of unseemliness.

This being granted, various weighty questions readily suggest themselves. It may occur to us to ask, "How is the inward cleansing, which entire self-consecration presupposes, to be wrought?" Anyone who asks this question with a view of ascertaining what he ought to do, will doubtless act unwisely if he takes no pains to find out whether there be some authentic and distinct communication from above which gives the answer. But to point out what should come of such investigation does not fall within the scope of my enquiry, which must necessarily pass over not a little that is otherwise quite pertinent, and may with reason be believed. However, dealing simply from my standpoint with possibilities of sentiment respecting what man ought to be, I hold myself at liberty to say that anyone may be securely challenged to portray a worthier ideal than that which takes the form of an immaculate and willing victim, who by some unutterably awful sacrifice of self procures for the unworthy, at whose hands he suffers, and whose scorn and hatred he endures without complaint, the greatest blessings that can be conceived. The evolution of man's proper sense of duty, plainly the effect of supra-sensuous knowledge, tells us of some revelation of the Will of God: what, then, is that grand ideal, higher still, and by innumerable degrees, above conceptions formed by psychic effort, but a revelation of His Character? In exercising a transforming influence upon the characters of creatures of high rank and noble faculties, but

corrupted and defiled in mind through the injurious operation of a privilege abused, it vindicates the goodness and the wisdom which bestowed that privilege, it justifies the evolution of man's conscience ; and, moreover, in the eyes of those who doubt not that it has been realised on earth, and in the person of a man, the sacrifice of self inseparable from this needful revelation, this comprehensive agency for the fulfilment of a work transcending the conceptions and the strength of guilty men, is of necessity vicarious.

In reference to this last remark, I would remind you that the realization of the ideal is, relatively to my line of argument, no more than a possibility which it was proper for me to take account of. Not, indeed, that I can help perceiving strictly philosophical and luminous congruity between such relevant considerations as, in my opinion, it suggests, and the conclusions which, as I believe, I have established. Still, although I take for granted nothing more than the conception of a character that cannot be conceived except as morally ideal, namely one in which the spirit of self-sacrificing zeal in doing good, and thereby overcoming evil, rules in steadfast singleness of purpose, what I now affirm is, that to apprehend it morally is to discern in it a standard which discovers to us what we ought to be. Two kinds of movement, then, distinguishable without difficulty, and bearing witness to the action of a directing Providence, may be observed along the course of moral evolution. The beginning of the earlier leaves to be inferred a simple intimation of something men ought not to do ; the later, in disclosing what they are required to be, has opened up immeasurably the scope of duty and the evidences of shortcoming. Deontology, it thus appears, should take account of everything which is involved in this most comprehensive and complete requirement ; and as not a single duty can, apart from it, be thoroughly and radically understood ; the principles which guide us rightly in determining the conditions of *objective* duty must needs presuppose that the condition of the *subject*, the created spirit whom it binds, has been investigated relatively to the fundamental obligation.

Ethical philosophy, so far as it knows nothing of responsibility to an all-ruling and absolutely righteous Spirit, is, and cannot but be, in the main objective ; and accordingly, among the thinkers of pre-Christian heathendom, however keen, inquisitive, and serious, none succeeded in being otherwise than superficial in their efforts to reduce to system and expound man's various duties, none had power to free their

intellects from the control of custom and tradition. Relatively to the exigencies of the sort of work they undertook, what light they had within them was but darkness. They perceived, indeed, that such relations between man and man as seemed to have their ground in nature, or to find their warrant in imperious necessities, implied a reciprocity of obligations, and that to fulfil such expectations as might thus become legitimate was to discharge a duty. Their sense of rectitude required subordination of all private aims to public interests, conformity to practices prescribed by law or custom, and, in the adjustment of disputed claims, fair distribution and equivalence. The conduct of the individual, regarded in its reflex aspects, they certainly did not ignore; for they were fully sensible of the advantages of temperance, and culture, and psychic equilibrium. Nevertheless, the crudeness of their teaching in respect to duty under both these heads is ample proof that, in the absence of a knowledge of the true God, and with moral tastes unsharpened by a vigorous sense and by a clear perception of what constitutes man's proper duty, all endeavours to establish or expound a science which shall fitly bear the title Deontology are fore-ordained to failure.

Modern Utilitarianism, in elaborating and applying its ethical conceptions, has not failed to profit by those discoveries of truth and those corrections of error, throughout the range of secular investigation, which have largely benefited all civilized nations in these latter days. The requisite conditions, psychic and material, of human happiness, so far as they can be discovered from its point of view, it specifies with scientific clearness and incisiveness. But how is it adapted to repress that spirit of licentiousness which has infused itself into the human mind through the knowledge of good and evil, and, as a deadly poison, vitiates the springs of human life? Not only is it ineffectual as a remedy for moral evil of the kind that lurks in deeds of darkness which Divorce Courts, for example, bring to light and blaze abroad, but the facility with which it lends its aid to specious pleas for the removal of restrictions that have been established on religious grounds betrays an ever threatening readiness to sanction fresh developments of animalism, and to claim liberty for new departures in the direction of its most debasing forms. Utilitarianism cannot but discountenance the madness of such expectations as the possibility of winning stakes and ventures simply by good luck excites in fools. But failing to exhibit truly in their moral character the acts which evidence

this kind of folly, it exerts no adequate deterring influence. Indeed, whatever be the sins, and the avenging tribulations that may be reasonably expected in their wake, it has in this respect but little power, still less to rescue victims from whom hope has fled. Utilitarianism classes with the virtues it acknowledges charity, as well as prudence, moderation, and the like; it may, for instance, give attention to the horrifying fact that in congested centres of population there are many homes which overcrowding has converted into teeming hotbeds, reeking with all kinds of moral abominations. But if it should utter what it knows, it speaks not with a voice that can disturb the blissful apathy which has been exempted from such dire experiences; it has no burning words which may arouse in those who live in decency and comfort the conviction that the inmates of the dens of misery are their brothers and their sisters. Evils and miseries innumerable, and ever bearing witness to resistance on the part of an antagonistic world, still tax the patient and enduring energy of a world-conquering Love. But this can never dwell apart from Faith and Hope. The obligations which it recognizes are imperceptible, unless regarded from the highest point of view which human thought has power to reach; nor can they be fulfilled, except by those who seek persistently the needful help from Him who, speaking in our consciousness of duty, thereby plainly tells us that it is to Him we have to render our account.

The CHAIRMAN (PHILIP VERNON SMITH, Esq., M.A., LL.M.).—I am sure all will agree that our heartiest thanks are due to Mr. Clarke, for his valuable paper. Perhaps you will excuse me if, in my position as Chairman, I venture to begin the discussion myself. I do not suppose it is possible to imagine a more comprehensive and abstract idea than that of duty. In the words of, perhaps, the most eloquent of present orators,* “Duty is a power which rises with us in the morning and goes to rest with us at night. It is co-extensive with the action of our intelligence. It is the shadow which cleaves to us, go where we will, and which only leaves us when we leave the light of

* Right Hon. W. E. Gladstone, M.P. (on the *Vatican Decrees*, 1874).

life." But in reference to the point of view in which Mr. Clarke has brought the subject before us, it is to be observed that the word for *duty*, which he has given as the heading of his Paper, and which he stated to be the Greek equivalent for the Latin *debitum*, or *due*, is *δέον*. I was struck with his explanation of this word as meaning *wanting*, implying a deficiency which requires to be made up. Now, no doubt, debts are very often bad ones and in that way they are deficiencies which sometimes are not made up; but I would suggest to him whether this word *δέον*, in connection with *duty*, has not another meaning besides mere want. It seems to me that it is just as much connected with *binding*, which is also a sense of the Greek word *δέω* and in that respect it corresponds not with the Latin *debitum* but with the Latin *opus* and *obligatio*; and I think Mr. Clarke himself has recognised this in the latter part of his paper, where he speaks of the sense of duty on the part of animals as a feeling that they were drawn or pulled by a higher will. It is rather remarkable that this view, which I have suggested, appears to be borne out by the etymology of the Greek word for debt, which is used, for instance, in the Lord's Prayer—I allude to the word *ὀφείλημα*. That word is connected with *ὀφέλλω*, which has two meanings, viz., that of *requirement*, and also that of growth or increase or prosperity. So that in the Greek the idea of duty is connected with *utility*; and in Philosophy, as we know, and, as we have been reminded in the course of the Paper this evening, duty is sometimes placed on the ground of *utility*. I quite agree with Mr. Clarke that this is not the highest ground on which to place it, nor a safe rock on which to build it; but I have no doubt that the two things are connected in language as well as in thought. There is another word of a less solemn meaning connected with duty, and that is the word *πρέπον* or *decorum*. That also enters into the idea of it, but I cannot help thinking that *obligation* is the real meaning, as, for instance, when our Saviour said *ἐν τοῖς τοῦ Πατρὸς μου δεῖ εἶναι με*, "I must be about my Father's business," or "in my Father's house." That is not a sense of debt, but of obligation, and that sense of obligation is shown in St. Paul's Epistles, and is put even higher in 1 Cor. ix, 16. "For though I preach the Gospel I have nothing to glory of: for necessity is laid upon me; yea, woe is unto me, if I preach not the Gospel." The Apostle there looks upon duty as being an absolutely binding force from which he cannot possibly become free,

A very interesting part of the Paper was that which traced the sense of duty in animals and compared it with the sense of duty in man. I did not feel that I was quite able to follow Mr. Clarke in the distinction he made between the sense of duty in man as a pneumatic idea, whereas in animals he affirmed it to be only a psychic idea. The great difference between animals and man is, of course, that animals do not and cannot recognise duty in the abstract, but they only recognise concrete duties when trained to do so. They can be taught to recognise a number of duties, but those duties will be independent of the general idea of duty, and will vary according to the impulse that is given to the animals by a higher will. A poacher's dog will recognise it as his duty to poach. A sheep-stealer's dog will recognise it as his duty to worry the sheep and kill them and carry them off. A shepherd's dog recognises it as his duty to guard the sheep, and on no account to injure them. But the difference between the cultivated and Christian sense of duty and the sense of duty in animals is not merely that. Man can form an abstract idea of duty whether he has a perception of the Supreme Being or not. He can generalise his ideas of duty in all systems of philosophy, whether Stoic or Utilitarian. When his duty is generalised, it to that extent becomes crystallised and fixed. In order, however, to get the highest standard of duty you must not only generalise the *duties* into one sense of duty but you must perceive that the duty is owed not to a changeful and uncertain will or a number of changeful or uncertain wills, as in the case of the lower animals to man, when they come in contact with him, but to the one Infinite and Changeless Will. When we get that idea, we get the idea of duty not merely generalised as far as ourselves are concerned, but also, so to speak, generalised at the other end of the cord, and it is then absolutely changeless and fixed. I think, however, upon the whole, that perhaps the most interesting part of the Paper, if I may be allowed to draw a comparison, was that which referred to man's consciousness of the degradation involved in his fall—his aspirations after something higher, and his demoniacal downfall, if in spite of this consciousness he allows himself to become the slave of his animal passions. If he falls, when he has the power of rising higher, he falls lower than the animals!

REV. C. R. PANTER, M.A., LL.D.—Although I agree with the Author of this Paper in his arguments, I am not quite

satisfied in regard to one or two of his deductions. On his second page he says, "Now the word duty implies that in the matter with respect to which it is used, something is conceived as being due (*debitum*).” That is perfectly true on one condition, that the matter the duty relates to is our sense of responsibility which springs from moral obligation, and which belongs more to the sense of rectitude than to that of Deontology. The Author says in the next instance, "If, however, for 'due' we substitute 'wanting,' we get a concept which is preferable," and further down he continues:—"And thus on the supposition that the experiences which originated and have perpetuated the notion afford materials available for the elaboration of a science, Deontology may claim to be accepted as its most appropriate name." I confess I know them not, nor can I see how substituting a word for "due," which the Chairman explained clearly, can make those experiences known to us. We know very well from our experiences of a sense of duty what they are. We have, through them, the knowledge of a consciousness of rectitude. Again, the Author draws the distinction between psychic and pneumatic affection, and he draws the comparison between man and the lower animals, in reference to the psychic and pneumatic affections. I deny that the lower animals display to human intellect a knowledge of duty, but the Author again assumes what I cannot agree with, and that is that the lower animals have a psychic affection that may be called a sense of duty. We are asked on the third page to observe how the lower animals behave when detected in an act of disobedience. "The manifestation of fear may possibly in such a case be insignificant, or even *nil*." And we are told this psychic affection arises from a sense of shame, and he says, "But a sense of shame implies a sense of duty." I do not agree with that. I say that a sense of shame implies a sense of something wrong being done, or guilt, and a sense of wrong implies—at least, an abstract thought in the individual, and that comes from ourselves being cognisant of a moral obligation, and that again arises from our consciousness of rectitude. [It is due to Dr. Panter to say that by reason of illness he could not correct the report of his speech. —Ed.]

Professor H. LANGHORNE ORCHARD, M.A., B.Sc.—If I were to say what part of this Paper has most charmed me I should select the latter portion on Utilitarianism. I must, however, agree with

the strictures of the Chairman with regard to the substitution of something *wanting*, as being worse than the idea of *obligation*, and I think the Author himself virtually admits that the idea of duty is obligation. I notice on the second page the Author says this—"The sense of duty is not an intellectual perception of the deficiency, but a kind of feeling which virtually acknowledges an authoritative command to supply it." But what is that but saying that the sense of duty is a kind of feeling which virtually acknowledges a duty to supply it? The idea of duty is apparently a consciousness of the supremacy of law, or, to put it rather more clearly, the consciousness of the supremacy of the supreme law. If I defined duty in that way, I should be disposed to define conscience in some such way as this,—“Conscience, or the moral faculty, is that which approves or disapproves actions, according as they agree or disagree with the supreme law.” The Author thinks, as I understand him, that there is in brutes a psychic sense of duty which leads them to avoid doing certain actions. Their sense of duty, if it may be so called, is not, however, natural to the brute, as you do not find it in wild animals. It is, whatever it be, the result of some training, and does not seem to rise higher than man. The sense of duty in man, is, I apprehend, innate,—existing as thoroughly in the infant and the savage. What is developed is not, I think, a sense of duty—that is the consciousness of the supremacy of the supreme law—but the intellectual discernment and judgment with regard to which that sense of duty is frequently and commonly exercised. The conviction that robbery is wrong, that injustice is wrong, is as thoroughly perfect in a child as it is in a cultured man. The difference between them is not, I think, in that, but in the intellectual discernment of what is robbery, and what is injustice. Once seen that the thing is a robbery, the conscience rebukes that just as much in a child or a savage as in a cultured man, but the cultured man would be able to say to such action, “It is wrong,” whereas perhaps the child would not be able to say this, for want of intellectual perception or judgment. Taking this view of duty, I cannot agree with the Author that there are two kinds of sense of duty in man, viz., the psychic and pneumatic, which may be in conflict with one another. It appears to me if duty says we ought to do a thing it is impossible that there should be a conflict of duties. Whatever I *ought* to do is supreme, and it is quite impossible that I *ought* to do

two different things in opposition to each other. I must differ from the Author as to the use of the terms "evolved," "developed," and "grown," with regard to this pneumatic sense of duty. If it be not innate, *where* does it come from? If it is evolved, *what* is evolved. It is not a psychic sense of duty, as the Author points out. If it is not evolved from that, it could not be evolved from anything whatever. I must contend that the sense of duty is from law, and is essentially innate. In fact, the Author says in one place that duty is essentially innate in man and yet he appears to say that infants may be without it, and there may be some human beings that do not possess it. As to Herod and John the Baptist, I do not think there was any conflict of duty, but it was simply that Herod preferred to please man—the daughter of Herodias—rather than God. That is, to my mind, the interpretation.

With regard to feeling the consequent sense of shame, surely the command implied, first, the possession by Adam of the sense of duty. Had there been no sense of duty already existing in him, I do not see how there would have been any guilt in breaking the command. It was because he did what he knew he ought not to do—in other words, because he went against his sense of duty—that he sinned. The sense of duty would not be evolved by the sin, but existed at first.

The Author has made a most valuable distinction between man and the brutes with regard to the sense of duty. If they be allowed to have any at all, it is certainly very different indeed to that possessed by man; and I thank the Author for so well and ably bringing out that distinction.

MR. CHARLES BROWNE.—I am entirely in accord with the remarks made at the beginning as to the etymology of the word. No doubt the word "Deon" is used in respect of duty in the sense of tying together, the idea of duality being very generally implied by the use of the D (Delta) in those words which represent the dealing in any way with two things; either as in words compounded of *Dis* and *De* representing severance of one thing into two; or, as in "duo," "duplex," etc., representing the connection of two things together. Thus in the words *Dei*, *Deon*, *Dnty*, etc., the notion conveyed is the tying together of two things, namely the person who is bound to do a thing and the supreme authority that compels him to do it; and thus there is a very plain connection or correspondence in sense between the words "Duty,"

derived from "deo" to tie, and "obligation" derived from "obligare" to bind together.

I am not only satisfied of the identity of the reasoning faculty in the lower animals, but I am also satisfied that there is in some of them at least the indication of an inchoate sense of morality. I would refer to the notion that dogs have of property and its rights, for that involves in itself the notion of their being obliged by some authority or principle that they recognise to restrain themselves from something they would much like to have appropriated to their own use.

The latter part of the Author's most interesting Paper refers to a subject which lies at the bottom of it all, that is the sense of moral obligation. We look at a treatise on moral philosophy of Socrates or Plato, and we see that that is the real difficulty with which they feel they have to contend. A man who is not disposed to do what he should do says "Why should I do so?" In the Platonic dialogues, reporting the discourses of Socrates, there is a higher notion presented, for he has a knowledge of higher obligations which impose on man higher duties; but when you come to Stoicism all you find is simply the didactic statement that he *must* do it; and you again ask, Why? and then a most valuable part of this Paper comes in. We all know the great distinction that is drawn by writers on jurisprudence, which has been so much threshed out lately—that, as a fundamental notion, law is nothing. You say "obey the law"; but unless the law has an executive power to compel its performance, it is no more powerful than a mere expression of opinion; but when you bring it, as the Author has so ably done, to a Christian system, you are carried to something higher than the mere existence of an abstract law—you are brought to the knowledge of that which keeps alive the conscience, so that in everything you do you have the abiding consciousness of the will of a Personal Being who is above you, to whom you are tied and bound so that you cannot shake yourself loose from the bond, and then you find a sanction that is wanting to all the heathen ethical precepts. A very common error is committed by persons who derive their notions on moral subjects from French writers, owing to a mistranslation of the word "conscience." The word "conscience" in French means merely "consciousness," and yet you constantly find it treated as meaning "conscience" in our English use of that word, and all that "conscience" with us

implies—that is, not only the mere recognition of the facts, but the reflection upon them, the submission of them to the criticism of the moral sense and the pronouncement of the judgment upon them formed by that sense, whether they are right or wrong, with all the consequences that follow on that judgment; none of which processes beyond the mere “consciousness” of the facts are implied in the French word “conscience.”

The CHAIRMAN.—I will now call upon the Author to reply.

The AUTHOR.—The first remark I have to make is in regard to the explanation I have given of the word *δέον*. I traced the meaning of that word as far as I could and in so doing I had in my mind the various senses in which it is employed, and it seemed to me that the prevailing one is that which is expressed by the word *wanting*. Whether I reached an absolute limit in my investigation it is impossible for me to say. But I appeared to arrive at a simple conception of the meaning of the word which I could assert as the basis of the conception of duty. Now, I will explain why it is that I have found it necessary to distinguish between a psychic and a pneumatic sense of duty. I think it must be admitted by all who know anything of the habits of intelligent animals that they really have a sense of shame. It is no theory of mine, and I took for granted that it would be generally admitted. I think Dr. Panter denied that animals had a sense of shame.

Dr. PANTER.—I said they had not a sense of duty.

The AUTHOR.—I thought you denied that they had a sense of shame, and that you resolved the appearance of a sense of shame into a mere manifestation of fear. That appears to me to be your argument and it seems to me that if there is a natural sense of shame, that sense of shame implies a sense of duty. What you assert is that they have a sense of disobedience and yet not a sense of duty; but how can anyone have a sense of disobedience without having a sense of duty? What does it mean? A failure to discharge a duty is a breach of duty. Any person who has a sense that he has violated an obligation certainly must have a sense of duty. Sense of duty has a prospective significance in relation to the consciousness of disobedience, so to speak. I do not maintain that animals have a consciousness of duty. I draw a clear distinction between sense and consciousness. But animals appear to have, as we have, a moral sense—a sense of justice. I think the last speaker allowed that

animals have a moral sense—that they have, I think he said, not a sense of justice—perhaps you will kindly tell me.

Mr. CHARLES BROWNE.—On the contrary, I should say that they had a sense of justice. I said property—that they have a sense of property.

The AUTHOR.—Yes, they most certainly have, and that implies a sense of justice. Now if animals, in those respects, are constituted as human beings; in what respects, so far as duty is concerned, do they differ from men? I maintain it is in this; an animal can be pulled or drawn only by some outward and visible manifestation of authority—something which is in its nature changeable. The animal has, as its master, a person whom he recognises as a master—somebody who belongs to this world of sense and time; but the human being, in so far as he exercises his conscience, recognises an authority that is Eternal and Unchangeable and shows himself to be the child of the Father of Spirits and therefore maintains a sense of duty which I say is properly called not psychic but pneumatic. At the same time, I maintain that he has also a psychic sense of duty, and of this I think there is no doubt. Professor Maurice, after commenting on the use of the word, thought that its significance as used in the *Northern Farmer* lay in the word “ought.” I cannot accept that statement without qualification. “That which is born of the flesh is flesh”; but if that which is born of the flesh is but flesh, then no racial prerogative can constitute a spiritual distinction. What I take the truth to be is this: that the so-called Anglo-Saxon sense of duty is a mere psychic affection—purely psychic—and that it has comparatively little in it of reverence—comparatively little of the religious sentiment; that, on the contrary, it is somewhat given to push aside, contemptuously, and to sweep out of its path all obstructions that may have been placed against it by religious scruples. It seems to me, therefore, that if we are to attribute to some nation a peculiar sense of duty or sensitiveness to moral obligation, we must admit that it is of a psychic—of an animal nature, as distinguished from what I maintain is a pneumatic or spiritual sense of duty. I do not see how it is possible to explain the various phenomena of the workings of the mind of man unless we make this distinction. I find it made in the Scriptures, *i.e.*, in the use of the term “psychic” (*ψυχικός* in the original), as applicable to the man who acts simply from a psychic

sense of duty. The pneumatic man is one who, recognising the Father of his spirit, acts from the highest sense of duty—he is the spiritual man. He is able to discern spiritual things—the spiritual faculty is in him more highly developed than in the case of the psychic man, in whom perhaps it manifests itself only occasionally and fitfully. I think now, having pointed out the necessity for making a distinction between those two words, it is not necessary that I should comment on every remark that has been made in reference to this Paper; it would take me too long a time. There is one more remark that I must notice. It is the objection that was made to my use of the word “evolved.” I spoke of the sense of duty, whether psychic or pneumatic, being evolved. I meant what was evolved was a potential sense of duty. The sense, unless its exercise be called forth, is latent, and the calling forth of that sense into some kind of action is what I mean by its being evolved. The sense of duty being evolved (that is, a peculiarly human sense of duty), in the exercise of that we arrive at an ever-widening conception of the scope of duty, and that which develops our views on that subject, that which brings out and unfolds the true principles of Deontology, is a reverential conception of the ideally perfect character. (Applause.)

The Meeting then adjourned.

FURTHER REPLY BY THE AUTHOR.

The interpretation I have given of the title of my Paper is based on the assumption, not that the conception of duty is separable from that of binding or obligation, but that the latter presupposes something in regard to which *deficiency* would be predicable on the supposition of its being *unfulfilled*. In short, in contemplating any requirement, be it moral or physical, I perceive a concept which, as it seems to me, necessarily underlies the notion of constraint. Between *needs* and *binds* there is no obvious relation in respect to meaning, and although in Greek they are represented by the same sound and the same combination of letters, no such coincidence as this would justify the assumption of etymological identity. Yet, if an etymological connection between the two concepts were established, I should hold that the former is the primary signification of the impersonal $\delta\epsilon\lambda$. In any case I classify the word with *oportet* (*opus*), *il faut*, &c. Thus

interpreted, it embodies what I take to be the fundamental conception of the science which has been named Deontology.

In the course of the discussion it was argued that if any animals have what may appear to be a sense of duty, it cannot be natural to them, but must be a result of some training, seeing that it is never found in wild animals. But the assumption on which this objection rests is not generally admitted by those who have made animal intelligence their study, and it is unquestionable that there are creatures which in their natural state, birds, for instance, and even insects, notably ants, make it evident in actions which display some degree of intelligence, oftentimes in strikingly ingenious adaptation of means to ends, that they are sensible of obligation to conform to a constituted social order, and that measures are adopted by the experienced and orderly among them for enforcing conformity on the part of the untrained and the contumacious. A social impression of what is fitting largely controls individualistic impulses and tendencies, and renders prosperity and safety compatible with a comparatively low degree of individual ability to foresee the consequences of irregular action. Such phenomena as I am alluding to disclose what I have ventured to term, not indeed a reflective perception, but a *sense* of duty, that is to say, of what is due to the community.

I have intimated my belief that the psychic sense is essentially distinct from the pneumatic, and I have pointed out conceivable cases in which they may conflict with one another, but I beg leave to observe that I have not therefore asserted the possibility of a conflict of *duties*. For human beings, such law as psychic intelligence has capacity for apprehending is subordinate to that, which, as children of the Father of Spirits, they are bound to obey. The psychic man's perception of the latter is limited to dim, confused, and inconsistent notions. And I should think it will not be denied that, as compared with enlightened Christians, children who are just old enough to be taught to believe in God have a feeble conception of a Being who requires truth in the inward parts. In their case, and in that of savages also, the desideratum is no mere intellectual development; they need, what all adult believers need more or less, *spiritual* advance, and therefore, on the supposition that the spiritual sense has been awakened, increased activity in that innate aptitude truly to respond to the demands of the Author of their existence. In making this supposi-

tion I have used a word which, for those who read these remarks, will, I trust, obviate any possible misapprehension of the meaning of the term *evolve* as applied by me to the sense of duty. In accounting for the first manifestation of this sense in human beings, what I have asserted is, not that it was generated by the consciousness of sin, but that it was awakened by the perception of a divine commandment, that incipience in moral activity, thereby brought about, not only preceded their transgression but rendered it possible, and that accordingly the tree of whose fruit they ate was to them from the first the Tree of the Knowledge of Good and Evil.

THE GUNNING PRIZE.

His Excellency Dr. R. H. GUNNING, M.A., LL.D., M.D., F.R.S.E., &c., Vice-Patron, has this year (1892) presented the Institute with a sum of £500, under the following conditions:—

“The interest or income thereof to be held in trust always, for the purpose of endowing a prize, to be awarded triennially (*or otherwise*) in recognition of services rendered to the object of the said Society.”