THE SOUTHERN
PRESBYTERIAN REVIEW,

VOL. XXXVI.—NO. 2.

APRIL, MDCCCLXXXV.

ARTICLE I.

MODERN HOMILETICS.[1]

The foremost literary man of a period not the most recent, marked a characteristic of his age in the words:

> "Of making many books there is no end,
> and much reading is a weariness to the flesh."

We wonder what would be his impression, could he stand on the banks and measure the volume of that stream which flows so steadily and increasingly from the printing presses of to-day. No branch of this great river—not all of it so pure and wholesome as it might be—is larger than that devoted to homiletics.

---

[1] 1. *Yale Lectures on Preaching.* 8 Vols. 1872–3–4, Beecher; 1875, Hall; 1876, Taylor; 1877, Brooks; 1877, Dale; 1879, Simpson.

2. "*Homiletics.*" 3 Vols. Vinet, 1854; Shedd, 8th ed.; Hoppin, 1883.

3. "*The Preparation and Delivery of Sermons,*" 1871; "*A History of Preaching,*" 1879, Broadus.

4. "*Lectures on Sacred Rhetoric,*" 1881, Dabney.

5. "*Lectures to My Students.*" 2 Vols. *First Series*, 1875. *Second Series*, 1877, Spurgeon.

6. "*The Theory of Preaching,*" 1881; "*English Style in Public Discourse,*" 1883, Phelps.

7. "*The Art of Extempore Speech,*" 1859, Bautain. "*Conditions of Success in Preaching without Notes,*" 1875, Storrs. "*Extempore Preaching,*" 1884, Wilder Smith.

8. "*The Principles of Written Discourse,*" 1884, Hunt.

ARTICLE IV.

EVOLUTION AND THEOLOGY.

THE LOGIC OF PROF. WOODROW'S OPPONENTS EXAMINED.

The grand theistic problem of our age is, not how to prove the existence of God, but how to conceive his relation to the world. That problem demands earnest and honest thought as well as honest and earnest discussion.[1] Manly, courageous thinking demands as one of its essential conditions vigorous effort, not only in concentrating thought, and following steadily long and diversified paths of intricate reasoning, but also self-surrender; both of which to many, like the "reading of many books," may prove such a "weariness to the flesh" that the thinking is left undone, or, what is the same thing, done by proxy.

There has been of late, especially in the Southern Presbyterian Church, a good deal of platform and pulpit and newspaper controversy on the subject of Evolution; whether there has been a brave and fair facing of the issues, is another matter. Perhaps it is inevitable that as long as there are certain leaders in science, with a turn for metaphysics, and certain leaders in theology, with a turn for science, they will play the *rôle* of intellectual knights-errant, and prance about the country bellicose and armed, great in challenge and counter-challenge, retort, invective, and innuendo. These passages of arms may be easily overrated. The world's decisive battles have not been fought by careering and trumpeting errant knights. Thinking done in public, or under the influence of prejudice, fear, and a paralysing awe of tradition and authority, though it may embody itself in speech now scornful, now pitiful, now minatory, may, while suiting the times or the majority to which it is addressed, be deficient in those qualities that can win lasting respect and command permanent conviction.

No devout man of culture can remain indifferent to the world-old conflict, which in varying form is constantly coming to the

[1] "Philosophy of Religion and History." A. M. Fairbairn. New York: Worthington, 1878.

surface in history. Man's religious faith often comes in apparent collision with the truths of nature. The mind of the age, and of every real thinker, is an arena where two apparently hostile conceptions struggle for the mastery, and the struggle seems so deadly as to demand the death of one for the life of the other. The contestants are not always the same. One may conquer the other; or they may discover that they are friends and shake hands. Yet it is the law of mental life and growth that every mind and every age shall be an unseen battle-field where the armies of thought join issue.

Our age, at least our Church, is morbidly alive to the apparent collision and antitheses of science and religion. But "the highest truth of religion is the ultimate problem which will confront science when she raises her eyes above the dust and above the stars and asks 'Whence' as well as 'How.' Religion lives by faith in a Creator, science in tracing means and methods is led at last to seek and discover a cause. Man cannot live either by religion or by science alone. Both are necessary to the perfection alike of the individual and society. The realities of both are sacred. It is the duty of the intellect to search diligently into both, and of the heart and conscience to loyally serve both. The truth that shall reconcile their apparent conflicts is to be found, not by silence or concealed convictions on either side, but by the frank criticism and coöperation of physicist, metaphysician, and theologian."[1]

The final outcome of antagonism and controversy will be a gain to truth and righteousness. These conflicts of ideas in the clashing of mind in debate are but the birth-throes of truth, or the budding and growth of new organs in her body, or new branches in her tree. To borrow a figure from the Lamarckian form of the evolution hypothesis: truth, as held in the mind of man, is a growing thing, developing, by appetency and use, new organs and forms. The mental conflicts are but the "growing pains," the temporary discomfort felt by germinating power. While giving this figure as a rough statement of the growth of truth in the mind of man, it is in no sense meant that truth itself is a relative

[1] "Theism and Scientific Speculation." A. M. Fairbairn.

thing or a mere development. It has an absolute changeless reality of its own, into which the mind is ever growing. "As from the war of nature . . . the most exalted object which we are capable of conceiving, namely, the production of the higher animals directly follows,"[1] so from the war of ideas there arises nobler forms of truth, better conceptions of God and nature. In the world of thought and belief, as well as in the kingdoms of plants and animals, the fittest survive in the struggle for existence.

While believing that God overrules all mistakes and errors in the end, and that the ultimate triumph of truth and right is certain, yet we are convinced that our Church has grievously erred in the position she has recently taken on the subject of Evolution, and has done a cruel wrong to Prof. Woodrow in removing him from his chair because of his views on that subject. A mental attitude, fundamentally wrong as to the relation between theology and natural science, has been exhibited by the majority whose will has temporarily triumphed in the act of Dr. Woodrow's ejectment declaring that a theological Professor will not be tolerated who thinks that "Evolution is a hypothesis which is probably true."

A spirit of unreasonable jealousy and fear towards scientific inquiry and speculation has been shown; ill-considered and ill-informed criticism has been indulged; rash and harsh judgments have been expressed. Words have been spoken and actions taken that are simply nineteenth century substitutes for the work done in the days of persecution by bell and book and candle. A spirit of hostility to free inquiry has been manifested. The spirit that confronts scientific theories too much in the interests of traditional interpretations, too little with the confident heart and open sense that seeks and finds God and truth everywhere, has been displayed. The past errors of theologians and of the Church, in some cases in her official capacity, in controversies over scientific theories, have found an echo and a repetition in our Church. Truth has been wounded in the house of her friends. Another javelin has been put in the hands of future John W. Drapers to

[1] Darwin's "Origin of Species," p. 429. New York: Appleton, 1875.

hurl at the Church and keep men from the Christian faith by misleading them into the belief, from the example of the Southern Presbyterian Church in the year 1884, that Christianity is opposed to culture and science, to freedom of thought and investigation. Not that the argument will be legitimate as against the Bible and Christianity, any more than is the reasoning of such men to-day on the imprisonment of Friar Bacon, the burning of Giordano Bruno, and the persecution of Galileo by Rome, and the burning of Servetus by Geneva. But they will not distinguish between the wrong-doings of an age and the error of a few, and the Christian system as a whole. They will be unfair, doubtless, and credit Christianity with the act of a small body. Their plan has always been to raise the ghosts of the dead, and confuse and exasperate the sons by fighting them with the bones of their fathers.[1]

That class of scientists which for generations to come will be hostile to religion, will be quick to use this recent act of our Church to mislead the unwary and caricature the spirit of the Bible. Such men have been and always will be fond of "narrating the conquests of science, as if they were victories over theology, and not over ignorance. The antiquated and false views of nature which old divines maintained, and because old could not but maintain, have been and will be gravely represented as essential to religion, almost identical with it, and are no less gravely classified and exhibited as exploded religious doctrines, rather than as what they really are, exploded conceptions of nature, interwoven with the religions or with the other thought of the time, but as form, not as matter." [2]

It is not to conciliate scientific scepties that the Church should guard her utterances and her acts, but to protect the masses from being led into ruin by the misrepresentation of foes. A Church's errors increase scepticism by putting stumbling-blocks in the way of faith. One prominent member of the majority side of this

---

[1] "Draper's Conflict between Religion and Science." New York: Appleton.

[2] Draper's unfair and misleading book, the so-called "History of the Conflict between Religion and Science," is a striking example of this.

question charged the minority with making concessions to science to win its favor, which would result in driving the masses into a rejection of the Bible. So doubtless thought the Fathers, Luther, and other Reformers, in opposing as infidel the doctrine of the earth's rotation. So thought the theologians of two generations ago, who opposed what turned out to be the erroneous, but harmless, theory, advanced as science, that the days of creation were thousand-year periods. It may be quite true that our first duty is to the people of our own generation. Yet this principle may be held in such a way as to make us forget that we owe duties to posterity as well. Responsibility extends beyond the limits of one land, or the boundaries of one age. The results of conduct reach far into the future. Every age must fight its own battles. Quite true. Hence the present must not surround the future with needless difficulties, by sowing in its fields the thorns of its own errors, and by cumbering its path with the *débris* and ruin of its own folly. There is an unfaithful fidelity to the people of our own time, which consists in fostering its follies, feeding its fears, and pandering to its prejudices.

Holding these views concerning the position of our Church in the ejectment of Prof. Woodrow from his chair at Columbia Seminary, it is but natural that the minority should maintain its protest, and contend in every lawful way against what is held to be both wrong and hurtful. There is no need to serve a formal notice, where the matter contested is an important principle, that the war is not over. Majority-votes do not settle principles. The victory of numbers does not conquer judgments, nor chain thought, nor seal lips, nor dry the ink from pens. To be a Presbyterian is to serve a standing notice that when error is honestly thought to have been committed, the fight against it will go on, even though the errorists should be "Synods and Councils," or rather *especially* should they be "Synods and Councils."

Two objections may be urged against further discussion on this subject, viz.: 1st. It may be said, "Considering the learning, the piety, and the eminence, and the overwhelming number of those in our Church, whose judgments are against the minority in this matter, agitation should cease; you should acquiesce and bow in silence

to the presumption that you are in the wrong." 2d. "Waiving the point as to who is right, as the solemn official acts of many Synods have condemned the views of Dr. Woodrow, as a matter of expediency and loyalty to authority, your mouth should be stopped in order to preserve the peace and harmony of the Church." In reply to the first objection, we would say, no one honors the eminent and godly men found in the ranks of the majority more than we do. Admiration for their learning and abilities, and respect for their earnestness, are coupled, in many instances, with a warm affection for their persons. But as Paul withstood Peter when he thought him in the wrong, and "gave place by subjection, no, not for an hour," so lovers of truth, who are not apostles, should oppose eminent men all the more earnestly *because* of their eminence, if they believe them to be in error. The errors of the great are more dangerous than those of the obscure. If the big clocks in the city go wrong, all the watches will be set correspondingly wrong. Truth must not be taken second hand, even from the great, for truth may not be what famous men think.

In reply to the second objection, we would say, *first*, "The purest Churches under heaven are subject to mixture and error."[1] *Second.* While the "Decrees and determinations (of Synods and Councils), determining controversies of faith, if consonant to the word of God, are to be received with reverence and submission,"[2] yet if not "consonant to the word of God," they are to be rejected and opposed as a matter of conscience and duty. *Third.* "All Synods or Councils since the apostles' time, whether general or particular, may err, and may have erred; *therefore they are not to be made the rule of faith or practice*, but to be used as a help in both."[3] Hence, believing our Synods have erred, and have violated the law which forbids them to "handle or conclude anything but that which is ecclesiastical,"[4] it is not obligatory upon

[1] Confession of Faith, Chap. XXV., Sec. 6; 1 Cor. xiii. 12; Matt. xiii. 24–30, 47–50.

[2] Confession of Faith, Chap. XXXI., Sec. 2.

[3] Confession of Faith, Chap. XXI., Sec. 3.

[4] Confession of Faith, Chap. XXXI., Sec. 4.

the minority to keep silent for the sake of expediency. It is a hollow, worthless peace which results from a sham surrender, or suppressed convictions. When principles collide, peace must be fought out, not bought out. When men, whose love for truth and righteousness is equal, meet in conflict over principles, their war need not be bitter and angry. The opposition is not personal. The final aim of both is the right. In the present case both parties love and revere the Bible, and are loyal to our doctrinal standards in purpose and sentiment. Both sides think the principles or actions of the other contrary to our doctrines in different particulars. Our own belief is, that whatever may be the fate of Evolution as a scientific hypothesis, the next generation, perhaps the present, will regard its theological bearings in very much the same light in which the nebular hypothesis is now generally regarded by Christian scholars, *i. e.*, whether true or false, it affects no truth of Scripture or doctrine of religion.

If the foregoing arraignment of the majority seems severe, we hope honored brethren will not credit us with a desire to rasp or exasperate. Kindly feeling is linked with strong conviction, which may be expressed in vigorous terms. While not speaking in a representative capacity, yet doubtless we are in line with all those who voted as we did in the various Synods, both as to sentiment and plainness of speech, in the criticism of our Synods' action which we are now presenting in this REVIEW. The subjoined articles recently published in the *Charleston News and Courier*, one of the ablest daily newspapers published in the South, and which has taken an intelligent interest in the recent discussion of this question, are here given as clear statements, both of the facts in the case and of the general views of the minority thereon:

THE EVOLUTION QUESTION.

The following letters appeared recently in the Charleston *News and Courier*, and as Prof. Proctor has lately visited and lectured in Greenville in aid and under the auspices of the Presbyterian Church, and the subject of Evolution being familiar to our people since the great debate here last fall, we reproduce the correspondence as one of general interest:

Correspondence of the News and Courier.

"PROF. PROCTOR AND EVOLUTION.—The lectures of that distinguished

scientist, Prof. Richard A. Proctor, recently delivered here, have been listened to with delight by all classes of our community, including most of the clergy of the city—indeed, they were among the most constant attendants.

"*Now, this same Prof. Proctor, in a letter published in the Sunday News of 18th ult., maintains the truth of Evolution as perfectly in accord with an earnest belief in the creation of man by God, and as not inconsistent with the Bible.*"[1]

"As this subject has been widely discussed, and has attracted great attention lately, many of us would like to know the difference between the views expressed by Prof. Proctor and those held by Prof. Woodrow, and why it is that the one is honored and admired, while the other, as is generally understood, has been removed from his chair without even a trial. Cannot you or some of your correspondents tell us exactly what Prof. Woodrow's heresy is? For we suppose, as he was expelled, his views must have been heretical. INQUIRER."

Correspondence of the News and Courier.

"PROF. PROCTOR'S VIEW—THE VIEWS AND THE REMOVAL OF DR. WOODROW.—In reply to 'Inquirer,' let me say, Prof. Proctor lectured here only on astronomy, and on that subject science (it has at length been allowed by the Church) does not really, but only in appearance, contradict Scripture. If I do not mistake, we had from him (January 19) the statement that scientific men the world over, Christians as well as sceptics, are nearly all agreed about Evolution.

"As to Dr. Woodrow's position: After twenty-five years of study, not merely in books, but in all the fields of working naturalists, he finds the Creator carrying out in the various species of animals formed by his hand, one or a few ideas, so that all his works of this sort have been along one continuous line, until he comes to make man. One species seems to have been evolved out of another, always by Divine power, from the very beginning down to the time when God said, 'Let us make man.' The anatomical and physiological resemblances between the various successive grades of animals are such as to suggest the idea of descent with modification. But these differences between the higher and lower ranks of brute creation are much more marked than that between the higher brutes and man. Therefore to the naturalist the considerations which suggest evolution up to man, suggest man's evolution also.

"Now Dr. Woodrow, being a Christian theologian, as well as a natu-

[1] Copied from one of the N. Y. dailies, in which Prof. Proctor severely criticises Dr. Talmage for ridiculing and caricaturing Evolution, in his characteristically witty and ludicrous manner, as both false and hostile to Christian faith.

ralist, turns to his Bible to see whether it contradicts this hypothesis of science. He has always been known as a very firm believer in the plenary or verbal inspiration of the Holy Scriptures. He has often declared that if any statement contradicts the word of God, that statement *ipso facto* must be false. But he does not find the Scripture here, or anywhere else, in contradiction with what science teaches. He supposes that when God tells Adam, 'Dust thou art,' Adam being not dust but flesh and blood, and when he says the serpent 'shall eat dust,' the serpent not eating that, but flesh and blood, it is clear that throughout this passage matter is not described chemically, but that the word 'dust' may mean either dead or living—organic or inorganic matter.

"The word dust, we are compelled to say, does not necessarily mean inorganic dust. It may refer to matter or substance in some other form. Now what that form is Scripture does not enable us to determine. Science, then, being confident that man's body comes under the law of evolution, and the Holy Bible not deciding of what or how God made him, Dr. Woodrow believes the scientific conclusion *may* probably be correct, so far as relates to the body of our first father, Adam. He does not hold, nor did he ever teach this as a doctrine, but has treated it as a *hypothesis* which *may* probably be true. Scripture does not, and therefore he does not, contradict it.

"Our Presbyterian Synods have nothing but this to allege against Dr. Woodrow. There is nothing else in his now famous address. But to many of our most intelligent and otherwise excellent ministers and elders, this, whether true or false, is a hateful idea, and it has led to the expulsion of Dr. Woodrow from the Columbia Seminary.

"'Inquirer' understands that Dr. Woodrow was removed without even a trial. This was even so. At our Synods it was over and over declared by his opponents that they made no charges and that he was not on trial, which must have involved an indictment and witnesses and a prosecutor, and also a fair and just protection of the accused. Nor did the Board yield to his demand for a trial, although that is guaranteed expressly to every professor. He may be suspended temporarily by the Board, says the Constitution, but not removed 'until his case can be fully tried.' But when he demands a trial the Board refuses, though it called on him to show cause briefly why he should not be removed. Some maintain that the Board, having been reconstructed by majorities in the Synod were not to try, but simply to execute their will. Others that the only body to try a Presbyterian minister is his Presbytery. Let all this be as it may, here stands the naked fact: He was guaranteed a full and fair trial with all the protection every accused person ought to have, but he has been denied this plain right and ignominiously expelled from an institution of which he has for twenty-five years been an ornament and a glory.

JUSTICE."

The following appeared first in the columns of the *Southern Presbyterian.* It is with pleasure that we transfer it to a higher permanent niche in the pages of this REVIEW. We thank the author for this gem of wit and clear statement. It deserves a setting of gold.

THE MOUNTAIN OF REVELATION.

A DREAMER TELLS A STORY ABOUT THE EVOLUTION CONTROVERSY.

[*Published by request in the News and Courier.*]

I had a dream, which was not all a dream. And the text of my dream was: "The word of the Lord is tried;" "the word of the Lord, which liveth and abideth for ever." I saw and, behold, a great mountain, and it reared its summit to heaven; and moreover the mountain was solid rock, and engraved upon it was the word, "REVELATION." And I saw that the mountain was the word of God, upheld by his power, stable as his throne, for "the word of the Lord endureth for ever." Then I beheld men building up a little mountain of stones, rubbish, stubble, and mud, portions of which stood, and parts crumbled, which they rebuilt; and some of the stones with which they builded had names written on them, and their names were: Astronomy, Geology, Biology, Evolution, &c.; and the banner that waved over them had inscribed upon it the word "Science." Moreover, I heard some of the builders talking loudly and saying, "We are building a greater mountain than Revelation, and we will move it from its ancient base, and establish ours in its place." Whereupon I heard some of the most learned of their number saying, "None know better than we the composition of our mountain of Science, that it is partly stone and partly rubbish, but we likewise know that the mountain of Revelation is all solid rock, and cannot be moved or even shaken; and moreover the view from its summit is clearer, loftier, and wider in its range."

And I saw among the latter a man sitting in a chair that was called "Perkins," and the chair was so placed that he could see the proportions of each mountain and their relations to each other. Then I heard men asking him of the comparative strength of the two, and whether there would ever be a collision, and what would be the result of such a collision. At this, I listened eagerly for his reply, and he said, "The great mountain is solid, every particle is rock, and it cannot be moved for ever. The smaller is partly stone and partly rubbish. Astronomy and Geology have placed stones of truth in its composition. I am testing Evolution, and amidst much rubbish may find a stone of truth; but whether it prove rock or rubbish, it can never displace a particle of the mountain of Revelation." Then I saw that many were delighted, and

were receiving with devout thankfulness his teaching that the great mountain was rock and immovable.

But just then some withdrew as if somewhat suspicious, and afraid to investigate the matter. Presently their fears increased, and they began to run about in dismay, crying, "The great mountain of Revelation is in danger; for we heard the Perkins man say Evolution may prove to be stone; and although he is not alarmed about it, yet we are afraid if it be a stone it will be hurled against the great mountain, and either overturn it or so shake it that men will lose confidence in its security." Whereupon there arose a great panic that spread through the whole land, and the noise thereof was heard in all the earth. In the midst of the panic I saw men running in great haste to support the mountain, to prevent Evolution from overturning it. I beheld whole Boards, Presbyteries, and Synods in their "organic" capacity and multitudes in their "inorganic" capacity propping the mountain with resolutions that "Evolution could not be dignified by the name of science;" that it was not a stone and "never would be." And as they worked "some therefore cried one thing and some another, for the assembly was confused, and the more part knew not wherefore they were come together;" but they were agreed in their general purpose, that they would so strengthen the mountain with their props and underpinning or so weaken Evolution that it could not move the mountain that had stood countless ages, and had by its own inherent strength broken in fragments every object hitherto hurled against it. I saw editorial Samsons, propping it with their pens and whole columns of matter, and firing blank cartridges at Evolution. I saw many a Hercules of orthodoxy strengthening it with his logic. One small man I observed particularly, that reminded me of Jehu, for he drove furiously and seemed to say, "Come, see my zeal for the Lord." I couldn't tell whether he was the agent of the rest, or whether they were his agents. And as he ran with his prop he did not place it against the mountain like the rest, but thrust it under the fifth rib of the Perkins man.

So after the confusion was over, I saw that they hadn't overturned Evolution; and Evolution hadn't overturned the mountain; and nothing was overturned except the Perkins chair. Then two things greatly impressed me: 1. Evolution, whether true or false, couldn't overturn the mountain. 2. I perceived that the mountain stood of its own strength, and the props did not strengthen its position. So I awoke and behold it was a dream, which was not all a dream.

JUNIUS JOHNSON, JR.

We would respectfully commend the above vision of the "Dreamer" to our honored brethren of the majority as a pretty fair picture of the situation. The photograph is not very flatter-

ing in some respects, but it may be wholesome to look at it. See Burns:

> "To see ourselves as others see us
> May from many a blunder free us,
> And many a foolish notion."

Before examining in detail the grounds on which the action of our Synods was based in condemning Dr. Woodrow's teaching of Evolution, we will say here that our present attitude towards the subject is that of almost absolute neutrality as to the truth or falsity of the theory. We neither affirm nor deny its truth. On this point we are simply an agnostic. As a philosophic conception of the mode of origin and order of the universe, the grandeur and simplicity of the hypothesis fill our mind with wonder and admiration. But whether it be a mere image of the imagination, with no corresponding reality, a brilliant plausible guess, or whether it be in truth "God's plan of creation," the evidences to which will be at length so closely unfolded as to command universal acceptance, we know not. Without endorsing all the positions of Quatrefages, the following paragraph from his "Human Species" expresses in the main our view as to the mode of man's creation:

"To those who question me upon the problem of our origin[1] I do not hesitate to answer—*I do not know.* I do not on that account anathematise those who consider they ought to act otherwise, nor do I greatly blame their boldness. The study of second causes has enabled man to explain scientifically the present constitution of the inorganic world; and it is quite legitimate to attempt to account for the present state of the organic world by causes of the same nature; *perhaps success will one day crown our efforts*, and should they remain for ever unrewarded as they have hitherto done, they will still possess a certain utility. These efforts of the imagination provoke new research, make new openings, and thus render a service to real science in the world of facts, as well as in that of ideas. If Darwin had not been actuated by his preconceptions, he would probably never have accomplished his excellent work upon the one hundred and fifty races of pigeons, nor developed his theory of the struggle for existence and natural selection which accounts for so much."[2]

---

[1] *I. e.*, the *mode* of man's creation.

[2] "The Human Species," p. 128, by A. de Quatrefages. N. Y., Appleton, 1883.

Quatrefages is one of the foremost living anthropologists. He belongs to that small band of European naturalists who have not accepted the hypothesis of the origin of species by derivation. His attitude towards Evolution is commendable and safe, because marked by broadness of philosophic view and manliness of spirit. As he has been one of the chief authorities quoted by the majority in their condemnation of Evolution, it might be well to follow his example in "not anathematising" those who hold or allow it, in admitting the "legitimacy of the attempts of evolutionists," and in allowing that "perhaps success will one day crown their efforts."

We now propose to examine briefly the grounds on which Prof. Woodrow's removal was based.

EVOLUTION IS ALLEGED TO BE AN UNPROVEN HYPOTHESIS.

This proposition in various forms stands in the forefront of every criticism and of every ecclesiastical decision rendered on the subject. One Synod declared it never could be proven.[1] Another pronounced it unworthy to be "dignified with the name of science."[2] "Unproven hypothesis" was nailed to the masthead of all the religious journals that opposed the teaching of the doctrine as held by Dr. Woodrow. Two preliminary criticisms may be made here: 1st. In the newspapers and in the discussion of the subject in the church courts the important distinction between a "*probable hypothesis*" and a proven theory was generally overlooked or ignored, hence misconception and confusion of thought resulted. However Huxley may regard "Evolution as clearly *demonstrated* as the Copernican theory of astronomy,"[3] though Haeckel[4] considers Evolution has as clear proof as the theory of gravitation, and great multitudes of others who accept it place it in the same category with other accepted doc-

---

[1] Synod of Kentucky.

[2] Synod of Mississippi.

[3] New York "Lectures on Evolution." This statement was criticised by Dr. Wm. Taylor, and referred to in a friendly review by Dr. McCosh, *Popular Scientific Monthly.*

[4] "Freedom in Science and Teaching," p. 65 (a review of Virchow's Munich address), by Ernst Haeckel. Appleton, N. Y., 1879.

trines of science, yet the descriptive terms carefully applied to it by Prof. Woodrow, marking, in his mind, its proper place in the world of thought, did not have their legitimate influence on the judgments of the majority. 2d. The legitimate use of hypotheses and the value of probable evidence and the weight of reasoning based upon probabilities were not duly considered, but, on the contrary, the logical trend of the discussion was in violation of some of the fundamental principles of sound philosophy which underlie our mental procedures in practical life and in building up and defending our system of theology.

I. *The Nature and Proper Use of Hypotheses Misapprehended.*

1. *The nature of hypotheses.* An hypothesis is a mental mould into which the facts that come under the mind's view are tentatively cast. It is an imaginary frame in which phenomena are provisionally set; it is a guess or conjecture made by the mind to explain the phenomena that come before it. Hypotheses are not held to modify facts, but to unify them, and then enable the mind to arrive at a notion of their relation, mode of origin, and the cause of their existence.

Plato justifies the use of hypotheses in these words: "The soul is compelled to use hypotheses: not ascending to a first principle, because she is unable to ascend above hypotheses, but employing the objects of which the shadows below are resemblances in their turn as images, they having in relation to the shadows a greater distinctness and therefore a higher value."[1] He distinguishes among the kinds of knowledge that "which reason herself attains by the power of dialectic, using the hypotheses, not as first principles, but only as hypotheses—that is to say, as *steps and points of departure* into a region which is above hypotheses, in order that she may soar beyond them to the first principle of the whole, and clinging then to that which depends on this, by successive steps she descends without the aid of any sensible object, beginning and ending in ideas."[2]

Aristotle seems to regard hypothesis as synonymous with a

[1] Plato's Republic (Prof. Jowett's Plato, Republic, II., 339).
[2] *Ibid.*

proposition that is *probably true:* "Whatever things then, being demonstrable, a man assumes without demonstration, these if he assumes what appears *probable*, he supposes (ὑποτίθησι), and this not an hypothesis simply, but with reference to the *learner* alone." [1]

Sir Wm. Hamilton, both in his Metaphysics [2] and in his Logic, defines an hypothesis as a provisional reference of phenomena to some supposed low cause, or class, until the mind is satisfied to make the reference permanent, or is able to refer them to some other. The end of hypotheses is to satisfy the desire of the mind to reduce the objects of its knowledge to unity and system. "Hypotheses are propositions which are assumed with probability, in order to explain or prove something else which cannot be otherwise explained."

Dr. Gregory says: "Hypothesis is often confounded with *theory;* but *hypothesis* properly means the supposition of a principle, of whose existence there is no proof from experience, but which may be rendered more or less probable by facts which are neither numerous enough nor adequate to infer its existence." [3]

"In some instances," says Boscovich, "observations and experiments reveal to us all we know. In other cases we avail ourselves of the aid of hypotheses; by which word, however, is to be understood not fictions altogether arbitrary, but suppositions conformable to experience or analogy." [4]

Says John Stuart Mill [5]: "An hypothesis is any supposition which we make (either without actual evidence or an evidence avowedly insufficient) in order to endeavor to deduce from it conclusions in accordance with facts which are known to be real; under the idea that if the conclusions to which the hypothesis leads are known truths, the hypothesis itself either *must be*, or at least is likely to be, true. If the hypothesis relates to the cause or *mode of production* of a phenomenon, it will serve, if

---

[1] Aristotle's Organon, Bk. I., ch. x., 4.

[2] Hamilton's Metaphysics, pp. 117, *et seq.*

[3] Fleming's Vocabulary of Philosophy, new ed., edited by Charles P. Krauth (1883), p. 221.

[4] *Ibid.*

[5] System of Logic, 4th ed., Bk. III., chap. 14.

admitted, to explain such facts as are found capable of being deduced from it. And this explanation is the purpose of many, if not most, hypotheses. Since explaining, in the scientific sense, means resolving a uniformity, which is not a law of causation, into the laws of causation from which it results, or a complex law of causation into simpler and more general ones, from which it is capable of being deductively inferred, if there do not exist any known laws which will fill this requirement, we may feign or imagine some which would fulfil it; and this is making an hypothesis."

2. *The use of hypotheses.* An hypothesis being a mere supposition, there are no other limits to hypotheses than those of the human imagination. Mr. Mill has some valuable remarks on the use of hypotheses: "Hypotheses are invented to enable the deductive method to be earlier applied to phenomena. The process of discovering the cause of phenomena by the deductive method consists of three parts: Induction (the place of which may be supplied by a prior deduction), to ascertain the laws of the causes; ratiocination, to compute from those laws how the causes will operate in the particular combination known to exist in the case in hand; verification, by comparing this calculated effect with the actual phenomenon. No one of these three parts of the process can be dispensed with. . . . The hypothetical method *suppresses* the first of these three steps, the induction to ascertain the law; and contents itself with the other two operations, ratiocination and verification."[1]

In employing the evolution hypothesis, the method of all those who accept it is to assume the law of derivation, observe the variation, distribution, etc., of life, and from the observed facts and the reasoning thereon draw the conclusion assumed in the hypothesis. This is the method of all scientific research.

Mill thinks that the use of hypotheses is legitimate only when "the nature of the case be such that the final step, the verification, shall amount to, and fulfil the conditions of, a complete induction. We want to be assured that the law we have hypothetically assumed is a true one; and its leading deductively to true

[1] Mill's Logic, 4th ed., Vol. II., pp. 10, 11.

results will afford this assurance, provided the case be such that a false law cannot lead to a true result, provided no law, except the very one which we have assumed, can lead deductively to the same conclusions which that leads to."[1] It may be said, however, that the very structure of the mind compels it to make suppositions concerning certain subjects, as the habitability of certain stars and planets, the ultimate nature of matter and force, which can never be verified as far as we know now; but yet which, not being self-contradictory, nor in conflict with known truth, are held as regulative assumptions in our thinking on these subjects. The atomic theory of matter can never, apparently, be verified, nor have we the data for verifying, in the scientific sense, the doctrine that all force is will force. The highest truths of theology and philosophy make this doctrine credible, probable to faith, and the impossibility of disproving it furnishes a sufficient basis for postulating it.

All scientific progress has been achieved by a proper use of hypotheses. "The history of all discoveries that have been arrived at, by what can with any propriety be called philosophical investigation and induction, attests the necessity of the experimenter (and observer) proceeding in the institution and management of his experiments (and observations) upon a previous idea of the truth to be evolved. This previous idea is what is properly called an hypothesis, which means something *placed under* as a foundation or platform on which to institute and carry on the process of investigation. Hypotheses are admissible and may be useful as a means of stimulating, extending, and directing inquiry. They are not to be set up as barriers or stopping-places in the path of knowledge, but as way-posts to guide us in the road of observation and to cheer us with the prospect of speedily arriving at a resting-place—at another stage in our journey towards the truth. They are to be given only as *provisional explanations* of the phenomena, and are to be cheerfully abandoned the moment that a more full and satisfactory explanation presents itself."[2]

---

[1] Mill's Logic, Bk. III., chap. 14.

[2] Fleming's Vocabulary of Philosophy, by C. P. Krauth, 1883, pp. 221, 222.

Hypotheses by suggesting observations and experiments put us on the road to that independent evidence, if it be really attainable; and till it be attained, the hypothesis ought not to count for more than a conjecture. This function of hypotheses is absolutely indispensable in science. When Newton said "hypotheses *non fingo*," he did not mean that he deprived himself of the facilities of investigation afforded by assuming in the first instance what he hoped ultimately to prove. Without such assumptions science could never have attained its present state. They are necessary steps in the progress to something more certain; and nearly everything which is now theory was once hypothesis. The desire to verify or disprove a hypothesis is the motive which determines the mind to make one experiment rather than another. Those delicate, unobvious, cumbrous experiments which have thrown most light on the general constitution of nature would not have been undertaken at the time and by the persons that they were unless some general theory, conjectured but not proved, seemed to depend on them whether or not they should be admitted.[1] "Neither induction nor deduction would enable us to understand the simplest phenomena if we did not often commence by anticipating on the results; by making a provisional supposition, at first conjectural, as to some of the very notions which constitute the final object of the inquiry."[2] The minds of lawyers and judges follow this method in eliciting the true history of an occurrence. Some fact suggests a clue or hypothesis, and the mass of testimony is unravelled gradually, and is woven into a theory, which was at first an *a priori* guess, and is rejected or accepted according as it will square with and explain the phenomena presented in the testimony.[3]

Says Prof. W. Stanley Jevons[4]: "All inductive investigation consists in the marriage of hypothesis and experiment." Even when observing phenomena that we cannot modify, attention should be guided by theoretical anticipations. Prof. Jevons and

---

[1] Mill's Logic, Vol. II., p. 16.

[2] Comte's Positive Philosophy, II., 434–7.

[3] Mill's Logic, Vol. II., p. 17.

[4] Principles of Science, 2d ed., Macmillan, London, 1883, Bk. IV. ch. 23.

J. S. Mill both point out numerous examples of this principle in the achievements of Galileo, Gilbert, Newton, Huyghens, Horrocke, Young, Herschel, Huxley, Tyndall, Whewell, etc. Whewell's "History of the Inductive Sciences," and his "Philosophy of the Inductive Sciences," furnish many more similar illustrations. The investigator begins and ends with facts. He uses facts to suggest probable hypotheses; deducing other facts which would happen if a particular hypothesis is true. Says Jevons: "Throughout Newton's works deductive reasoning wholly predominates, and experiments are employed, as they should be, to confirm or refute hypothetical anticipations of nature."[1]

3. *The criteria of legitimate hypotheses.* So much for the nature and use of hypotheses. The criteria of legitimate hypotheses might be examined at length, and the evolution hypothesis tested in their light, the only legitimate method of examining it. Hamilton gives several criteria of a good hypothesis in the tenth lecture of his Metaphysics, and in his discussion of the "Representative Theory of Perception" (Lect. 26th). They are in substance as follows: 1. The facts to be explained must really exist. Prove ghosts before explaining them. Establish *an sit* before *cur sit.* 2. The phenomena cannot be explained by any known cause or principle. 3. The hypothesis must involve no internal or external contradiction. It must be consistent with its parts, and not contradict other known truth. 4. It must explain the phenomena better than any known or supposed law or cause. 5. It must explain the phenomena simply and *fully*, independently of subsidiary hypotheses to help it out. 6. It must save the facts to be explained and not subvert, distort, or mutilate them. Prof. Jevons,[2] however, in giving the requisites of a good hypothesis, considers "*agreement with fact the sole and sufficient test of a true hypothesis.*" He mentions the three marks of a good hypothesis given by Hobbes and Boyle, viz.: (1) It should be conceivable and not absurd. (2) It should allow of phenomena being necessarily inferred. (3)

[1] Principles of Science, 2d ed., Macmillan, London, 1883, Bk. IV., ch. 23.

[2] Jevons's Principles of Science, Bk. IV., Ch. 23. London: Macmillan, 1883.

It should not be inconsistent with any other truth or phenomena of nature (Boyle). After remarking that unless by *inconceivability* and *absurdity* were meant self-contradiction or inconsistency with the laws of thought and nature, this mark could not be accepted, because "*some satisfactory theories involve suppositions which are wholly inconceivable*"—(the theories of gravitation and the undulatory theory of light are afterwards cited as "the two best founded theories in physical science, and yet involve the most absurd suppositions")—he adds, "there is but one test of a good hypothesis, viz., its conformity with observed facts, which involve three conditions: 1. It must admit the application of deductive reasoning, and the inference of consequences capable of comparison with the results of observation. It must allow the precise calculation of results. 2. It must not conflict with any laws of nature or of mind which we hold to be true. 3. The consequences inferred must agree with facts of observation."[1]

Now whether the evolution hypothesis presents all these criteria it is not our purpose here to discuss. Our object is to point out in the rather unmeasured condemnation of hypothetical methods and teaching expressed in our church journals and courts, that the principles implied in the terms and manner of condemnation are opposed to those of sound philosophy and practical life. The framing or acceptance of hypotheses as mental feelers thrown out in the world of facts, as instruments of research, are legitimate and necessary. And when it is declared that nothing but established truth, demonstrated doctrines, shall be taught even as *probable*, *i. e.*, *provable*, then it seems the door to further progress in knowledge is shut, and no scope or play is given to the personal peculiarities of different minds in their modes of viewing and presenting truth. Individuality must be swallowed up in the unbroken uniformity of the body. The harmony must not be that of many notes blending in an orchestra, but the monotone of many voices sounding in the same pitch and key.

---

[1] Jevons's Logic, *ad supra.*

II. *The Validity of Probable Reasoning Denied by the Majority and Assent to Doctrines on the Grounds of Probability Forbidden.*

Now all that was claimed by Prof. Woodrow for Evolution was probable truth, enough to win his acceptance of it as defined and limited by him, it is true, but still not as a demonstration. The quantity of evidence, or its quality, was such as to win his personal faith in its *probability.* Of course all who accept Evolution do so on the belief that as an hypothesis it meets the requirements and presents the credentials of a just hypothesis, as given above. If it be a truth, and if it be finally accepted as such without a dissenting voice, it will rest on the only basis which supports nearly every doctrine of science, viz., probability. Some of the evidence adduced in support of Evolution is inductive, a large part of it is analogical; and deduction and analogy cannot go beyond the establishment of probability, which may indeed produce the conviction of moral certainty, but still remain a probability.

If hypotheses must not be taught, held, or allowed, because the evidence in favor of their truth amounts only to probability, then the great body, not only of our received science and philosophy, but some of our distinctive theological tenets, must be abandoned.

"Probability is the guide of life," says Butler; and Jevons,[1] in expounding the methods of induction, rests them on the theory of probability. Reid[2] teaches that the evidence by which the known laws of nature have been discovered, and the effects which have been produced by them, or which may be expected in future, is probable. He makes this splendid statement: "*The laws of nature are the rules by which the Supreme Being governs the world.* We deduce them only from facts that fall within our own observation, or are properly attested by those who have observed them." The philosopher's knowledge of these laws differs from that of the masses, not in the first principles on which it is grounded, but in its extent and accuracy. Our

[1] Principles of Science, Bk. II., Ch. 10.

[2] Int. Powers, Essay VII., Ch. 3.

knowledge of nature, consisting of facts reduced to general rules, the consequences flowing from them, and the belief in their continuity, rests on *probable*, not demonstrative evidence. These rules may have unknown exceptions and limitations, or they may be changed by Him who framed them, but our very constitution compels us to rely upon their continuity with as little doubt as if it was demonstrable."[1] Dugald Stewart[2] states very clearly that probability does not imply *deficiency* in the proof, but only makes the particular *nature* of that proof, as distinguished from mathematical evidence. It is opposed not to what is *certain*, but to what admits of mathematical demonstration. In popular speech *probable* means mixed with some degree of doubt; philosophers, while using the term similarly, apply it also to events that are considered *certain*. Hence the philosophical meaning of the word is more comprehensive that the popular, the former denoting that particular *species of evidence* of which contingent truths admit, the latter being confined to such *degrees* of their evidence as fall short of the highest. These different degrees of *probability* constitute a *series* from bare possibility to apprehended infallibility or moral certainty. Stewart thinks the word *probable* is inapplicable to their last term of the series. Says Locke[3]: "Demonstration is the showing the agreement or disagreement of ideas by the intervention of one or more proofs which have a constant, immutable, and visible connexion with one another. So probability is nothing but the appearance of such agreement or disagreement by the intervention of proofs, whose connexion is not constant and mutable, or, at least, is not perceived to be so, but is, or appears for the most part to be so, and is enough to induce the mind to judge the proposition to be true or false, rather than the contrary." Probability, he adds, is *likeliness* to be true. The mind's acceptance of *probable* truth Locke terms belief, assent, opinion, *i. e.*, the reception of a proposition as true on proofs that persuade us to receive it as true without certain

---

[1] Works of Thomas Reid, ed. by Sir Wm. Hamilton. Edinburg, 1846. Int. Pow., Essay VII., Ch. 3.

[2] Elements of Philosophy, Par. 2, Ch. 2, § 4.

[3] Locke on the Understanding, Bk. IV., Chaps. 15, 16.

knowledge that it is so. Locke, Reid, and President Noah Porter,[1] agree substantially in pointing out that probable reasoning rests on contingent truth, while demonstration rests on necessary truth.

The grounds of probability are: 1. The conformity of anything with our own knowledge, observation, and experience. 2. The testimony of others vouching their own observation and experience. 3. The evidence furnished by analogy and induction. Other grounds are sometimes given, such as (1) the authority of good judges, (2) the recognition of identity—of things and persons, (3) knowledge of the general principles of human nature and conduct, (4) probability of chances (Reid), Locke mentions the "opinion of others," and adds, "There cannot be a more dangerous thing to rely on, nor more likely to mislead one; since there is much more falsehood and error among men than truth and knowledge. And if the opinions and persuasions of others, whom we know and think well of, be a ground of assent, men have reason to be heathens in Japan, Mahometans in Turkey, Papists in Spain, Protestants in England, and Lutherans in Sweden."[2] Says Jevons: Probability belongs wholly to the mind, to our mental condition, to the light in which we regard events, the occurrence or non-occurrence of which is certain in themselves. It refers to the quantity of knowledge, not to the quantity of belief. The theory of probability does not measure what the belief is, but what it should be. The quantity of belief is proportional to the quantity of knowledge.[3] The same information being pre-supposed, the quantity of belief should be the same in all minds (quoting Prof. Donkin).[4] LaPlace happily describes the theory of probability as "good sense reduced to calculation." And he, reasoning from the known phenomena of heat, and the laws of cooling bodies in rotation, etc., propounded the now generally accepted nebular hypothesis, or the

---

[1] "The Human Intellect," pp. 454–5. Prof. Noah Porter, D. D., of Yale College. Scribner, N. Y., 1869.

[2] Locke's Essay, Vol. II., p. 184.

[3] Perhaps *quantity of evidence* would be more strictly accurate.

[4] Principles of Science, Bk. II., Chap. X., p. 199.

doctrine of Cosmical Evolution. The grounds of probability form the basis of assent to the truth or falsity of any proposition, and the quantity of evidence (substituting this phrase for Jevons's "quantity of knowledge") is the measure whereby the various degrees of assent are to be regulated. In this statement is involved one of the differences between demonstration and probability. In demonstrative reasoning one argument is as good as a thousand; a multiplication of demonstrations is logical tautology; but the strength of probable reasoning depends, usually, not upon one argument, but upon many, which unite their force and lead to the same conclusion. Any one alone would not convince, but the whole taken together may have a resistless force. A rope, made of many threads twisted together, may be more than strong enough to bear the stress laid upon it, while no one of its threads singly would bear the weight. A rope does not necessarily break because one or two of its strands snap, neither does the failure of one argument always disprove the truth of the conclusion it is intended to uphold, otherwise there are few truths which could survive the ill-considered arguments adduced in their favor. The dictum "*falsus in uno falsus in omnibus*," urged by some against Dr. Woodrow's position as a whole, on the supposition that some of his arguments had been destroyed, does not logically apply. If it does, then the recent abrogation of the "Deceased Wife's Sister" clause in our Confession because of its error, logically undermines our creed; and the recent revision of our Book of Church Order, because of discovered heresies, wrongs, etc., in the Old Book (false allegation and slander against the Old Book, by the way, according to Dr. Lefevre and others, both living and dead), invalidates our theory of church polity.

Must nothing be taught, held, or allowed, which is only probable? So it seems, according to the "*Received-Interpretation of-our-Church*" logic. The very term employed by the majority, construed by strict logic, in ejecting him because his teachings are contrary to the "received interpretation," proves him to be in harmony with that interpretation. See,

"Evolution is an hypothesis." (Received Interpretation.)

"Evolution is an hypothesis." (Prof. Woodrow.)

"Evolution is an undemonstrated hypothesis." (Received Interpretation.)

"Evolution is an undemonstrated hypothesis [*i. e.*, *probable*, does not admit of demonstration; it is *likely*, does not involve absurdity or contradiction]. (Prof. Woodrow.)

Of course it will be said that the terms are employed by the two parties in different senses. But what we are criticising in this paper is the sense in which terms are used and the procedure based thereon, as subversive of sound philosophy and the principles of common sense. The position maintained is virtually this: the framing, teaching, holding, or allowing of hypotheses is forbidden. The assent to an hypothesis, on the theory of probability, unless the degree of probability amounts to certainty, is unlawful. Hypotheses must not be accepted, or taught as *probable*, until they are verified—demonstrated, *i. e.*, until they cease to be hypotheses. Now, who is to draw the line between hypothesis and established theory? Who is to judge the quantity of evidence which is to measure the degrees of probability and regulate the assent? Dr. Dabney cannot be accused of partiality to the hypothesis of Evolution, nor can he be credited with any fixed purpose of tolerating the teaching of it in our theological schools as probable when he teaches that the *dividing line between hypothesis and demonstrative induction cannot be clearly drawn.* He quotes a sensualistic philosopher's comment on some theory accounting for a group of phenomena: "This is not valid because it is only hypothesis." He replies, "*But what, I pray, is the dividing line between hypothesis and demonstrative induction?* And why is the former, without the latter, invalid? The answer is metaphysics. 'The *post hoc* does not necessarily prove the *propter hoc.*' Tell us why? It cannot be told without talking metaphysics."[1]

III. *Consequences of these errors.*

(1) Grounds for receiving and teaching nearly all science destroyed. Virchow's declaration at Munich in 1877 at the 50th

[1] "Sensualistic Philosophy," p. 5. A. D. F. Randolph & Co., N. Y., 1875.

meeting of German Naturalists and Physicians, was approvingly quoted and referred to several times in the course of the discussion in our Church, viz., "Nothing shall be taught that is not absolutely certain. None but objective and absolutely ascertained knowledge is to be imparted by the teacher to the learner; nothing subjective, no knowledge that is open to correction, only facts, no hypotheses." [1]

Now, according to Kant, "in every science only as much objective knowledge—demonstrative truth—is to be found as it contains mathematics." Human nature is full of inconsistencies which are sometimes happy, sometimes woful. Virchow and Haeckel have for years been warm friends. Haeckel was Virchow's enthusiastic and admiring pupil. In their philosophic and religious views they were and are birds of a feather. Until lately they were both *equally* denounced as typical free-thinkers and materialists. But as Huxley wittily says, "Like the two women grinding at the mill, one has been taken and the other left. Since the publication of his famous oration, Virchow has been received into the bosom of orthodoxy and respectability, while Haeckel remains an outcast." Virchow stock sells above par in certain circles on three mistaken—surely not *hypotheses*, for the "majority" condemn hypotheses!! Yes; hypotheses; majority

[1] A few remarks are proper here. 1. Virchow made this speech in reply to Prof. Haeckel's proposal to remodel the text-books and schools for German children so as to teach them Evolution, *four days* after Haeckel spoke. It contains many good things, and the short time given to its preparation may account for some things in it which were so sharply criticised on the Continent and in England. 2. It is distinctly an argument against instilling into the minds of young people the doctrine of Evolution on the ground that it was not absolutely proven. 3. Huxley, in commenting on it, says it owed its extraordinary reception not to its undoubted literary and scientific merits, but to an "*imputed righteousness.*" "It is mistakenly supposed to be a recantation and a death-blow to Evolution; but though I certainly hold that doctrine with some tenacity, I am able, *ex animo*, to subscribe to every important general proposition which its author lays down." Huxley adds, "Virchow nowhere repudiates the doctrine. He says it is not proven and hence should not be taught to children. If Prof. Virchow will make this good rule absolute and apply it to all subjects taught in our schools, I should be heartily disposed to concur with him."

hypotheses at that, viz.: (1) that his views on Evolution coincide with theirs; (2) that he could be safely cited in defence of their doctrine on hypotheses; (3) that he was a good orthodox Christian, *i. e.*, held to the "received interpretation." Virchow's address is before us: (1.) He does not affirm the doctrine of *immediate* creation out of a lump of clay. (2.) Gives liberty of *opinion* as between this and creation by the process of evolution. (3.) He is an agnostic on the subject of *æquivoca generatio*—involving the connexion of organic and inorganic. (4.) He acknowledges that he found it impossible every year to give up subjective notions, *i. e.*, hypotheses. (5.) He says we must teach for *fact* only what we *know*. If we go further, we must say, "This is not *proved*—this is *my opinion*, *my idea*, *my theory*, my speculation." We may investigate problems, and publish or speak *our opinions* thereon. "Our favorite problems must be set forth as problems only. Let us never tire of saying: 'Do not take this for confirmed truth; bear in mind that this may perhaps be changed; only for the moment we are of opinion *that it may be true.*" (Really this sounds more like Prof. Woodrow than the majority.) (6.) He goes on: There are probably *few naturalists who are not of the opinion that man is allied to the rest of the animal world, and that a connexion will possibly be found, if not indeed with apes, then perhaps in some other direction*, as is now the opinion of Prof. Vogt. (7.) "I acknowledge openly that this is a *desideratum* (a thing *desirable* and wanting) of science. I am quite prepared for it," (are *you* all ready, brethren?) "and should not be for a moment alarmed if the ancestors of man belonged to some other order of vertebrates." (8.) He says man's animal descent is "only a problem, however *probable* it may appear." Really this is too much like Dr. Woodrow again. Surely these utterances were made years ago, when Virchow and Haeckel were such friends! No; they are from the Munich address. Verily, then, some "Received-Interpretation-Theory" Jay Gould has watered the Virchow stock and unloaded on the anti-evolution market. There is one *hypothesis* which might relieve the difficulty, viz., the translation of J. Fitzgerald, A. M., may be wrong; for as translators sometimes

err there are *probabilities* that this one errs here.[1] Other hypotheses, supported by probabilities equally strong might be presented, such as Virchow's position was misinterpreted by some hypothesis of the majority, or his views were taken second hand on the *hypothesis*—supported by *probability*—that the witnesses vouching for them were credible. But none of these subterfuges will do; they are all condemned methods of procedure; for the majority neither uses nor allows hypotheses, nor assents to them on the grounds of probability. The literal face-meaning of all documents, books, etc., must be taken without inventing hypotheses to explain and harmonise its statements. It will not mend matters by saying the hypotheses applied to various passages of *one book* are simply the basal truths, the general trend of the system contained in it—it is a mere hypothesis, supported only by probable evidence, that the method is legitimate.

Before leaving Virchow, two remarks are proper. 1st. If the general character of his religious opinion be correctly represented in the epithets "notorious materialist," "advanced radical," "great supporter of the atheism of science," before 1877, then, according to Virchow, the doctrine laid down by him above, and accepted by the majority, involves the rejection of Christianity. 2d. Happily for Virchow, perhaps, he did not follow out his own theory. "The great service rendered by Virchow to pathological science, anatomy, and physiology depends chiefly, not on the many new facts he discovered, but on the theories and hypotheses by which like an inspired pioneer he sought to open a way through the dead waste of pathological knowledge and to form it into a living science." Says Haeckel, "These new theories and the hypotheses on which they were founded, Virchow then propounded to us, his disciples, with such incisive assurance that every one of us was convinced of their truth; yet later experience has shown that they were in part insufficiently proved and in part wholly false." He cites as an example Virchow's theory of connective tissue (for which Haeckel, in several of his early works, 1856 to 1858, broke a lance),

[1] The oration was first translated for *Nature* and then revised for the *Popular Science Monthly*.

which seemed to explain many pathological and physiological phenomena, and though finally proven false was of great service as a provisional hypothesis and guiding clue to investigations. Haeckel proceeds: "Virchow belied his Munich teaching daily. Every hour he taught his disciples some unproved theory and problematical hypothesis. . . . The charm of his instruction lay in this, that Virchow as a teacher constantly let us, his pupils, enter into those problems with which he was occupied. He propounded to us his personal hypotheses for the elucidation of the given facts. *And what really gifted teacher who lives in his science would not do the same?* Where is there, or where has there ever been, a great master who in his teaching has confined himself only to imparting certain and undoubtedly ascertained facts? Who has not found that the charm and value of his teaching lay precisely in propounding the problems which link themselves with those facts, and in leading the uncertain fluctuating hypotheses which may serve to solve these problems? Or is there for the young and struggling mind anything better or more conducive to culture than to exercise the intelligence in problems of investigation?"

Leaving Virchow, and applying the principle under criticism, the greater part of the natural sciences, according to it, must be abandoned. Newton's theory of gravitation, regarded as the most important and certain theory of physics, is an hypothesis resting only on probable evidence; hence, while accepted without hesitation, it is only "probably true." The degree of probability perhaps amounting nearly to moral certainty, yet it involves some "absurd suppositions" according to Prof. Jevons.[1] It positively contradicts the old dictum that nothing can act but through some medium. It puzzlingly acts independently of intervening obstacles. Light pays some respect to matter, for opaque bodies stop it, transparent ones in a degree absorb and deflect it; but to gravity all media are transparent, or non-existent; two antipodal particles on the earth draw each other as if no globe were between. Gravity acts instantaneously throughout the cosmos. No time is required to act across all space. Change

[1] Principles of Science, Bk. IV., ch. 23.

the position of one atom and the grip of every other through space is changed. The myriad cords joining each atom to its countless myriads of fellows are every instant changing their length or tautness, and no one ever breaks or is displaced. What is this but an undemonstrated—yea, an unverifiable hypothesis—supported only by probable evidence? Must it therefore not be held or taught as probably true?

The undulatory theory of light is only an hypothesis involving equally absurd suppositions: it asks us to give up our preposessions and believe that interstellar space, which seems empty, is not empty at all, but full of something more solid and elastic than steel. Young says, "The luminiferous ether pervading all space and penetrating all substances, is not only highly elastic but absolutely solid!" Herschel calculated the force which, according to the undulatory theory of light, is constantly exerted at each point in space, and found it to be 1,148,000,000,000 times the elastic force of air at the earth's surface, hence the pressure of ether per square inch is about 17,000,000,000 pounds. Yet we live and move without sensible resistance through this medium immensely harder and more elastic than adamant. All our common notions must be abandoned in accepting such an idea; yet it is no more, says Jevons, than the known phenomena of light and heat force us to accept. He agrees with Young in thinking there may be independent worlds, some possibly existing in different parts of space *pervading each other*, unseen and unknown in the same space. Now, according to the principles enounced by the majority, this doctrine of science must not be taught, because it is only an hypothesis resting on probable evidence.

The same remarks apply to chemistry as well as to physics. "The whole theoretical side of chemistry is an airy structure of hypotheses," says Haeckel. Every student knows that within the last half century chemical theories have rapidly followed each other; none of them demonstrably true, yet some one of them held by every professor of chemistry. What may be termed the base of all chemical theories, the atomic theory, is but an unverifiable hypothesis. An atom was never seen, on land or sea. It

is accepted on the probable evidence that it works well in guiding investigation and helps investigators to calculate results. And so it might be shown that the whole hierarchy of physical sciences, geology, botany, zoology, etc., must not be taught because they rest on or involve hypotheses which are incapable of verification, and hence only probable.

2. It will fare no better with those metaphysical and moral sciences dealing with psychology, philology, political economy, jurisprudence, etc. Subtract from these all hypotheses and theories resting on the grounds of probability, and the remainder will be very small. We would have to light a candle and use magnifying glasses to find it.

3. Our theology will share no better fate. "The faith of history and the judgment of solemn tribunals," says Reid, rests on probable reasoning. Our system of apologetics and Christian evidences rests upon principles virtually condemned by the majority. To the majority of Christians in the world, who have studied the Bible as faithfully as we have, it may be, and claim the promise of the Spirit's guidance as confidently as we do, our Presbyterian polity and the *peculiar* doctrines of our creed are not only hypotheses, but not even probable hypotheses. To us they are supported by a degree of probability that amounts to moral certainty. When we study the Bible to learn and to teach, our method of procedure is, or should be, the method of inductive philosophy. Scripture facts, phenomena, words, and propositions suggest to our minds an hypothesis of the Bible doctrine on the subject in hand (corresponding to the hypothesis of causes and laws of phenomena in nature suggested by material facts). We make an induction of facts; the processes of analogy, generalisation, and inference are all employed; at every step the "theory of probability" conditions both process and result, and the final outcome of it is probability (not mathematical demonstration). Such a high degree of probability, it is true, that we can very often say, "I know and am persuaded." We repeat, that the *peculiar* features of our doctrine and polity are our hypotheses (suppositions, beliefs) of Scripture teaching. And we receive them on *probable* grounds, however certain those grounds may appear to

us. And if hypotheses are forbidden fruit, and probability only a foundation of sand, then we surrender our position as Presbyterians. Let it be noted here that our contention is not that the *degree* of probability for Evolution is as great as that for our system, but that the logical principles *employed by the majority* in our Church, their method of procedure to destroy Evolution is vicious and suicidal. Logical dynamite has been used to put out a supposed fire, in the upper story of our house. And all the family in the house at that. There MAY BE (if we may be pardoned for using *hypothetical* language) some patent hand-grenade fire-extinguisher that will put that Evolution fire out. But, maybe, that fire will not do any harm, for it may be in the chimney; or maybe it was just a light shining through the door; or maybe it was all a false alarm (but we beg pardon, we are suggesting *hypotheses* again).

The arguments employed to prove Evolution untrue, and inconsistent with Scripture, strange to say, involved the inconsistency of employing the very methods and principles so severely condemned in the position of the majority on the subject of hypotheses and probable reasoning as a ground of assent, as we hope to show more fully in a future paper. In forbidding assent to or acceptance of hypotheses on "mere probable grounds," it was hardly to be expected that the position would be maintained and the mandate enforced by employing the contraband weapons. Now, the main reliance in attempting to show Evolution to be an unproved hypothesis was the authority of scientists. What is this but mere *probable reasoning* in support of the *unproved hypothesis* that the testimony of these men was conclusive evidence, verifying the proposition laid down? How was Evolution proven to be inconsistent with Scripture? Both parties appealed to Scripture—one to show that it was probably *silent* as to the mode of creation, and as to the condition of the dust of which Adam's body was made; the other to show that it was not silent on this subject. Scripture was the supreme authority with both. It would be begging the whole question therefore to say that the proof of one side was drawn from Scripture, while that of the other was not. It is begging the whole question also to cite

Scripture as a "parol witness" in proving Evolution to be false and atheistic. Whether, therefore, Evolution is inconsistent with Scripture is an hypothesis or belief, however the probabilities may be on either side, and the method of reasoning, even on Scripture, by both sides, involved the theory of probability. The reasoning in each case was clearly probable, and the result reached was only probable, and could be nothing more on either side. The other method of proof that Evolution is anti-scriptural was confessedly that of probable reasoning, viz., the appeal to the consensus of Christendom, the *opinions* of theologians. This reasoning was in support of the unproven hypothesis, supposition, belief, that the testimony of these men was conclusive proof of the doctrine maintained. We hope to test the validity of this argument hereafter. It may be said here that if the consensus of Christendom be a reason for condemning Evolution as anti-scriptural, it is also a reason for abandoning the distinctive features of our creed and polity. Further, before condemning Evolution as atheistic, etc., with the consensus of Christendom as a reason therefor, it would be well to heed the caution, "Be sure of your facts." You might be startled with a conclusion opposite to the one anticipated. An unexpected boomerang sometimes flies back from our premises.

We have confined ourselves in this paper to a review principally of what we conceive to be the formal errors in the reasoning of those who differ from us on the allowableness of Prof. Woodrow's views as consistent with our doctrines. We shall barely touch, in closing, the relation between theology and Evolution as held by Prof. Woodrow. There is a sense in which all science—theology, metaphysics, and natural science—is anthropological, the creation of human faculties, the symbol of human culture, the mirror of mind interpreting God, self, and nature. Theology is anthropology, in a sense very different from that intended by Prof. Steinthal, of Berlin. Science is nature explained by man; theology is God and nature explained in and through man. Man has conceived God's relationship to the world in various ways. Aside from Scripture, he borrows from nature the symbols for articulating his faith. Thought may

change or refine these symbols, but can never break away from the ideas they represented. "The phenomena of generation and light have suggested an emanational relation of God to the world.[1] Those of organic life are immanent; those of adaptation are architectonic." The theistic idea and the cosmic form may then so grow together as to seem one and inseparable. A growing acquaintance with nature may change our cosmic conception, which was the mould of our theistic faith. The old cosmic forms may seem a necessary frame in which to hold the idea of God. Hence conflicts arise, and theology and science may be put in battle array against each other on the *radically false issue that a given cosmic conception is essential to faith in God.* But faith in God does not die with changing notions of nature. Like a jewel, the idea of God, in his essential character, as a being to trust, love, obey, and reverence, is unchanged and changeless, though the cosmic setting in which the mind places him may be changed. God, like an eternal mountain, stands fixed in faith; man's cosmic conception, his shifting ideas of nature, are but robe, girdle, and coronet of cloud which drape the mountain. The clouds flee, melt, change their hues; the mountain stands immovable.

Men think they fight for or against God in fighting for a given conception of nature. Is the theory of creation by the art or technic of a manlike artificer—by outward, mechanical fashioning or framing immediately from dead dust—necessary to theism, to teleology, to Scripture? Has God been banished from his universe if it be said that the process by which he made man was not that of a manufacturer shaping furniture, or an artist modelling a cast in clay? Does a denial of this mode of creation contradict his word? We answer, No, for that word represents him as creating by speech, the symbol of thought, by a command, the symbol of will. The world was the expression of the divine thought, the creation of the divine will. If any process is indicated by these wondrous expressions, it is not an artificial constructive, but a natural productive process. All nature is speech.

[1] See Jonathan Edwards's fine figure of the universe and its God being related as body and image in a mirror.

God *spoke* stars, mountains, rivers, seas, trees, rocks, and animals—these are God's language. All science is man's commentary, interpretation of God's visual speech in nature. The Bible is God's speech, a revelation of his mind. Why should men make mistakes in studying one of these books more than the other? Men are no more apt to err in studying human speech, *i. e.*, revelation of mind, in works of human art and industry than in studying written human thought in books. Christians have the guidance of God's Spirit in all their life, in business, duty, worship, study, whether it be in God's word or works. Nature is the art of God, and like the work of all artists, it expresses his thought. Are we liable to err in one? so are we in the other. Nature being God's thought, types, copies of his ideas, fuller acquaintance with it will make us nobler, richer, better in mind and heart, keener eyed, quicker witted, to catch his meanings in the written word. Fuller knowledge of the written word will strengthen us, multiply our powers for reading the art gallery of his cosmos. We have studied the written word more, longer. Yes; and maybe we have not obeyed sufficiently the many implied commands to study his works. Suppose we find that by not studying the nature book enough, *and as his book*, we have *misread* his meanings in some things he says in his word about his works?

If we wish to learn *how* an artist works, we do not stop with reading a catalogue of his works; we go to his studio, to his statues, pictures, and watch and study. God says to us in his word, "*I* made your home—this earth and all things thereon. I am still busy in it, ordering the stars, draping the earth with clouds, spreading my morning on the mountains, and lighting their face with my sunsets. 'Come and behold the wondrous works of the Lord.'" The Bible tells us *how* to live, how to obey God, how to be saved, and as a motive to loyalty, worship, gratitude, honor to him, holiness of character, he tells us *that* he made all things wisely and well. Now, if we would know *how* God created, how he wrought, we must go and watch how he works. A statement *that* he created, given to us as a motive to holiness, coupled with so many invitations to study his works, so many eulogies on those works, is almost a plain statement by

the Bible itself that to learn the *method* of the worker we must study his *works* and *watch his mode of working in the present.*

We fear not only that injury has been done to a faithful and nobly useful servant in our Church, but that harm has been brought upon our Seminary and the cause of truth by rejecting principles which are but the dictates of wisdom. The evil of declaring war where God declares peace is too great to affirm, on the slender grounds of tradition, that the Bible is imperilled by a doctrine which so many great and good men accept as a probable description of God's plan of creation. Our Confessional doctrine on man's liability to err should have made our Synods and Councils more cautious and tolerant. The following words of John Locke should be carefully weighed by all; they breathe a noble spirit: "I cannot but own that men's sticking to their past judgment and adhering firmly to conclusions formerly made is often the cause of great obstinacy in error and mistake. May we not find a great number of men that think they have formed right judgments of several matters, and that for no other reason but because they never thought otherwise? Who imagine themselves to have judged right only because they never questioned, never examined their own opinions? Which indeed is to think they judged right because they never judged at all: and yet these of all men hold their opinions with the greatest stiffness; those being the most fierce in their tenets who have least examined them. What we once know we are certain is so; and we feel sure that there are no latent proofs undiscovered which may overturn our knowledge or bring it in doubt. But in matters of probability we cannot always be sure we have everything before us that any way concerns the question; and that there is no evidence behind, and yet unseen, which may cast the probability on the other side and outweigh all that at present seems to preponderate with us. Hence, it seems, it would become all men to maintain peace, and the common offices of humanity and friendship in the diversity of opinions; since we cannot reasonably expect that any one should readily and obsequiously quit his own opinion and embrace ours with a blind resignation

to authority which the understanding of man acknowledges not.

"We should do well to commiserate our mutual ignorance, and endeavor to remove it in all the gentle and fair ways of information; and not instantly treat others ill, as obstinate and perverse, because they will not renounce their own and receive our opinions, or at least those we would force upon them, when it is more than probable that we are no less obstinate in not embracing some of theirs. For where is the man that has incontestable evidence of the truth of all that he holds, or of the falsehood of all that he condemns; or can say that he has examined to the bottom all his own or other men's opinions? The necessity of believing without knowledge, nay, often upon very slight grounds, in this fleeting state of action and blindness we are in, should make us more busy and careful to inform ourselves than constrain others. At least those who have not thoroughly examined to the bottom of their own tenets must confess they are unfit to prescribe to others, and are unreasonable in imposing that as truth on other men's belief which they themselves have not searched into or weighed the arguments of probability on which they should receive or reject it. Those who have fairly and truly examined, and are thereby got past doubt in all the doctrines they profess to govern themselves by, would have a juster pretence to require others to follow them; but these are so few in number, and find so little reason to be magisterial in their opinions, that nothing insolent and imperious is to be expected from them: and there is reason to think that if men were better instructed themselves, they would be less imposing on others."[1]

J. WM. FLINN.

[1] Locke's Essay on the Understanding, Bk. IV., chap. 15.

THE SOUTHERN

PRESBYTERIAN REVIEW.

VOL. XXXVI.—NO. 3.

JULY, MDCCCLXXXV.

ARTICLE I.

A CALM AND CANDID REVIEW OF SOME SPEECHES ON EVOLUTION.

Whether for praise or for blame, it cannot be doubted that the whole agitation all over our Church respecting Columbia Seminary, has had its main origin with two individuals. Has it been, indeed, the unearthing of a dangerous concealed influence, which, brought chiefly by two men into the clear light of day, is being *slaughtered?* Then the Church has these two men to hold in especial honor for this great and useful service. On the other hand, has it been an unnecessary and hurtful excitement about nothing, arousing our fears about dangers imaginary, and stirring up baseless apprehensions through the exaggeration of trifles into real and frightful evils? Then the chief responsibility will still lie at the doors of two men alone. One of them has had an official position—in fact, two official positions—giving him enormous powers of both good and evil. But whether he has been doing our Church great beneficial service, or great damage, in these two official positions, is to be ascribed mainly to the support given him by his truly eminent colleague in all this work. The most popular and best beloved minister in our Synod, distinguished as a scholar and a theologian, eloquent as the golden-mouthed John of Constantinople, gentle and tender and affection-

ARTICLE VI.

EVOLUTION AND THEOLOGY.

THE CONSENSUS OF SCIENCE AGAINST DR. WOODROW'S OPPONENTS.

In a previous article discussing the formal errors in the logic of those who aided in Professor Woodrow's ejectment from Columbia Seminary, it was shown that those errors in formal logic involved ruinous consequences in philosophy, theology, and practical life. The purpose of the present paper is to point out the material error in the reasoning on which Dr. Woodrow's expulsion was based. Waiving for a moment the question whether the act of expulsion was justifiable on the supposition that the reasons therefor, the principles on which it was grounded, were tenable, an examination will be made of the *grounds* of the action. Whether church courts or boards of trustees are logically carrying out their views according to the forms and technicalities of law is one thing; whether those *views* are right is quite another thing. Although Romish persecution has found defenders in the ranks of Dr. Woodrow's opponents, on the ground that the Church of Rome was carrying out its views, a more important question is, What right had she to hold views according to which, in her opinion, the burning of Giordano Bruno and the imprisonment of Galileo were duties and logical results? This is the question of questions which our age asks in reviewing the conduct of former ages; it is the question which the future will ask in passing judgment upon the course of our Church in its treatment of Dr. Woodrow; it is the question to be answered before a higher tribunal than human history. To carry out one's views is doubtless an important matter; it is far more important to have *right views* to carry out.

This question in due course of time will probably be taken up to the highest court of our Church; it may be an issue within a year in all our Presbyteries in electing commissioners to the General Assembly; a man's position on this subject will determine whether he can be elected commissioner; in the final issue

the question will have to be settled on its merits; therefore the merits of the question—the rightness or wrongness of the views of Dr. Woodrow's opponents—is and will remain in order for discussion. Doubtless the majority will try to evade and pooh! pooh! but the subject cannot be tabled. The principles involved render it as impossible to down at a mere bidding as was Banquo's ghost. It is not from a mere love of fight that we of the minority persist in our opposition to, and criticism of, the principles and actions of the majority in ousting Dr. Woodrow. More than one hundred names are on record as voting against the action of the majority. They are known to the world as calm, truth-loving, law-abiding men. They are not captious, turbulent, or lovers of strife. Their loyalty to Presbyterian doctrine and polity is, and has always been, unchallenged and unchallengeable. Their soundness in the faith "once for all delivered to the saints" is above suspicion. Many of them—yea, a majority of them—are as true in their love for Columbia Seminary as any who oppose them. The ties and associations which hallow that institution and endear it to their hearts are as strong and sacred as any whose professions of attachment have been so loud, and whose zeal (which may prove to be without knowledge) has, we believe, led them to stab, seriously if not fatally, our common *Alma Mater*. These men are the peers of any in their loyalty and devotion to the Southern Church. Their record proves that as upholders and exponents of the spirit and principles of our Southern Church they are representative men. None can claim prcëminence over them as typical Southern Presbyterians. In their veins runs the blood of heroes in the faith whose lives and characters have made glorious Scotland, North Ireland, England, France, Holland, Germany, and Switzerland. The same spirit of loyalty to the very same doctrines which led Covenanters, Huguenots, and Puritans to face death unflinchingly animates their breasts.

Now, what is the situation before us? A position is taken by a majority in our Church which logically condemns this minority, which has been truthfully characterised above (a minority constituting at least one-tenth of our Church), as heretics, or if not

heretics, at least apostates from our doctrines to such a degree that they cannot be trusted as theological teachers; and in some cases we are told that outside parties have tried to defeat the election of some of these men as pastors in Christian churches, because they hold that Dr. Woodrow's theory of Evolution does not contradict Scripture or Presbyterian doctrine.[1] When the announcement was made in the Synod of Mississippi that the Rev. Dr. Jos. R. Wilson had been elected head of the theological department in the Southwestern Presbyterian University at Clarksville, Tenn., the statement was made by Dr. B. M. Palmer, announcing the fact, that *the Synod need not have any doubt about Dr. Wilson's soundness in the faith on the "Woodrow heresy," for the precaution had been taken (knowing the family connexion between Drs. Wilson and Woodrow) to sound Dr. Wilson, and that he had written in reply that he did not sympathise with Dr. Woodrow's views.* This, of course, may have only meant that Dr. Wilson (like all Dr. Woodrow's *defenders*) was not an evolutionist, or it may have meant that his views agreed with the majority in holding Evolution to be a dangerous theological error. In either case, a man's views on Evolution are a test of orthodoxy and of fitness for a theological professorship, even though he be simply a non-evolutionist, like Profs. Kellogg, of Alle-

[1] Perhaps a majority of these men are comparatively young, but they also include some of our oldest and most honored chiefs, such as Rev. Drs. J. B. Adger, J. Leighton Wilson, C. A. Stillman, A. W. Clisby, J. R. Burgett, Wm. Flinn, J. Woodbridge, etc. Among those either comparatively young or in the very prime of their manhood are such men as Rev. Drs. W. E. Boggs, J. L. Martin, E. Daniel, E. M. Green, A. R. Kennedy, C. R. Hemphill, G. R. Brackett, etc., etc.; Rev. Messrs. W. J. McKay, T. H. Law, T. R. English, A. B. Curry, W. H. Dodge, N. W. Edmunds, G. T. Goetchius, J. S. Cozby, W. S. P. Bryan, W. R. Atkinson, D. C. Rankin, etc., etc. The elders who are thus condemned virtually as heretics by synodical decrees, in these deliverances, which introduce into church courts the bill of attainder mode of inflicting penalties, include some of the best men in our Church, as Messrs. Hemphill, Clark, Perrin, Fraser, Walsh, Smyth, etc., of South Carolina; Messrs. Lapsley, Anderson, etc., of Alabama; Messrs. Anderson, etc., of Georgia; Messrs. T. G. Richardson, J. T. and W. T. Hardie, T. J. McMillan, etc., of New Orleans. All these men (and many more of the same kind might be added) are the peers of any in our Church in character, learning, usefulness, and loyalty to Presbyterianism.

gheny, Gulliver, of Andover, Hodge, Patton, and Shields, of Princeton, yet agreeing with these distinguished men and with Dr. Woodrow that Evolution, whether true or false, does not contradict Scripture.

It is said that those who have been from time to time elected to professorships at Columbia Seminary have been sounded on Evolution beforehand to see if they were *sound*. The assurance, we are told, was given to the Directors that Mr. Vos, of Princeton, avows he cannot see any "monkey Evolution" or "tadpole theology" in the first and second chapters of Genesis. Neither does Prof. Kellogg, of Allegheny, (nor Dr. Woodrow, for that matter,) but Dr. Kellogg's endorsement of Dr. Woodrow's theology, while rejecting his science, would disqualify him, in the eyes of the majority, for a professorship at Columbia. Had not Professors Boggs and Hemphill resigned, their defence of Dr. Woodrow (though not Evolutionists) would have led logically to their ejectment in the near future. Hints (or *threats ?*) to one of them that he was in danger of losing his place for his defence of Dr. Woodrow were actually given. Hence it appears both theoretically and practically that we *non-Evolutionists*, who yet maintain that the theistic form of Evolution held by Dr. Woodrow is theologically harmless and colorless, are, as to theological character and standing, in the same boat with him. If he is a heretic, so are we. If his views contradict Scripture, so do ours. There is, theologically speaking, no difference between the two positions: (1) "I believe a certain form of Evolution to be a probable scientific truth, which does not contradict Scripture or our Presbyterian doctrines;" and (2) "I do not accept this Evolution to be a scientific truth, yet I do not think it contradicts Scripture or our Presbyterian doctrines. I allow you to hold it and express your opinions concerning it, for whether true or false I regard it as theologically harmless." First, then, on the broad principle of maintaining truth and opposing error for their own sakes, and, second, because the error of the majority, logically and practically, works injury to every one who defends Dr. Woodrow in holding Evolution to be (whether proven or unproven) not contradictory of Scripture or of any important truth, is bound

to make common cause with him. Whether we will or not, his cause is ours. It is not mere defence of a friend, but of truth. It is also self-defence, which becomes a high and sacred duty when important truth is involved in the issue.

Recurring now to the grounds held by the majority, their position was substantially as follows: "Evolution is a mere hypothesis. The Seminary is not the place to teach hypotheses. They must not be inculcated or handled. Nothing but positive, demonstrated truth must be taught. No hypotheses. No subjective notions (Virchow). Evolution is an hypothesis supported only by *probable* evidence. Probability does not furnish sufficient ground of proof for the acceptance of an hypothesis." Our former article examining these positions showed that they involved formal errors subversive of sound philosophy and of all that is peculiar and fundamental in our creed.

Now for the material errors in the reasoning advocating these two propositions: 1. "Evolution is an unproven hypothesis." 2. "Evolution contradicts Scripture and sound doctrine." The main proof relied on to establish the first proposition was the testimony of science as rendered by scientific men. One of the main lines of proof adduced in support of the second proposition was the "received interpretation," the opinions of theologians, in other words, "traditional interpretation." Therefore the principle of proof in both cases was the *appeal to authority*—the authority of human opinion. The two positions may be thrown into syllogistic form:

1. "Any hypothesis which is rejected by the consensus of scientists is unproven.

"The evolution hypothesis is rejected by the consensus of scientists.

"Therefore evolution is an unproven hypothesis."

Of course the converse of the proposition would hold equally with the above; thus: "Any hypothesis which is accepted by the consensus of scientists is proven," &c.

The majority have committed themselves to the principle that the consensus of scientific authorities determines the truth or falsity of a scientific hypothesis. Without pronouncing any

judgment upon their major premise, it can be easily shown that the tribunal to which they have appealed renders a verdict against them; hence their conclusion *on their own premise* should be just the opposite of the one which they have drawn.

2. With regard to the theological complexion of evolution, the appeal to the "received interpretation," traditional opinion, if it means anything at all, amounts simply to an appeal to the consensus of orthodox evangelical Christendom. We may cast the position of the majority on this point into a syllogism also, thus:

"Any hypothesis which is condemned by the consensus of Christendom as contrary to Scripture, or to the body of evangelical reformed doctrine, is unscriptural, dangerous, and hurtful.

"The evolution hypothesis is so condemned.

"Therefore evolution is contrary to Scripture and to the body of evangelical reformed doctrine, &c."

Of course the reverse of this proposition is in the same logical category.

Admitting for argument's sake the principle that the judgment of Christendom concerning any hypothesis determines its theological character, it will be shown that the tribunal appealed to here also renders an adverse decision, and that from their own premises the majority are compelled to draw a conclusion precisely the reverse of the one which they have drawn.

I. *An examination of the grounds on which evolution is condemned as an unproved scientific hypothesis.*

Our opponents have explicitly condemned evolution as untrue, because it was rejected by science. As the testimony urged against the hypothesis, drawn from geology, the geographical distribution of plants and animals, comparative anatomy, embryology, archæology, comparative ethnology, philology, etc., was taken second-hand on the authority of original investigators (on which the majority of the educated world chiefly relies for most of its beliefs on scientific questions), therefore "science," as appealed to by the majority, was simply the authority of scientific men. We accept the challenge, and insist that our "majority" stand to their own chosen tribunal. We do not commit ourselves to their major premise; but holding them to it by disproving or prov-

ing the reverse of their minor. we shall compel *them* to admit (on their own ground) that *evolution is true, or at least probably true.*

1. *Evolution defined.*

Evolution in its broadest sense is simply an unfolding, the coming of one thing out of another, or the production of one thing or state of things out of another. An evolution takes place from an involution; the result Kant[1] calls an "educt." He called evolution the "Nest-Box" theory—a small box fitting into a larger one, and all finally enclosed in one box. The term "*educt*" as denoting the result of a process of evolution, was used by Kant to mark one form of Leibnitz's theory of "Preëstablished Harmony," which considers each organism generated by its like as either an educt or a product. "The system which holds that they are *educts* may be styled the system of individual preformation, or the theory of *evolution;* the system which maintains that they are *products* may be called the system of epigenesis, or generic preformation. In antithesis to this we might call the system of educts one of involution."[2]

Again, Evolution is merely a mode of succession of phenomena—a law of sequence. It is not a force, but a plan according to which power or cause acts. The term is very widely applied to denote *a description or history of the process by which the universe and the form of life within it came into their present condition.* Employed in a strictly scientific sense, evolution knows nothing and affirms nothing of absolute beginnings, either of force, law, forms of matter, or of life; it only attempts to trace orders of sequence, or modes of operation, leaving to philosophy and theology the higher question of primal origin and first cause. In the literature of the subject these questions are often confusedly mixed up with it, but they are mere importations irrelevantly injected into it from the subjective notions of individual writers. Separating it from these metaphysical and theological problems, and viewing it purely as a mode of operation,

[1] Critique on the Judgment, § 81.

[2] Critique on Judgment, II., § 81. Kant held that organic beings are *products*, not *educts.*

"Evolution is the passage (or the production) of the present state of things from a preceding state of things."[1] In its comprehensive sense Evolution includes the stellar and planetary universe, the earth with its fauna and flora, human societies, history, art, etc. Accordingly we have the expressions cosmical evolution, geological and geographical evolution, sociological evolution, the evolution of plants and animals, or organic evolution, etc. Within the domain of the natural, affirming that forms and conditions have grown out of preëxisting forms and conditions, that the present is the child or result of the past, that "in to-day already walks to-morrow" (Coleridge), Evolution simply affirms that the force or principle of causation operates according to the law of continuity. Present known causes have acted according to present known laws from an indefinite past until now, in producing the phenomena presented in the successive conditions and forms of the universe. The action of these causes has been more or less gradual and uniform. Each successive condition and form of existence born of, or produced from, its predecessor in the line of descent, has varied more or less from its ancestor. Each newly acquired or produced form, power, or condition, was made a point of departure or stepping-stone for something higher and more or less different. These general statements apply in a broad way to every department and phase of the Evolution hypothesis, cosmic, organic, or sociological. Another remark cannot be too strongly emphasised and carefully remembered, viz., the establishment of one branch of the Evolution theory would not demonstrate the truth of another phase of it; *e. g.*, the demonstration of the origin of the species plants and animals, man included, by the process of Evolution, would not establish cosmical Evolution, or the nebular hypothesis, nor the reverse. And so with all the departments of Evolution. Nor would the failure of proof, or the disproof, of Evolution in one branch of natural science or human history, invalidate the evidence for Evolution in another branch of knowledge. It may be true that

[1] Lieutenant General R. Strachey, F. R. S., President of Section E of the British Association for the Advancement of Science. Address at the Bristol meeting of the Association, 1875.

in proportion as Evolution is proved to be a law holding good in many departments of nature, a strong analogical argument is thereby furnished for the universal prevalence of the law. A growing knowledge of nature begets a belief in her unity and solidarity, in the unity of her cause, and in the unity of method which this cause pursues.

Dismissing all phases of Evolution except organic Evolution, perhaps no definition more accurate and briefly comprehensive can be given than the one in Dr. Woodrow's Address, viz., "Descent with modification." Many leading naturalists define it in a similar way, referring merely to the method according to which species arise. If it were necessary to attempt a definition which would incorporate what is fully brought out under Dr. Woodrow's and other naturalists', it might be stated thus: *Organic Evolution is the origination of present species by means of descent (from preëxisting species) with modification.* This definition is theologically colorless and (we believe) scientifically exact, *supposing* Evolution to be true. It leaves the Christian theist free to believe that the "*origination*" was the work of a superior cause, an *Originator*, God, and that this divine Originator wrought "by means of" instruments and according to methods of his own devising and under his control, and that therefore they were made obedient to his aims and will. It leaves the sceptic of whatever type free to say all that he ever wished and said 3,000 years ago, or may say 3,000 years hence.

To show the variety of scientific opinion on the subject of Evolution, and to expose the error of Dr. Woodrow's opponents in persistently misrepresenting his views by confounding his form of Evolution with Darwinism proper, and with all Haeckel & Co.'s materialistic additions and deductions, we will now give Prof. Alexander Winchell's[1]

"CONSPECTUS OF THEORIES OF THE ORIGIN OF SPECIES."

I. IMMEDIATE CREATION:

1. In single pairs, ...	Popular Opinion.
2. In colonies, ...	AGASSIZ, etc.

[1] The Doctrine of Evolution, etc. By Alex. Winchell. Harper & Bros., N. Y., 1874.

II. MEDIATE CREATION OR DERIVATION:

1. Through a force, which is a mode of the Unknowable,
HERBERT SPENCER.

2. Through external forces.

(*a*) Physical surroundings, . . . DE MAILLET.

(*b*) Conflicts of individuals, or "*Natural Selection.*"

(1) By insensible gradations, { DARWIN, HAECKEL, CHAPMAN, GEGENBAUR, WALLACE,[2] etc.

(2) With occasional leaps (*Saltative*), HUXLEY.

3. Through an internal force, influenced by external conditions. Perpetual effort to improvement (*Conative-variative*),
LAMARCK, GEOFFROY ST. HILAIRE, etc.

4. Through genetic processes exclusively (*Filiative*).

(*a*) Prolonged development of embryo (*Variative-filiative*),
"Vestiges of Creation" [Robt. Chambers].

(*b*) Accelerated development of embryo (*Variative-filiative*),
HYATT and COPE.

(*c*) Extraordinary births (*Saltative-thaumogene*),
PARSONS, OWEN, KŒLLIKER, [DALTON], MIVART, etc.

(*d*) Partheno-genesis—virginal births (*Saltative-filiative*),
FERRIS, KŒLLIKER.

These various groups of theories, under "mediate creation or derivation," differ very materially from each other, particularly 1 and 2 from 3 and 4. To confound together 2 and 4 either as identical or as involving identical consequences, is a proof either of inexcusable ignorance, or of invincible prejudice. One feature indeed is common to them all, viz., descent or derivation. It may be added also that the disproof (or lack of proof) of any one of the forms of organic evolution as given above would not demolish or invalidate the evidence for some other form of the theory. This fact is clearly stated by Rudolf Schmid, in the third chapter of his valuable work on "The Theories of Darwin." Schmid groups these theories under three heads, viz.: "1. The Theory of Descent. 2. The Theory of Evolution. 3. The Theory of Natural Selection." Schmid, as a theological professor at Schönthal, Würtemberg, is not quoted here as a naturalist, whose ori-

[2] Winchell adds that Wallace excludes the mind and body of man from Natural Selection. This is true, but Wallace nevertheless holds to the derivative origin of man's body. He holds to the animal descent of man's body, but thinks "*a higher power than Natural Selection guided the development* of man."

ginal investigations make him an authority; but he has read widely and studied carefully on the subject, and is competent to report the state of scientific opinion, and at the same time to have a judgment of his own entitled to respectful consideration. It is one of the insoluble enigmas of newspaper controversy that Rudolf Schmid was actually quoted in support of the views of the majority as against Dr. Woodrow!! We do not mean that Schmid regards Evolution as an established truth, but his general position is in harmony with Dr. Woodrow's on this subject; and how any candid intelligent reader can fail to see this is beyond our comprehension. By adopting a style of quotation which amounts to a *suppressio veri*, Schmid can be twisted into or made to *appear* an ally of the majority. Schmid says "the *descent theory* has gained, the selection theory has lost ground, the theory of development (evolution) oscillates between both; all three theories have not yet passed beyond the rank of hypotheses, although they have very unequal hypothetical value." He thinks the "*descent theory*" may "still have value when both the others are diminished or lost. . . . The theory of descent is indeed at first sight exceedingly plausible, and will probably always be the *directive* for all future investigations as to the origin of species." He discusses the three theories in succession.

1. *Descent.* After speaking of the many deep resemblances between the higher species, which increase in number and value with the rank of species, he says: "Our imagination refuses to accept the theory that the Creator, or nature . . . in producing the new species, laid aside all those points of contact which are continually becoming more numerous and more important, and produced instead, by ever widening leaps, the new and higher species from the inorganic, which lies farther and farther from them. On the other hand, the theory appears to us all the more plausible that every new species came into existence on that stage which is the most nearly related to it, and which was already in existence." After referring to the uninvalidated maxims, *omne vivum ex ovo* (all or every life is from an egg) and *omne ovum ex ovario* (every egg is from an ovary), and the fact that we cannot conceive the origin or development of any higher animal without the nourish-

ing help of a mother's womb, he adds: "Each and every attempt to render the origin of the first individuals of the higher species conceivable, leads of necessity to the descent theory. We have either to reject, once for all, such an attempt, as an unscientific playing with impossibilities, or to accept the idea of descent." He then reviews the evidence for descent from geology, concluding: "All these modifications of geological progress would entirely correspond to the idea of a pedigree to which the descent theory traces back the whole abundance of forms of organisms." He considers a tree a good illustration of the pedigree of species. From plant and animal geography he infers: "All these are facts which render quite inevitable the idea of an origin of the higher organic species of to-day through descent. . . . The hypothesis of a separate origin for each single species without genealogical connexion with the anatomically and physiologically related species, becomes neither more nor less than a scientific impossibility." From the testimony of comparative anatomy he concludes: "The *ideal* plan and connexion in the organisms, disclosed by these facts, and long ago acknowledged and admired, receives at the same time its *material* basis through the acceptance of a common descent." From the phenomena of rudimentary organs he infers, "*How simply are all these facts explained by the descent theory, how not at all without it!*"

In the embryonic development and growth of animals he finds "confirmation for origination through descent—namely, in leaps through metamorphosis of germs, or a heterogenetic generation . . . which we call change of generation or metagenesis."

Of the "main objection raised to every descent theory, viz., the origin of one species from another has never been observed, but that, on the contrary, so far as our experience goes . . all species remain constant," he says:

> "That objection loses its chief force from the consideration that we have not only never observed the origin of one species from another, but never even the origin of a species itself [in any way]. . . If, therefore, we cannot observe directly their origination, we have a right to make all possible attempts at approaching the knowledge of it in an indirect way. This objection is also invalidated by the fact *that no new species* have arisen since the appearance of man. This fact is inconvenient for those who . . reject aim

and purpose in the world; for *they* must admit that if species once originated through descent, new species ought still to originate through descent. . . But those scientists who recognise aims in the world, for which the world and all its parts are destined, and which aims are attained through the processes of coming into existence, have to expect beforehand that the organic kingdoms are also planned with reference to those aims. . Man in God's image, with the highest physical organisation, a self-conscious and responsible spiritual life capable of conceiving the ideal, even the idea of God, is the aim of all nature and life. . . . Scientists who take this standpoint can readily adopt the fact that we do not now observe the origination of new species; for it is in full harmony with their metaphysical doctrines, without the same being, on that account, dependent upon the confirmation or rejection of the hypothesis of the present constancy of species. With this very fact, the maxim that if new species once originated, new species must still originate through descent, has lost for them its truth, and therefore its power of demonstration."[1]

2. *Theory of Evolution.* This, says Schmid, "teaches that the species have developed themselves one from another in gradual transitions, each of which was as small as the individual differences still observed to-day among the individuals of the same species. It is not without support, especially in the *history of the development of plants and animals.*" Of the proofs for Evolution, in this sense, as furnished by Geology, he says the answer of Geology "reads contradictorily: it says yes, and it says no." On these contradictory results of geological proof for the evolution of *man*, he says:

"We dare not overlook three points: *First*, our knowledge of the crust of the globe is still very fragmentary, and does not yet extend over the whole globe. *Second*, from the nature of the case the strata in mountain formations can only give a very incomplete picture of the whole variety of the real organic life which may have populated the earth and the sea. *Third*, a purely hypothetical consideration is rendered of importance, particularly by Darwin and Häckel, viz., that the forms of transition without doubt existed for a shorter period than those forms whose organisation has established itself in fully developed species."

After a *résumé* of the proofs of man's evolution from archæology, he says: "Archæology, as a whole, seems to do no more

[1] "Theories of Darwin, and their Relation to Philosophy, Religion, and Morality." By Rudolf Schmid, President of Theological Seminary at Schönthal, Würtemberg. Chicago: Jansen, McClurg & Co., 1883. Pp. 61–77.

than admit that its results can be incorporated into the theory of an origin of the human race through gradual development, *if* this theory can be shown to be correct in some other way, and that its results can just as well be brought into harmony with a contradictory theory. *Comparative Ethnology* gives us quite a similar result." And so with *Philology*. He thinks the results of these three sciences quite compatible with the evolution of man, if the theory were otherwise confirmed, "but they agree just as well with a contrary theory, which excludes the origin of man by gradual development." He concludes thus:

"The Evolution theory, like the Descent theory, is so far only a hypothesis . . which has a much more problematical character than the Descent theory. For while in regard to the latter (the Descent theory) we had to say that we have either this explanation or none of the origin of the higher species, with the Evolution theory there is not even room for this alternative. For even in the case of its (evolution) failure, a descent of one species from another through heterogenetic generation is certainly very possible. Besides, it is not only possible, but *even probable, that both theories—that of heterogenetic generation and that of gradual development—may have to share with one another in the explanation of the origin of species.*"[1]

And yet Schmid is quoted in support of the majority!!

3. *The Theory of Selection.* Schmid thinks this theory "also is not entirely without support in the realm of observed facts," but that both "*facts* and *logic* are opposed to the *autocracy* of the selection principle. For selection can only explain the *preservation* and perhaps the *increase* of already existing useful qualities, but would not explain their *origination.*"[1] He concludes, Bk. I., Chap. 3, as follows:

"In summing up all we have said thus far about the theories of *Descent*, of *Evolution*, and of *Selection*, we still find all three solutions of the scientific problems to be hypotheses, but hypotheses of very different value. The idea of Descent has the most scientific ground; it will, as a permanent presupposition, govern all scientific investigations as to the origin of species, . . . More uncertain and less comprehensive is the position of the Evolution theory; in all likelihood, the idea of an origin through development will have to share the sovereignty with the idea of origin by leaps through the metamorphosis of germs. Still more unfavorable is the state of the Selection theory. It possesses the merit of having started the whole question as to the origin of species; it may explain subordinary developments;

[1] *Ibid.*, pp. 77–99.

Natural Selection may have co-operated as a regulator in the whole progress and the whole preservation of organic life. Ed. von Hartmann (Truth and Error of Darwinism, Berlin, 1875) compares its functions with those of the bolt and coupling in a machine; but that the driving principle which called new species into being lay or originated *in* the organisms, and did not approach them from without, seems to be confirmed more and more decidedly with every new step of exact investigation as well as of reflection" (p. 107).

We have quoted freely from Rudolf Schmid for two reasons: *first*, as he is an authority with Dr. Woodrow's opponents, the broad distinctions he points out between *Descent* (the form of Evolution held by Dr. Woodrow), *Evolution* (the development of species by gradual transitions, each one as small as the present observed differences among individuals of the same species), and *Selection* (Darwinism proper), will show them their error in confounding the Evolution of Dr. Woodrow with Darwinism. Indeed, on the methods of argument pursued by the majority we might go further, and say, "As you agree on certain points with Schmid, you agree with him on all. You claim him as supporting you in denouncing Evolution as an unproven hypothesis," etc.—(It will be seen from the above extracts, however, that Schmid's language on the hypothetical character of Evolution does not mean to him what it is made to mean by the majority.) "As Schmid does not deny that scientific men generally (especially naturalists) accept Evolution, but on the contrary quotes in his book about one hundred of the greatest names of modern science as accepting some form of organic evolution (man included) as at least *probably true*, so ought you, our dear friends of the majority, on your own premises, make the same admission. As Schmid, with triumphant success and ease, with incontrovertible reasoning proves the complete absence of contradiction between Evolution (including the descent of man's body from a *brute! mirabile dictu*) and Theism, the Bible and all the positive doctrines of orthodox Christianity, Religion, Morality, Providence, Prayer, Miracles, the Fall and Redemption of Man, Resurrection, Immortality, etc., you should agree with him." He thinks the Bible is "*naturally silent as to the descent problem*"

[1] *Ibid.*, pp. 100–103.

(p. 314). Thinks it "*infinitely insignificant* whether the earthly matter out of which God formed man, who is dust of the earth, was an animal organism or not" (p. 315). "*The question . . . whether man's connexion with the ground is brought about through the form of a preceding animal organism or not, is no longer of importance*" (p. 318). He thinks it just as *dignified* to have an animal ancestry as to have an ancestry of dirt; he sees no ground for the sentimental opposition to animal descent as to our bodies, because "*brutes*" are so ugly, wicked, hideous, etc., for "mankind has stains uglier than those which disfigure the wildest beast of prey, and also traits so noble that man need not be ashamed of them" (p. 319). He says, "It is certainly a right feeling to which Darwin, in his 'Descent of Man,' gives expression when he says: 'For my own part, I would as soon be descended from that heroic little monkey who braved his dreaded enemy in order to save the life of his keeper, or from that old baboon who, descending from the mountains, carried away in triumph his young comrade from a crowd of astonished dogs, as from a savage who delights to torture his enemies, offers up bloody sacrifices, practises infanticide without remorse, treats his wives like slaves, knows no decency, and is haunted by the grossest superstitions" (p. 319).

We insist that the majority stand by their man, Prof. Rudolf Schmid, and think like him in all things, because they (claim to) think like him in some things. On this principle Prof. Woodrow is charged with Darwinism. On the same principle the majority are *Schmidists*, and we therefore insist on them subscribing to or proclaiming this paragraph from Schmid:

"*Thus, then, the advocates of descent would find themselves in the unaccustomed position, equally surprising to friend and foe,* of being in *a much more friendly relation to the biblical belief in revealed religion than their opponents.*" [Really wonderful, isn't it? and Schmid a majority man.] "We should see the apparent discords . . . between Scripture and nature . . . . dissolved into harmony, and above the double relation of the two accounts (of creation, Gen. i. and ii.) we should see the morphological ideas of Oken and Goethe, the ideas of types of Cuvier, Agassiz, and Owen, the laws of development of K. E. von Baer, and finally the idea of descent of Lamarck and Darwin, reach a friendly hand to one another. And even the old joys of a teleological view of nature, adorned indeed

with queue and wig, but at present rejected with too much disdain, even if they are called ichthyo-teleological and insecto-teleological, would attain in this reconciliation their modest subordinate place. Moreover, we should then have the satisfaction of seeing again that a religiousness which, in its own realm, gives absolutely free play to natural investigation, and does not find it beneath its dignity, to learn from natural science, *can on that account retain its own autonomy in its own realm much more uncontestedly;* and that, as it seems to us in the present case, it can go much farther in the use which it makes of its autonomy, and in the extension of the revealed character of its records to physical processes and circumstances than is either necessary or safe, and that it nevertheless is rewarded for keeping peace with natural science by more rich, more living, and more correct glimpses into the harmony between God's word and his work, *than would be the case with a religiousness which, without regard to natural science, weaves its cosmogonies from the Holy Scripture alone.*"

Second. We quote Schmid freely, because, as President of a *theological college* in Würtemburg, the publication of such views in his book is the *teaching* of them to his students. Yes, he is accredited as a sound teacher by his Church—the "*Evangelical* Protestant Church" (we believe), formed by the union of the "Reformed Church" and the "Lutheran Church" in 1823. He has not been condemned and kicked out untried for teaching in substance the same things taught by Dr. Woodrow. What a shame on the "Evangelical Protestant Church"! And they profess the same doctrines, on vital points, that are set forth in our Confession of Faith! Furthermore, as Schmid holds that it is right and proper for a theological professor to hold and teach these views, so the majority, on their own principle that agreement with a man in some things implies agreement in all, must hold (and *act accordingly by rescinding their rash, blundering synodical decrees, etc.*) that Dr. Woodrow has the right to hold and teach as theological professor similar views.

2. *Scientific authorities examined.*

It is proper to state here, once for all, that we do not pass any judgment one way or the other on the opinions we shall quote from scientists as to the truth of any form of evolution, descent, gradual development, or natural selection (Darwinism). Further, as Evolution or gradual development and natural selection

or Darwinism, are both particular forms of the general theory of *descent*, it is a matter of course that if a man believes in Darwinism or selection, *a fortiori* he would still believe in the *descent of species*, even though he should become convinced that selection or evolution were without sufficient support, for descent is generic, the other two are specific.

(a) *Admitted anti-Evolutionists.* Several eminent naturalists have never given in their adhesion to this theory. But some of them quoted by the majority hold, or held, views which weaken their strength as allies.

Agassiz.—He indeed rejected the theory to the last, but the following facts give Agassiz's testimony at least questionable value as supporting the general position of the majority:

(1) Agassiz admitted before his death that naturalists generally accepted some form of organic Evolution. Tyndall, in his Belfast Address, 1874, speaking of the general acceptance of Evolution, quotes a confession made by Agassiz at Mr. Winthrop's, near Boston, when he, Tyndall, and others were then at luncheon: "*I confess*," said Agassiz (alluding to the success of Evolution in winning acceptance), "*that I was not prepared to see this theory received as it has been by the best intellects of our time. Its success is greater than I could have thought possible.*" Now if Agassiz's testimony is good for so much, it ought to be worth something for those who stake so largely on him, as to the acceptance of descent by scientific men.

(2) Agassiz denied the infertility of hybrids, held that a fertile offspring could result from the crossing of two distinct species, and denied that fertile offspring between plants and animals was proof of unity of species or origin. Here is his exact language on these points:

"To make specific difference or identity depend upon genetic succession is begging the principle and taking for granted what in reality is under discussion. . . . . We are not justified in doubtful cases, therefore, in considering the fertility of two animals as decisive of their specific identity. Moreover, generation is not the only way in which certain animals may multiply, as there are entire classes in which the larger number of individuals do not originate from eggs. Any definition of species in which the question of generation is introduced is, therefore, objec-

tionable. . . . . It is beyond all question that individuals of distinct species may, in certain cases, be productive with one another, as well as with their kind."[1]

Now all this reads very much like parts of Chapter IX. of Darwin's "Origin of Species," 6th ed., pp. 234–263. "It is Darwinism, as far as it goes." Perhaps it would be unkind to call attention to the fact that on the principle of our opponents, the agreement of Agassiz and Darwin on these important points proves their agreement on everything pertaining to species. But it must be noted that Agassiz's points of agreement with Darwin, as given above, make matters very serious with the majority. In the newspapers and in the Synods, the very *reverse* of these doctrines of Agassiz was insisted on as important to their cause. Hence when their "best man" is against them on points confessedly essential, he must be thrown out of court, or there must be a radical revision of principles.

Agassiz is *authority*. Agassiz holds opinions which (by confession of his friends) make Evolution *at least* "probably true." Therefore the denunciation of Evolution as unscientific must be cancelled. Quatrefages[2] speaks of the "singular points of resemblance," as well as "striking contrasts," between Agassiz and Darwinists. He mentions the resemblances as given above, and quotes Agassiz as "*denying the existence of species.*" "After having rejected the criterion drawn from crossing and degrees of fertility, he adds: 'With it disappears in its turn the pretended reality of species as opposed to the mode of existence of genera, families, orders, classes, and branches. Reality of existence is in fact possessed by individuals alone.' *Thus, ... Agassiz and Darwin have arrived at a similar result.*"[3] Now "fixity of species" was insisted on as essential to *anti-Evolutionists;* as it is all a myth (according to Pope Agassiz), therefore *anti-Evolution* is without foundation.

[1] "Sketch of the Natural Provinces of the Animal World and their Relation to the Different Types of Man." By Louis Agassiz, 1853. Prefixed to Nott & Gliddon's "Types of Mankind."

[2] "Human Species." By A. de Quatrefages: Appleton, N. Y., 1883, p. 155.

[3] *Ibid.*, p. 158.

(3) Agassiz denied the unity of the human race on the ground that this doctrine involved the theory of Evolution and the common origin of man and monkey as an inevitable result. We are aware that Agassiz attempted to bring his views into harmony with essential race unity and human fraternity. But he denied a unity of origin from one pair, holding that man was created in colonies, nations, or groups. The older members of the present generation remember the controversy that was still maintained thirty years ago on the "unity of the race." Agassiz was then denounced as all sorts of a heretic, teaching doctrines subversive of Scripture, morality, the whole plan of salvation, etc. *He was then in the minority both among theologians and scientists!* Now he is with the majority—in the Southern Presbyterian Church—a majority which seems more inclined to swallow Agassiz's notions on the multiple origin of mankind than Dr. Woodrow's views of Evolution. And the position of that majority compels it to do either one or the other of three things, viz., (1) agree with Agassiz in denying the common descent of mankind from one pair; (2) hold to the unity of the race, accepting Evolution as a necessary part of the doctrine (according to Agassiz); or (3) abandon Agassiz's testimony against Evolution as either valueless or dangerous. "But," some may ask, "does Agassiz really hold that man's common descent from one pair inevitably involves Evolution?" He does, explicitly. After stating the two alternatives of mankind's origination and race descent from a common stock, or that the various races are distinct primordial forms of the type of man, he says: "The consequences of the first alternative (descent from a common stock or single pair), which is contrary to all the modern results of science, *run inevitably into the Lamarckian development theory, so well known in this country through the work entitled 'Vestiges of Creation'; though its premises are generally adopted by those who would shrink from the conclusions to which they necessarily lead!*" [1]

Again, he said: "If it is ever proved that all men have a common origin, then it will be at the same time proved that all mon-

[1] "Sketch of the Natural Provinces of the Animal World and their Relation to the Different Types of Man," in Nott & Gliddon's "Types," etc., p. 76.

keys have a common origin, and it will by the same evidence be proved that man and monkeys cannot have a different origin."[1] He confesses that he "saw the time coming when the question of the origin of man would be mixed up with the question of the origin of animals, and a community of origin might be affirmed for them all."[1] Now, Agassiz was indeed a great man, and one of the most eminent of the world's naturalists; but is his testimony against Evolution worth much to those who hold to the unity of the race? Agassiz stoutly combated the doctrine that race peculiarities, such as color of the skin, character of the hair, form of the features, general anatomical and physiological differences, etc., were produced by natural causes, such as climate, food, physical geography, mode of life, occupation, etc. To him the truth of this theory was proof of race unity, and therefore of Evolution. The energy with which some of Dr. Woodrow's opponents fought against the idea of the origin of such race peculiarities as color, etc., from natural causes, vehemently denying the fact when it was cited as an analogical argument for the *possibility*, at least, that Evolution *might* be true, would indicate that Agassiz's opinion on this subject was shared by some of these opponents. But this fact is denied by very few except those who deny the unity of the race. Now, if the testimony of science is that race varieties have arisen from natural causes, and if this fact (as appears from the vigorous denial of it by some of these opponents) furnishes an analogical presumption that Evolution *may be true*, then these opponents must abide by the decision of their chosen tribunal on this subject, accepting along with the decree of their own court the probable or possible evolutionary conclusion confessedly flowing from it.[2]

---

[1] Quoted by Prof. E. S. Morse, Vice-President of the Biological Section of the American Association for the Advancement of Science, in an address before the Association on "What American Zoologists Have Done for Evolution," at Buffalo, N. Y., August, 1876. It is singular to note how naturalists of to-day, taking the same facts and many of the leading principles on which Agassiz based his opposition to Evolution, draw precisely the opposite conclusion.

[2] NOTE on Race Unity and the Causes of Race Varieties.—It is one of the instructive facts in history that the question of the unity of the race and of

Quatrefages: Professor of Anthropology in the Museum of Natural History, Paris.—He is one of the few living naturalists who reject Evolution, but he does not endorse the extravagant position of the majority on this subject. Speaking of the attempts of men, "eminent in science and in the richness of their imaginations," to explain organic life by descent, etc., as revivals of the methods of the Greek philosophers, which consisted in connecting together, and explaining thereby, facts of nature with conceptions almost entirely intellectual, he criticises their rashness, and adds: "These men could not but excite admiration. They spoke in the name of science alone; by its means they replied to aspirations perfectly justifiable on such a topic; they produced

---

the causes of race varieties has found all along believers and sceptics on both sides of the question. Quatrefages (Human Species, p. 159) says that Agassiz's theory of a multiple origin of mankind is "the reproduction, *in the name of science*, of a theory at first proposed by La Peyrère, *in the name of theology.*" La Peyrère's attempt to show that "man was created by nations" was not only in accord with Scripture, but *demanded* by Scripture, is very curious. And he had numerous followers. Agassiz and other Christian polygenists of later days argued that Scripture did not contradict their doctrine. It is also well known that in the modern revival of race plurality by Voltaire and his allies in France, Germany, England, etc. (such as Rousseau, Bolingbroke, Gibbon, and Tom Paine), the alleged *falsity* of the race unity theory was fiercely urged as an argument for the rejection of the Bible and Christianity as worthless and false. Other sceptics urged the *Bible doctrine of race plurality* as proof that the Bible was false! Thus do men reason! As remarked by the *Biblical Repertory and Princeton Review* in 1850: "No one acquainted with the subject has any conception of the amount of learning and labor drawn into the discussion." Among Southern writers on this subject of whom we may well be proud, both for the intrinsic value of their works and for the encomiums paid them by the highest authorities, scientific, theological, and literary, are Rev. Drs. J. Bachman and Thomas Smyth, of Charleston, S. C., and Dr. J. L. Cabell, Professor of Comparative Anatomy and Physiology in the University of Virginia. All these distinguished scholars maintain, with great learning and force, that race peculiarities, "color," etc., are the results of natural causes—climate, food, habits, etc. Rev. Stanhope Smith, D. D., LL. D., President of Princeton College, in a work on the "Causes of the Unity of Complexion and Figure in the Human Species" (New Brunswick, Philadelphia, Charleston, etc., 1810), assigns "climate, manner of life," etc., as these causes. Dr. Smith gives some remarkable illustrations confirming his

theories which charmed by their fulness and the apparent precision of their explanations." He then proceeds to condemn the attacks made on these men in the name of religion: "Men as *imprudent as ill-judged have attacked them in the name of dogma.* Scientific discovery has degenerated into controversy; both parties have become excited; . . . . they have vied with each other in violence [savants and theologians equally intolerant]. . . . . I will only remind the one party of the trial of Galileo, and the other of the theories of Voltaire denying the existence of fossils."[1] We commend these words to those who cite Quatrefages. Take his counsel and beware of denouncing Evolution as anti-scriptural. Again, he confesses himself an agnostic as to the mode

views, among them a negro, Henry Moss, of Maryland (personally known to Dr. Smith), who completely changed from a black negro, with kinky hair, into a white man, with "fine straight hair of silky softness; . . . and in his appearance he could not be distinguished from a native Anglo-American." The whitening process was gradual, extending over a period of about ten years. It began on the abdomen, and soon appeared here and there on the body, encroaching on the original color until only black spots were left, "resembling dark clouds melting away at the edges." The parts of the body most exposed to air and sun were the last to whiten. The hair changed slowly from negro kinks to fine straight hair of silky softness, as the skin whitened under it, indicating that the peculiar form of the African hair is due largely to those secretions in the cells of the skin which cause color. This negro Moss, says Dr. Smith, attracted the attention and benevolence of the public, and his freedom was purchased by money raised for that purpose. He went to Virginia, and at last accounts he was alive and well and in appearance indistinguishable "from a native Anglo-American." A record of this case is in the Medical Depository of New York. It is mentioned by Dr. Wm. Barton, of Philadelphia; and Rev. Dr. Rodgers and Jno. R. B. Rodgers, M. D., of New York, examined Moss in company with Dr. Smith (pp. 92–95). Dr. Smith refers to Dr. Witherspoon's observation of the remarkable differences in complexion, figure, etc., of the people of East and West Scotland, resulting from climate, occupation, etc. (pp. 164–5). He cites the case of a young Indian student entering Princeton at the age of fifteen (during the Presidency of Dr. S.), who changed so much in features, etc., as to lead Dr. Smith to believe that if the "Anglo-American and the Indian were placed from infancy in the same state of society in this climate, which is common to them both, the principal differences which now subsist between the two races would in a great measure

[1] "Human Species," pp. 126–7.

of man's origin (p. 128); does not anathematise evolutionists; thinks their efforts legitimate; admits they have done good in provoking research, etc.; admits that they *may* finally succeed (p. 128). Quatrefages holds other views which some of the majority insisted on as false, or as *logical results, if Evolution were true: e. g.*, (1) "The characteristic phenomena differentiating man from beast are not in his material disposition nor in his physical organism. There is less difference between man and the higher apes (physically) than between the higher and lower apes" (p. 18). "In anthropology the axiom or truth which serves as a criterion is the fundamental, physical, and physiological identity of man with other living beings. All hypotheses at variance with

disappear when they should arrive at the age of puberty." He says: "Less difference existed at length between this Indian's features and those of his fellow-students than we often see between persons of the same nation (pp. 173–6). Rev. Dr. Thomas Smyth,[1] of Charleston, S. C., in his learned work on the "Unity of the Human Races," which Dr. Robert S. Candlish pronounced "the most comprehensive manual we can well have on this subject," quotes about 150 of the greatest names in the various professions and departments of learning who teach the unity of the race, and nearly all these (we know of no exception) also hold that race varieties are the results of natural causes. We have examined personally more than one-third the list given by Dr. Smyth, and from the quotations by various authors from the others we would infer that no scholar of any eminence, whose studies on this subject entitle his opinion to any consideration, denies that race varieties have been produced by natural causes, though they do not all agree as to the part played by each of these causes. Among these authors are: 1. *Naturalists:* Linnæus, Buffon, Cuvier, Ray, Shaw, Pallas, Humboldt, Blumenbach, Lichtenstein, Sir Wm. Hooker, Camper, Lyell, Audubon, Bachman, Guyot, Pickering, Mantell, Darwin, Owen, etc. 2. Physicians, Physiologists, etc.: Sir Jno. Richardson, Abernethy, Sir Chas. Bell, Hunter, Lawrence, Prichard, W. B. Carpenter, Combe, Rush, Goode, Tiedemann, Torrey, Sir W. Ainslie, Arbuthnot, Prout, Boerhaave, J. Miller,

[1] Dr. Smyth's work was republished in Edinburgh, 1851. It was very highly endorsed by Rev. Drs. Wm. Cunningham, Robert S. Candlish, Alex. Duff, Jas. Hamilton, Prof. Jno. Brown, David Brown, of Glasgow, Wm. Symington, David King, Henry Cooke, of Belfast, Robert Halley, Leonard Bacon, J. G. Lorimer, J. Pye Smith, Jas. McCosh, and Hugh Miller. The leading British and American periodicals also warmly commended the work; among them the *British Quarterly*, the Princeton *Review*, the London *Evangelical Magazine*, etc.

this truth should be rejected. . . . Every solution which makes or tends to make man an exception, by representing him as free from those laws which govern other organised and living beings, is unsound and false" (p. 28). Now that great physical gulf whose existence was urged as a disproof of Evolution by the majority is dried up or bridged over by the chief living authority of our good friends. But Quatrefages did not *mean* to be unkind to you, brethren.

(2) He thinks the *minds* of brutes and man are the same in kind, differing only in *degree.* "Man and animals think and reason by virtue of a faculty which is common to both, and which is only more developed in man" (p. 21). He affirms the same thing of the language of man and of brutes (p. 21). The only fundamentally characteristic phenomena distinguishing man from beast are those of morality and religion (p. 22). This is worse than some theistic evolutionists who claim both a *mental* and *spiritual* gulf between man and beast. Nearly all who oppose Evolution (among them our majority friends) deny that the

---

etc., etc. 3. General scholars, theologians, philosophers, etc.: Stanhope Smith, Cardinal Wiseman, Chevalier Bunsen, Jas. McIntosh, Sharon Turner, Sir Walter Raleigh, Archbishops Sumner and Whately, Faber, Stillingfleet, Lord Bacon, Jno. Locke, Dugald Stewart, Sir Wm. Hamilton, Robertson (the historian), Heeren, Michaelis Calmet, Wells, Flourens, Lord Brougham, etc., etc. 4. Ethnologists, Linguists, etc.: F. Schlegel, Klaproth, Humboldt, Herder, Niebuhr, Abel Remusat, Sir Wm. Jones, Grotius, Carl Ritter, Birch, Lepsius, Kenrick, Latham, Quatrefages, etc., etc. Darwin thinks that all evolutionists must logically hold that "all the races of man are descended from a single primitive stock." He says: "Finally we may conclude that when the principle of Evolution is generally accepted, as it surely will be before long, the dispute between the monogenists and the polygenists will die a silent and unobserved death." It is interesting to note here that the late gifted and lamented Rev. Dr. A. Flinn Dickson, in a speech at Davidson College, before the appearance in this country, we believe, of Darwin's "Descent of Man"—though not an evolutionist—pointed out almost in Darwin's words that the truth of Evolution would settle the question of race unity. Darwin makes "sexual selection" the main factor in producing varieties, but thinks an "unexplained residuum is left," and that "unknown agencies" operate as in the case of individuals differing from their parents.[1]

[1] "Descent of Man," chap. vii.

mental difference between man and brute is one merely of *degree* and not of *kind.* They say, "If this is true, Evolution is true." And Quatrefages, their Leo XIII., says it is true. Quatrefages should be deposed, and those who quote him should be—more careful!

(3) Quatrefages teaches an antiquity for man which the majority assert implies or at least is demanded by the Evolution theory. He antedates the glacial epoch (p. 142). He lived in the tertiary age, in the miocene division (p. 151). Now, these geological eras (according to general scientific opinion) date many thousand years back, the computations ranging from 20,000 years to millions of years. It is doubtful whether any real authority in geology would put the figures as low as 20,000. Now, this opinion of Quatrefages was said to be consistent with and demanded by the Evolution theory alone. Authorities are sometimes very inconvenient.

(4) He thinks two geological revolutions separate man of to-day from the primitive stock, and that the primitive human type has been effaced, or disappeared (p. 239). "We know nothing of primitive man; from want of information it would be impossible to recognise him. All . . . we can say is that . . . he ought to be characterised by a certain amount of prognathism, and have neither a black skin nor woolly hair. . . . His color probably resembled that of the yellow races; his hair more or less red. . . . His language was a more or less pronounced monosyllabic one. . . . It is possible to believe that he did not enter upon the scene of the world with innate knowledge and the instinctive industries which belong to animals. Still less did he appear in a fully civilised state, mature in body and mind. . . . His knowledge was very small, . . . and he was ignorant of industries, to our eyes very elementary, and which we see appear in succession. Upon this point the Bible agrees with classical mythology" (pp. 242–3). Now this barbarous primitive condition of man, as pictured by Quatrefages, was urged as a necessary corollary from any descent theory. It is one of the essential attributes of the theory, say Dr. Woodrow's opponents. Their highest living authority testifies to the existence of this attribute. To establish

the mark or attribute of a thing is to prove the existence of the thing itself in which it inheres. Hence, on the premises of the majority, the descent theory is at least probable. We non-evolutionists, not having committed ourselves to the principles of reasoning employed by the majority, are not driven to such a dilemma. These four doctrines of Quatrefages: (1) The obliteration of the physical chasm between man and beast, (2) the identity in *kind* of human and brute mind, (3) the extreme antiquity of man, and (4) the savage state of primitive man, were all urged as marks or constituent elements of Evolution. We might say: "On your principle that agreement with a man in one thing implies agreement in all, you are compelled from the testimony of Quatrefages to agree with him that these four marks are constituent elements of *anti-Evolution* as well as of Evolution; or holding to Quatrefages as an authority on these four points as matters of fact, and to your own view that these facts render Evolution probably true, you must reject the testimony of Quatrefages *against* Evolution, and say that he, to be consistent with these alleged facts, must accept Evolution as true." Without pressing this point further, one thing is evident: these four *alleged* marks and logical concomitants of Evolution are no more necessary results or constituents of the descent theory of Dr. Woodrow and other Christian evolutionists than they are of anti-Evolution.

Principal Sir J. W. Dawson, of Canada.—All admit that he is an anti-evolutionist. But he, too, holds views on these subjects utterly inconsistent with those of the majority. Note these extracts from his "Origin of the World According to Revelation and Science."[1] "The Bible leaves us perfectly free to inquire as to the *plan* and *method* of the Creator" (p. 228). The majority generally held that the Bible settled the question of *plan*, etc. One speaker in the Synod of Mississippi said: "To try to tell me *how* God made man is impertinence and folly." Not so, however, thinks Dawson, a high authority with the majority. Again: "In that scheme of revelation all the successions and changes of organised beings, just as much as their introduction

[1] Harper & Bros., N. Y., 1877.

at first, belong to the plan and will of God. Revelation opposes no obstacles to any scientific investigation of the nature and method of this plan, nor does it contemplate the idea that any discoveries of this kind in any way isolate the Creator from his works. Farther, inasmuch as God is always present in all his works, one part of his procedure can scarcely be considered an intervention any more than another" (p. 380). That means, of course, that the origination, the production, the creation of man's body, was no more immediate or miraculous than anything God did in nature before or since that origination. This doctrine, it was charged, is a logical result, or a constituent part of Evolution. Only Evolution could deny that the creation of man's body was an act of special intervention, but here it seems that this denial is a mark of anti-Evolution as well. We need not repeat here the reasoning which puts the majority in a dilemma similar to that pointed out in showing the contradictions between our friends and Quatrefages. Again: "The expression in the case of man, '*out of the dust*,' would *seem* to intimate that the human body was constituted of merely elementary matter, without any previous preparation in organic forms. It may, however, be intended merely to inform us that while the spirit is in the image of God, the bodily form is of the earth earthy, and in no respect different in general nature from that of the inferior animals" (p. 378). If this paragraph means anything, it means that the condition of the dust of which Adam was made, whether organic or inorganic, is *not* definitely settled by the Bible; and taken in connexion with the preceding paragraphs, it means that the question whether the human body was constituted (created, produced) with or without "*previous preparation in organic forms*"—*i. e.*, by descent—is to be settled, if at all, from a study of nature and not from the Bible. Would that all the majority agreed with Dawson on this point! The shameful treatment of Prof. Woodrow would then have been impossible.

M. Joachim Barrande,[1] Emil Blanchard, Göppert, Giebel, Pfaff,

[1] A careful *résumé* of Barrande's work on the Silurian Rocks of Bohemia is given by Winchell in his work on "*Evolution.*" Harpers, 1874. Barrande has recently died. Sir Roderick Murchison died in 1871. All

Sir Roderick Murchison, and a *very few* others, exhaust the list of living or recently deceased naturalists who do not accept some form of the doctrine of descent. It is probably not too much to say that five per cent. would be a very liberal estimate for the proportion of living naturalists who reject every form of organic Evolution. A number of physicists and other scientific men whose studies do not embrace the biological sciences can be found who reject Evolution, but even their number is comparatively small.

(b) The testimony of *alleged anti-Evolutionists.*

Several prominent scientific men have been claimed and quoted on both sides. If it could be proved that they flatly contradict themselves, their testimony would simply be thrown out of court. But there are three things to be considered before taking such a course: (1) Some writers may admit that unexplained difficulties confront the theory and at the same time hold on to it as, on the whole, more probable, and encumbered with less embarrassment than anti-Evolution. (2) The rejection and the criticism of some particular phase of Evolution, *e. g.*, unmodified Darwinism or natural selection, by some writers may be misunderstood as a rejection of every form of the descent theory; *e. g.*, Mivart's characterisation of Darwin's theory as "a puerile hypothesis" has been mistakenly quoted as proof that Mivart was an anti-Evolutionist! A. R. Wallace's exception of man from "natural selection" has been misunderstood as a statement on his part that man's body was not derived from preëxisting animal life! (3) The utterances of men on this subject twenty-five or thirty years ago are erroneously cited as giving their present views, whereas within that time their opinions have changed. Lyell, Owen, Dana, LeConte, etc., are notable examples.

Prof. Rudolf Virchow, of Berlin University.—In our previous article we quoted Huxley's comment on Virchow's Munich Address, viz.: "It owes its extraordinary reception to an *imputed* righteousness. It is mistakenly supposed to be a recantation and

---

these writers are referred to by Rudolf Schmid in "The Theories of Darwin." Jansen & McClurg, Chicago, 1883. Murchison, Barrande, and Blanchard are the only ones of the six given whose writings we have seen.

a death-blow to Evolution; but though I certainly hold that doctrine with some tenacity, I am able, *ex animo*, to subscribe to every important general proposition which its author lays down." How "tenaciously" Huxley holds to Evolution may be judged from the fact that in his New York lectures he said it (organic Evolution) was "*as clearly demonstrated as the Copernican theory of astronomy.*" Now if Huxley could subscribe to that Address, then our friends in the opposition, in quoting it so triumphantly, got more out of it than was in it. Perhaps they read *between the lines*, or may be Huxley does not understand Virchow. Perhaps some light may be thrown on Virchow's Munich Address by his own explanation of it in a speech at the Edinburgh University Tercentenary. He says:

"You will allow me to speak to you on the position which I am *supposed* to have taken up towards the teachings of Darwin. The opinions which I have expressed have in some English publications been *much misunderstood. I have never been hostile* to Darwin; never have said that Darwinism was a scienific impossibility. But when I expressed my opinion at . . . Munich, I was convinced, and still am, that the development which it had taken in Germany was extreme and arbitrary, for the following reasons:

"1. Darwinism was interpreted in Germany as including the question of the *origin* of life, not merely its mode of propagation." He thought spontaneous generation a logical possibility, but not proven.

"2. His second reason for opposing the *German development* of Darwinism, referred to the descent of man from apes, or some other vertebrate animal. Was there anywhere a pro-anthropos? *The existence of such a precursor is a logical possibility, perhaps a probability.* But it is a purely speculative question. No anthropological teacher has any occasion to speak of a pro-anthropos, except as a matter of speculation. Haeckel *had proposed to introduce into our schools* (for CHILDREN) a *new system of religious instruction, based upon the doctrine of the descent of man*, and I still think it necessary to guard against the danger of constructing systems of doctrine out of possibilities, and making these the basis of general education."

Haeckel is a rank materialist and atheist (at least a monist), and this proposal from him was of course an effort to displace the Bible. We see no reason why any sober-minded evolutionist might not accept Virchow's statements. We see little prospect of our majority-friends getting much help or consolation from Virchow. But when people are in great distress a little comfort will go a long way. Any port in a storm.

Alfred Russell Wallace, the independent coöriginator, with Darwin, of the theory of "natural selection."—Very strangely Wallace's belief that "natural selection" has limits as applied to man, and that certain features of his mind and body were not produced by this agency, has been mistaken as an opinion on his part that man was *not* of derivative origin—that his body was *not* descended from preëxisting animal forms. Nothing could be farther from the truth. By careless reading, or by unfamiliarity with the subject, it is easy to see how one might misunderstand Wallace in reading his essays, "The Development of Human Races under the Law of Natural Selection," and "The Limits of Natural Selection as Applied to Man."[1] Yet his words seem plain enough. Speaking of the earth going through its "grand cycles of geological, climatal, and organic progress," and the various life-forms being continually but imperceptibly "moulded into such new shapes as would preserve their harmony with the ever-changing universe," he says: "At length, however, there came into existence a being in whom that subtle force we call *mind* became of greater importance than his mere bodily structure, etc."[2] "A superior intelligence has guided the development of man in a definite direction, and for a special purpose."[3] He does not think that man's development by some higher power than "natural selection," at all inconsistent with Darwin's theory. "It merely shows that the laws of organic development have been occasionally used for a special end. . . . . I do not see how the law of 'natural selection' can be said to be disproved, if it can be shown that man does not owe his entire physical and mental development to its unaided action."[4] This statement occurs after Wallace's profound profession of faith that "matter is force," and that "all force is will-force."[5]

If these passages leave any doubt as to Wallace's opinion, the following from his opening address as President of the Biological

---

[1] "Contributions to the Theory of Natural Selection." By A. R. Wallace. Macmillan, 1870.

[2] *Ibid.*, p. 325. [3] *Ibid.*, p. 359. [4] *Ibid.*, p. 370.

[5] "*The will of one supreme intelligence.*" *Ib.*, p. 368.

Section of the British Association for the Advancement of Science in Glasgow, 1876, removes it:

"The controversy (as to man's development from some lower animal form) is now, as to the *fact* of such development, almost at an end, since one of the most talented representatives of Catholic theology—Professor Mivart—fully adopts it as regards physical structure, reserving his opposition for those parts of the theory which would deduce man's intellectual and moral nature from the same source, and by a similar mode of development.

"Never, perhaps, in the whole history of science or philosophy, has so great a revolution in thought and opinion been effected as in the twelve years, 1859 to 1871, the respective dates of the publication of Mr. Darwin's "Origin of Species" and "Descent of Man." Up to the commencement of this period the belief in the independent origin of the species of animals and plants, and the belief in the very recent appearance of man upon the earth, were practically universal. *Long before the end of it these two beliefs had utterly disappeared, not only in the scientific world, but almost equally so among the literary and educated classes generally.* The belief in the independent origin of man held its ground somewhat longer, but the publication of Mr. Darwin's great work gave even that its death-blow, for *hardly any one capable of judging of the evidence now doubts the derivative nature of man's bodily structure as a whole*, although many believe that his mind, and even some of his physical characteristics, may be due to the action of other forces than have acted in the case of the lower animals."

We cannot suppose Wallace was quoted as denying the derivative origin of man's body with a deliberate intention to misrepresent his views. We are sure it was through misapprehension. At the same time the lack of information, and the careless reading which led to such misconceptions, are totally unjustifiable; for, on such misapprehensions as these, naturalists generally were erroneously supposed to reject the doctrine of descent, and on this mistaken notion our Synods based their uncalled-for action, injuring the cause of truth by staking the truth of the Bible on a given cosmic conception, and doing injustice to an honored, faithful, and orthodox servant of our Church.

Arnold Guyot (recently dead), though rejecting Darwinism proper, is claimed by evolutionists as not unfriendly to the doctrine of descent in its theistic form as God's method of creating species. We have seen nothing in his last work to contradict this claim.

(c) *Evolution taught or accepted in the Biological Professorships in all, or nearly all, American and European Universities and Colleges.*—This fact was disputed on the authority of the *New York Observer's*[1] published denials of such teaching by several Presidents of American Colleges in their respective institutions. These Presidential denials would seem to be conclusive, but the real history of the matter puts the case in a very different light. It is substantially as follows: Dr. McCosh had said in the *Evangelical Alliance* at New York:

"It is useless to tell the younger naturalists that there is no truth in the doctrine of development, for they know that there is truth which is not to be set aside by denunciation. Religious philosophers might be more profitably employed in showing them the religious aspects of the doctrine of development; and some would be grateful to any who would help them to keep their old faith in God and the Bible with their new faith in science."

The New York *Independent* endorsed these views of Dr. McCosh, saying: "We are all taught in our best schools, by our scientific authorities, almost without exception (and we laymen in science are therefore compelled to believe), that man was, at least so far as his physical structure is concerned, evolved from irrational animals."[2] The New York *Observer* sent this paragraph to nine College Presidents, and asked them if it represented the teaching in their respective institutions. Dr. Chadbourne denied that the doctrine in the *Independent's* paragraph was taught at Williams College. Dr. Cattell, of Lafayette, said he had never heard any of his colleagues "expressing the opinion referred to in the slip you send me." Dr. Brown, of Hamilton, said it was not "to his knowledge taught at Hamilton." Dr. Potter, of Union, said "the printed statement is *not* a correct statement of the teaching in this College." Dr. Robinson, of Brown University, said, "We do not teach the doctrine stated in the enclosed slip." Dr. Anderson, of Rochester, and Dr. Seelye, of Amherst, made somewhat similar denials. Dr. Porter, of

[1] Late in 1879 or early in 1880.

[2] The *Independent* mistakenly found ground in the supposed truth of Evolution to confirm its *old* doubt about the historic reality of the fal of Adam—a *non sequitur*.

Yale, said, "The enclosed does not give a correct representation of the teaching in this College by our scientific authorities." Dr. McCosh, of Princeton, said, "We do not teach in this College that man is evolved from *irrational animals*. I teach that man's soul was made in the image of God, and his body out of the dust of the ground. I do not oppose development, but an atheistic development."

This *looks* unanimous enough. Without going further, it might be said, (1) that College Presidents do not *always* know *everything* their colleagues teach; (2) when part of the slip from the *Independent* contained a denial or doubt of the fall of man, the doctrine of the paragraph as a whole might be properly disclaimed (which seems to be the case with some of the replies), and yet Evolution taught or held in the sense of Dr. Woodrow's form of the theory. But there is more to follow.

The *Independent* "went behind the returns," and took the votes of the biological Professors themselves, with results differing widely from the "Presidential canvass." The following is a condensed statement of the facts elicited by the *Independent's* inquiries:

(1) At *Yale*, Professors Marsh, Dana, Verrill, Brewer,[1] and Smith, are pronounced evolutionists. Prof. Marsh said before the American Scientific Association: "*It is now regarded among the active workers in science as a waste of time to discuss the truth of Evolution. The battle on this point has been fought and won.*" The readers of contemporary scientific literature in journals, reviews, books, etc., know that this statement of Professor Marsh is literally true. The tone of nearly all working scientific writers who allude to the subject is no longer that of defence, apology, or polemic, but of assured confidence that Evolution is true as a matter of course.

(2) Princeton.—Dr. McCosh is known to be friendly to Evolution as far as its theological aspects are concerned. Professors Macloskie, Young, and Brackett, are friendly to the Evolution theory, both in its religious and scientific aspects.

[1] See Prof. Brewer's letter to Dr. Woodrow, quoted in Dr. Woodrow's speech in South Carolina Synod, and published in January number of this REVIEW and in *Southern Presbyterian*.

(3) Prof. A. S. Packard, of Brown University (Instructor in Zoology, etc.), fully believes in Evolution—man's body no exception. His published books support Evolution through and through.

(4) The Professor of Geology at Amherst is an unreserved theistic evolutionist.

(5) All the Professors at Harvard, whose chairs deal with biology, are evolutionists—man's body no exception. These Professors are Asa Gray,[1] Whitney (the geologist), Alexander Agassiz (son of Louis Agassiz), Hagen, Goodale, N. S. Shaler, James Farlow, and Faxon. Perhaps Alexander Agassiz will be regarded as a "degenerate son of a noble sire" by our good majority friends. But any one who honestly reads his works,[2] will see that in vigorous thought, careful research, and wide reading he is "a chip off the old block." Perhaps he was convinced of the unity of the race by the proofs brought against his father's theory, and then accepted his father's view: "*If all men descended from one pair, so did all monkeys; and if that be true, then man and monkey had the same origin.*" The *Independent* affirmed of these Harvard Professors, "They are all conservative theists—they do not believe that Darwinism, *i. e.*, Natural Selection—is a sufficient theory of Evolution—but they accept Evolution."

(6) University of Pennsylvania.—All the biological Professors are evolutionists, viz., Professors Leidy and Allen in Comparative Anatomy, Professor Rothrock in Botany, and Professor Lesley in Geology.

(7) Johns Hopkins University, which aims to be the highest grade school in America, holds and teaches evolution in biology.

(8) Prof. Winchell[3] teaches evolution at Michigan University. So with the other biological professors.

---

[1] See Gray's "Darwiniana," Appleton, N. Y., 1884; "Natural Science and Religion," Chas. Scribner's Sons, N. Y., 1880—lectures before the Yale Divinity students, advocating the truth of Evolution and its consistency with the Apostles' and the Nicene Creeds.

[2] Especially the "Revision of the Echini"—Palæontological and Embryological Development: Address before Biological Section of the American Association for the Advancement of Science. See "Proceedings" of American Association, 1881.

[3] "*Evolution*," by Alex. Winchell.

(9) At Cornell, President A. D. White[1] and others are pronounced theistic evolutionists. "And so of Bowdoin, Dartmouth, etc.," says the *Independent*. "But what is the use of going further? It would be the same story. There can scarcely an exception be found. Wherever there is a working naturalist, he is sure to be an evolutionist. We made inquiry of two ex-Presidents of the American Association for the Advancement of Science. One wrote us in reply: 'My impression is that there is no biologist of repute now-a-days who does not accept in some form or other the doctrine of derivation in time, whatever be the precise form in which they suppose the evolution to have occurred.' His successor replied: 'Almost without exception the working naturalists in this country believe in evolution. In England and Germany the belief in evolution is almost universal among the active workers in biology. In France the belief is less general, but is rapidly gaining ground. *I should regard a teacher of science who denied the truth of evolution, as being as incompetent as one who doubted the Copernican theory.*'" The *Independent* concludes thus: "We challenge the *Observer* to find three working naturalists of repute in the United States—or two (it can find one in Canada)—that is not an evolutionist. And where a man believes in Evolution it goes without saying that the law holds as to man's physical structure." Thus endeth the first lesson on the *Observer-Independent* controversy as to Evolution in our Colleges. We may add—

1. We think the New York *Observer* a very valuable, well-edited paper. As a religious journal for wholesome reading in families and elsewhere it stands in the very front rank. We think the *Observer's* theology (except its wrong inferences from Evolution) is generally sound. We think it possible that it *might* have gained the battle over the *Independent* but for one thing—*the facts were against it.* It ought to have called those professors in the biological chairs to the witness stand at first.

2. Newspapers and writers would have saved themselves some trouble, and avoided the mortification of having avoidable errors

[1] White's "Warfare of Science."

pointed out, had they read carefully, and *remembered*, both sides of this debate.

3. Second-hand information based even on the authority of a first class church paper, is not always perfectly trustworthy. Even the editors of church papers are not infallible—*i. e.*, not *quite* so, *always*—in their facts, their theories, their science, or their theology. We identified numerous quotations in the public prints taken from that superficial and misleading book, "Wainwright's Scientific Sophisms."[1] The style of quotation employed in that book, copied, too, by some of our majority friends, would enable any one to prove that Dr. Woodrow's opponents generally were favorable to the doctrine of Evolution!! for they said (many of them) "it was a plausible theory;" that "some analogies seemed to favor it;" that it "could not be called heresy;" that it "could not be said to contradict Scripture in the highest sense (*i. e.*, Scripture's real meaning as God intended it), but only in its relative sense," *i. e.*, *our notion* of it, or the interpretation put upon it by the majority, etc. The same may be said of the style of quotation and reasoning employed by Rev. Dr. W. F. Crafts, of New York, on "Darwinism not Proven" in the June and July numbers of the *Pulpit Treasury*, 1884. It may be quite true that *Darwinism* is not proven. It may be and probably is true that a majority of naturalists do not accept Darwinism proper. But it is also true that an overwhelming majority of naturalists *do* accept, as *at least probably true*, the doctrine of Descent in some of its various forms. Hence, however honest and scholarly Drs. Wainwright and Crafts may be—and they are doubtless men of the highest character and purest motives—their writings on this subject are misleading. We press this point: with the majority the hypothetical and unproven character of Evolution was a controlling consideration in condemning Dr. Woodrow. The opinion of scientific men and the attitude of scientific chairs in our colleges towards the theory were important factors in establishing their belief that it was a "*mere unproven hypothesis.*" The facts on which the belief *against* Evolution was confessedly based

[1] Published in the Humboldt Library in 1881, and by Funk & Wagnalls in 1884.

are spurious, non-existent. Their spuriousness was ascertainable. This ascertainment was a duty—for a verdict was rendered with these *false facts as a basis*—a verdict involving the good name of an honored man. In civil courts we would call such a verdict injustice. The mental state or habit which would accept, without critical investigation, such testimony as accurately representing facts concerning scientific opinion, we could call credulity. An unwillingness to face candidly *all* the facts, we would call fear.

We might go on indefinitely examining the attitude of scientific professorships in our Colleges toward Evolution, the result would be a mere expansion of the accurate statements made in Dr. Woodrow's speech on this point in the South Carolina Synod and elsewhere, whereby it was shown that nearly every college of any note had in it professors who taught or held Evolution to be probably true. We are informed on good authority that the Professor of Geology in the University of Mississippi agrees substantially with Dr. Woodrow; whether or how much he teaches his views we do not know. It is well known that Prof. Caldwell[1] resigned his position in the Southwestern Presbyterian University because his views and teachings, being similar in substance to those of Dr. Woodrow, he thought it proper to withdraw rather than collide with the views of the majority of those controlling the institution. We are credibly informed, however, that prominent members of the "majority," both within and without the Synods controlling this institution at Clarksville, Tenn., thought there was no sufficient reason on this ground for Dr. Caldwell to resign; "*because he was a Professor in a* COLLEGE, *there was no objection to him as a scientific man holding or teaching these views in a* COLLEGE!"

Now that sounds almost incredible. It means just this: our young men (sons of our ministers, elders, deacons, and private members, who may be candidates for the ministry) may be taught by our scientific professors, even in our church schools, that Evolution is true; and then our professors in the theological schools *must* tell these same young men (if they handle the subject at

[1] Now Professor in the Tulane University of Louisiana.

all—which they can hardly avoid unless they ignore the most prominent topics in modern Apologetics) "Evolution is false—a mere unproven hypothesis, *because scientific men say so*, and it is not taught or held in the *scientific departments of our Colleges! and it contradicts Scripture and our Theology!*" We do not know positively Prof. Lyon's[1] views; but on this theory he can teach the probable truth of Evolution in his lecture-room (in the Southwestern Presbyterian University), and Drs. Wilson, Price, Shearer, and Lupton in the adjoining lecture-rooms *must* teach the opposite (citing scientific men, Prof. Lyon included, as authority)—and all this within the space of one hour, and under the same roof! It would take very steady young men to keep their heads level under such circumstances. They might conclude that *somebody* was talking in a mere Pickwickian sense. We hardly suppose that all our majority friends adopt a view involving such absurd inconsistency.

We may add to this list of schools the Tulane University of Louisiana. Prof. Elliott (son of the late Bishop Elliott, of the Episcopal Church) in two lectures last winter avowed his belief in organic Evolution and its consistency with the Bible and Christian doctrine. We are told that the gifted young Professor Ayres holds the same view; if so, then there are at least three Professors[2] in this institution who are theistic evolutionists.

Furthermore, it is doubtful whether any college deserving the name in the United States, North or South, uses a text-book on geology or biological science whose author is *not* an evolutionist, and in which Evolution is not taught. Take Dana,[3] LeConte.[4]

---

[1] Recently elected Dr. Caldwell's successor at Clarksville.

[2] Professors Elliott, Ayres, and Caldwell. To these may be added the honored names of Professors T. G. Richardson and S. E. Chaillé.

[3] Dana agrees with Wallace in holding to the derivative origin of man's body, but that for his development there was required "a special act of a Being above Nature, whose supreme will is not only the source of natural law, but the working-force of Nature herself." *Am. Jour. of Sci. and Arts*, Oct., 1876.

[4] "Evolution is the central idea of Geology. It is this idea alone which makes Geology a distinct science. This is the cohesive principle which unites and gives significance to all the scattered facts, which cements what would otherwise be a mere incoherent pile of rubbish into a solid

Lyell, and Winchell, etc. The Colleges where the works of these authors are used as text-books on Geology are counted by the score; even where the professor in the school may not be an evolutionist, *e. g.*, Hampden Sidney, Va., (we do not know the views of the Professor of Geology there), LeConte's Geology is used as a text-book. So at Davidson College, Central University, Ky., etc. Take, again, the text-books on Botany—Asa Gray, Hooker, etc. Nearly all the present botanical text-books are written by evolutionists. See also the many institutions employing the works of Huxley, etc., as text-books on Physiology, Anatomy, etc. It may be added here that botanists who believe in the "descent with modification" of the present species of plants, almost without exception, hold the same view concerning animals, man included.

Prof. E. S. Morse, of Massachusetts, in his address on "What American Zoologists have done for Evolution," [1] cites about thirty of the most distinguished American scientists, who have contributed by their work to the establishment of Evolution. In addition to those named by Prof. Brewer in his letter to Dr. Woodrow, and those quoted above, he mentions Dr. Jos. Leidy, Prof. W. B. Rogers, Prof. Parsons, Prof. A. R. Grote, Prof E. D. Cope, Dr. Kneeland, Dr. C. C. Abbott, Prof. Chauncey Wright, Prof. Jno. Fiske, Prof. Wyman, Prof. Riley, Prof. Wilder, etc., etc. Speaking of Agassiz, Prof. Morse says: "Agassiz made *men* (by his teaching and influence), and the methods of work taught by him spread to other parts of the country. He made the American student acquainted with the classical work of European naturalists. . . Agassiz's earnest protest against Evolution checked its too hasty acceptance among American students. But even the weight of his powerful opposition could not long retard the gradual spread of Darwin's views; and *now his own students, last to yield, have with hardly an exception, adopted the general view of derivation as opposed to that of special creation.* The

---

and symmetrical edifice." LeConte's "*Elements of Geology*," p. 396. LeConte has written to Dr. Martin, of Memphis, "I endorse every word in Dr. Woodrow's Address," or words to that effect.

[1] Before the American Association for the Advancement of Science, Buffalo, N. Y., August, 1876.

results of his protest have been beneficial in one sense. They have prompted the seeking of proofs in this country, *and now our students are prepared to show the results of their work in evidence of the laws of progressive development.*" His Address reviews this work as *illustrating and establishing, from known facts in Geology, Zoology, Palæontology*, etc., each of the general principles of Evolution or Descent. *E. g.*, Darwin admitted the absence of intermediate forms. He offered the imperfection of the geological record as a reason for these "missing links." He predicted that time might bring them to light, and when found, they would connect together widely separated groups. "Behold the prophet!" Says Morse, "Through the labors of Marsh, Leidy, Hyatt, and Cope, animals have been discovered, not only showing the characters of two widely separated groups, but in some cases of three groups as they now appear," *e. g.*, *common ancestors* for the present widely separated *hoofed quadrupeds*, *rodents*, and *carnivora*, have been found! Species with characters intermediate between pigs and ruminants! "The gap between horses and lower forms has been filled. Three-toed horses, some no larger than foxes, and with these a perplexing maze of deer, antelopes, camels, sheep, hippopotami, and pig like animals, ruminant-like beasts, some no larger than ordinary squirrels," etc. Want of space forbids further enumeration as to the missing links found. Morse quotes Prof. Flower, the great English osteologist, as confessing that "these forms completely break down the line of demarkation between them. A gradual modification can be traced in the characters of the animals of this group corresponding with their chronological position, from the earlier more generalised to the latest comparatively specialised form, thus affording one of the most complete pieces of evidence that are known in favor of a progressive alteration of form, not only of specific, but even of generic importance through advancing ages."

Morse shows how these naturalists apply their law of Evolution to account for the production of man's body from preëxisting animal forms. Of the proof for man's derivative origin, he says: "There is established a series of facts of precisely the same nature as is seen in those discoveries which link the horse in an

almost unbroken line to earlier and more generalised animals. . . . If man has really been derived from an ancestor in common with the ape, we must expect to show: 1. That in his earlier stages he recalls certain persistent characters in the apes. 2. That the more ancient man will reveal more ape-like features than the present existing man. 3. That certain characteristics pertaining to early men still persist in the inferior races of men." Morse then endeavors to show that the facts establishing these propositions "*have been fully contributed by American students.*" The researches and discoveries of Wyman, Cope, Shaler, Marsh, Lyon, Barnard, Gillman, Putnam, etc., in comparative anatomy and physiology, paleontology, fossils and remains from the mounds of Kentucky, Michigan, Florida, etc., are cited as verifying his statement. His conclusion is: "From the various evidences educed regarding the anomalous characters of the remains of primitive man, it seems impossible that a mind unbiassed by preconceived opinion should be able to resist the conviction as to man's lowly origin." Of course our readers will remember all along that we do not commit ourselves to any statement quoted. *Scientific opinion* has been appealed to by the majority as a reason for their condemnation of Dr. Woodrow. We are simply taking them to their own court and making them listen to its verdict. *It is grimly and dismally against them.*

British and European Naturalists nearly all Evolutionists.

It would seem to be a superfluous task to refer to or quote from such men as Huxley, Tyndall, etc., to show that they are evolutionists. To any one having the slightest acquaintance with recent scientific literature, the denial of the fact would be a laughable absurdity, and quotations from their writings to prove that they accepted the doctrine of descent a useless waste of time to prove what all admit. And yet the *Southwestern Presbyterian* (September 25th, 1884) and others actually quoted Huxley, Tyndall, the Challenger expedition, conducted by the *Evolutionist*, the late Wyville Thompson,[1] as supporting the position of the

[1] "I do not think that I am speaking too strongly when I say that there

majority, that Evolution was *not* accepted by scientists generally, and was *therefore* a mere unproven hypothesis. The admissions made by these men that their acceptance of Evolution is "provisional so long as one link in the chain of evidence is wanting," that in accepting Evolution they are not ignorant of the "uncertainty of their data," etc., are admissions which they make concerning *other generally accepted theories in science;* such as the law of gravitation, the Copernican theory, the atomic theory, the nebular hypothesis, the undulatory theory of light—they are all accepted on the grounds of probability, resting on analogy and induction, which can make any theory probable, and probable only. If, therefore, the admissions of these men disprove Evolution, or prove that they do not accept it, then they disprove the other scientific theories just named, and show that they do not accept *them*, for many of them put Evolution in the same category, as to the nature of its evidence, with these other theories—a fact which was overlooked.

In citing some of the British and European naturalists, we will give in foot-notes facts concerning the positions held by these men, the professorships they have filled, the scientific societies of which they are members, and the honors and titles conferred upon them.

Prof. Thos. H. Huxley:[1]

"Now Mr. Darwin's hypothesis is not, so far as I am aware, inconsistent

---

is now scarcely a single competent general naturalist who is not prepared to accept some form of the doctrine of Evolution."—Wyville Thompson (in "Depths of the Sea"), Professor of Natural Philosophy, University of Edinburgh.

[1] Fellow of the Royal Society; Professor of Natural History Royal School of Mines (1854 until now); Hunterian Professor in Royal College of Surgeons (1863–1869); twice Fullerian Professor of Physiology in the Royal Institution; President of the Ethnological and Geological Societies (1869–1870); President of the British Association for the Advancement of Science (1870); Secretary of Royal Society (1872); Lord Rector of the University of Aberdeen (1872); member of Royal Commission Scientific Instruction and Advancement of Science since 1870; corresponding member of principal foreign scientific societies; honorary degrees from Universities of Edinburgh and Breslau, etc., etc.

with any known biological fact; on the contrary, if admitted, the facts of development and of comparative anatomy, of geographical distribution and of paleontology, become connected together and exhibit a meaning such as they never possessed before; and I, for one, am fully convinced that, if not precisely true, that hypothesis is as near an approximation to the truth as, for example, the Copernican theory was to the true theory of the planetary motions. . . . . I adopt Mr. Darwin's hypothesis, therefore, subject to the product of proof that physiological species may be produced by selective breeding; just as a philosopher may accept the undulatory theory of light, subject to the proof of the existence of the hypothetical ether; or, as the chemist adopts the atomic theory, subject to the proof of the existence of atoms; and for exactly the same reasons, namely, that it has an immense amount of *prima facie* probability; that it is the only means at present within reach of reducing the chaos of observed facts to order; and, lastly, that it is the most powerful instrument of investigation which has been presented to naturalists, the invention of the natural system of classification, and the commencement of the systematic study of embryology."[1]

Again, in Lecture VI., "Origin of Species,"[2] Huxley applies the legitimate logical tests of hypotheses (which we gave in our former article when discussing the meaning, the nature, and the use of hypotheses) to Darwin's theory. He says substantially:

"In order to explain or get at the cause of complex masses of phenomena we must invent a hypothesis, or make what seems a likely supposition respecting their cause. Having supposed a cause to explain the mass of phenomena, we must then try either to demonstrate our hypothesis on the one hand, or, on the other hand, try to upset and reject it altogether, by testing it in three ways: 1. We must show that the supposed causes of the phenomena exist in nature; that they are true causes. 2. We must show that the assumed causes of the phenomena are competent to produce such phenomena as those which we wish to explain by them. 3. We must show that no other known causes are competent to produce these phenomena. If we can satisfy these three conditions, we shall have demonstrated our hypothesis, or rather we shall have proved it as far as certainty is possible for us; for, after all, *any of our surest convictions may be upset or modified by a further accession of knowledge.*"

Huxley then proceeds to show that (a) Darwin's theory meets fully the first test, viz., the causes he assigns for organic phenomena, the inter-action of atavism and variability with the conditions of existence, etc., do exist; they are real causes.

[1] "Man's Place in Nature" (1863), Humboldt Library edition, No. 4, March, 1880, p. 22.

[2] (1864) Humboldt Library edition, No. 16, December, 1880, pp. 19–22.

(b) As to the competency of these causes to produce the phenomena of organic nature, he says this is "indubitable to a certain extent; they account for the phenomena exhibited by races; they account for the purely structural phenomena exhibited by species; they account for most of the physiological characteristics of species; not only so, but they are competent to account for many which otherwise remain wholly unaccountable and inexplicable, and I may say incomprehensible." He cites as examples the facts embodied in systems of classification and in rudimentary organs, and adds: "Upon any hypothesis of special creation, facts of this kind appear to me entirely unaccountable and inexplicable; but they cease to be so, if you accept Mr. Darwin's hypothesis." He thinks the evidence of the descent of present widely differing animal species from some ancient common stock has evidence similar to that from which we infer the descent of the Greek and English tongues from a common Sanscrit stock. The graduated succession of animal forms in geological strata he thinks is explained only by Evolution. So with the facts of paleontology. "They are totally inconsistent with any other hypothesis which has been proposed." He then speaks of one set of phenomena as "not explained" by the theory as it now stands, viz., hybridism. On this point Huxley has been misunderstood and misquoted. He has been made to say that the phenomena of hybridism disprove Darwin's theory and other forms of the Evolution hypothesis; whereas he says no such thing. He says, indeed, that infertile hybrids have *not* yet been produced by selective modification from the same species. But to disprove the theory, he says it must not only be shown "that this *has* not been done, but that it *cannot* be done." He says: "So far, infertile hybrids *have not* been produced from a common stock. *On the other hand, I do not know that there is a single fact which can justify any one in asserting that such sterility cannot be produced by proper experimentation. For my own part, I see every reason that it may and will be so produced.*" He then gives facts to show how "uncertain and capricious sterility is, and how unknown are the conditions on which it depends." He thinks these will be better understood by and by; and "though Mr. Darwin's

theory does not completely extricate us from this difficulty at present, we have not the least right to say it will not do so. *There is a wide gulf between the thing you cannot explain and the thing that upsets you altogether. There is hardly any hypothesis in this world which has not some fact in connexion with it which has not been explained; but that is a very different affair from a fact that entirely opposes your hypothesis; in this case, all you can say is that your hypothesis is in the same position as a good many others.*"

(c) The third test—the competency of other causes to explain the phenomena—Huxley thinks is fully met by the Darwin theory. He says:

"I really believe the alternative is either Darwinism or nothing, for I do not know of any rational conception or theory of the organic universe which has any scientific position at all beside Mr. Darwin's. I do not know of any proposition that has been put before us, with the intention of explaining the phenomena of organic nature, which has in its favor a thousandth part of the evidence which may be adduced in favor of Mr. Darwin's views. Whatever may be the objections to his views, certainly all others are out of court. . . . Yet I accept it provisionally, *in exactly the same way as I accept any other hypothesis.* Men of science do not pledge themselves to (scientific) creeds; they are bound by articles of no sort; there is not a single belief that it is not a bounden duty with them to hold with a light hand, and to part with it cheerfully the moment it is really proved to be contrary to any fact, great or small. And if in course of time I see good reasons for such a proceeding, I shall not hesitate in coming before you and pointing out any change in my opinion without finding the slightest occasion to blush for so doing.

"We accept this view as we accept any other, so long as it will help us, and we feel bound to retain it only so long as it will serve our great purpose—the improvement of man's estate and the widening of his knowledge. The moment this or any other conception ceases to be useful for these purposes, away with it to the four winds; we care not what becomes of it! . . . . I have attended closely to the controversies roused by Mr. Darwin's book. None of the mass of objections is of any great value, except that of sterility, just named. All the rest are misunderstandings of some sort, arising either from prejudice or want of knowledge, or still more from want of patience and care in reading the book!"

These extended citations from Huxley would not have been given, but for the surprising fact that those who ought to know better, quoted him as supporting the position of the majority.

The application here of the legal principle that the testimony of a witness in court must be received *in full* by the party that summons him to the stand, would work very disastrously to the majority. But we cannot let them off; we must say, "Gentlemen, Huxley is your witness, you subpœnaed him, now stand by him."

Prof. John Tyndall.[1]—Perhaps no man would be more surprised than Tyndall himself to see his name quoted as sustaining the position of the majority, viz., rejecting Evolution as a mere unproven hypothesis, on the authority of scientific men. Yet he is so quoted; among others by the *Southwestern Presbyterian*, September 25, 1884. The sentence, "Those who hold the doctrine of Evolution are by no means ignorant of the uncertainty of their data," occurs in Tyndall's Address before the British Association at Liverpool in 1870. Even if Tyndall meant what our friends interpret him to mean here, it would be a little stretch of the word *present*, to say it represents "*present opinion*,"[2] when it was fourteen years old when quoted, and on a subject on which men's opinions have been changing so fast that, according to Wallace, only twelve years were required to work a complete revolution. Tyndall quotes this sentence from his Liverpool Address (1870) in 1878, in his review of Virchow's Munich Address, subsequently published in his "Fragments of Science," 2d series. His review of Virchow is spiced by the fact that "Virchow was held up to me in some quarters as a model of philosophic caution, who by his reasonableness reproved my rashness, and by his depth reproved my shallowness." It is interesting to read Tyndall's views of his relations to Virchow, and his opinion of Evolution. We think the eyesight that would see or the logic that would infer Tyndall to be the right man for our friends of

[1] Fellow of the Royal Society, Secretary of the Physical Section of the British Association for the Advancement of Science (1852), Professor of Natural Philosophy at the Royal Institution (1853 until now), Superintendent of the Royal Institution (succeeding Faraday to this office in 1867), President of the British Association in 1874, etc.

[2] The quotation from Huxley as to the "provisional acceptance of Evolution," etc., has to be stretched still more to make it "*present opinion.*" It was written in 1863, hence was twenty-one years old when quoted—old enough to vote. See "Man's Place in Nature," Chap. II.

the majority to appeal to to disprove Evolution, must be "fearfully and wonderfully made." Let us see: Tyndall refers to Virchow's disclaimer of any wish or intention to disparage the great services rendered by Darwin to the advancement of biological science, of which no one had expressed more admiration than himself. He gives the substance of Virchow's Address, as follows:

"He enters an energetic protest against the attempts that are made to proclaim the problems of research as actual facts, and the opinions of scientists as established science. On the ground, among others, that it promotes the pernicious delusions of the socialists, Virchow considers the theory of Evolution dangerous; but his fidelity to truth is so great that he would brave the danger and teach the theory, if it were only proved. The burden of the lecture is that a marked distinction ought to be made between that which is experimentally established, and that which is still in the region of speculation. *As to the latter, Virchow by no means imposes silence.* He is far too sagacious a man to commit himself . . . to any such absurdity. . . . As long as a problem continues in this speculative stage, it would be mischievous, he considers, to teach it in our schools. 'We ought not to represent our conjecture as a certainty, nor our hypothesis as a doctrine. . . . We must draw a strict distinction between what we wish to *teach* and what we wish to *search for*. The objects of our research are expressed as problems (or hypotheses). *We need not keep them to ourselves; we are ready to communicate them to all the world*, and say, "There is the problem; that is what we strive for." 'The investigation of such problems, in which the whole nation may be interested, cannot be restricted to any one. This is the freedom of inquiry.' He will not concede to Dr. Haeckel 'that it is a question for the *schoolmaster* to decide, whether the Darwinian theory of man's descent should be at once laid down as the basis of instruction, and the protoplastic soul assumed as the foundation of all ideas concerning spiritual being.'

"Virchow's position is of the highest practical importance. He says, 'Throughout our German Fatherland men are busied in renovating, extending, and developing the system of education, and inventing fixed forms in which to mould it. . . . In all the German States larger schools are being built, new educational establishments are set up, the universities are extended, "higher" and "middle" schools are founded; finally comes the question, What is to be the chief substance of the teaching?' The foregoing quotations from Virchow show that he thinks there ought to be a clear distinction made between science in the state of hypothesis, and science in the state of fact. From *school-teaching*[1] the former ought to

[1] Huxley, Tyndall, and others think Virchow means to exclude Evolution from the schools for *children* proper—not that professors in colleges,

be excluded. As it is still in the hypothetical stage, the ban of exclusion ought to fall upon the theory of Evolution."

After this *résumé* of Virchow, Tyndall proceeds to prove from his published writings that he had long before expressed these same views. He says, 1. "I have never advocated the introduction of the Evolution theory into our schools."[1] 2. He had always insisted on the distinction between *established fact* and scientific opinion or hypothesis. He quotes a paragraph from his Liverpool Address (1870), in which the sentence quoted by the *Southwestern Presbyterian* occurs, to prove his position. "I did what Virchow recommends," he adds, "showing myself as careful as he could be not to claim for a scientific doctrine a certainty which did not belong to it." Tyndall then refers to his endorsement of the "Theory of Descent" in 1877, in an address before the Midland Institute at Birmingham. In justification of his Birmingham Address he quotes the following from Dr. Hooker's Presidential Address to the British Association at Norwich in 1868:

"'Ten years have elapsed since the publication of the "Origin of Species by Natural Selection," and it is therefore not too early now to ask what progress that bold theory has made in scientific estimation. Since the "Origin" appeared it has passed through four English editions, two American, two German, two French, several Russian, a Dutch, and an Italian. So far from Natural Selection being a thing of the past, *it is an accepted doctrine with almost every philosophic naturalist*, including, it will always be understood, a considerable proportion who are not prepared to admit that it accounts for all Mr. Darwin assigns to it.' In the following year at Innspruck, *Helmholtz took up the same ground.* Another decade has now passed, and *he is simply blind* who cannot see the enormous progress made by the theory during that time. Some of the outward and visible signs of this advance are readily indicated. The hostility and fear which so long prevented the recognition of Mr. Dar-

universities, higher seminaries, and professional schools, were disallowed even by Virchow to discuss Evolution as a problem, and express their opinion to their students that it is "*probably true.*" Two facts establish this view of Virchow's meaning, 1. His pupil, Haeckel, shows that Virchow taught, in this way, many unproven hypotheses of his own to his University students. 2. Evolution is *thus* taught or held in every German University.

[1] See Note on preceding page.

win by his own University have vanished, and this year Cambridge, amid universal acclamation, conferred on him her Doctor's degree. The Academy of Science in Paris, which had so long persistently closed its doors against him, has also yielded at last; while sermons, lectures, and published articles, plainly show that even the clergy have, to a great extent, become acclimatised to the Darwinian air. My reference to Mr. Darwin in the Birmingham Address was based upon the knowledge that such changes had been accomplished, and were still going on. That the lecture of Prof. Virchow can to any practical extent disturb this progress of public faith in the theory of Evolution, I do not believe."

Tyndall having pointed out the agreement between himself and Virchow, proceeds to specify the positions taken in the Munich Address wherein they differ. He criticises severely Virchow's attempt to affix a stigma upon Evolution by connecting it with Socialism, whose aim is to destroy existing forms of government.

"It welcomes anything that helps to this end, whether it be atheism or Papal infallibility. When Church and State were united against socialism, it was regarded with a common hatred. When differences arose between them, socialists began to dally with the Church.[1] Far nobler and truer to my mind than this fear of promoting socialism by *a scientific theory which the best and soberest heads in the world have substantially accepted* is the position assumed by Helmholtz, who in his 'Popular Lectures' describes Darwin's theory as embracing '*an essen-*

[1] Lange's History of Materialism, Vol. II., p. 538. Huxley also condemns sharply this attempt of Virchow to make Evolution odious. He says: "I think I shall have all fair-minded men with me, when I also give vent to my reprobation of the introduction of the sinister arts of unscrupulous political warfare into scientific controversy, manifested in the attempt to connect (Evolution) with the doctrines of a political party which is the object of hatred," etc. He refers to the blot on Edmund Burke's fame, viz., his "attempt to involve Price and Priestley in the furious hatred of the English masses against the author of the Revolution of 1789. . . . Professor Virchow is a politician—may-be a German Burke—he knows the political value of words, and as a man of science, he is devoid of the excuses that might be made for Burke. . . . Prof. Virchow should have unfolded the links of the hidden bonds which unite Evolution with revolution, and bind together the community of descent with the community of goods. . . . Since the 'Rejected Addresses' there has been nothing in literature at all comparable to the attempt to frighten sober people by the suggestion that evolutionary speculations generate revolutionary schemes in socialist brains."

tially new creative thought,' and who illustrates the greatness of this thought by copious references to the solutions, previously undreamed of, which it offers of the enigmas of life and organisation."

Tyndall differs with Virchow also as to what a theory is or should be, and the use of hypotheses (concerning which Virchow's own *practice*, especially when Professor at Würzburg, was inconsistent with the teachings of his Munich Address). He says:

"Theoretic conjecture often legitimately comes first (before verification). It is the forecast of genius which *anticipates* the fact and constitutes a spur toward its discovery. . . . Darwin's theory, for example, like the undulatory theory, has been a *motive power*, and not an anodyne. . . . A theory accounts for observed facts and helps us to look for and predict facts not yet observed. Every new discovery which fits into a theory strengthens it. A theory is not complete from the first; it grows, as it were, asymptotically toward certainty. Darwin's theory, as pointed out nine or ten years ago by Helmholtz and Hooker, was then in a state of growth; if they spoke of the subject to-day, they would be able to announce an enormous strengthening of the theoretic fibre. Gaps in continuity which then existed, and which left little hope of being ever spanned, have been since bridged over. The further the theory is tested, the more does it harmonise with progressive experience and discovery. We shall probably never fill all the gaps; but this will not prevent a profound belief in the truth of the theory from taking root in the general mind. Much less will it justify a total denial of the theory. *The man of science who assumes . . . the position of a denier is sure to be stranded and isolated.*"

These citations from Tyndall to prove that he does not support the majority in their position, that he and scientists generally regard Evolution as untrue, very doubtful, a mere unproven hypothesis, etc., to any one at all acquainted with his writings, must seem as useless as an argument to prove that the "*Dutch have taken Holland.*" But our friends claim him as their man in maintaining the "unprovenness" of Evolution. Well, gentlemen, our cross-questioning has brought out his testimony. It is with the jury. You should have told him what you wanted to prove by him—or acted more wisely, and not have called him. But there he is. He is against you. Perhaps we ought to feel—very sorry.

Prof. St. George Mivart.[1]—The epithet—"a puerile hypothe-

[1] F. R. S., Fel. Lin. Soc., etc., Prof. of Biology in University College, London, since 1874. Lecturer in St. Mary's Hospital, Medical School, since 1862, etc.

sis"—which he applied to Darwinism, has been mistakenly supposed to be a repudiation on his part of the doctrine of descent or the derivative origin of species, man's body included. He does reject natural selection, and his criticisms of Darwin's form of the descent theory are very powerful and probably unanswerable. In his "Genesis of Species" (1871), "Man and Apes" (1873), and "Lessons from Nature" (1876), and "Contemporary Evolution" (1876), Mivart vigorously maintains the scientific and philosophic consistency of the theory that man's body was created by an evolutive or derivative process from some lower animal form, and his soul supernaturally and immediately. In the *Contemporary Review* last year he said:

"The great scientific event of the present time is the wide acceptance of the theory of Evolution and its use as a weapon of offence and defence. It is used both against the belief that intelligent purpose is, as it were, *incarnate* in the living world about us, and also in favor of a merely mechanical theory of nature. Dysteleology[1] is often associated *unfairly* with the illustrious name of the late Mr. Darwin. His speculative views lend themselves indeed to Haeckelianism, and have been pressed into its service. Yet they are by no means to be identified therewith. As Prof. Huxley has pointed out with his usual lucidity and force, Darwin's theory can be made to accord with the most thorough-going teleology."

Mivart is a sincere Roman Catholic—a philosopher as well as a naturalist of high standing. He is well versed in patristic and scholastic literature. He quotes freely from these sources, and reasons very plausibly to prove "that ancient and most venerable theological authorities distinctly assert *derivative* creation, and thus their teaching harmonises with all that modern science can possibly require."[2] Similar views are expressed by Tayler Lewis.[3]

Prof. W. B. Carpenter.[4]—The closing chapter of his "Men-

[1] *Dysteleology*: Devoid of aims, absence of design or end, the negation of the doctrine of final causes. The doctrine of the purposelessness of the organs and organisms which people a purposeless planet. It may be called the doctrine of the irrationality of the universe.

[2] "Genesis of Species," 2d, p. 305: "Lessons from Nature," p. 449.

[3] "Six Days of Creation," "Nature and the Scriptures—Vedder Lectures, 1875."

[4] F. R. S., Prof. of Phys. Roy. Inst., Prof. in Univ. Coll., London, Pres. British Association, 1872.

tal Physiology" (4th ed., Appleton, N. Y., 1884) contains some profound remarks on the relations between science and religion, law and force, and the evidences of a personal God. Specifying some of the causes of unbelief among certain scientific men, he names as one the denunciation and opposition of certain theologians to Evolution. He thinks the attempts to put down Evolution, "the great scientific hypothesis which engages much of the best thought of our time, by citing, '*God made man of the dust*,'" etc., are precisely parallel with the opposition once shown to the Copernican theory, geology, etc. In his Presidential Address before the British Association at Brighton, 1872, on "Man as the Interpreter of Nature," he came to this conclusion:

"The laws of nature are human conceptions, subject to human fallibility, and they may or may not express the ideas of the great Author of nature. To set up these laws as self-acting, and as either excluding or rendering unnecessary the power which alone can give them effect, appears to me as arrogant as it is unphilosophical. To speak of any law as 'regulating' or 'governing' phenomena is only permissible on the assumption that the law is the expression of the *modus operandi* of a governing power. . . . Modern science, fixing its attention exclusively on the *order* of nature, has separated itself from theology, whose office is to seek the *cause* of nature. In this science is fully justified alike by the entire independence of its objects and by the historical fact that it has been continually hampered and impeded in its search for the truth as it is in nature by the restraints which theologians have attempted to impose upon its inquiries. But when science, passing beyond its own limits, assumes to take the place of theology and sets up its conception of the *order* of nature as a sufficient account of its *cause*, it is invading a province of thought to which it has no claim, and not unreasonably provokes the hostility of those who ought to be its best friends."

In his "Mental Physiology" he states finely some important truths; *e. g.*, "Laws are the *predetermined uniformities of action* of the governing power. The laws of nature are *phenomenal uniformities*, having no coercive power whatever. The power in the universe is *mind* power—the mind of God."

Law is the predetermined plan of God's will. God is changeless in character, hence changeless in his method of working. Uniformity of law in the seen and in the unseen universe, in the realm of matter and of spirit (law being but the self-chosen plan of God's acting and his authoritative *order* for creaturely being), is

a simple corollary from the immutability of God. Law is changeless, because it is the perfect plan or order of a perfect God. The uniformity of law, the changelessness of his plan, renders it *knowable* to men, both in the natural and in the spiritual world—in the visible universe of sense and in the unseen universe of mind. Whether we study the visible or the invisible realm, we study them in and through their phenomena; and we find in these phenomena order, law, uniform methods of sequence—making the cosmos a harmony. As law, "whose voice is the harmony of the world, hath its seat in the bosom of God," we would expect to find "*uniformities of action*" wherever God acts, whether in the world of mind or matter. Hence to learn a law of nature is to seize a thread which, if followed up, will be found stretching through the spiritual world. Thus a knowledge of law in either world is a clue leading us on to find the same law in the other.[1]

Drummond's "Natural Law in the Spiritual World," setting forth the unbroken continuity of the *same* laws through both realms, is so true that it seems self-evident, from the truth that law is the predetermined order of God's will and the self-chosen plan of his working, *if* this truth is remembered alongside of the fact of God's immutability and the inevitableness of a perfect God framing a perfect, and hence a changeless, plan. The wonder is, now that the doctrine is stated, that it was not perceived before. But now that a Drummond has seen it, and said it, no doubt it will eventually be a truth shining with its own light into all minds. It is thus with all great truths: when announced we see that they were right before our eyes all the time; unseen because so near. God chooses, and with a divine fitness, the time and the man to voice them.

Like parallels of latitude encircling the globe in an unbroken line over Himalayan snows and arctic icebergs, desert sands and oceanic isles and waves, northern pines and tropic forests, so laws—God's parallels of order—sweep through both hemispheres

[1] As Drummond points out, however, *all* the laws of the spiritual world are not projected downward into the natural, though natural law reaches upward into the spiritual.

of being. Natural laws find their higher octaves in the spiritual. The higher notes are the same—they are the upper octave, repetitions of the lower. And as on the simple gamut of seven notes are built the endless combinations of harmony, heard in oratorios of the great masters on organ and flute, harp and horn, in the song of birds and the voice of storms, so a comparatively few and simple laws, the fore-ordained and ever-maintained modes of divine action, are repeated, interwoven, coördinated, and blended into the majestic and infinitely complex harmonies of the universe. A mighty master! A wondrous instrument! Glorious music! The grander and more wonderful we find the universe to be, the greater will God appear.

Other British Naturalists.

We cannot, for lack of space, make further detailed citations from British scientists. But we offer to make good, by quotations from their published writings, giving name of book, etc., chapter and page, this proposition, viz.: *Nearly every British naturalist—geologists, botanists, physiologists, anatomists, zoologists, etc.—accepts as at least probably true some form of the theory of organic Evolution, man's body included. Whether the form of the theory accepted by these men be Darwinism, or Owenism, the Evolution of Mivart, Naudin, Kölliker, Von Baer, Wigand, A. Müller, Weismann, Zittel, Dana, or Lyell, etc., they agree in holding to the theory of descent—the derivative origin of present species, man's body included. Many, if not all, of the Presidents of the British Association for the last fifteen years have been evolutionists. This we are prepared to prove from their addresses and the papers read before the meetings.* Evolution is taught or held by Professors in the Universities of Edinburgh, Glasgow, Aberdeen, St. Andrews, Oxford, Cambridge, Owen's College, Manchester, University College, London, the Royal Institution, etc., etc. How much it is taught in the lecture rooms to students we shall not say. In so far as scientific societies as such endorse scientific doctrines, or have scientific creeds, then if the views of an overwhelming majority of naturalists in these societies indicate their creeds, Evolution

is the scientific creed of the British Association, the Royal Society, the Geological Society, etc., etc. All this we are prepared to prove, if need be, by quotations, giving definite reference to publication and page. We are also prepared to prove in the same way that a majority of British physicists, chemists, etc., many European philologists and philosophers accept Evolution as perfectly consistent with the various sciences which they pursue. In addition to the writers already quoted from, we are prepared to give quotations from Prof. Richard Owen[1] (Royal College of Surgeons, London), Prof. Allen Thompson, President of the British Association, 1877, Prof. Grant Allen,[2] George J. Romanes,[3] Francis Galton, W. K. Clifford[4] (various works), W. H. Flower, Phillips,[5] George Bentham,[6] J. G. Allman,[7] Prof. Geikie.[8] Baden Powell,[9] Prof. Tait,[10] Balfour Stewart,[11] Sir Charles Lyell,[12] J. J. Murphy,[12] Sir John Lubbock,[13] E. B. Tylor, and a host of others, showing that they accept the theory of descent. They are not all Darwinists. They differ among themselves in many particulars, but on the main fact of *derivation* they do agree.

Majority of European Naturalists are Evolutionists.

In proof of this fact, we are prepared to give citations from Naudin, Albrecht Müller ("Appearance of Man in Europe"), the Marquis Nadaillac,[14] Dr. Aug. Weismann, Professor in University

---

[1] Anatomy, etc., of the Vertebrates, Vol. III., p. 786, etc.
[2] "Vignettes from Nature," "Evolutionists at Large," etc.
[3] "Scientific Evidences of Organic Evolution," etc.
[4] University College, London.
[5] President British Association, 1879.
[6] President of Linnæan Society.
[7] President of Biological Section British Association.
[8] University of Edinburgh.
[9] Prof. of Geometry, University of Oxford.
[10] University of Edinburgh.
[11] Owen's College, Manchester.
[12] "Habits and Intelligence."
[13] "Origin of Civilisation," etc., 1870.
[14] "Prehistoric America." Putnam: London and New York, 1884.

of Freiburg[1] (the last chapter of Weismann's work attempts to show the harmony between Evolution and design), K. E. von Baer,[2] Prof. Zittel, Emil DuBois Reymond, De Candolle, Helmholtz, and numerous other German, French, Swiss, etc., naturalists. We suppose that it will hardly be necessary to quote from Prof. Carl Vogt, University of Geneva, Prof. Ernst Hæckel, University of Jena, Prof. Oscar Schmidt, University of Strasburg. The fact that they are materialistic evolutionists is well known, and perhaps admitted even by those who quoted Huxley, Tyndall, etc., as not evolutionists. Perhaps many of our readers have read Oscar Schmidt's "Descent and Darwinism,"[3] and remember his statement that nearly all scientific men accept Evolution.

President Rudolf Schmid ("Theories of Darwin") cites nearly a hundred of the leading men in science, philosophy, and theology who accept or are friendly (on philosophic and theological grounds) to some form of organic evolution. We have already quoted Agassiz, Schmid, Wallace, Mivart, Carpenter, Marsh, Morse, two Presidents of the American Association, Asa Gray, Tyndall, Hooker, and several Presidents of the British Association, as all substantially uniting in testifying to the general acceptance of Evolution among scientific men. Several of these were cited by the majority to prove Evolution untrue, and *not* accepted by scientific men generally. Now the testimony of these witnesses proves the contrary of what they were summoned to prove. The testimony of such men as Agassiz, Schmid, Tyndall, the Presidents of British and American Associations, etc., to a simple matter of fact, viz., the opinions of scientists, is sufficient to establish that fact. Our majority friends, therefore, must consider, on their own principles, the fact established for them, for they rested the reality of the fact on the testimony of the witnesses whom they summoned.

---

[1] "Studies in the Theories of Descent." Translated by R. Meldola: Rivington, etc.: London, 1882. See esp. Vol. 2, pp. 694–718.

[2] Professor of Zoology, University of Königsberg, 1819–1834; Librarian of the St. Petersburg Academy, etc., 1837–1876.

[3] International Scientific Series, Vol. 13. Appleton: New York, 1875.

The desperate efforts made to prove Evolution untrue, *because rejected by scientific men*, by citing such witnesses as Tyndall, Huxley, Mivart, Schmid, etc., etc., show what straits our friends felt themselves to be in. We have now disproved the minor premise of the majority. On their own principles they are compelled to draw the reverse conclusion of the one sought to be proved, and affirm Evolution to be an established scientific truth, or "*at least probably true.*" Whether Evolution be false or not, one thing is clear: *our majority friends have not proven it false. On the contrary, their premises necessitate, for them, just the opposite conclusion.* And as the condemnation of Prof. Woodrow was based largely upon a demonstratively baseless notion concerning scientific opinion, it is destitute of all foundation in right, truth, or law.

The Majority in an Awful Dilemma.

To those within and without our Church who take a calm, critical, and judicial view of the wild excitement and unreasoning prejudice manifested in connexion with the numerous synodical decrees launched, in many instances, gratuitously[1] and recklessly at Evolution, the plight in which the majority have put our Church would be absurdly ridiculous, were it not so piti-

[1] Outside of the four Synods controlling Columbia Seminary, viz., South Carolina, Georgia, Alabama, South Georgia and Florida, there was not the slightest call for any action on the subject. We took the ground from the start, and still hold it, that it was a piece of Quixotic impertinence and injustice for the other Synods or Presbyteries to intrude their voluntary *in thesi* deliverances on public notice for the purpose (avowedly in some cases) of influencing the action of the four controlling Synods; because— 1. They were competent to determine their own duty in the matter, and should have been left free to do so, without illegitimate attempts to influence them by outside pressure and authority, to the detriment of truth and sober judgment. 2. It was an arrogant assumption of greatness, authority, and wisdom, to presume in this way to influence church courts from without. 3. It was prejudging a question which in due course will come before the Assembly. We are informed by a prominent member of the Synod of Texas that the action of this Synod was merely "intended as an advertisement for the theological department in Austin College"! We do not by any means suppose that all our Texas brethren meant their decree "just for Buncombe," but that *one* should so regard it is—suggestive.

fully deplorable. Just see. The appeal to scientific opinion as a reason or basis of action of course means this, no more, no less: "Whatever scientific opinion says about the truth or falsity of Evolution is true." We have shown that scientific men generally endorse it. Hence the majority, on their own premises, must say, "Evolution is true." Now notice. That same majority declared: "Evolution is contrary to Scripture; destroys the headship of Adam; removes the ground of miracles, the atonement, inspiration; it is materialism, atheism, etc., etc."[1] As one writer puts it: "If Evolution is true, the Biole is false." Now by resting the truth of Evolution on scientific opinion, and as we have shown that it is accepted generally by this authority, therefore they have put themselves in a position which compels them logically, unless they recede, to draw the awful conclusion that the Bible is false! Now what will they do? They cannot deny the fact that scientific opinion generally accepts Evolution. That is a simple question of history, ascertainable by proper reading and investigation. We have established that fact, and could fill a volume with accumulative evidence of the same sort. If they hold on to the Bible, they must do one or the other of two things: (1) Recede from their ground that scientific opinion settles the scientific status of Evolution, or (2) recede from their ground that Evolution, as a mere description of the process of creation, is contradictory of Scripture.

If they recede from the sufficiency of scientific opinion to settle the status of Evolution, and still maintain their condemnatory decrees against Dr. Woodrow and Evolution, then they abandon one of the chief grounds on which this condemnation was based, and confess that their action was based upon "*a mere unproven hypothesis,*" *an alleged fact, which turns out to be a false fact!* What a spectacle! Church courts giving false testimony concerning a matter of fact and on the basis of a falsehood passing sentence of condemnation! We by no means charge any one with wilful ignorance or misrepresentation. Far from it.

[1] See various newspaper articles, the decrees of various Synods, the *Central Presbyterian*, the *Southwestern Presbyterian*, Dr. Dabney's Sensualistic Philosophy, and in this REVIEW.

Two mistaken notions underlie this woful state of affairs: (1) The erroneous view as to the fact of scientific opinion; (2) The erroneous belief that it is the Church's duty to pass judgment upon the truth or falsity of scientific theories *per se*, an error condemned by our Confession of Faith (Chap. XXXI., Sec. 4), forbidding church courts to "handle or conclude anything but that which is ecclesiastical." Church courts can legitimately touch only the moral interpretations or theological inferences drawn from scientific theories which plainly undermine faith in the Bible, or are expressly used to destroy the doctrines of our creed. The Bible gives the natural theology of material facts, not their scientific sequences, modes of occurrence, mutual interrelations, etc. All that the Bible tells us of nature might be reduced to these heads: God made all things wisely and well, in time—creative time being represented to us as six divine days, or orderly, successive forth-puttings of energy, the work of each divine day or manifestation of divine energy being complete, perfect as a part in relation to the past and the future, so that God's work-days and the work done therein, being complete and worthy of the divine purpose, might serve as a model for man—his work and character to be a copy of God's, and rest, to follow as the crown of Godlike character and Godlike truth. All things were made according to a divine plan, order, law; all made to co-work for moral and spiritual aims, which were to be summed up in man, God's image and representative, the sub-king and head of nature, capable of recognising God, man's relation to him, and capable of knowing and working for the accomplishment of the divine aims and moral ends of creation. Natural facts present to intelligence laws and analogies of moral truths, and the more we know of them, the more do we see their fitness to illustrate and symbolise spiritual truth; and as they are realisations of divine thought and purpose, the Bible teaches men to study "the *wondrous works* of God," and from the works of the *Great Worker* learn the *methods* of his workmanship. This being, in substance, the Bible's teachings about nature, all those questions concerning the *methods* of God's works—which the Bible seems plainly to declare are to be learned from the *works*, not from the

Book that tells *that* God made them all, and refers us to these *works* to find out all they can tell us, and all that is in them, concerning his *modes* of production and preservation—it follows necessarily that as to theories which touch *only* the mode, not the *fact and purpose*, etc., of creation, so long as they collide not with, or are not interpreted contrary to, the great basal truths sketched above, the Church, as such, is not called upon to decide upon their truth or falsity.

One consideration will evince the truth of this view. What is natural science? The *human* interpretation of nature. Is this interpretation infallible? No, it is fallible. What is theology? *i. e.*, as a science? The human interpretation of Scripture. Is it infallible? No. In which book, nature or the Bible (they are both God's), are *Christians* most liable to err? We do not know. The redeemed Christian *knows* that his Father's thought, skill, and power are manifested in his creation; he knows, too, that he is in a friendly sympathetic relationship to him whose thought and purpose are in this earthly home, where his Father is preparing him for a higher state. He knows the Bible reveals that love and grace which brought salvation, and which are ever making him more like God, and therefore better able to know and sympathise with the thoughts of that God, whether revealed in Scripture, nature, or providence. Perhaps the exceeding love, gratitude, and reverence with which the Bible is regarded, as the word of eternal life, may often lead Christians to read more into the Bible references to nature than was meant, and tend to make them misunderstand the Bible directions to study God's works to learn the Worker's methods.

Furthermore, the Christian knows that God is God for evermore, Maker, Redeemer, Father, Friend. He knows that the Bible is true, and that nature is true, though his interpretation of both may err. Now, what is the only court of appeal for church courts in "handling and concluding" all matters brought before them? The Scriptures, and the Scriptures only. As a Church her duties and testimonies are bounded by Scripture. Now, in deciding on the truth or falsity of scientific theories *per se*, the Church must necessarily base her judgment upon extra-

scriptural grounds, *i. e.*, on the opinions of scientific men. Thus spiritual judgments (the only kind proper to the Church) are based upon human conceptions of material things. It is too evident to need proof, that most of us rest nearly all our scientific faiths on the authority of scientific men. Says LeConte:[1]

"*What is the rational basis of faith in matters of science?* Simply the authority of scientific unanimity. . . . It must and ought to be so. The world could not get on without such faith in authority. Such unanimity is a thoroughly rational ground of belief."

Says Winchell:[2]

"If the evidences sustain it (*Evolution*) and the general sentiment of the scientific world accepts and indorses it, we may safely regard it as standing for a truth in nature; or, at least, as more probably standing for truth than the dissent—perhaps unenlightened dissent—of a few individuals. As truth it becomes the object of all honest research, and to reject is not only to insult the truth, but to defraud ourselves. Nay, if it be truth, it is God's truth, and to reject it superstitiously or unreasoningly is an insult to the Author of truth. We incur greater danger of doing violence to truth by rejecting the general verdict of science, than by devoutly accepting it."

Says Henry Calderwood, D. D., LL. D.,[3] in his "Science and Religion" (a noble book, which we earnestly hope all will read and *study* with care):

"Most men must take their scientific knowledge on trust. . . . Conclusions are accepted as true when admitted by the great majority of scientific inquirers, no matter how much they may be at variance with previously accepted beliefs. The basis of faith is *comparative unanimity of scientific authority.* This is the test with scientific men in all departments of investigation lying beyond their own domain."

---

[1] "Religion and Science," p. 236. Appleton, N. Y., 1874.

[2] "The Doctrine of Evolution." Harper & Bros., N. Y., 1874.

[3] Professor of Mor. Phil. Univ. of Edinburgh. Prof. Calderwood in this book shows with unanswerable reasons that Evolution (to which he is favorably inclined, and which he says is generally accepted by scientific men) is perfectly consistent with the Bible. We count it one of our highest privileges to have been a student under him at Edinburgh in 1875 and 1876. We remember to-day the glow of pleasure and the sense of benefit we felt in listening to his opening address to his class, Nov., 1875. It was a splendid appreciative review of "*The Unseen Universe*," a book just published anonymously—written by Profs. Tait and Balfour Stewart, and dealing with the questions before us in this paper.

We could quote indefinitely to the same effect. The majority have acted on the principle that scientific authority is not only the "*basis of faith*," but the "*pillar and ground of truth.*" We do not commit ourselves in this way, for we remember the theories in Astronomy, Geography, and Geology, before the days of Copernicus, Columbus, and Hutton and Cuvier.

By attempting to settle the scientific status of Evolution, the majority made the Church base her decree on *human opinion*, and not God's word; nay, more, the decree was based on a false human opinion as to what human opinion was. The principle involves this ruinous error: human conceptions of nature must "control the interpretation of Scripture." As scientific opinion is ever growing, changing, the meaning of the Bible must change with it. The Bible thus becomes "a nose of wax," to be twisted into all sorts of shapes. All this comes from the anti-scriptural doctrine that science—God's *methods* in nature—are to be sought in his *word* instead of in his *works*, and from the unconstitutional error of supposing it to be the Church's duty to issue scientific decrees. The only way out of the difficulty is for the proper steps to be taken—either to annul the deliverances made and remove the stigma from Dr. Woodrow, or bring the matter before the legal tribunal of the Church—and let us see whether we be genuine Presbyterians and lovers of truth and right.

The Consensus of Christendom against Dr. Woodrow's Opponents.

II. *The Theological Character of Dr. Woodrow's Evolution.*

In condemning Evolution as anti-scriptural, heretical, etc., many appeals were made to religious opinion, to the Northern Presbyterian Church, to the outside Christian world generally, including all evangelical Churches. This argument, of course, means that the consensus of Christian opinion settles the theological status of any doctrine. Put in a syllogism it runs thus:

"The consensus of Christendom settles the theological status of a scientific theory.

"The consensus of Christendom affirms Evolution to be, *a*, in-

consistent with Scripture, heresy, etc.; or, *b*, consistent with Scripture, etc.

"Therefore Evolution is *a* or *b* (as in the minor premise above)."

The majority, laying down the major premise, and *a* of the minor premise, draws the conclusion "Evolution is heresy, etc." If, as a matter of fact, their minor premise is disproven, and the reverse established, of course the conclusion also must be reversed.

Now, we lay down this proposition, which we can prove by citations from scores, if not hundreds (we have examined over a hundred), of representative scholars from the various evangelical Protestant Churches of Christendom, viz.: Evolution, as descriptive of the process by which the world (inorganic and organic) has been brought into its present condition, is tolerated by the consensus of Christendom as consistent with Scripture; and evangelical Churches generally allow their preachers and theological professors to hold and teach the consistency of theistic evolution with the Bible and with their doctrinal standards; and in multitudes of instances these preachers and professors hold and teach that Evolution is, scientifically, "probably true." In every instance the teaching that Evolution, whether true or false, does not destroy the Bible, or any important doctrine, is tolerated as perfectly consistent with the doctrines set forth in the Reformed Symbols of Faith. Citations here to prove this statement must be few and brief; but, if challenged, we can and will furnish them in abundance.

1. *The opinions of scientific men as to the theological bearings of Evolution.*

Before setting forth the attitude of representative Christian sentiment on the theology of Evolution, we will refer to the opinions of scientific men themselves on this point. We can, by numberless citations from scientific literature, establish the fact that nearly all leading scientific men regard Evolution as consistent with our old doctrines concerning God, morality, etc., and that a large majority of these men are either Christians, church members "in good and regular standing," or have well-defined church affiliations, leanings, and sympathies. Of course, there may be many things in the theological beliefs of some of these men we

do not endorse. Many, too, who either believe in God, immortality, etc., or admit the consistency of such faiths with Evolution,[1] hold opinions antagonistic to much that is in the Bible. But there is no causal connexion with their errors and Evolution. Darwin thought there was no reason why his theory "should shock the religious feelings of any one." He quotes approvingly what a celebrated author and divine wrote to him, saying that Evolution was "just as noble a conception of the Deity" as the old theory of immediate creation. The theistic mottoes from Bacon, Butler, and Whewell, Darwin endorsed as his own, and kept them on the reverse of the title page of every edition of his "Origin of Species." The closing sentence of this work, affirming the grandeur of creation and the Creator from the standpoint of Evolution was never changed.[2] He contends for the consistency of Evolution with religion in his "Descent of Man." The "affirmative answer by some of the highest intellects that ever existed, to the question whether there is a Creator and Ruler of the Universe," he thinks is correct.

Huxley says: "Teleology (design in nature) is not touched by the doctrine of Evolution, but is actually based upon the fundamental proposition of Evolution." Similar ideas might be quoted from Tyndall[3] and Spencer.

These men are agnostics; though Spencer's controversy with Frederic Harrison shows that he thinks a good deal can be known about God after all. Their admissions show that there is no more logical connexion between Evolution and atheism and materialism than there is between the rule of three and pantheism. Prof. Kölliker[4] says Darwin is in the fullest sense of the word a teleologist. (He is an evolutionist, though not a Darwinist.) Prof.

[1] Among these are Darwin, Huxley, Spencer, and Tyndall. They all vehemently deny being atheists, or materialists, or that Evolution involves such doctrines.

[2] "Origin of Species," pp. 421–29.

[3] See especially "Fragments of Science," p. 167, and "Additions to the Belfast Address."

[4] Prof. of Anat. and Histology, Univ. of Würzburg. Huxley thought Darwinism was fatal to the Paleyan idea of Teleology—or rather that it swallowed it up in a grander, wider Teleology. Kölliker thought Darwinism was just the old Teleology—hence criticised this aspect of it.

Asa Gray, of Yale, contends stoutly for the consistency of Evolution with Teleology, the Bible, etc. His "Darwiniana" (last ed., 1884) and "Natural Science and Religion," lectures before the Yale divinity students (1880), are worthy of careful study as the views of one of the first of living naturalists. He is an evolutionist, a devout Christian holding firmly to the Apostles' and the Nicene Creeds.

Prof. Brewer, of Yale, who says nearly all scientists are evolutionists, thinks a larger proportion of them are devout members of some evangelical Church than would be found in a similar number of lawyers or doctors.

Prof. Stanley Jevons[1] says: "I look upon the theories of Evolution and Natural Selection in their main features as two of the most probable hypotheses ever proposed. . . . Granting all this, I cannot for a moment admit that the theory of Evolution will destroy our theology." Prof. Simon Newcomb,[2] in an Address as President of the American Association, said, "Evolution is not atheistic; if it is, then all belief in second causes and natural law is atheistic." Mivart says, "The doctrine of Evolution is far from any necessary opposition to the most orthodox theology."

Principal Dawson[3] says in substance, the theory of derivation is of little consequence to theology, when applied to the lower animals. What he says of its conflict with Scripture *only* when applied to account for the *absolute* "*origin of things*, or when *employed to dispense with the action of divine power* and when it represents man *with all his higher powers*, as a mere outgrowth of the variation of brute animal"—all this could be said by Dana, LeConte, Winchell, McCosh, Woodrow, and other theistic evolutionists. Dawson adds, "But for *these applications of it* the Darwinian hypothesis would be a harmless toy." If these words mean anything (taken in connexion with the quotation from Dawson on a previous page), they mean that theistic Evolution, which does *not* do these things here condemned, does not contradict Scripture, but is "*a harmless toy*."

[1] "Principles of Science," p. 762. Macmillan & Co., 1883.

[2] "Newcomb's Astronomy" is extensively used as a college text-book.

[3] "Nature and the Bible," pp. 135–42.

Sir William Thomson says: "The proof of the essential idea of Evolution *would have no bad effect on our theology.* God would remain then as now, the living fountain of all life. *His glory would not be shaded by it, if it should finally appear that he had created man by the slow approach of untold ages, and by the operations of natural law; rather it might enhance our ideas of divine power!*" Strong words from these two solid anti-Evolution Presbyterian elders[1]—one in Canada, the other Professor of Natural Philosophy at the Glasgow University, Scotland. Our majority, agreeing with the distinguished men in not accepting Evolution, should agree with them in its theological harmlessness. Oken, Lamarck, Geoffroy St. Hilaire, the older Evolutionists of a past age, held Evolution to be consistent with theism. Robt. Chambers[2] said: "The work of creation is equally real and equally divine, whether it be effected mediately or immediately, with or without the intervention of means." Hugh Miller[3] thought (in his review of the "Vestiges") the development theory perfectly consistent with strict theism. Dr. Buckland (on the "Vestiges") said: "So far from superseding an intelligent agent, such a view would exalt our conception of the consummate skill and power that could comprehend such an infinity of future uses under future systems in the original ground-work of his creation." These utterances are old enough—like good wine—to be rich and mellow. We advise our majority friends to drink them in; they may do your souls good, brethren. Try them.

Dr. Lionel Beale:[4] "There is nothing in Mr. Darwin's views

---

[1] We find it hard to understand just what sort of an anti-Evolutionist Sir William Thomson really is. He thinks that life *originated* on this planet from germs or minute forms brought here by meteoric fragments from other worlds, and from that source life plant and animal "got its start." We would call that Evolution, though it denies spontaneous generation, which comparatively few naturalists think has anything to do with Evolution. See *Interior* (Chicago), Sept. 11, 1884.

[2] "Vestiges of Creation," p. 92—the evolutionary book which made such a stir forty years ago.

[3] "Testimony of the Rocks," "Footprints of the Creator," etc.

[4] "Protoplasm, or Matter and Life," 3d ed., London: J. A. Churchill. pp. 291–378. Dr. Beale is the highest type of a scientific man, scholar, and Christian. We are not sure that he accepts Evolution as a scientific truth. He seems to reserve a definite opinion.

that conflicts with the conclusions I have reached from a very different course of study (p. 293). . . . The argument for design is strengthened instead of weakened by new facts of science. . . . Darwin does not dispense with miracle. His doctrine implies miracle of a consummate kind (p. 377). Miracle constitutes a necessary part of his (Darwin's) system. So far from excluding miracle, or supernatural influence, the Evolution of Darwin starts from miracle" (p. 378).

Prof. Flower[1] says: "Man's soul, hopes, and faiths, are uninfluenced by the way in which each man was born, so they are *totally independent of and uninfluenced by the mode in which the race originated*, whether from dead dust, or by modification of preëxisting animal forms." Prof. Baden Powell says: "In proportion as man's moral superiority is held to consist in attributes not of a material or corporeal nature or origin, it can signify little how his physical nature originated. Science has nothing to do with man's soul, which is hyperphysical." J. J. Murphy,[2] replying to the objection to Evolution that where change is gradual it cannot be fundamental, hence if man be *from* apes he must remain ape, says: "Not so; the *parallel fact* is seen in *individual* development—the change there is gradual, but fundamental." Each person begins life (as to his body) a gelatinous protoplasmic germ; a homogeneous, organless, senseless speck, growing gradually into a complete man. Prof. Richard Owen[3] says: "According to my derivative hypothesis, *a purposive route of development*, *manifesting intelligent will*, is as determinable in the succession of races as in the organisation of the individual." Sir Charles Lyell[4] says: "Evolution does not substitute a material, self-acting machinery for a supreme creative intelligence." He thinks as much "power, wisdom, design, or forethought, are needed for the gradual evolution of life from lower to higher forms, as for a multitude of separate, special, and miraculous acts of creation." He thinks the opposition to Evolution is

[1] Quoted in "Mivart's Genesis of Species," p. 300.

[2] "Habit and Intelligence," p. 582.

[3] "Anatomy of the Vertebrates," Vol. 3, p. 808.

[4] "Principles of Geology," 11th ed., p. 500.

like that once shown to astronomy, geography, geology, and the age of the earth.

So we might go on indefinitely quoting from philosophers' and scientists' opinions to the effect that there is no conflict between religion and Evolution. We will refer specifically to Professors Hermann Ulrici[1] and Paul Janet[2] among philosophers. Says Ulrici: "We do not at all oppose the theory of descent in general, but only the purely mechanical conception of it, which shuts out all governing *plan* and *design*."[3] Paul Janet's great work on "Final Causes" contains a profound discussion of the bearings of Evolution (Book I., Chaps. 7–9) upon teleology. He shows conclusively their perfect consistency. He says: "Not only does the idea of Evolution *not* exclude the idea of final causes, it seems, on the contrary, naturally to imply it" (p. 218). Evolution is not inconsistent with creation—it is only a mode of creation. "Special creations are one manner of conceiving the creative action, Evolution is another" (p. 220). R. H. Lotze[4] also holds the consistency of Evolution with theism.

In short, we might safely say that the consensus of science and philosophy agree in holding Evolution to be consistent with theism, and perhaps it would not be going too far to say that a large majority of leading scientists (nearly all of whom are Evolutionists) are Christian men, and their Christian faith, theoretically and practically, is not affected by their views on Evolution. Now it is evident that if the *supposed* opinion of scientists concerning the truth or untruth of Evolution be a proper basis of synodical decrees, then their real views as to the *theological character of Evolution* ought to have equal weight in securing deliverances in harmony therewith.

2. *The Consensus of Christendom against the Majority.*

The position taken by the majority was that to allow a Professor to teach Evolution to be probably true in a theological semi-

[1] Professor in the University of Halle.

[2] Professor of History of Philosophy at the Sorbonne, Paris.

[3] "God and Man," Part I., pp. 248–250.

[4] Prof. of Phil. Univ. of Leipsic, 1839–1844; Prof. of Phil. Univ. of Göttingen, 1844 until now.

nary was an endorsement and official teaching of Evolution by the Church; which of course means that the Church endorses and teaches all the views held by her professors on all subjects, political, literary, scientific, philosophic, dietetic, sanitary, and so on *ad infinitum*. Of course, on this view, the Church taught that the elect angels were *confirmed* in holiness after a limited period of obedience, as an act of grace, on the ground of the homage rendered to the law by the atonement of Christ, a doctrine taught by Dr. Palmer when he was Professor at Columbia (we believe), and made very plausible and wondrously beautiful by his masterly diction and keen reasoning; but still we believe it an unproven (and harmless) hypothesis; and we do not know that it is the "received interpretation."[1] The same might be said of Dr. Girardeau's views on instrumental music and metaphysics, Dr. Dabney's teachings on geology (Lectures, pp. 170, etc.). However, while not altogether accepting the unmodified theory that the Church teaches and is responsible for all the notions of her theological professors, the majority have assumed and acted on that principle. They must stand by it, in what now follows concerning other Churches.

The *Northern Presbyterian Church* allows her theological professors and preachers to teach that theistic Evolution is reconcilable with Scripture. Dr. McCosh says: "I hold the doctrine of Evolution on the understanding that the whole process is the work of God, and that there are higher manifestations of God's power which cannot thus be accounted for" (Homiletic Monthly, January, 1884, Philosophic Series, and various writings). He says he has always taught his students at Princeton that "there is evolution everywhere in nature, and that there is nothing in this evolution, properly explained and duly limited, inconsistent with revelation." He thinks if he taught his students that Evo-

[1] Our honored friend, Dr. Palmer, of course will not misunderstand the above allusion. Knowing our profound respect and admiring friendship for him, he will be the last to think any unjust criticism of him is meant. We condemn neither the doctrine nor the teaching of it (as done by him) even in the Seminary. We cannot *quite* see it, but think it allowable to personal liberty.

lution was false and "contrary to Scripture, they would be tempted to give up the Bible, because they find Evolution to be a truth in nature." Prof. F. L. Patton (Homiletic Monthly, April, 1884), of Princeton Seminary, teaches that "theistic evolution does not exclude the supernatural nor creation;" that the "world process," according to theistic evolution, "does not differ much from the same process as given in Genesis." He thinks the "question whether natural selection is *anti-biblical* or not turns upon the question whether or not it is *anti-teleological. Modified by the hypothesis of an inner law of development, . . . natural selection is not only not anti-teleological, but teleology enters into its very essence.*" (Hence, from the premises, it is not anti-biblical.) According to this law, "nature has been moving in the direction of an end, and the existing organic world is the realisation of ideals of which all lower forms of life were prophecies. But theism is the only rational explanation of *finality* in nature. Natural selection will not hurt theism." He thinks if the old view of man's origin be given up, and we learn that man's body was produced by descent from brute forms, while his soul was not so derived, but directly created (according to many naturalists), it would be "*more than we have a right to say that no scheme of reconciliation could be found*" between this idea and the Bible. Such an idea, he says, need not be rejected on the ground of respectability. We need not be sensitive about ancestry. "Nothing very shocking in the idea that God used organised matter (even though an ape) in making man, for organised matter is a higher form of matter than unorganised." The creation of man's body by "the slow process of genetic development does not make God any the less our Creator and the Father of our spirits." Prof. Patton thinks thus while regarding Evolution as still unproved.[1]

[1] We modestly venture to think Prof. Patton (who is usually profound and masterly in his logic and his philosophy) makes a logical slip when he says the theory of a *derivatively created* body and a directly created soul "involves organic and *psychological* continuity." The very terms "non-derivative origin of the soul" deny "psychological continuity." Hence the difficulty he finds in reconciling the theory with woman's creation, unity of the race, Adam's righteousness, headship, and fall, is (1) based on an idea foreign to the theory—upon an attribute not inherent in the

Prof. A. A. Hodge (Outlines of Theology, pp. 39–40) classifies the evolution theories in their theological relations under three heads. He describes the first thus: "Those which neither deny nor obscure the evidence which the order and adaptation observed in nature afford to the existence of God and his immanence in and providential control of his works. . . . *With this class of Evolution theories the natural theologian has, of course, only the most friendly interest.* Even if continuous Evolution could be proved as a fact, the significance of the evidence of intelligent order and contrivance *would not be in the least affected.*"

Prof. C. W. Shields, of Princeton College, teaches to the same effect that creation by organic evolution is consistent with theism and Scripture. Prof. Kellogg's (Allegheny Seminary) agreement with Dr. Woodrow on the non-contradiction of Evolution and Scripture is well known. We might quote from Dr. Howard Crosby (ex-Chancellor N. Y. Univ.) unqualifiedly and warmly endorsing J. A. Liefchild's "*Great Problem*," a book which teaches the consistency of Evolution and Christianity, and from numerous other theologians in the Northern Presbyterian Church, in colleges, seminaries, and pulpits, who agree with Dr. Woodrow as to the theology of Evolution. Now on the theory of the majority, all this it the *teaching of the Church* North. Not a word of objection has ever been raised to these doctrines. Their

---

theory, but a subjective addition to it from Prof. Patton's mind. (2) It is a *non-sequitur*, for *ex hypothesi* man's body as a suitable dwelling for his soul (to be immediately created when the body was ready) was the divine purpose to the realisation of which nature was divinely made to work. This purpose included the necessary divinely-correlated adjustments between the purposed and gradually prepared body and the soul. Hence there is no more difficulty here with Adam's headship, fall, etc., than there is on the theory that the matter of his body, the moment before creation, was dead, though *possibly* it had in cosmic cycles passed through the stages of fire-mist, gas, rock, trees, and animals. The continuity (whatever it be) involved in the passage from man to brute (let the change be slow or rapid), is consistent with *fundamental* change in mind and body, just as the passage from senseless embryo to perfect man is consistent with fundamental physical and mental change, and the difficulties in the latter case connected with moral responsibility are as great as the alleged difficulty of the former in connexion with Adam's headship and fall.

propounders have not been cast out of their professorships. Note this: among all the doctrinal differences—the specified errors of the Northern Church—*its toleration of Evolution has never been named.* Yet pretty long lists of errors have been written. What is not condemned is therefore approved. This *must* be so on the majority's theory that they must *condemn* in order not to approve Evolution. It will not do to plead ignorance. Drs. McCosh and Crosby spoke out twelve years ago; even Dr. Charles Hodge said twelve years ago, in a work which is a text-book at Columbia:[1] "There may be a theistic interpretation of the Darwinian theory." Brethren, you ought to have known and condemned (to be consistent) long ago the Northern Church's toleration of Evolution as consistent with Scripture, for many of you gave as a reason for condemning Dr. Woodrow, "Oh, the Northern Church will call us heretics if we don't." Many of you even threatened to go to the Northern Church rather than stand Dr. Woodrow. "Anything rather than Evolution," was the cry—"even the Northern Church."[2] On this subject it would have been a case of "out of the frying-pan into the fire." The attitude of the Northern Church was given as a reason for condemning Dr. Woodrow; therefore their toleration of the inculcation of the consistency of Evolution with Scripture by their theological professors should be a reason for removing this sentence of condemnation.

The Dutch Reformed Church.—In 1855 Tayler Lewis[3] taught *precisely* the doctrine taught by Dr. Woodrow, viz., that the creation of man's body by evolutionary process from a lower animal form was perfectly consistent with Scripture. The Dutch Reformed Church endorsed this doctrine (after having twenty years to study and digest it) by selecting Lewis as Vedder Lecturer[4] for 1875 before their theological students at New Brunswick. The evolution views he then taught are in advance of

---

[1] "Systematic Theology," Vol. II., p. 16.

[2] See writers in the *Central Presbyterian*, etc.

[3] "Six Days of Creation," Chap. 20.

[4] "Nature and the Scriptures," 1875, *published with the imprimatur of the solid old Calvinistic Dutch Church!*

those of 1855. He finds Evolution, by strict exegesis, to be the mode of creation described in Genesis. Some of the finest writing in the English language is found in his grand demonstration of the unreasonableness and awfulness of atheistic Evolution.[1]

In 1883 Dr. J. B. Drury was Vedder Lecturer. Through him the venerable Dutch Church taught her theological students: "It seems most probable that Evolution, considered as descriptive of the process by which the world has come to its present condition, is likely to become established. Already with the majority of scientists is it accepted as a working hypothesis, and each year is adding to the number of those who, *in this sense*, are evolutionists (p. 15). . . . He (Darwin) inaugurated a revolution in scientific methods, and lived to see Evolution become the prevalent working hypothesis of science" (p. 17). On the theology of Evolution, Dr. Drury says: "Let Evolution be seen to be only an instrument or method of God, and it ceases to be antagonistical to faith and religion" (p. 30). He very properly says mechanical evolution (self-originated, operating necessarily and continuously, without intervention of any power above or outside of itself), or materialistic Evolution, cannot account for man. "The advent of man with powers bespeaking a different order of being, . . . demands the interposition of an omniscient, omnipresent Creator; and this is strictly accordant with a divinely coördinated and controlled Evolution." Drury agrees with Wallace, it seems (p. 61), that a "superior intelligence guided the development of man in a definite direction and for a definite purpose. Wallace, as we have seen, teaches the derivative origin of man's body, and special divine intervention to account for his soul. There is nothing, so far as we can see, in Lect. III. that Dr. Woodrow could not consistently say.

We could give other proofs that the Dutch Church tolerates Evolution as consistent with Scripture, but these are enough.

[1] Passages in Lect. V. have been totally misunderstood and misquoted by not considering the qualifying words, "*unqualified* Evolution," "endless" Evolution, "mechanical" Evolution," etc., which he is careful to use in condemning any form of Evolution. Dr. Woodrow, or any other theistic evolutionist, could heartily endorse p. 219, and everything in Lect. V.

Our Church has long endorsed the orthodoxy of the Dutch Church. It has been about the only Church pure enough in doctrine for us to exchange fraternal delegations with "since the war," and lo and behold, Evolution has been tolerated in that Church as theologically harmless for thirty years!

The Congregational Church.—We might quote from Profs. Gulliver, of Andover Seminary, and G. F. Wright, of Oberlin, and many others, to show that Evolution was tolerated in that Church also.

The United Presbyterian Church of Scotland (Shades of Covenanters, Seceders, Relief Body, Erskine, Brown, and the rest, just think of it) allows her noble and gifted Prof. Calderwood to be very friendly to Evolution and to teach its consistency with Christianity ("Science and Religion"). Many of her public teachers hold the same view, and she never said, "Don't do it!"

The Free Church of Scotland has long allowed her theological professors to teach the consistency of Evolution and Christianity. Dr. James Buchanan, while Divinity Professor in the New College, Edinburgh, over thirty years ago, taught thus: "The argument for theism does not depend on the *mode of production*, but on the *character of the resulting product.* Were the theory of development admitted, it would not destroy the evidence of theism any more than the propagation of plants and animals under the existing system."[1] Buchanan was a contemporary of Chalmers, Cunningham, Candlish, and a host of great orthodox scholars and theologians, and he was never condemned. Only last year this same Calvinistic orthodox Presbyterian Free Church made Prof. Drummond (a hearty theistic Evolutionist) her professor in the theological school at Glasgow, putting him in a chair quite similar to the Perkins Chair at Columbia! "Natural law in the Spiritual World," the book which won his LL. D. and this professorship, assumes and teaches Evolution all the way through. We Southern Presbyterians never said a word about the Free Church's idea about the consistency of Evolution and Christianity away back in the "forties" and "fifties" (before

[1] "Faith in God and Modern Atheism," 1855, Vol. I., pp. 437–62, criticising the "*Vestiges.*"

"some of us" minority men were born), when we were praising them and helping with our money to make their free and independent "start in the world." We have never condemned their toleration of Evolution in the various Scotch Universities.

The Established Church of Scotland's toleration of Evolution as consistent with Christianity is well known. It would be difficult to find among her leading theologians, scholars, and professors, any who do not hold that theistic Evolution is consistent with Scripture. Prof. Flint at Edinbugh is an example. Prof. Knight, of St. Andrews, Principal Tulloch (if we are rightly informed), Dr. George Matheson, and many others, can be named and quoted.

The Episcopal Church in Great Britain and America has hosts of great scholars and zealous churchmen who are either evolutionists, or teach its consistency with Christianity. Among these are the late Charles Kingsley, Bishop Jackson, Bishop Temple, Canon Farrar, Canon Barry, J. W. Reynolds,[1] President of Sion College. Judging from the tone of writing in the British periodicals within the past few years, representing all Protestant bodies in the kingdom, it would not be too much to say that the best thinkers there generally, and perhaps a majority of theologians of all classes, either assent provisionally to Evolution as a probable hypothesis, or hold its compatibility (whether true or false) with Scripture.[2]

E. de Pressensé doubtless represents the best thought in the Reformed Church of France. She permits him to teach: "The idea of Evolution is then inseparable from that of design. . . . The doctrine of Evolution thus understood appears to us altogether worthy to be accepted." Pressensé quotes approvingly

---

[1] "The Supernatural in Nature," London, 1880.

[2] Bishop Henry Potter, of New York, said to the writer last winter, in substance: "I sympathise heartily with you and your allies in contending that Prof. Woodrow should be allowed liberty in this matter. I realise that you are fighting a battle in which all Churches are equally interested, for it involves a fundamental principle of Protestant Christianity—freedom of thought and conscience in things indifferent." In this Bishop Potter represents the best thought, and doubtless the majority, of American Episcopalians.

Wallace, Naudin, Gaudry, Janet, Ribot, Flint, and others who are friendly, on philosophic and theological grounds, to Evolution.[1]

We have referred to Prof. Rudolf Schmid, D. D., as representing the "Evangelical Protestant Church" in Germany. We can furnish numerous other proofs that other Protestant bodies in continental Europe tolerate both the acceptance of Evolution as "probably true," and the inculcation of its consistency with Christianity.

We have now shown fully (and can furnish cumulative evidence) that the *consensus of Christendom is against Dr. Woodrow's opponents.* His ejectment is condemned by the best thought in Christendom among orthodox evangelical Christian scholars. The principles held or taught, and the practice pursued toward theological professors and public teachers on the subject of Evolution by the enlightened judgment of Christendom, rebuke and condemn the action of the majority in expelling Prof. Woodrow from the Perkins Professorship. It has been virtually claimed that the *size* of the majority in our Church who condemned Dr. Woodrow was proof that the "*Holy Ghost spake in condemnation of this error*"[2] (*sic*). Well, how about the *size* of this vast majority of Christendom condemning the majority in the Southern Presbyterian Church? Does Satan speak through *minorities in* our Church, and through *majorities outside* of it? We hold the majority to their premises, according to which they must say: The Holy Ghost speaks through Christian *majorities* and Satan through Christian *minorities.* Dr. Woodrow's condemners are a small minority of Christendom. Therefore——— Brethren, stand by your logic and fill up that blank. Your "received interpretation" theory must not be applied solely as it works to your advantage and our disadvantage. Be consistent. Look at our theological text-books and see how the consensus of creeds and of theologians is cited in support of doctrines laid

[1] "A Study of Origins." By E. De Pressensé, D. D., Jas. Pott & Co., N. Y., 1884. An able, finely written work. Chap. IV., Book II.—"The Doctrine of Evolution"—deserves careful reading.

[2] Rev. Dr. J. B. Mack in *St. Louis Presbyterian.*

down! See the newspaper discussions and debates in church courts on all important subjects, how appeals are made to the consensus of Christendom, the views of theologians, and the practice of churches,[1] as their reasons for this or that course. The principle implied is that the consensus of Christendom (the views and practices of other Churches) is a *probable* argument for or against a course of action. Whatever the appeal be worth, Dr. Woodrow's opponents have made it, erroneously—yea, grievously so—assuming without thorough investigation that it was for them. Whereas it is against them.

It is now evident that the logical groundwork for a complete reply to Dr. Girardeau's speech for the silencing of Dr. Woodrow has already been laid in the foregoing discussion. His speech (says the *Southwestern Presbyterian*, March 5th) "embodies the strength of the argument on the other side." In this judgment agree the *Central Presbyterian*, the St. Louis *Presbyterian*, and others. Some of these criticise sharply his "ultimate standard" and "relative standard" theory. The criticism of Dr. Smith is very cogent and strong. To us it seems that if Dr. Girardeau's "ultimate standard" idea fails, the whole argument falls. We leave Dr. Girardeau, however, to the tender mercies of Drs. Smith and Farris. They have destroyed the foundation; can it be replaced? We hope our honored friend will pardon the temerity which ventures to criticise him. His noble gifts of head and heart, and his wide learning in theology and philosophy, have always held our warm admiration. It is not our strength that emboldens us, but facts and principles that are with us.

Dr. Girardeau's *main* argument (the others are met in this and our preceding papers) is: "Dr. Woodrow must be silenced because his views are contrary to the '*received interpretation of our Church.*' We all stand on this proposition, viz.: No teaching contrary to Scripture and our standards is allowable, espe-

[1] See especially debates in the Charleston Assembly, 1880, on the Power of *In thesi* Deliverances on dancing, etc., Lexington Assembly on Ministerial Qualifications, discussion on Deceased Wife's sister, etc., etc. See also Hodge, Thornwell, Dabney, Turrettin, J. Müller, and—Dr. Girardeau, citing others' views.

cially in important matters. This, however, must not exclude legitimate discussion on proposed constitutional amendments. The minority hold that Scripture and the standards—not unfairly interpreted—are *probably silent* on Evolution. This is their *main* proposition—the non-contradiction of Evolution by Scripture and the standards. And we resort to these authorities for the proof. Maintaining their silence, we claim liberty from them and from God to learn from nature, if we can, "God's plan of creation" (whether it be Evolution or not). And if any of us think there are probable grounds for believing Evolution to be true (nearly *all* our knowledge rests on probability), then God, the Bible, and the standards, give us liberty to think so, and say so. We think the divine principles of freedom set forth in our standards were violated in Dr. Woodrow's ejectment. The constitutional limitations to the "received interpretation" theory were ignored, under the influence of excitement, authority, popular tradition, and prejudice. There is our position.

We will notice, 1. Dr. Girardeau's answer to the point that "*all the professors are allowed to do what Dr. Woodrow does, viz., teach views opposed to the general judgment of the Church.*" He concludes that this "*chief* point of the argument . . . is *no* point at all" (Speech, pp. 19–21). The present writer first made this point in the *Southwestern Presbyterian*, somewhat in this form: "All professors teach incidentally, but really, views in philosophy, history, philology, science, etc., either as an organon, *i. e.*, instrumentally to the real purpose of their *constituent* teachings, or as *obiter dicta*, which are the inevitable deposits from the individuality and experiences of a professor. That these often were not endorsed by the majority of the Church, but so long as they were not plainly and vitally contrary to the standards, and were not used to undermine them, liberty was allowed." Speaking of this point, Dr. Girardeau said to the writer (in September, 1884): "There you touched with a needle's point the heart of this whole question." Now we submit that the standards and the Bible in their "absolute sense" are *silent* as to Evolution; that the exposition of the arguments *pro* and *con* for Evolution is mere or-

ganon, *i. e.*, instrumental to the real teaching and main purpose of Dr. Woodrow; that his opinion as to its *probable truth* is mere *obiter dicta* as related to his positive *constituent* teaching that the God of the word and of the works is one; that no Bible truth contradicts a nature truth, and that the *natural theology* of revelation (to use a solecism) and the *natural theology* of nature are in harmony. This is Dr. Woodrow's *teaching;* all else is organon and *obiter dicta.* He does not teach his not-generally-received views to destroy faith; hence the same freedom should be allowed him as is allowed Dr. Girardeau, *e. g.*, in *his* organon-*obiter dicta* metaphysics, etc., which may or not be generally approved. The Church does not feel called on to pronounce upon these extraneous matters, and will not cramp his individuality by telling him he must hold to Kant, Reid, Berkeley, or Locke, so long as his metaphysics, like Dr. Woodrow's Evolution, is not used against our creed.

2. In answer to the argument that the differences between Dr. Woodrow and others were analogous to those between parties in our Church on predestination, the will, imputation, etc., hence liberty should be allowed, Dr. Girardeau takes remarkable ground (see p. 21). He denies the analogy because the parties specified appeal mutually to the *Bible* and the standards to prove their positions, and because *they* would not hold views contrary to the standards!

We reply: (1) Views are held and allowed by these very parties contrary to the *popular received interpretation of the standards*, *e. g.*, six-day creation and geology; death in the animal world before the fall; the nebular hypothesis, etc.

(2) Dr. Woodrow would not, nor would any of us, hold even a scientific theory plainly contrary to the standards. We fail to see why Evolution, if contrary to the standards, would be in another category with the theological errors named; their *opposition to the standards* is the common feature that classes them under the genus error.

(3) "There is no analogy between allowing liberty as to Evolution and on the will, etc., because the parties differing on the will appeal to the Bible and the standards." We read that frequently to be sure of its sense, and we reply:

(a) We *do* appeal to these authorities to prove their *silence*, and consequent allowing of freedom.

(b) Of any two opposing views on imputation, predestination, the will, etc., one is right, the other wrong. Does an appeal to the Bible and the standards diminish the kind and degree of the error in the wrong view? Dr. Girardeau's logic means just that, or it is meaningless. Hence his premises involve this awful conclusion: Error is harmless, and freedom to teach it is allowable, if Scripture is urged in its support. Therefore if a professor should teach Socinianism, Unitarianism, Mormonism, etc., at Columbia, give him liberty so long as he appeals to the Bible and the standards! But because Prof. Woodrow does not *argue from Scripture* for the *truth* of Evolution, he must go. Of course on this ground the difference between Dr. Girardeau and the majority of the Charleston Assembly on *in thesi* deliverances was very small and harmless because both appealed to the Bible and the standards. Yet we remember how Dr. Girardeau then thought that the error of his opponents was very dangerous and hurtful.

3. The received interpretation of our Church a reason for expelling Dr. Woodrow. The argument is plausible, but superficial. From his own premises, Dr. Girardeau's conclusion should have been the reverse. Let us see:

(a) Dr. Girardeau did not think Dr. Woodrow a heretic. Evolution may *not* contradict the absolute sense of Scripture, *i. e.*, God's meaning of Scripture. Dr. Girardeau admits that neither he nor the Church ought to call Dr. Woodrow's views heresy. Evolution is a scientific hypothesis. As it cannot be called heresy, it cannot be said to contradict Scripture in any important sense of that word. Now the "*received interpretation*" and practice of our Church is that non-heretical scientific theories stand in the relation of non-contradiction to the Bible. Evolution is such a theory; therefore, according to the *received interpretation*, Evolution (being not heresy, according to Dr. Girardeau) does not contradict Scripture.[1]

[1] We can show from various authorities, Hodge, Calvin, Arnot, Chalmers, Lewis, Thornwell, etc., that our "received" teachers agree with Dr. Woodrow, *in principle*, as to the relation between science and revelation.

(b) The *practice* of our Church towards non-heretical scientific theories (which were yet contrary to the common interpretation of our standards) shows that she regards the relation between them and the Bible to be non-contradiction:

(1) She has allowed *liberty of view and teaching* on scientific subjects, showing she does not regard physical doctrines *per se* to be dangerous.

(2) She has permitted on scientific subjects views and teachings which did and do *seem* to contradict the Bible and standards and which yet contradict the popular view, *e. g.*, on geology, etc.

It is our *received interpretation* and practice to allow discussion and free teaching on non-heretical theories *against* popular notions and the first impulses and judgments of the popular mind. Hence it was a *departure* from "received interpretation" to yield, without long and careful discussion, to the first excited impressions of the crowd. Hence Dr. Girardeau ought, on his own premises, to have defended Dr. Woodrow, and taught the Church that in condemning him so hastily (for a non-heretical doctrine) she was violating her traditional interpretation of her own law.

(3) It is the practice of our Church, her "*received interpretation*," to aid her own judgment in reaching truth and determining duty, to examine closely and be legitimately influenced by the consensus of Christendom in situations kindred to her own. We submit that Dr. Girardeau, therefore, ought (believing Evolution to be not heresy) to have counselled more deliberation and careful study by the whole Church, so that the judgment of Christendom (and the opinions of Christian scientists), which it is our "*received interpretation*" and practice to consult, as an aid and a light (secondary, indeed, but an aid) for our own guidance in similar affairs, might have been ascertained. The Holy Ghost guides *all* God's people, and he teaches *much* to us through the conduct and historic experience of others.

4. Evolution is, confessedly (not being heresy), not forbidden by the higher meaning of Scripture. Hence God hath left men's minds and lips free. Therefore Dr. Girardeau should have ar-

gued: "*Evolution is not heresy;* it *may* be in accord with Scripture; therefore leave Dr. Woodrow free, for it is our law to permit speech where God is silent. It is our 'received interpretation' to command silence only when God speaks."

5. Whatever may be said of Dr. Girardeau's position, that the Synod of South Carolina was not called on to vindicate Dr. Woodrow from charges of heresy, etc. (Speech, p. 5), one thing is clear: *It is the duty of his Presbytery and Synod either to vindicate completely or try him (Dr. Woodrow) on the charges made.* It is the "received interpretation" of our church courts to vindicate their members (by trial or otherwise) from charges against them. Proof: *When anonymous charges were circulated against Dr. Woodrow in the Charleston Assembly, a committee appointed to investigate, recommended full and complete vindication, and a rebuke against the originator and circulator. Dr. Girardeau joined in the unanimous vote by which this paper was adopted.* This is law, and this is its "*received interpretation.*" Let justice be done. Let truth and right prevail.

J. William Flinn.

Note.—The author of the foregoing article intended the substance of it to appear as three articles in successive numbers, but at our request he consented to give it its present form, that the whole might be published at once.—Eds. Southern Presbyterian Review.