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MARCH, 1896.

NO. 1.

# "HELL" NOT IN THE BIBLE.

By REV. W. E. MANLEY, D.D.

SHEOL-HADES-TARTAROS-GEHENNA.

Though the dogma of endless woe seems to many people unreasonable, and as a foul blot on the character of God, there are many passages of Scripture that seem to teach the doctrine; and it is impossible, with their education and traditional reverence for the Bible, to settle down in a more comfortable belief, till these passages have been explained so as not to favor the unsavory dogma which they are supposed to teach.

Prominent among these passages are those that speak of hell. For some years after we had come to see the unreasonableness of the doctrine of never-ending punishment, the passages that had been urged in its favor stood in the way of a complete change of our opinion on this subject. Nor did we find entire satisfaction in respect to some of these texts, till, by a study of the original languages of the Bible, we settled the matter for ourself. Since that time, not a doubt on this subject has obtruded itself on our mind for a single moment. The strongest desire we now have is to convince others, and to lift a load from their minds

which they ought no longer to carry.

We feel deeply on this subject, not only because the doctrine in question was once the occasion of much unhappiness to ourself, casting a blight over the best years of our youth, unfitting us for both study and work, and seriously threatening life; but, sadder still, because a beloved mother was brought to the grave in the most shocking manner by her faith in this dreadful doctrine. After five long and wretched years of wild insanity, she imagined herself in hell, and expressed great surprise that we did not see the flames about her! She refused to eat; and all the nourishment she took during the fifty days of her sickness before death came to her relief was four spoonfuls of liquid food. Any attempt to conceal the food by mixing it with the water she craved was in vain, as she utterly refused all such preparations. Her screams at times were heartrending. Her apparent suffering was indescribable; though she may have suffered less than she appeared to do. These things occurred nearly seventy years ago; but they are as fresh in our memory as if they were of recent date. They have furnished us a strong motive to make all possible effort to remove from the church and the world the cause of all this misery. Awful as this case was, it was only one of a thousand, or rather of many thousands, that have been very similar.

In discussing the subject of this paper, we begin by laying down the following proposition:

There is no term in the Hebrew or Greek Scriptures which has the meaning of the English word "hell."

The uninformed reader will probably say that this is a bold proposition. He may think it as rash as it is bold. Of this he will be better able to judge after he has read what we have written on the subject. There have been times in the history of the Christian Church, not many centuries in the past, when any one avowing his belief in such a proposition would have been delivered to the mis-named "Holy Inquisition," to pay for his temerity with his life. Let us rejoice that these times of superstition and barbarity are past, never to return.

When our late revision of the Bible was in progress, Canon Farrar said in substance as follows: "If the revisers do their whole duty, when their work is done our Bible will not contain the word hell, nor damnation, nor everlasting punishment." This covers the whole ground of our proposition, and something more. The revisers, it seems, have not done their whole duty, though they have gone a good way in that direction. Damnation is no longer seen; and hell does not so often greet the eye of the reader as it once did. Everlasting punishment has stepped out, and eternal punishment is found in its place—no great improvement. view of the momentous importance of the subject, may we not expect the close attention of the reader from beginning to end? It is not possible to do justice to so vast a subject in a short article; and our paper must not be so long as to find a lodgment in the waste basket. This limitation makes it all the more necessary that what is written be read with care. We will do the best we can, and if we prove the proposition before us, as we expect to do to the satisfaction of all candid and intelligent minds, it will be an achievement at which all good men will rejoice.

There are four words in the Bible that are translated hell, though not uniformly so translated. One of these is a Hebrew word, sheol, and is found in the Old Testament sixty-five times. In the old version it is rendered thirty-one times hell, thirty-one times grave, and three times pit. In the Revision it is rendered hell fifteen times, grave fifteen times, pit five times, and left untranslated thirty times. that the word does not mean hell, but say it is a place of departed spirits, The revisers admit good and bad, and must therefore embrace a hell and a paradise, though these places, and the separation between them, are nowhere mentioned or alluded to in that part of the Bible. With the views the revisers had of sheol, it was manifestly improper to render the word either hell or There was but one consistent course to take, and that was to give the original in every instance, as they have done in nearly half of them, and as the New Testament revisers have done with the corres-

In passing we may remark that *Sheol* was the proper name of the first king of the Hebrew nation, and of him who became the apostle to the Gentiles, with some difference of pronunciation—a pretty good evidence that their respective parents did not attach to the word the meaning of hell, unless it had to them a more musical sound than it has to some of

The true meaning of sheol is grave; and the translators of the old version have given their sanction to this view, by so rendering the word in nearly half the instances in the ancient Scriptures; and if we add the three times it is rendered pit, often the synonym of grave, the rendering grave will be in the majority. Professor Stuart says the word should have been translated grave more times than it is; and only in five instances does he suppose that it denotes a place of future punishment. Is it likely that this term denotes a place of future suffering five times out of sixty-five, and in all the other places has some other meaning, generally grave? The idea is preposterous. The truth is, that the translators, finding no word in the Hebrew Bible having the meaning of hell, gave this meaning to a word to which it did not belong, retaining its true meaning in most of the places where it is found. That the word ever denotes a place of departed spirits, as supposed by our late revisers, and still held by Dr. Briggs and others, probably never entered the minds of the old translators. And if it had, it would have been summarily set aside, from its supposed resemblance to the Roman Catholic purgatory.

That we may not extend this paper to an unreasonable length, instead of quoting each passage in full where sheol occurs, unless it is quite brief, we will give the substance of each, with the chapter and verse, and such comments as will make the matter plain to the reader, presuming

that the latter has a reasonable amount of common sense.

1. Sheol occurs seven times in the Pentateuch. It is found four times in Genesis. Jacob says he will go down to sheol to his son Joseph, mourning. Three times it is said with reference to the same thing, that his gray hairs will be brought down to sheol. This kind of language requires that sheol should mean the grave (see Gen. 37:35; 8:38:44:29,31). Again, Korah and his company were swallowed by the earth; and they, with their tents and goods, went down into sheol, the word being twice rendered pit (see Num. 16:30,33). In a highly poetic passage, the anger of God is said to burn to the lowest sheol (or sheol below), and "consume the earth and her increase, and set on fire the foundations of the mountains" (Deut. 32:22). In the mountain-side the Hebrews had their places of burial. The reference is wholly to this earth.

2. Sheol occurs four times in Samuel and Kings. "The Lord bringeth down to sheol and bringeth up," 1 Sam. 2:6. In the next passage we have the "sorrows of sheol," which are such sorrows as would bring one to sheol or grave (2 Sam. 22:6). David is speaking of the snares his enemies laid for him, from which he barely escaped. David, being about

to die, enjoins on Solomon not to let Joab go to sheol in peace, but to bring him to sheol with blood (1 Kings 2: 6, 9). Of course sheol is the grave.

3. Sheol occurs eight times in Job. People vanish away in sheol (7:9). The divine presence is high as heaven and deeper than sheol (11:18). Job prayed that God would hide him in sheol (14:13). If he waited he would go there at last (17:13). Sheol is in the dust (17:16). It is here rendered pit. Wealthy men are liable to go down in a moment to sheol (21:13). Sheol consumes its immates (24:19). Sheol is the limit of our vision, but not of God's (26:6). The passage is obscure.

4. Sheol occurs sixteen times in the Psalms. There is no one to give God thanks in sheol (6:5). If this be true then sheol is not a place of spirits, good and bad, as Dr. Briggs and others suppose. Good spirits surely would give God thanks. "The wicked shall be turned into sheol" (9: 17). This is the way a victorious army treats its fallen enemies; it turns them into the grave. Some of the Psalms of David are plainly war songs-such is the psalm that has the foregoing passage; they were sung or recited when the army was going into battle. These psalms were read with much enthusiasm on both sides in our civil war. Again, "Thou wilt not leave my soul in sheol; neither wilt thou suffer thine holy one to see corruption" (16:10). "Soul" is the rendering of a word that quite as often has the sense of "life." It has this meaning in the passage before us. The sorrows of sheol (18:5) we have had To bring up the soul or life from sheol (30:3) before (2 Sam. 22:6). is to restore one from a dangerous illness or some other exposure to death. Again, sheol is a place of silenes (31:17). Sometimes men are buried in sheol with as little feeling as we would bury a sheep. Death feeds on men (49:14). Here sheol is found twice in one verse. redeems the soul (life) from the power of sheol (49:15). We have had two or three such passages.

David prayed that his enemies might go down quick (alive) into sheol (55:15)—into no worse place, probably, than the grave. The sense is expressed in the context, "God shall bring them down into the pit of destruction." David was delivered from the lowest sheol (86:13). Not the lowest sheol, but sheol below. He says: "Violent men have sought after my soul." No, not his soul; it was his life they were after, but they failed to get it. Again, David says: "My life draweth nigh unto sheol"—the same original word rendered about equally life and soul. No man can deliver his soul from sheol (99:48). If this place is hell, all

must go there. Often "his soul" means "himself."

The pains of sheol (116: 3) and sorrows of sheol are the same. Such pains or sorrows got hold of David while he was on the earth. The same David said: "If I make my bed in sheol, thou [God] art there" (139: 8). Such a place was one of rest and sleep—of "sleep that knows no waking." David was too wise to think of making his bed where sleep was impossible. "Our bones are scattered at the mouth of sheol" (141:

7). This was often verified in the East, where graves are not protected

against the ravages of wild beasts.

5. Sheol occurs nine times in Proverbs. "Let us swallow them up alive as sheol" (1:12). This is the language of a robber trying to persuade others to join him. As sheol swallows the dead, is probably the meaning. Of a bad woman we read, "Her feet go down to death; her steps take hold on sheol" (5:5). This is an example of parallelism in Hebrew poetry, wherein death and grave are convertible terms. To give sheol the meaning of "hell," or a place of spirits, is to change sense into nonsense. "Her house is the way to sheol, going down to the chambers of death" (7:27), the same as the preceding. "He knoweth not that the dead are there, and that her guests are in the depths of sheol" (9:18), another similar example. By a figure of speech, prolepsis, these devotees of sensuality are regarded as being already, where they soon would be—dead and in the grave as the result of their evil practices.

God can look beyond death and sheel; how much more into the hearts of men? (15:11). "The way of life is above to the wise, that he may depart from sheel beneath" (15:24). By wise practice, one may long keep himself from death. The parent, by judicious use of the rod, may save his son from premature death (23:14). "Sheel is never satisfied" (27:20; 30:16). Very true of the grave; why need we go further?

6. Sheol occurs twice in Ecclesiastes and Canticles. "There is no work, nor device, nor knowledge, nor wisdom in sheol" (Eccl. 9:10). This is plain enough; sheol is not a place of suffering nor a place of spirits. "Love is strong as death; jealousy is cruel as sheol" (Cant. 8:6) We

know the grave is cruel, for it takes away our dear ones.

7. Sheol occurs nine times in Isaiah. In the poetic language of the prophet, sheol opens its mouth to receive the rebellious people of Israel (5:14). The word is rendered hell, but the revisers have put grave in the margin. The prophet, addressing the King of Babylon, says: "Sheol is moved to meet thee at thy coming. It stirreth up the dead for thee," etc. (14:9, 11, 15). Verse 11 shows the meaning: "The worm is spread under thee, and the worms cover thee." Here sheol is twice hell and once grave. The people are said to have made a covenant with death and sheol, so that when the overflowing scourge should come they would be safe. But they are admonished that their covenant with sheol shall be annulled, and when the overflowing scourge should come, they would be trodden down by it (28:15, 18). Comment is unnecessary. "I shall go to the gates of sheol" (38:10). These are the words of Hezekiah, expecting soon to die. Sheol cannot praise thee (38:18). Thou didst debase thyself, even unto sheol (57;9).

8. Sheol occurs five times in Ezekiel. Sheol is once rendered grave and twice hell in the same passage (31:15-17). The inmates of sheol are those that were slain with the sword. They lie there. In 32:22, 27, the slain had with them their weapons of war, with their swords under

their heads. This must satisfy the most sceptical.

9. Sheol occurs five times in four different books. "I will ransom them from the power of sheol. . . . O sheol, I will be thy destruction" (Hos. 13:14). Whatever may be the meaning of the word, the place cannot be of endless duration. The wicked dig into sheol to escape punishment (Amos 9:2). It is a literal fact that oriental tombs are resorted to by criminals, in order to conceal themselves from the officers of the law. Jonah says: "Out of the belly of sheol cried I unto the Lord" (Jon. 2:2). Is sheol, then, the name of a big fish? No, but the fish was the grave of Jonah for the time being; such at least is the story. The avaricious man enlarges his desires as sheol (Hab. 2:5).

The foregoing are all the places where sheol occurs.

III. We will now bring before the reader the Greek word hades, having the same meaning as sheol in the Hebrew. That this term has the same meaning as sheol is proved by the fact that, in the Greek version of the Old Testament, then in common use among Jews and Christians, hades is the rendering of sheol in almost every instance of its occurrence. The term hades is found ten times in the revised New Testament, and eleven times in the old version.

10. Hades occurs four times in the Gospels. In two passages, Capernaum is threatened with being brought down to hades (Matt. 11:23; Luke 10:15) With the idea of hades now being adopted by the liberal portion of the orthodox church—that Hades is a place of spirits good and bad, each in an appropriate department—Capernaum is threatened as much with paradise as with tartaros. But if hades has the meaning of grave, the destruction of Capernaum is all that is intended; and this is the fate that actually befell that city. Again, Jesus says the gates of hades shall not prevail against the church (Matt. 16:18). This is the opposite of the fate of Capernaum—the church should not be destroyed or become extinct. As a place of spirits, good as well as bad, how could hades be considered hostile to the church, as the words of Jesus imply? The rich man was buried in hades (Luke 16:22). This is the Vulgate reading (Latin), and if correct, hades has the sense of grave.

11. Hades occurs twice in the Acts. Peter, on the day of Pentecost, quoted from Ps. 16:10, and applied the passage to the resurrection of Christ. The soul (life) of Jesus was not left in hades, nor did his flesh see corruption (2:27, 31). The life of Jesus was not left in the grave,

for he had it with him when he came out.

12. Hades occurs four times in the Revelation. Jesus has the keys of hades and of death (1:18). Jesus raised the dead, and he raised Lazarus after he had been buried. The reference may be to his own resurrection. He had power to lay down his life, and he had power to take it again. The revelator saw in a vision a pale horse, and the rider thereon was Death, and Hades followed with him (6:8). The pale horse represents a pestilence; and when a pestilence prevails, death occurs in rapid succession, and so dees the burial of the dead. Hence the grave follows, not after death, but with it. The revelator describes a great judg-

ment, when death and hades delivered up the dead which were in them, who were then cast into the lake of fire (20:13, 14). This was seen in vision, but doubtless it had an important meaning. One thing is clear. It is that death and hades are cast into the lake of fire, and this is the last thing that is affirmed of them. The passage recalls the words of the prophet, "O sheol, I will be thy destruction."

IV. 13. Tartaros occurs once in the New Testament (2 Pet. 2:4); and it is implied in the parable of the Rich Man and Lazarus. The rich man was tormented in that part of hades called by the Greeks tartaros. But the Jews avoided the use of heathen terms, with the view of concealing the fact that they obtained their opinions from a heathen source. Jesus accommodated His words to their feelings on this subject. Pet. 2: 4, the word is tartarosas, and is rendered cast down to hell.

V. We will close the present discussion with some general observations, from which it will appear that hell is no part of divine revelation, unless

the doctrine is contained in the word gehenna.

- 1. It should be borne in mind that the translators of the old or authorized version, had but one word for the two renderings, grave and hell, and that the former was the sense of the term more often than the latter. It is as plain to us as anything well can be, that in the whole Hebrew Bible they could not find a word for the idea of hell. It is often affirmed by learned Hebrews that there is no such word in the Hebrew language, in the Bible or any other book. This is confirmed by the revisers, who confess that sheel has no such meaning; and they name no other word in the Hebrew language to fill the place. Finding no word for hell, they made use of the word sheol, grave, and attached to that the desired meaning when the connection would not betray the fraud. The meaning of hell was not in the word; but they could inject it, and then it would be there, and the Old Testament would not be obliged to bear the disgrace of having no hell. The people, having no knowledge of the Hebrew tongue, and not doubting that the translators, of high standing in the church, were pious, good men, accepted the new version as an inestimable boon to the English people, as no doubt on the whole it is.
- 2. The revisers confess that hell is a wrong translation; but they have not altogether rejected this rendering, on the ground, we suppose, that sheel was a hell, as well as a paradise; though there is nothing to support this idea but their conjecture. When our friends die they go to sheel, but whether to paradise or to tartaros is all a matter of uncertainty. Evidently we shall need another revision. "It is only a question of
- 3. In more than half the places in which sheol occurs, it is said to be down, meaning in the earth. This no one believes of hell or a place of spirits. If the Bible is of any authority on a matter of this kind, why not accept its teachings concerning the location of sheol, as well as its existence? The New Testament is decisive in making the future resid-

ence of the soul above, and not below. Therefore sheel is not a place of spirits. (See John 14:1-3; 17:24; Acts 1:9; 7:55, 59; 2 Cor. 4:1; 12:2; 1 Thess. 4:16, 17).

4. In a large number of instances, death and sheol are parallel terms in poetic language. Death and the grave are near enough alike to answer the purpose of the Hebrew poet, but neither of the other definitions of

sheol comes within the rules of the art.

Many learned men, like Dr. George Campbell, of Scotland, affirm confidently that the state of souls after death is not revealed in the Old Testament. The language of Dr. Campbell is that "The most profound silence is observed in respect to the state of the dead, their joys or sorrows, their happiness or misery." This is consistent with the meaning of

sheol as the grave, but not with the other meanings.

6. It is proper to mention a peculiarity of the word under consideration. It denotes the grave in general, as the final resting place of our mortal bodies; but never any particular burial place, where bodies are interred. As we have separate names for such localities, "burying ground," "cemetry," etc., so had the Hebrews. Jacob speaks in a general way of going down to sheol; but the grave in which his mortal remains were deposited, in the family vault at Hebron, is called geber.

7. The word sheol never has the term everlasting, or any other expressive of duration. An everlasting or eternal hell is found only in sermons

or in theological books.

8. Rev. W. Balfour, a learned Scotchman, came to this country many years ago as a missionary, to convert the heathen of New England; but he himself became converted to a more liberal faith, and was the author of a number of valuable books, of which one of the most valuable was on the word "hell." He found sheol in the Bible sixty-four times; but a few years ago we ascertained the true reckoning to be sixty-five.

In the old version hades was found in 1 Cor. 15:55, "O hades, where is thy victory?" here rendered "grave," but in every other passage "hell." The translators did not relish the idea that hell was to have no victory. The revisers have disposed of the difficulty more effectually by dropping out the word and putting "death" in its place. But, as the revelator speaks of a time when there shall be no more death, this must include the second death. It may be added that neither sheol nor hades is referred to a future state; and whenever the sorrows or pains of sheol are alluded to, the reference is to the present life. The parable, constructed of the heathen hades, is not to the point, as we have shown. The parable was fulfilled by temporal events.

We will conclude this paper with a brief anecdote concerning Mr. Balfour and this matter of hell. After hearing a sermon on the subject, and being invited to add some remarks, all he said was (in his native brogue): "If ony mon wants to be domned, let him be domned."\*

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# IS THE SUN HABITABLE?

BY CHARLES ETLER.

To this question "everybody" gives a most emphatic negative. My own reply is, I don't know; and my ignorance, which is very profound, is of many years' standing. Those who know that he is not habitable affirm, on what is put forward as very solid evidence, that he is by far too hot for any conceivable form of life; that he is one of a vast brotherhood of blazing stars; that he is nearly ten times hotter than any raging fiery furnace of human contrivance; and that his temperature is something between 3000° and 18,000,000° Fahr. And the immense significance of this fact is couched in the following dictum of an able and very orthodox exponent of modern science: "The whole vast universe, so far as our knowledge has yet gone, looks to the eve of science like a huge blunder." Happily, however, in the light of this universal conflagration, it can be scientifically demonstrated that this huge blunder is merely a temporary affair, and that its rectification is universal death. Thus also, as placed in the strong solar and sidereal glare, it will be clearly seen that our terrestrial life is really nothing more than an insignificant and chancebegotten fungus development, temporarily adherent to the cooled crust of one of a small family of little fireballs, still burning fiercely on their very near insides, but not blazing outright, like their larger solar brothers; and further, that all these fireballs,—and their tale is infinity -are aimlessly, i.e., stupidly, swinging to and fro in the spacious vault of heaven, while they are draining, and just as purposelessly, their hot life-blood upon what has been finely called "the waste-heap of the universe." From an ethical point of view, and to a devout evolutionist, like myself, this is not a cheerful outlook by any means; and it very much concerns us to know how far our real knowledge does extend in this particular direction.

I take up two questions: (1) Is the sun, and inferentially the entire sidereal universe, a "raging fiery furnace," as alleged? (2) What maintains this solar raging? And, in spite of the questionable logic, I will consider the second question first. Of the various replies given to

this tough problem, I will briefly glance at four only.

1. God made the sun just so. This solution completely covers the whole inquiry; and, accepting it, nothing more remains worth doing. But ancient, modern, universal, and immensely respectable as the superstition is, it forms no part of my own little cult to deify the multitudinous forms of my own ignorance, blumder, incapacity, folly, and indolence, and then to designate the entire consecrated mess—My God. Nor, avowed Theist as I am, will I knowingly traffic with pious fictions of any kind.

2. As one of the speculative results of Joule's great discovery of the mechanical equivalents of heat, many able scientists have contended that the solar furnace is fed by an incessant and tremendous rain and tempest of those sky-stones which we recognize as "shooting stars." But, as this solution is rather more troublesome than the original pro-

blem, I will not stay to discuss it.

3. It has been strenuously maintained by Mr. M. Williams, F.R.A.S., that the (terrestrial) atmosphere exists in universal, but, of course, unequal diffusion; and he shows, to his own satisfaction, that the solar atmosphere is capable of evolving, or at least of exhibiting, all those stupendous phenomena which so amaze and perplex us. But, as this able scientist appears to be quite singular in his views on this point, I shall not trouble my reader with them.

4. As one of the outcomes of the grand "Nebular Hypothesis" propounded by Laplace, Helmholtz (closely and ably followed by Lord Kelvin and other first-class scientists) maintains that solar light and heat are the direct results of the progressive condensation, and consequent compression of those crude gaseous elements out of which the entire sun system has been mechanically evolved. As this theory is "all the fashion" just now, I am compelled to give it some consideration.

In the first place, plausible and beautiful as the Nebular Hypothesis undoubtedly is, it covers only a part of the whole ground of difficulty; and at best, it is only a partial and provisional explanation of the great cosmical problem. Further, even if we accept the hypothesis as true, we do not know that the central, or any other part of the solar system, is still undergoing the process of condensation; wherefore, when we say the sun shines because he is contracting, and we know that he is contracting rapidly because he is shining so brightly, we are simply arguing

in a pretty little circle.

In the second place, our genuine admiration of the Nebular Hypothesis should not blind us to the circumstance that it has for its substructure another, and still farther-reaching hypothesis, which consists essentially of a group of unrelated "ultimate," incognoscible, and inaccessible "facts," each of which is in the nature of an uncaused cause. I prefer placing all such "facts" in the very large category of theologico-metaphysical truths, and to locate them, one and all, somewhere outside of the fertile and legitimate field of human research. Yet it must be admitted that in the stress and splendor of modern astronomical and chemical discovery, the inquiring scientific mind has been under much compulsion, historical rather than rational, however, to assume, as its working hypothesis, that "matter" exists; that it is discrete, and not continuous, and that every, the minutest, particle of it is "gifted," "invested," "endowed," or "created with" an eternally inherent power or capacity of exerting a pull on every other particle of matter far and near. But, as a matter of fact, there is nothing in science to show to the contrary, while there is much in the fundamentals of science —reason and common-sense—to suggest, that all those half-discovered physical modes which are now vaguely denoted by such inexplicable terms as matter, ether, attraction, repulsion, light, heat, electricity, etc., are ail reducible to, and expressible in, some correlation, or some composition of opposites, with the essential features of which we have been very familiar all our lives. In which case, that ultimate, greatest, and most unimaginable fact of modern science, universal gravitation, will prove to be nothing more than the half of a truth, which in its simple entirety has ever been as close to us as our own noses. But, and this is the point I am driving at,—in considering all such great and fundamental problems, if we would avoid perpetrating and perpetuatiag blunders huge enough to throw the whole material universe into eclipses, we must be exceedingly careful to discriminate between our actual knowledge and its provisional and most unreliable substitutes, crude

physical hypothesis, and tentative scientific theory.

My more specific objections to the condensation theory are as follow: (a) As an enormous unbalanced process, it lies beyond the grasp of the most far-reaching and most fertile generalization of modern science, the Polarity of Force; and as such, it places the dynamics of existence as a ruinous charge on its statics. (b) Why, seeing that this unbalanced force has had a past eternity in which to disport itself, has it not already expended itself on the great "waste-heap of the universe" countless ages ago? In other words, why is it, and against the ruling of all chance-law, that in this our own particular and inappreciable moment of infinite time, space is a glorious spangle of liring suns, and not a measureless vault of dead ones? (c) Had this process of nebular condensation a beginning? If yes, what was the strong arm which drew such a mighty bow-"the energy of position"-to its fullest limit? and whose the finger which then let slip the swift arrows of light and heat across the celestial spaces? If no, does it not appear somewhat absurd to affix, as this theory does, a terminal point to a duration which by hypothesis is interminable? (d) If it be the nature of contracting worlds to squeeze out flames of inconceivable fury and insupportable brightness during their cooling-down process, what is the matter with our dull planetary worlds? And, granting, which I very willingly do, that these smaller worlds are faintly selfluminous, is there a jot of evidence to show that such luminosity is due to their compression? (e) Restricting the attention to our own planet, does not its geological record, extending back as it does for hundreds of millions of years, completely negative the opinion that it has played the part of a diminutive sun during the period embraced by the Nebular Hypothesis? (f) It is generally assumed, and confidently asserted, that this earth of ours is a slightly-crusted mass of heat-molten matter; but of this "fact" we have no knowledge whatever; nor, indeed, have we a single reliable argument in proof of such a fact. I commend these and such-like points to the consideration of the universal conflagrationist, and pass on at once to my first question,-Is our sun a raging fiery furnace, spouting up flames hundreds, thousands, and even hundreds of thousands of miles high?

As, not long ago, our uncorrected experience qualified us to take our "solemn Bible oath" that the sun daily rose in the east, travelled across the sky and sank in the west, so also the same faulty instrument of research enables us to testify with the utmost confidence that he is a furiously blazing ball of fire. But, in the necessary default of all other instruments of knowledge, we must amplify, collate and harmonize our experiences before we can apply them to the solution of physical or any other prob-Science, extending the more rudimentary lessons of our ordinary experience, teaches us that sunlight passes through space without illuminating it; and, similarly, that the passage of solar heat leaves the interplanetary regions at the very zero point of an ideal thermometric scale. Thus, and thus far, it verifies a world-old half perceived truth, which in its simple and indisputable entirety is, -In the production of those conditions which we call light and heat there are, and must be, two factors, viz., in the one case, the Light-giver and the Light-receiver, and in the other case, the Heat-giver and the Heat-receiver. And, generally, this obvious and necessary correlation of the "objective" and the "subjective" is being gradually recognized as the broadest and grandest induction of modern thought. Remove every terrestrial subjective, and it is only a truism to say that, as far as this world is concerned, the light and heat of the sun are as things which are not. Completely eliminate the subjective factor, and its objective counterpart would be virtually extinguished also. In short, everything, the sun included, exists (in our consciousness) in virtue of its relation to some other thing. And this is a point which must be carefully kept in view while we are considering the habitability of the sun.

But, by amending this correlation of sun and planet, we can get a step nearer the simple truth. Science teaches us that all space, inclusive of at least many material bodies, is filled with a mysterious, extremely paradoxical, and half-discovered something which it has agreed to name Ether, and which is usually described as an "infinitely elastic fluid," but which, astronomy apart, is rather more suggestive of an infinitely inelastic solid. Of the real nature of this so-called "fluid" we know nothing, except that it is the medium for receiving, propagating, and communicating motions, which in some respects, but not in others, are analogous to the sea waves, and which are therefore called "undula-But, even here, we incur much risk of overstepping our actual knowledge and committing a grave error, for we do not know, as my words imply, nor, indeed, have we any reason for thinking, that this medium is capable of either receiving motions from, or communicating them to, any other body which is not, under ultimate analysis, truly ethereal itself. Now, it is this undulating ether, and not the sun himself, which is the immediate co-factor with the terrestrial light and heat receiver in the generation of that compound condition which we call

light or heat; and, so far is this extremely near light and heat-giver from being insufferably bright and hot, that it is "darker than pitch" and "colder than ice." Setting aside the very pertinent query, If this be so at our end of the long ethereal string, may it not also be just so at the other, or solar, end? I contend that, as these two intensely negative conditions—cold "heat" and black "light"—are the direct outpourings of the great central orb, when we assert that that orb is a mass of dazzling white heat, we simply overstep our actual knowledge

by some ninety-three millions of miles or thereabouts.

It is both very natural and very convenient to speak of the two modes of motion communicated by the sun to the ether as "heat" and "light;" but the real fact is that this emanent light and heat are conveyed across interstellar space in a condition of the profoundest sleep, so to speak, from which they cannot possibly be aroused until they meet with their appropriate subjective co-factors, which might be located at a distance of a billion billion miles from the other term of the cosmic equation. These, and such-like considerations, therefore, should make us pause before we accept the direct and uncorrected evidence of our experience, as a proof that our sun is a raging furnace of fire, and therefore totally destructive of every conceivable form of life.

That marvellous instrument, the spectroscope, not only assures the scientist that the solar surface is a seething mass of flame, but also informs him as to some of the very ingredients undergoing inflammation. Nevertheless, its testimony, which is briefly as follows, does not appear

very conclusive to me.

1. The light emitted from any glowing hot solid or liquid body, such as iron, stone, etc., passing through a small slit into a darkened room, and falling obliquely on a glass prism, gives what is called a continuous spectrum, in which, as in the rainbow, the colors pass gradually into each other.

2. A gas, or a vaporized metal, if made luminous, gives a spectrum consisting of *bright lines*, the particular number, grouping, character, and intensity of which serve as infallible distinguishing marks for the

recognition and identification of such luminous bodies.

3. If the light emitted by a solid body be made to pass through a non-luminous gas or vaporized metal, the spectrum exhibits dark instead of bright lines; and as these dark lines are the exact reversal of the others, they also can be similarly employed as a sure means for identification and research.

Now, let us apply these rules to the elucidation of our problem.

(a) The solar environment is demonstrably gaseous or vaporous, and it is universally declared to be also luminous. Therefore, by rule 2, it should give a spectrum of bright lines.

(b) But the spectrum given consists of dark lines. Therefore, by rule 3, the aforesaid luminous environment is not luminous, but it is a non-luminous medium for the passage of light emitted by some luminous

solid or liquid body located behind it, presumably the actual surface of the sun.

(c) But the most careful telescopic scrutiny of the sun-spots conducts us to the conclusion that this posterior body, or solar surface, is dark or non-luminous in comparison with its gaseous or vaporous environment, and that the depth of penetration behind this luminous envelopment is also the measure of the intensity of the comparative shading.

Thus, to sum up this argument, while the spectroscope demands a cool and non-luminous atmosphere above, and a white-hot body below, the telescope reveals an intensely luminous medium above and a comparatively dark body below; from which conflict of testimony it may fairly be argued, that as yet there is nothing in this department of physical science which definitely closes the question of the sun's habitability. In fact, the sun-spots testify to the contrary. These phenomena have been most carefully studied, and their positions, distribution, configurations, motions and periods exhibit altogether such a close parallelism with the main features of our great inter-tropical storms that, coupled with the fact that the sun's equatorial regions are warmer than the circumpolar, it is hardly possible to escape the inference that the sun-spot is due to climatic differences. But, obviously, the very notion of climate is utterly incompatible with the "raging furnace" theory; while, on the contrary, it is strongly suggestive of the existence of those conditions of temperature which, as we know, are conducive to the generation and maintenance of vital phenomena.

Finally, (for I am now overstepping my allowance of space, and must omit various other considerations which count as evidence), let us place the following alternative squarely before us. Is the Cosmos, with all its beauties, sublimities, mentalities, vitalities, and infinity of marvellous adaptations, contrivances, and unfathomable complexities, nothing more than the chance interaction of blind and blundering forces, in which a murderous struggle for a worthless existence is a very fitting prelude to that universal suicide so confidently predicted by the prophet of the most "advanced" type of thought? Or, on the contrary, is it, as we partly, and so far certainly, see it to be, a stable system of mutual compensations, and of forces which are correlated or complementary to each other, Are the vital motions which pulsate through but not antagonistic? every body of the material universe nothing more than a "death-rattle" of moribund worlds, or do they denote an eternal and an infinitely varied overlapping of Beginnings and Endings; or, in other words, is "periodicity" a fundamental condition of all things, except that one thing which is the inexpressible sum of that All? Is the Life Universal limited as to its capital? and, like any other spendthrift, is its expenditure in excess of its income? and will it, therefore, have to "go under" by eventual default? Or, contrariwise, is it that permanent and profitable concern, in which death, decay, and a certain percentage of evil, more or less evitable, appear as charges on life and the happiness which enriches it? For my own part, I prefer the optimistic alternative, which lends color to the speculation, and body to the hope, that man, like his possible congeners in other worlds, is the acumination of the Creative Intelligence which is universal; and therefore that he, and they, are at once the creators and depositaries of that maximum of happiness in relation to which the physical universe they dominate constitutes the raw materials.

There is also an economical train of thought underlying the whole of my contention with the universal conflagration theory. Man is the exponent of that natural system of thiugs of which he constitutes a prime and an integral part; and the multitudinous economies which illustrate and enrich his life can have no other source than the analogous economies which pervade the physical world. But this economic idea is utterly preclusive of the notion that this infinitesimal world of ours is the only, or even the principal, abode of life and feeling, and that the numberless orbs which are located in the infinitudes of time and space are nothing more than so many enormous masses of utter uselessness, whose glory consists, for the most part, of nothing more glorious than a halo of "glowing hydrogen gas!"

# THE SONG OF THE STORM-KING.

#### BY WALT. A. RATCLIFFE.

When the day glides out through the western gates,
And the angels of night draw nigh,
I love to list for their shadowy wings,
And the strains of song each phantom sings
As they come from the eastern sky;
From the darkening eastern sky,
To meet by mountain and glade and brook,
And with the zephyrs, from nature's book,
Sing earth's sweet lullaby.

From the twilight gray, through the darksome night,
To the ruby dawn they sing,
And just as the chilly eastern breeze
Shakes the diamond dew from the sleeping trees,
Their flight to the west they wing;
Of the myriad songs they sing
Of the star-lit sky, of the danclng sea,
Or of love, there is none so sweet to me
As this of the Tempest King.

He comes from his castle of coral and pearl,
Far under the bright smiling sea,
Where the hurricane-blast in his cavern is found,
And the thunder in silence a season is bound,
Or mutters his prayer to be free.
He only can make them free,
When he leaps to the back of his nimbus black,
And above the meadows with bridle slack
He scampers in boist'rous glee.

He darkens the sun while he roars at the earth. And laughs through his clattering rain. His thunders re-echo from hill to hill, His lightnings flash, and each freighted rill Leaps headlong down to the plain. Man's puny strength is vain; His mightiest works are crushed at a blow,—One shining arrow will lay him low, To rebuild them never again.

He lashes the sea till her angry steeds
Rear, champ and chafe and roar,
And gathering strength from each strong last leap,
Shall rush from the breast of the surging deep
Far up on the sloping shore.
Oh, the sea doth roil and roar,
Till, like bubbles of air, the stately ships,
Engulphed by her yawning, greedy lips,
Down sink to rise no more.

Or he comes from his home in the Frozen North. Where Aurora encircles his throne, Where no man e'er treadeth that desolate shore, And no torrent forever again may roar, And no voice ever speaks but his own. He comes in his might alone, And clothes all the lakes and green valleys below. With an armor of ice and a doublet of snow, From that silent crystal zone.

Listowel, Ont.



### THE EVOLUTION OF MIND.

An Address delivered at the opening meeting of the Mainland Teachers' Institute, held at Vancouver, British Columbia, Thursday evening, Jan. 9, 1896.

BY THE HON. JAMES BAKER, MINISTER OF EDUCATION, B.C.

In briefly introducing the speaker of the evening, the President, J. H. Kerr, B.A., read the following letter from the Mayor of Vancouver:

"City Hall, Vancouver, Jan. 6, 1896.

"To the President and Members of the Mainland Teachers' Institute.

"Ladies and Gentlemen,—On behalf of the council and citizens of Vancouver, I wish to express to you our appreciation of the honor conferred upon us by the holding of your Convention in the Terminal City. We all have our differences of opinion on many subjects, but none can differ as to the value of a thorough education. In your hands, to a very, very large extent, lies the success of our Province in the future, and I cannot help feeling a sense of approval of your desire to get together and seek self-improvement through the exchanging of ideas. To those from outside the city I can only say that you are heartily welcome, and I hope that your brief sojourn will combine some modicum of pleasure with the profit that attendance at such gatherings ensures. The day has gone by when teaching was simply a make-shift till something better turned up. Your profession now ranks A No. 1 at Lloyd's—that is, in the office of public opinion. Wishing for each and every one of you a sensible school board, apt pupils, and successful results from the application of your talents during 1896, I am, yours very truly,

"HENEY COLLINS, Mayor of Vancouver."

The Hon. James Baker then delivered his address on "The Evolution of Mind." as follows:

MR. CHAIRMAN, LADIES AND GENTLEMEN,-It is now two years since I had the pleasure of attending the annual meeting of the Mainland Teachers' Institute, and I can assure you that I feel much gratified at finding myself again addressing you on this occasion, as in duty bound in my capacity as Minister of Education. My position at these meetings is somewhat analogous to that of a farmer who is about to cultivate a well prepared field which from its fertility and adaptability will respond-I hope kindly-to any labor which may be bestowed upon it. I feel that I am addressing those who trade in knowledge, and that we are therefore all of us sufficiently aware of how little we really know and how much we have to learn. And when we analyze this trade in knowledge, in what does it consist? In the cultivation of mind? Yes, but what is mind? We have heard that question answered to this effect: "What is mind? no matter. What is matter? never mind." But we will endeavor to refresh our memory on this occasion; and, inasmuch as it is your principal duty to fashion immature minds into higher forms, it may be profitable to dwell for a time upon what the human imagination conceives the mind to be. In order to do this in an intelligent manner, it will be necessary to go back to the genesis of knowledge.

THE BEGINNING OF MIND THE BEGINNING OF LIFE.

It is a long, long stride, and when we have spanned it we find ourselves landed somewhere about the genesis of life. At this resting place we become aware of

the finite powers of our reason, and we discover that, although the revelations of the present enable us to recognize many of the wonders of the past, still we can only do so up to a certain point, and there we are forced to pause and to bow in reverence to the superior wisdom of an Allwise Creator. We have, however, learned this much by the way,-that the limitation of our reasoning power is being expanded upon a scientific formula, and that in process of time the boundaries of our knowledge are being enlarged. Both in the infinitely great and in the infinitely small we are now able to see partially where before we were blind. The microscope has enabled us to assert that there are living organisms so minute that it would take six thousand millions of them to cover a square inch, and even then the limit of the microcosm would not be reached; while in the infinitely great the spectroscope has revealed to us the composition of the atmosphere of the sun and its planets, and we are now able to measure distances to stars so great that, at last, our imagination becomes lost in space. Our imperfect reason does not permit us to realize a distance so great that it can have no end; neither, on the other hand, can we realize distance being bounded, because there must always be something beyond the boundary. Hardly a decade passes without some new revelation from science founded upon the experience of the past, and which tells us that, although many of our former deductions were correct, some of our premises were wrong. For example, the atomic theory of Democritus has, after a lapse of 2,000 years, been corrected, and I might also say perfected, by Clerk Maxwell and others. In point of fact, we are gradually being lifted up to a higher level of reasoning power, and we are at last permitted to grasp the wonderful hypothesis of Evolution.

# A VERY DOUBTFUL HYPOTHESIS.

And when we contemplate that hypothesis, what a marvellous revelation is laid out before us! We are first confronted with the advent of life upon this earth. How it came we are not as yet permitted to know, but a most ingenious and fascinating hypothesis has been suggested by the distinguished scientist Helmholtz, and it may interest you if I describe it. It is known that through the azure and clear sky-which the people of Vancouver are sometimes permitted to see-there are passing great streams of what in astronomical language is called "dust," which is composed of rocky masses of various sizes, some of them as large and probably a great deal larger than this building. And if it is doubted that such large masses could be floating through the sky without being visible to the naked eye, let it be remembered that a large object like a balloon becomes but a mere speck when even but a few miles distant. These great streams of gigantic dust circling through space are probably debris from other worlds, and astronomers have so accurately defined their courses that they can foretell almost to an hour when these streams of dust will come into contact with the atmosphere of the earth at about 48 miles distance. Before that time the attraction of gravity has drawn the nearest rock masses towards the earth, and the accelerating velocity of falling creates so much friction from the air that the exterior of the meteorite becomes heated to incandescence, and we see what is called a falling Helmholtz suggests that there are germs of life from other worlds roaming through space in this ethereal dust, and that they may have come to us encased in meteorites. The idea certainly harmonizes with the beautiful legend that when a star falls unto us a child is born—"We have seen His star in the east and have come to worship Him."

#### THE GREAT STAGES OF PHYSICAL EVOLUTION.

Be that as it may, we are able to fix the commencement of life upon earth in the early geological period to which the name of "Palæozoic" has been given, when the atmosphere was far warmer than it is at present and more highly charged with carbonic acid gas. Indeed, at this period the temperature at the poles was not much less than at the equator-and scientific research leads us to believe that the medium which surrounds existence has a great influence upon the growth and formation of organisms. We know that a great change has taken place, not only in the atmosphere, but also in the composition of the waters of the ocean, since the creation of the earth, and that a change is still going on, but so slowly as not to be perceptible to our senses. Evolution may, therefore, be an adaptation of life to the changing medium which surrounds existence But before touching upon the spiritual or psychical conditions of life, it may be well to indicate very briefly a few of the stages of Evolution. It has been divided into three great epochs, namely, the Palæozoic, or period of ancient life, the Mesozoic, or period of middle life, and the Cenozoic, or period of recent life. As far as our powers of observation permit us to go, we find that life commences in the Palæozoic period with the protoplasm or first single cell germ, and that primitive cells arrange themselves into groups to form what is called protozoæsponge-like and shell-like organisms, which, after great periods of time, are accompanied by radiates, which we recognize in the present day in our jelly-fish, sea anemones and star-fish; and these again were followed by mollusks, which were the progenitors of our oysters and clams; and after further periods of time there appeared the articulates, from which have been evolved our shrimps, lobsters and crabs; and finally there appeared upon the scene the vertebrates, which are represented by fishes, reptiles, birds, animals, - anything, in fact, which has a backbone; and we remark that in each successive period of time there was a higher order of being. But it must be understood that in this process of evolution, the changes from a lower to a higher order of being did not occur in a regular sequence by the lower disappearing upon the advent of the higher order. On the contrary, there appears to have been a radiation of evolution, starting from the protoplasm as a common centre; and some of the organisms after considerable development fail and die out, some remain stationary, while others are developed into higher and still higher orders of being. This may possibly be accounted for by the change which has taken place in the atmosphere and in the waters of the ocean, which have become inimical to some organisms and favorable to others.

#### THE PALEOZOIC PERIOD.

Turning then to the Palæozoic period, we find life commencing in the lower silurian formation. It may have existed in the Laurentian in the form of algæ or seaweed; and indeed some scientists—Sir William Dawson among the number,—think they have discovered what are called rhizopods, a form of protozoa, in the Laurentian limestone; but, so far as our purpose goes, we may say that life commences in the lower silurian formation with the protozoa, radiates, mollusks and articulates, all of which were of marine origin; there was no life upon the land at that period. When we ascend into the upper silurian formation, we still find the same forms of life continuing. But a very important event now occurs in the history of evolution by the appearance upon the scene of the first vertebrate, in the form of a low order of fish, something like a dog-fish, of the

present day; and I want you to realize the enormous length of time it took from the commencement of life to arrive at even this primitive vertebrate. According to Lord Kelvin, whom you may perhaps recognize better under his former name of Sir William Thompson-and we could not have a better authority -it must have taken about 50,000,000 of years from the commencement of life to the developement of even this primitive vertebrate. Think of that! This is on the supposition that it has taken about 96,000,000 of years from the creation of life up to the present time, which has been divided into 72,000,000 of years for the Palæozoic, 18,000,000 of years for the Mesozoic and 6,000,000 of years for the Cenozoic periods. It is a long, long time, and it has been computed by measuring the thickness of the different strata and then calculating the length of time necessary for their deposition. Of course the computation can only be approximate even to some millions of years; but it affords a basis to reason upon. As we ascend into the formation above the upper silurian, namely, the Devonian, we find it characterized by a great abundance of fishes, - but even these fishes assumed a higher order of being by some of them becoming ganoid, or covered by great shining scales, and we have only to place a salmon alongside a dogfish to become aware of how large a field there is for the development of even fishes. There was still no life upon the land at this period, except perhaps a few mosses, and here and there a very scanty vegetation. But, when we ascend into the carboniferous formation, a most important change occurs. We find a large portion of the land covered by a dense vegetation, in the form of great forests of pines, tree-ferns, and a thick undergrowth, and consider for a moment what the result of this was. We know that the atmosphere was heavily charged with carbonic acid gas at this period, and we also know that animals cannot live in carbonic acid gas, but trees and plants feed upon that gas-consequently these great forests of the carboniferous formation ate up the carbonic acid gas in the atmosphere, and converted the carbon afterwards into a large portion of the coal measures which we find upon our earth in the present day. This had the effect of purifying the atmosphere and rendering it fit for animal life; and behold, there at once appears upon the scene the first amphibian or water lizard, which could both swim in the water and crawl among the rich vegetation on the land. These amphibians had gills like a fish and could breathe under water, and therein they differed from the other reptiles and saurians, which had to come up to the surface to breathe, just as our alligators have to do in the present day. We also find that insects now appear upon the land, mostly in the form of spiders and scorpions. This closes the Palæozoic period, which you will remember has lasted for 72,000,000 of years.

### THE MESOZOIC PERIOD.

We now enter upon the Mesozoic period, which has been divided into the Triassic, the Jurassic and the Cretaceous formations. This was an age of great reptiles, and I am very glad that it is not our fate to be living among them, for it must have been a most night-marish sort of country. There were large saurians inhabiting the land in great numbers. For example, there was the plesiosaurus, which was half serpent, half crocodile, the iguanodon, a large lizard, which stood 30 feet high; the ichthyosauri, like great crocodiles, some of them 70 feet long; the pterosaurus, which could fly in the air, swim in the water and crawl on the land, and from which birds have been evoluted. It had a head like a crocodile, and probably our ideas of a flying dragon are derived from this beast. Then

there was the monster labyrinthodon, a sort of huge toad as big as an ox, which went crawling around the land and marshy places. Altogether it must have been a period to give everyone the "jumps," and I am very glad that we are out of it. But another important event in the history of Evolution occurred towards the close of the cretaceous formation by the appearance of the first mammal in the form of a marsupial, something after the fashion of our kangaroos of the present day—so that you see we are gradually getting up in the scale of life. This closes the Mesozoic period, which you will remember took 18,000,000 years to develop.

### THE CENOZOIC PERIOD.

We now enter the Cenozoic period, which has been divided into the Tertiary and the Quarternary formations. This is the age of mammals, large and small. The tertiary has been sub-divided into the Eocene, the Miocene and Pliocene formations. We now find, curiously enough, that most of the life which existed during the cretaceous formation disappears when we enter the Eocene, and that new orders are born. Again, when we enter the Miocene, more than one-half of the forms of life which existed in the Eocene disappear, and still higher orders are born; and at last, when we enter the Quarternary formation, we arrive at the highest mammal of all in the form of man, after the lapse of 60,000,000 years from the dawn of life. But even now we find some of the organisms of the silurian period living among us, such as the well-known nautilus, which has retained the form it possessed 70,000,000 years ago.

### MAN'S ORIGINAL ANCESTOR, THE "BLASTODERM."

Now, there are one or two more interesting points in these stages of evolution to which I should specially like to call your attention. In the earliest developments which passed from the protozoic to the metazoic there arose a most important event. The numerous protoplasmic cells grouped themselves into the form of a skin, spherical in shape and hollow, which may conveniently be represented by a hollow india rubber ball with an air-hole in it. This spherical protoplasmic organism has been named "blastoderm," or germ skin. Then, by the process of what is called invagination, one side of the blastoderm was pressed in so as to form a cup, and one half of the skin was thus brought into contact with the other half. A further development or pressure of invagination, and the opening of the cup was reduced until it assumed the form of a sack. The outer skin of this sack is called the epiblast; the inner skin of the sack is called the hypoblast; and the intervening space between the two is called the mesoblast. This simple formation, which came into being so many, many millions of years ago, was the archetype of our own bodies in the present day. In point of fact, each of us represents a blastoderm with fittings. Our skin, you must remember, is not only an outer skin, but it is continued into the mouth and down the throat, and throughout the whole of the inside. Our outer skin, with all its complicated nervous system, is the epiblast; our inner skin inside the body is the hypoblast; and between the two the protoplasmic cells have been busy organizing themselves under different architects, foremen and artisans, to build up the corpuscles of our blood, our veins, our nerves, our bones and muscles, to form the mesoblast; while in the interior of the sack, that is, inside the body, similar protoplasmic cells have been building up the stomach and organs of sustenance. fact, every part of the body is made up of groups of protoplasmic cells. So then, you see, this primitive blastoderm which came into being about 70,000,000 years

ago was our ancestor, and we can, therefore, boast of a very long pedigree. All animals have sprung from this simple organism, and scientists can distinctly trace many stages of the wonderful process.

### MISSING LINKS. THE PIKERMI DISCOVERIES.

Great strides have been made in our knowledge of evolution during the past 50 years in consequence of extended discoveries of fossil remains in various parts of the world, which have brought to light many missing links, and have revealed to us the skeletons of numerous animals which were living during the Cenezoic and other periods. By comparative anatomy, scientists are enabled to trace the evolution of various animals from a lower to a higher order of being, and also to group them into genera and species. The stores of science were greatly enriched in this direction a few years ago by the discovery of the fossil remains belonging to the upper miocene formation at Pikermi, in Greece. the space of only 300 by 60 yards of gravel in the bed of a mountain stream there were found an extraordinary number of fossil bones of huge animals. There were two kinds of rhinoceros, larger than any which exist at the present day; the megatherium, which is larger than the elephant; the great heliotherium, which is far larger than our giraffe; the dinotherium, or large tapir; the chalicotherium, or huge pig; the machairodus, a great sabre toothed tiger more than twice the size of the present tiger; the hipparion, or early form of horse; all these were found in great profusion, besides numbers of smaller animals, many of which are now extinct. It was evident that all these animals must have been driven together through terror caused by some convulsion of nature, and they were then swept away by a mountain torrent and buried among the gravel and debris carried down by the storm, to be afterwards resurrected by the hands of man in order that they might bear witness to the history of the world 2,000,000 years ago.

### HISTORY OF THE HORSE.

It is by means of such discoveries, not only at Pikermi, but in other parts of the world, especially in Colorado and the south of France, that we have been enabled to trace the interesting history of the evolution of our common friend, the horse; and all the stages of development are so clear and so remarkable that I cannot give you better evidence of the truth of the evolutionary hypothesis than by a description of the process. The principal credit of this history is due to Prof. Marsh, of Yale University, who has discovered no less than thirty stages of equine development, and I will now describe seven of them. The first of the series is as small as a fox, and the fossils were found in Colorado in the lower eocene formation, dating back probably 6,000,000 years, and, in consequence, the name of Eohippus has been given it. This early ancestor of the horse had four toes or fingers and the rudiments of a thumb on each of its fore feet, and three toes on each of its hind feet. As we ascend into the upper eocene formation we come to the Orohippus, or mountain horse, which is somewhat larger than the eohippus; and now we find that the thumb has disappeared and the equivalent to our middle finger is becoming elongated. As we move higher up in the strata into the miocene formation, we find a third genus called the has disappeared, the middle toe is still elongating, and the other toes are shrinking, thus showing that the transition stage is in progress. In the upper

miocene formation the Mesohippus disappears, but a fourth form, the Miohippus, is found, which is very similar to the form of horse called the Anchiterium in Europe. The size is increasing, and the midde finger continues to elongate and the other toes to shrink. As we ascend to the lower pliocene formation we find another stage in the evolution of the horse, the Protohippus, which now becomes as large as an ass. There are still three toes on the feet, but only the middle one touches the ground. This genus is found not only in America, but in Europe under the name of Hipparion. Still ascending in the formations to the middle pliocene we find the Pliohippus, on which the two side toes have shrunk up out of sight; and when we pass into the upper pliocene formation, we come to the true Equus of the present age, which still shows the remnants of two of its former toes, but they have shrunk up to those insignificant appendages which we call "splints" in the horse's legs of the present day. So you observe that the horse's fore foot from the knee downwards was originally the middle toe of which the nail is now the hoof.

### CORROBORATION BY EMBRYOLOGY.

I have only alluded to the various changes which have taken place in the feet, but there have been changes in other bones and in the teeth of the equine tribe which are equally important as witnesses to the undoubted connection of a lower with a higher development of the same genus In fact, the pedigree of the horse can be traced back for about 6,000,000 years, and we find it always rising to a higher order of being. Briefly, then, we learn that the physical condition of living things has been steadily advancing upon an upward scale over an estimated period of approximately, 100,000,000 years, from the primitive protoplasmic cell up to the highest of created beings in the present day in the form of man. And there is a most curious and interesting point in this wonderful process, and that is, that if we select any particular organism at any time during all these millions of years, we find the whole history of the evolution of that organism up to that time repeated from beginning to end in the short period of a few weeks-or at most a few months-which are necessary for its embryonic development. In fact, embryology gives us a short history of evolution. is called ontogeny, or the development of the individual in distinction to phylogeny, or the development of the tribe of which the individual forms a part; and it is one of the great mysteries of life.

#### PSYCHICAL EVOLUTION.

It is now time to turn from the physical to the psychical conditions of life, or the evolution of the mind. It is customary to suppose that reason is the peculiar attribute of man, and that animals are only guided by instinct, but when we attempt to define the boundary between reason and instinct it becomes so blurred as to be indistinguishable, and if we try to fix the zero of reason, we have to keep pushing it back and back until it touches the genesis of life. But taking that as our zero, we then can graduate the scale of psychical evolution up to the highest intellect of the present day. In the earliest stages of evolution the primitive organisms had developed in them a creative power for the purpose of forming a home for rest and security. Even the earliest mollusks built their shells. Insects and birds built their nests, and it is difficult to say which is the more wonderful, a bee's nest or Westminster Abbey. In either case the building operations must have required a considerable amount of thought and organization

of labor. But in the life of insects we have a most interesting illustration of the powers of observation and the adaptation of habit to surrounding circumstances in the case of the anthrophora, or mason bee, and the little sytaris, or blister beetle.

# A STORY OF INSECT REASON OR INSTINCT.

The anthophora bee seeks about for a soft kind of rock and bores a circular tunnel into it for a certain distance. It then sinks a perpendicular shaft or well at right angles to the tunnel, and when it is down a sufficient distance the male and female bees go outside and mix up a kind of cement or plaster with which they line the interior of the tunnel and shaft in a very beautiful manner. this work is completed they start off in search of honey, which they deposit in the shaft, or well, and when it is sufficiently full the "mamma" bee lays her eggs on the top of the honey, so that they float upon it; and she then goes outside and mixes up some more plaster or cement, with which she returns and covers up the mouth of the shaft with the eggs inside. The male bees are the first to hatch out about the end of August, and the embryo bee scratches his way out through the plaster covering the well, crawls, in a sleepy sort of way, along the tunnel until he gets to the mouth of it, and there he lies all through the winter in a hybernating sort of state, to come into full activity the following spring. Now, once upon a time there was a lady sytaris beetle of a domestic turn of mind, who was roaming about the country in search of a nice home for her future family, when she happened upon one of the tunnels of the anthophora bees, and, being of the feminine gender, she was naturally of an inquisitive turn of mind, and so she stood by to watch; and when she saw the male and female anthophora bees come out of the tunnel her curiosity was still further excited, so she went inside and explored the whole premises, and then returned to the entrance of the mouth of the tunnel to continue her investigations, and there she remained until she had made herself acquainted with all the habits of the anthophora bee. Then she began to think, and this is how she reasoned; "If I lay my eggs at the mouth of that tunnel, my baby sytaris grub will hatch out about the end of August, and when it finds that sleepy-headed embryo bee lying alongside of it, as my child comes of a rustling family, it will fix its six sharp claws into that bee and utilize it for food. And by and by, when it sees the "mamma" bee lay her eggs on the top of that nice sweet honey, well, if it does not know how to take advantage of the situation, it will not be like a child of mine." Accordingly, she commenced to put her plans into operation, laid her egg at the mouth of the tunnel, and everything turned out exactly as she had anticipated. The baby sytaris grub utilized the embryo bee for food, and when it saw the female bee lay her egg on the top of the honey and come out to mix up the plaster, the grub crawled along the tunnel, looked down into the well and then climbed on the top of the egg floating on the honey. " mamma" bee, but she is so much occupied with her masonry operations that she never notices the little grub on the top of the egg, and she plasters up the mouth of the well with the thief inside. And now the sytaris grub has a "real good time." It first devours the contents of the egg, which lasts for eight days, and then it lies in the empty shell as a sort of raft, and with its head in the sweet honey it gorges itself to repletion, and it grows and grows, and molts and molts, and changes its form until at last it develops into a full-fledged sytaris beetle. It then eats its way through the plaster covering, crawls along the tunnel, and

issues forth into the world in all the glory of its beetledom, and if it is a female beetle it returns either to the same tunnel or to some other tunnel of the anthophora bee, lays its eggs there, and the whole process is gone through over again. Now, it is quite clear that the lady systaris beetle must have thought out the whole process, and not only so, but her thoughts must have been inherited by her progeny and developed into habits which afterwards became a force of custom It is a very instructive lesson, and indeed we find that just as physical evolution commences with very small beginnings and gradually ascends into higher organisms, so it is with the evolution of mind.

### MENTAL DEVELOPMENT, PAST AND FUTURE.

In the earliest aggregations of protoplasmic cells, as represented by protozoans, radiates, and mollusks, we find them all actuated by what-for want of a better word-I may call "motives," or desires of alimentation, for conjugation, and for There was the effort for sustenance, and its consequent growth, the effort to increase and multiply, and the effort for defence and for offensive war. And out of these three motives there was inaugurated the survival of the fittest. Moreover, these three motives have actuated all living things, from the birth of the protoplasmic cells to the highest specimen of intellectual man in the present In support of the parallelism, we also find that, in psychical as in physical evolution, the process, although extremely slow, is progressive, and assumes higher powers as we pass from the palæozoic to the mesozoic, and from the mesozoic to the cenozoic periods. In other words, cephalization has been progressive. Deductive reasoning, therefore, must convince us that, enormous as is the difference between the psychical powers of the protozoan of 100,000,000 years ago compared with those of a man of the highest intelligence in our own age, there may be in the long future quite as great, or even a greater, difference between the most intellectual man of to-day and the wonderful being who is yet to be evolved on this earth, or who may even now be evoluted in some other world. We are permitted to reason by induction and deduction from objects and circumstances which surround us, and by that process we are enabled to assert that all organisms have been, are, and will probably continue to be, greatly influenced by environment; and I particularly wish to concentrate your attention upon this important point, because it is one which can be clearly proved through all the stages of psychical evolution, and it is one that has a peculiar bearing upon your responsibilities as teachers of the young.

### THE GENESIS OF THE HUMAN MIND.

In the earliest stages of evolution, when the groups of protoplasmic cells were floating about in the medium — water— by which they were surrounded, they were dependent upon their environment for their sustenance, and, consequently, for their growth. It was the exteriors of these organisms which were brought into contact with the surrounding medium, and there was gradually built up either a sympathy or an antipathy between the medium and the exterior and interior of the organism. We ourselves recognize this sympathy or antipathy in the emotions developed in our nervous systems by beautiful strains of music, or by the poetic fancies created in us when gazing upon some lovely scenery. Or, on the other hand, by the gasping of our breath as we plunge into cold water, or by the oppression occasioned by an overheated room. But, to return to the organism, which in its movements through the medium, water, came into contact with

forces, either chemical, electrical, or mechanical, as the case might be: it was influenced by those forces both as to the direction of its actions and the form of its growth. But there was in the interior of even the primitive organism a mysterious power or force which exerted its influence in a greater or a lesser degree on surrounding forces, and this extramissive force or mind of the primitive organism was the psychical germ of 100,000,000 years ago, which has evoluted into the intellectual power of man in the present day. We know not what it is, we only know that it is there, and we rightly attribute it to the Almighty.

# MAN A "FAINT IMAGE OF A FUTURE GOD."

We may, therefore, resolve all the forces acting upon any organism into two -namely, the esoteric extramissive force of the organism itself, and the exoteric intromittent force of environment; and the resultant of these two forces represents the measure of the power possessed by the organism of ascension or for descension in the scale of evolution. If, then, we acknowledge that there has been evolution in the psychical condition of life, or the evolution of mind, we must also acknowledge that there has been a continuity and augmentation of thought, and heredity of actions which are the products of thought; and we have practical experience of this in the inherited habits of animals-man included. But we can easily understand that, unless there has been some motive power or mental exaltation, there would have been a sameness in the continuity of thought over ages upon ages of time, and there could not have been any psychical advancement. But we have only to compare the psychical condition of the primitive protozoan with that of an intelligent human being to become aware that there has been a marvellous psychical advancement and an enormous graduation in the scale of psychical evolution from zero, or the genesis of life, upwards. Therefore, there must have been a motive power of mental exaltation acting through all time in a greater or lesser degree in all organisms, and forming a component part of their extramissive force; and it must in certain cases have been sufficiently powerful to regulate the force of environment, otherwise it would have been overborne by that force. Therefore, it is easy to realize that a multiplication and aggregation of organisms may become important factors in the environment of a single organism, and they will reciprocally react upon each other, and this is what we recognize when we allude to the force of example or the force of custom. How familiar is the expression, "He means well, but he is easily led;" or, in other words, the force of environment is stronger than his extramissive force. And we see in all this wonderful process a great purpose, a divine mystery, a spirit of exaltation, small and feeble at the genesis of life, and revealing itself only in the survival of the fittest, but ever ascending to higher levels through millions upon millions of years, until it has reached in its upward path that intellectual being who is called man, possessing a reasoning power, a conscience, and a freedom of will so incomparably superior to anything which has preceded him, as to suggest that he may indeed be the faint image of a future God.

# MAN NOT THE ONLY CREATOR.

I know that there is a certain school of scientists who scornfully deny the divine origin of life, and who refer back to the primitive monera and try to blend organism and inorganism into one harmonious whole. But even should they succeed, they will be no nearer to their goal. They will still have to seek for the

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first cause in their exceedingly indefinite phrase "spontaneous generat on," instead of the far more definite and more beautiful one of "divine origin." And when we come to read them closely, with an unbiassed mind, and even with a due reverence for their giant intellects, what do we find? That they become lost in the maze of their own deductions, because they acknowledge that they cannot account for the origin of motion which is absolutely essential to their They would seem also to err in another direction-I speak with all humility-but they do not appear to attach sufficient significance to the opposite extremity of evolution, namely, the marvellous power of the human intellect; they do not appear to realize that if, after 100,000,000 of years, there has been evoluted a human being possessing a creative power which is able to produce a moving thing of the complicated mechanism, for example, of a modern line of battleship, the lungs and stomach of which are fed with air, with water and with fuel-somewhat after the fashion of a human being-which digests its food, turns it into motion and voids the undigested portions, which breathes in air and exhales steam and carbonic acid gas, which can emit a language of sound signals, which can create light, which can destroy life, which can move with speed over the face of the waters and perform other actions, some of them somewhat similar to those of the human machine, and if all this wonderful piece of mechanism is perfected and set in motion by the limited mind of man, surely it is well within the bounds of deductive reasoning to believe that there is an Almighty Creator as far superior to man as man is to the primitive moner. And when we come to consider this creative power of man, large as it is but limited as it is, and then to gaze upwards at the vast firmament and to note all its wonderful content, does it not seem a blasphemy upon nature to suggest that man is the only creator?

### LESSONS FOR THE TEACHERS.

I have thought proper to address you upon these subjects because from the spirit of the age this wonderful evolutionary hypothesis must of a surety come before you for your consideration and for your judgment, and I would earnestly urge upon you to receive it as a beautiful revelation of the majesty of the Divine And if you accept it in that spirit you will find the study of evolution a great aid and assistance to you in the noble work of moulding the immature minds which are committed to your charge. It will help you to cultivate, not only the three R's, but the more important qualities, the two P's, pity and patience-pity for inherited faults-patience to mould them into virtues; and when you meet with aggravating eccentricities of character, it will help you to look upoe them, not with anger and impatience, but with a curious interest as manifestations of inherited tendencies, which it is your duty and your privilege to correct and to reform for the advancement of the human race. It will help you also to realize to the full the force of environment and the important part which you yourselves play in that environment, and you will learn that a spirit of altruism must pervade the schoolroom if your pupils are to advance along the path of evolution. And when you contemplate that path with all its wonders in the past and its aspiratious for the future, it will help you to marshal the young minds into one united band, and to confidently lead them on, step by step, upwards, towards the distant goal, singing the pæan as you go, Nearer, my God, to to Thee, nearer to Thee.

# GOLDWIN SMITH AS A UNITED STATES ADVOCATE.

In answer to a request for a statement of his views on the Anglo-Venezuelan boundary dispute and Mr. Cleveland's message in reference to it. Mr. Goldwin Smith has written one of the most remarkable expressions of opinion we have seen. Naturally, when wars and rumors of wars are being discussed, the wildest opinions and assertions are put forward by ignorant and excited partisans; but it is depressing indeed to find such views as those Mr. Smith has uttered coming from a man credited very generally with being both learned and of a peculiarly judicial and impartial cast of mind. He begins by saying:

"No one, I think, who has been much among Americans and conversed with men of different parties and classes among them, will be much surprised at Mr. Cleveland's message. I am firmly convinced that since the abolition of slavery there prevails among them no desire for territorial aggrandisement. The absence of such a desire was shown when they refused to annex San Domingo, and has appeared on other occasions. I have never in all my intercourse with them heard the slightest expression of a desire to infringe upon the independence of Canada. I have no doubt that as an independent country we might rest in perfect security at their side; but to the Monroe doctrine I have always believed them to be strongly attached; and I doubt not that President Cleveland, in asserting it on this occasion, will have their general sympathy and support."

The questions involved in this paragraph are mainly questions of fact. and any one who has read the newspapers during the last few weeks, or even during the last few years, must surely see that Goldwin Smith's assertions are far from the truth. We believe that surprise at President Cleveland's message was almost universal, as well among Americans as among other peoples. The mixture of tenses in the second sentence renders the meaning somewhat obscure; but certainly, having acquired Alaska, and there remaining only Canada and what territory they have left to Mexico in the way of completing their control of North America. they have not recently displayed much land-greediness. That they refused to annex San Domingo is a peculiar argument; it could have been -not a white elephant, but a very black one upon their hands. But where can a man have lived who has heard "not the slightest expression of a wish to infringe upon the independence of Canada?" Why, the papers have been full of such talk, not only from Fenian blatherskites and dynamiters, but even from U.S. army officers. Although the more respectable Americans have for years repudiated any desire to "annex Canada," a man must be blind who has failed to see the expression of such a desire, and of threats to do so at once in case of war.

Mr. Smith says Americans "regard it [the Monroe doctrine], not as a manifesto of American aggrandizement, but as a charter of independence for this continent." Now, however Americans may say they re-

gard it, no one can legitimately contend that the assumption of new and unacknowledged rights over the whole of Central and South America is not "aggrandisement." The claim, if it means anything, means that, if Canada should declare her independence of England, and should elect Sir Charles Tupper as king, the United States would have the right to veto its action. And, instead of a charter of independence, it would simply mean that for the future this hemisphere would be under the despotic sway of the Washington politicians.

Mr. Smith's next paragraph contains some most curious notions:

"I think it doubtful whether any European power would be permitted, if the United States could help it, to make this continent the scene, basis, or highway of its wars. I rather think that the United States would be inclined to exercise that tutelary authority in guarding the PEACE of this continent. Our two railways are almost as much American as Canadian. They are practically in no small measure under American control. I doubt whether they would be allowed to be freely used for the transmission of troops and munitions of war to be employed in war against any power with which the United States were at peace. In case of war, I suspect that Great Britain's only sife route to India would be round the Cape of Good Hope."

We seem to be living in a New World, truly, in reading this remarkable passage. Of course, Cuba is not a part of "this continent," and therefore the Monroe doctrine has nothing to do with Spain sending thousands of troops there, or with the many bands of filibusters who have gone there from United States ports. Of what use is it talking of "guarding the peace of this continent," when the larger part of it has not known more than a few months' continuous peace for the last halfcentury? Then look at the outrageous folly implied in the doubt as to whether England would be allowed to use her own railways in case of a war. Naturally, in such a case, the United States would control all railways inside her own boundaries, but the last clause quoted shows clearly that Mr. Smith thinks they would attempt to control the railways in Canada also. This really implies that the United States contemplate taking the part of any enemy of England, and would fight England rather than allow her the legitimate use of her own resources on this continent.

Mr. Smith may be reasonable in his opinion that questions of boundary are peculiarly fit matters for arbitration. We fully agree with him here; and, indeed, we are very strongly of opinion that the wisest course that could be adopted would be to establish an International Court of Arbitration, to which all disputes whatsoever that might arise between nations should be referred. Such a Court, established by Britain and America, would mean practically a union of the English-speaking races, with Home Rule for each country and colony. But, until such a court shall be established, boundary disputes, like every other class of disputes, varied as they are by varying circumstances, must be decided on their merits as best the interested parties may be able to settle them. If they

call in an arbitrator, well and good; but in the present case we have an outside power determining of its own proper motion to examine and to decide upon the merits of a dispute, and to carry out its decision by force of arms. This is the very reductio ad absurdum of arbitration.

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# MA PROPRE PATRIE.

(A French Version of a Scotch Song.)
BY ANDREW W. HERDMAN,

JE suis loin de "chez-moi," et je m'ennuie très beaucoup, Pour l'espère maison m'apportant de mon père les rises heureux, Et je ne serai jamais content si ne voient pas yeux de me Les Portes de l'Or du Ciel et ma Propre Patrie. La terre est pleine de fleurs, beaucoup couleurs, jolis, frais, Les oiseaux chantent heureusement car ceux mon père si faisait, Mais ces vues et ces frappes n'ont pas l'int'rêt avec me Quand j'ecoute les angèles chantantes dans ma Propre Patrie.

J'ai son bon mot de promis que quelque heureux jour, le Roi À son propre Palais-Royal il apportera "chez-soi" Ses exiles. Avec yeux cœurs pleins nous verrons—Voici! Le Roi dans sa ravissement dans notre Propre Patrie! Plusieurs mes fautes ont été et mes peines ont été dures, Là, ne m'afflicterons jamais, ils seront oubliés-meurt! Car son sang a fit me alb et mes yeux sec seront me, Quand m'il apporte "chez-soi" après, à ma Propre Patrie.

Si peu d'aucune je sais—du sainte et beau lieu,
Je seulement sais "chez-moi" où nous verrons sa chère vue!
Toujours satisfie serait sûr être à l'éternité,
Dans sa gloire de son être dans notre Propre Patrie.
Comment un enfant à sa mère, un oiseau qui dormerait,
Je maintenant veux d'aller lui qui sauvait me—mauvais,
Car à son sein transporte timides âmes de qui ressemble me,
Comment prend-il les soi-même, à son Propre Patrie!

Il fidèle est qui a promis, et il donc viendra sûr, Il servera son mot avec moi, mais je ne sais point quelle heure, Mais il ordre: "Ne fais-tu mal," et "Sois-tu a ton fusil," Que je vais a l'heure aucune, à mon Propre Patrie. Si j'ai soin toujours moi-même chantans je n'ai jamais tort, Pour La Prèsence de son Pied cette côte de la Porte de l'Or. Le Dieu donne son faveur à quelq'un qui entends me Que nous tous viendrons heureuses, à notre Propre Patrie!

Kennington Cove, N.S.

# FROM OUR OWN OBSERVATORY.

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# THE MONROE DOCTRINE.

GLADSTONE and ROSEBERRY.—" What is wanted is a little common sense."

# The Monroe Doctrine of President Monroe.

What the Monroe doctrine was originally may not be vastly important to-day. "The world moves;" and President Cleveland—backed up, it must be confessed, by a majority of his fellow countrymen—has taken a position which determines his interpretation of it, and consequently the reality which must be considered by other nations. At the same time, it may be as well to look at the doctrine as originally put forward in his message to Congress in 1823 by President Monroe:

"We owe it to candor and to the amicable relations existing between the United States and the allied powers to declare, that we should consider any attempt on their part to extend their system to any portion of this hemisphere as dangerous to our peace and safety. With the existing colonies of any European power we have not interfered and shall not interfere; but with the governments which have declared their independence and maintained it, and whose independence we have, on great consideration and principles, acknowledged, we could not view an interposition for oppressing them, or controlling in any other manner their destiny by any European power, in any other light than as a manifestation of an unfriendly disposition towards the United States."

Two things are very clear here: (1) That President Monroe assumed the right to prevent the introduction of the European monarchical systems to any part of the Western Hemisphere; and (2) that he assumed suzerain rights over the whole of that hemisphere not already controlled by European powers. In the first assumption, he was strictly in line with those European despotisms (England included) which, just a century ago, decided to upset the newly-established Republic of France, because they considered the example it set to their subjects was a menace to their own authority. The second assumption is opposed to every principle of international law. It could only become the policy of a civilized government after it had been accepted by the protected nations. But there is no pretence for showing that the Central and South American nations have accepted the controlling influence of the United States; and in this view, it is a one-sided and an illegitimate claim, only to be enforced when power and opportunity are favorable.

# The Monroe Doctrine of President Cleveland.

To dub the Monroe Doctrine an international law is about as reasonable as it would be to call the Ontario Game Laws international laws. No doubt it affects other nations. But, while these latter may be compelled to regard it as a matter that may be forced upon them by the United

States, the latter should consider, not only the question of its justice, but also that of its own ability to enforce it. In view of these points, let us look at the Monroe Doctrine of to-day. In his despatch, Mr. Olney tells England:

"That distance and three thousand miles of intervening ocean make any permanent political union between a European and an American state unnatural and inexpedient."

Our Imperial Federationists must feel very small under such a sweeping condemnation as this from an exalted personage like Mr. Olney. As if, too, this argument did not apply just as well to the United States, which, in fact, is almost as far from Venezuela as is England herself. But President Cleveland follows up this dictum in this style:

"The dispute [between Venezuela and England] has reached such a stage as to make it now incumbent upon the United States to take measures to determine... what is the true divisional line between the Republic of Venezuela and British Guiana.... When such report is made and accepted, it will, in my opinion, be the duty of the United States to resist, by every means in its power, as a wilful aggression upon its rights and interests, the appropriation by Great Britain of any lands, or the exercise of governmental jurisdiction over any territory which, after investigation, We have determined of right to belong to Venezuela."

### The Monroe Doctrine a Boomerang.

It is clear that these two declarations together make the Monroe Doctrine very different from that of 1823. The new doctrine means shortly, that no European nation shall be allowed ordinary international rights in the American continents from Tierra del Fuego to Alaska, and that all arrangements made therein shall be subject to investigation and approval by the United States government, which, when it has determined, to its own satisfaction, the merits of any case, shall have the right also to enforce its resulting decision. Such a doctrine seems at first blush little short of lunacy; and yet one cannot read the records of the American Senate, Congress, and Press without seeing that a large portion of the American people have committed themselves to the wild and dangerous policy. It means the assumption of rights and powers that might easily lead to a war, in which the United States would find itself fighting not only those foreign states against which its policy was directed, but also the very states it wished to protect.

### English v. Venezuelan Civilization.

The assumption at the basis of the Monroe Doctrine is, that the governments now established on the American continent are so vastly superior to the governments of Europe, that an irreparable damage would be done to the American peoples by allowing the European governments to establish their systems on this side of the Atlantic. Considering, however, that the South American peoples have already decided this question by successful revolutions against the reactionary governments, and that the present dispute is between a free country like England and

a semi-civilized state almost constantly distracted by revolutions like Venezuela, a claim that the Americans are acting in the interests of humanity by opposing even an extension of the English democratic system in South America, is a ridiculous absurdity.

### A Political Dream, and its Effects.

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The idea of the Monroe Doctrine appears to be one of those national dreams-like some of the ancient dreams of universal empire, and such modern ones as the French idea of European domination and Russia's similar though more extensive dream of European and Asiatic conquest which will have their day among a very partially-civilized people. In the present case, we see a people professing to follow the teachings of the meek and lowly and peace-bringing Nazarene, and to be leaders in civilization, ready to recklessly shed their own blood and treasure, as well as those of kindred nations, for an idea which, if even successfully consummated, would be of doubtful benefit either to them or to the world at large, and which would almost certainly bring about its own Nemesis. The New York Post justly remarks, that to sustain the role laid down by Mr. Cleveland, would necessitate the creation by the United States of a standing army of at least half a million of men, and a navy of five hundred battleships, and an annual expenditure of \$1,000,000,000; and we might add that, instead of in the near future becoming a nation of real freemen, practically they would be converted into a nation of slaves for generations to come. Apart altogether from the financial injury inseparable from rumors of war, a serious damage has already been done in the encouragement of the military spirit, which has been in evidence too much already for some years past.

### The Cost of the War Scare.

Mr. Smalley thus called attention to the losses occasioned by Mr. Cleveland's warlike message:

"Financial enterprises, says a leading banker, have already come to a standstill... No man knows what a day or a week may bring forth. The friends of this very President are pleading against disturbing the tariff, because business of all kinds needed repose. Where is the repose to-day? Is it worse to disturb the tariff or the public peace? It is two days since Mr. Cleveland launched his thunderbolt. The money losses to this country for these two days are already reckoned by millions. Mr. Depew computes that war would bankrupt one-third of the industries of the United States."

Sensible men will soon find out that "patriotism" which causes such immense losses by its mere mention is a peculiar sort of benefit to a country, and the sooner it is replaced by a broader and more humanitarian loyalty to honor and justice the better it will be for the whole world. It is this spurious patriotism—the counterpart of religious sectarianism—which has been the most baneful influence in politics in all times and in all countries. Some people have said that the "losses"

referred to have only been those of speculators, and consequently no real loss to the country. In effect, however, they operate just like all monopolies and unfair taxation. They tend to crush and pauperize the less prosperous sections of the people, and accumulate wealth in a few hands. They "give to him that hath, and take away from him that hath not even that which he hath."

# The King of the Belgians on England's Power and Influence.

Coming from a crowned head, the letter of King Leopold is a remarkable specimen of common sense and a valuable contribution to the controversy. He has watched England's progress for half a century, he says, and he is unable to account for the fact that she appears to be hated by so many people. There is no just cause for this hatred, which must arise from envy and jealousy. He points out that, though England is only a small nation, she has spread a network of colonies all round the world, and wherever her power has extended extraordinary and salutary changes in social and political conditions have followed. some extent, the bad features of European civilization have accompanied England's advance, but this has been unavoidable. Who could expect that she should establish a Utopia wherever she planted her flag? What the world would have been to-day without her may be imagined, but there certainly appears to be nothing to show that any other nation would have done so much good; what the world may be like if the jingoes of to-day have their way, may be equally subject to speculation, but we shudder to think of the fate of some of the native races who have hitherto had the benefit of Britain's stable and liberal rule. As the King says, success has always engendered envy and hatred. Frenchmen of the better class, he says, are not so blindly envious. They say, "Je deteste les Anglais, mais je les admire." We are inclined to think that "the better class of people "—and altogether they are a large class—neither in France nor in the United States, really "hate" the English. The people who "hate" foreigners are only the ignorant and the uncultured classes.

### The New Monroism.

In the American Senate there seems every probability that a resolution will be passed extending the Monroe doctrine to its utmost capacity. Of course, such an extension can only be intended to precipitate a war by stopping any negotiations with a power which imposes impossible conditions at the start. It is hardly likely that such a resolution will become law; but its proposition shows into what reckless hands the government of the Republic is liable to fall. Mr. Baker does not say, "the best way to preserve peace is to be prepared for war." He says.

# Senator Wolcott's Temperate and Loyal Speech.

Amid so much jingoism, Senator Wolcott's moderate utterance in the United States Senate deserves record. After expressing his opinion that

the Monroe doctrine had been misapplied to the Venezuelan dispute, and severely criticizing the so-called Republican Governments of South America, he said:

"Where the vexed boundary line will finally be located we cannot tell; but I sincerely hope it will rightfully be found to place those rich mines where the English-speaking people who develope them will not be subject to the cupidity of the half-breeds of Venezuela, and where English common law and the certainty of its enforcement will throw over them shelter and protection."

Speaking of the European imbroglio the Senator said:

"France is a sister republic, and, although most of her colonies commended in the resolution of the senator from Alabama have fewer rights than Cuba, she is yet entitled to our consideration and sympathy because of our form of government; Germany has furnished us hundreds of thousands of worthy citizens, who are a credit to the republic; Russia was our friendly ally in the late war. And yet, Mr. President, when I read that all those governments, France, Germany and Russia had allied themselves together against Great Britain, and that the people of those little islands, 'compassed by the inviolate sea,' in defence of what they deemed their rights, were marshalling their navies, ready, undaunted, to face a whole world in arms, unyielding and unafraid, I thanked God I was of that race. (Great applause.)"

Whatever may be the extent of the anti-British feeling in the United States, Senator Wolcott's sentiments will be echoed by a large majority of the intelligent classes on both sides of the Atlantic; and though many may think his prophecy of the "day when war shall be no more" too Utopian for practical politics, all disinterested men must join in his hope that England and America, "these two great nations of the same speech and lineage and traditions, may stand shoulder to shoulder in the interests of humanity;" and not be hounded to mutual destruction by reckless and reactionary partisans.

### Anglo-Saxon International Union.

We are glad to see, by a New York despatch of Feb. 14 to the Montreal Star, that a movement with the object of promoting an Anglo-Saxon union has made considerable progress. Such a movement may be premature in a "political" sense, but its discussion will do an immense amount of good in stemming the tide of militarism. A call for a public demonstration has just been issued by Mr. Herbert Welshe, 1305 Arch Street, Philadelphia, to whom all inquirers should write.

### Will there be a European War?

The present aspect of affairs in Europe must give rise to grave fears on the part of every thinker. The probability is that the long-dreaded "great war" is within measurable distance. Though the condition of affairs in 'the different European countries would not, under ordinary circumstances, cause serious apprehension, yet this is so complicated by a very critical condition of the "Eastern question," that it seems hardly

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possible a peaceful solution should be found for present difficulties. German Emperor has for a long time been playing a part which can only eventuate in a serious imbroglio with the liberal section of his own subjects, unless, indeed, he follows the example of the Little Napoleon, and endeavors to distract the attention of his disaffected people from their domestic troubles by a foreign war. Germany seems to contain but one free man just now, and he is half a lunatic; the rest of the nation are slaves. The sixty or so editors who tried to utter a few words of freedom are all in gaol. The situation is, indeed, far more critical than that which preceded the wars with Denmark, Austria, and France, which, while consolidating the German Empire, wiped out the reform movement of the preceding quarter of a century; for, though the anti-socialist legislation has been somewhat modified, the last few years have seen hundreds of men punished for simply using language "disrespectful" to the Emperor or his dogs and horses. Freedom of speech is a thing of the past; and, with a vanity-stricken despot at the helm, only one outcome seems possible—war, at home or abroad.

Although Russia has her hands full, not only with nihilism, but with railroad and shipbuilding, in order to enable her to deal more effectually with China and Japan as well as with Turkey and the European powers, and could well afford to wait still longer to accomplish the scheme of conquering Constantinople, it is likely she will be forced to take advantage of the present circumstances to advance her frontiers. It is thought also by some, indeed, that she will do this without a protest from the Western Powers, and without the outlay of a copeck or the loss of a Cossack. If so, the reason will be that more serious matters will be engaging the attention of the other Powers, which will indicate equally dangerous conditions.

France is politically in an extremely feverish state. The mass of the French people, if left undisturbed to pursue their own path of thrift and enjoyment, would doubtless be quite content to continue the work of a gradual consolidation of the Republic; yet political partizans are so active and unscrapulous, and they so industriously and so vindictively pursue their selfish ends, that a coup d'etat seems imminent almost daily. Such an event could only end in a military despotism; and this in turn would probably result in a repetition of the events of 1870, and a restablishment of the Republic. So far as there is any union of the political parties, it is on the question of rehabilitating French "glory." The chief difficulty seems to be to settle which to avenge first—Sedan or Waterloo. Chance will most likely cast the die for them.

To Canadians, the condition of affairs in England is of most importance; and, indeed, throughout the world, the greatest interest is exhibited in the proceedings of the Government of the world's greatest empire. Liberals universally recognize that the world's progress—at all events for many years to come—is bound up with the progress and prosperity of Great Britain, and that any events which would seriously interrupt

that progress would be disastrous to civilization for a long time. In this view, it is satisfactory to see, in Canada as well as in Australia and the other colonies, such an earnestly expressed determination to support the mother country if war should be forced upon her; and it is gratifying also to see that the English government has refrained from rushing into a disastrous war, at the instigation of Christian missionary societies, in order to repair the disasters brought about by American missionaries in Armenia. It is, indeed, ludicrous to hear one section of the American press hounding on the English Government to a disastrous and profitless war in favor of American proteges, while another section is calling upon the American Government to destroy the English empire.

### The English Democracy.

In reckoning upon the probable course of events in England, it would be foolish to leave out of account the great strides which have been made during the last few years in the organization of the various sections of the laboring people. The laboring men of England have gone farther in this direction than those of perhaps any other country. Recent events have shown, however, that notwithstanding this, the British workman can very readily be excited to the war pitch; and that in this he is not very different from the workmen of other countries. But a great war could not fail to have one effect, -- the vast increase of the national debt, -which would be very severely felt by the mass of the people; and, whether successful or not, the end of the war would leave the British workman facing the question: Who's to pay? Unless his memory were destroyed by the excitement of fighting, the question would be argued in the light of the discussions that are now engaging his attention. new way to pay old debts" would be invented, we believe, and a revolution more or less acute would certainly be the end.

# Canada's "Loyalty to the Mother Country" and her Duty to Herself.

While we may think it satisfactory to be proclaiming our determination to stand by Great Britain in her troubles, it might be as well to see how we have been preparing ourselves to meet emergencies such as may arise, and what real means we possess with which to do anything in the "stand-by" line beyond merely standing by and looking on. can be no question that, for many years past, the expenditure of the Dominion Government has annually reached a point which has merely marked the utmost capacity of the people to pay taxes or of the Government to borrow money. A similar state of things has marked the financial policy of the principal municipalities, until to-day Canada's moneyraising ability depends rather upon the persuasive powers of her loannegotiators than upon the extent and availability of her resources. Canadians possess a magnificent country, and if our affairs were honestly and sensibly managed, we should stand in the front rank of solvent nations. While, however, our municipal affairs are mismanaged as they are at present in most cases, the Dominion finances will not be likely to be more flourishing. And, while we see men who have been convicted of the grossest crimes in the way of pilfering the public funds and corrupting public officials, released from gaol and returned to Parliament to continue their nefarious practices, little hope can be entertained of an improvement. What is required is, that Canadians should be "loyal" to Canada, not putting party before every other consideration, and they would soon possess the means wherewith to be loyal to the mother country to some purpose.

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# Montreal's Twenty-five Years of Civic Management.

Montreal affords an instructive instance of civic mismanagement, as may be seen from the following figures, which we take from a recent number of the Montreal Witness:

	Population.	Re	al Estate Asse	ess't.	Debt.	Deb	ot per Cap.
1888	 . 107,225		\$53,992,000		\$5,100,000		\$47
	 . 155,237		79,883,445		10,660,000		69
	 200,000		108,776,013		10,972,847		55
	 210,050		128,413,000		16,159,235		75
	 225,000		240,000,000		25,000,000		111

In 1880, the debt was almost fully guaranteed by saleable property. To-day, nearly one-half of the debt represents sewers, railway subsidies, street and harbor improvements, etc. In the twenty-five years, while population increased only 120 per cent., the ordinary expenditure increased 400 per cent., the assessed valuation 450 per cent., and the debt 500 per cent. The city seems to be almost hopelessly in the hands of the water, gas, electric light and street car companies. Of the outlay last year, no less than half a million dollars were paid for legal expenses connected with expropriating property valued at \$4,500,000. One of the aldermen was the head of a firm that received \$11,552 on this account! And (notwithstanding that there were some good honest and capable men in the Council), says the Witness:

"So adroitly had the expropriation law been doctored up, that, had it not been for the interference of the Government the city would have been made this year to expropriate over 130 streets, costing in the neighborhood of \$20,000,000!"

As a result of this extravagance, the new Council for 1896 is just now busily occupied in cutting down the estimates, nearly every item so far being reduced. Of course, this means all-round extravagance in the past or inefficiency in the future.

# Improvements in Municipal Government.

Mr. Hardy's Bill on municipal government contains some good points, of which a few, however seem capable of improvement. Electing aldermen for two years, and allowing one-half of the number to retire each year, appears to be a decided improvement on the present plan. The clause establishing a board of control for cities of over 100,000 inhabit ants is of course intended to apply to Toronto alone; but if it'be good in this case, we do not see why the principle should not be applied to all

cities. Our own opinion is, that the whole of a city's business requiring technical knowledge and a large share of a man's time should be conducted by permanent paid officials, removable only for just cause. It is quite certain that a system which changes the heads of departments every year would be ruinous to many businesses; and it no doubt causes the city immense losses. The proposal to have the results of elections declared on the day of polling would no doubt avoid many corrupt practices, and should be adopted. The proposal to empower the council to pay damages and costs given in law courts against policemen we look upon as an extremely vicious one. Certainly, if policemen act "in the proper discharge of their duty," such costs would very seldom be given; but it is just because these costs are incurred when policemen exceed their duty, and commit offences against individuals, that they should be paid by the offenders, and not by the city milch cow.

# Municipal Mismanagement and the Citizens' Duty.

It is a common idea that the Mayor, the City Treasurer, or the City Auditors—anybody, in fact, which in reality means nobody—will keep the city's business in good shape. Let the taxpayers, however, realize that officials of all grades are just as much liable to temptation as any ordinary citizen, and that mismanagement means a loss of money for the taxpayer quite as surely as "boodling" or open robbery, and they may see the advisability of regarding the reports of the meetings of the city council as items of news in which they have a decided financial interest. Every citizen who has a regard for his own interests (which are, or should be, coincident with those of the city and country in which he lives) should carry on a consistent course of examination of the measures proposed for the conduct of the public business, and of the attitude assumed towards them, and the votes given, by the men whom he has helped to elect. The only way in which public bodies can be protected from the perennial and ubiquitous boodler and lobbyist is for the citizens to follow the reports of the public business with as much care as they exercise when receiving payment of a bill or taking change over a counter. Instead of regarding efforts in the direction of economy as "meanness," as is too often the case, they should remember that extravagance is twin-brother to dishonesty. In the present condition of municipal matters in some of Canada's chief cities, extravagance in every form is a suicidal policy for the people. And they should remember that corrupt government cannot be got rid of while the people are themselves either corrupt or careless.

# Mayor Fleming's Inaugural Address.

Although Alderman Boustead told the Mayor that if he wished to carry out all his proposals he would need to occupy the Mayor's chair for ever, we do not think there is any legitimate cause to object to his proposals as being either too radical or too numerous. We shall take an early opportunity of referring to them more in detail. In the mean-

time, we would refer to one question which was not touched upon, but which costs the city a large sum of money each year with but poor results.

### The Toronto Charities.

The City Council every year votes considerable sums of money to help to support numerous institutions of a sectarian or semi-religious character. Many of these duplicate the work undertaken by others, and the only effect of the city contributions to their funds is to maintain duplicate sets of officials. In the case of the House of Industry, the report just issued shows that the total expenses amounted to \$59,938.18, and that of this the city grants totalled \$49,700.00, while the relief distributed to outdoor poor and the cost of the 111 inmates only amounted to \$48,-201.12. The city thus contributed more than the cost of the charity dispensed. It seems to us that it would be far better that this and the other similar institutions should be amalgamated and taken under the entire control of responsible city officials. An institution such as the Children's Hospital is one that certainly should be supported by the city.

### The Manitoba School Question.

In view of the recent events at Ottawa and in Manitoba, the Manitoba School question has been narrowed down to a very small compass. The real merits of the matter are not in sight. The point now is-What will the Ottawa Government offer and what will its Quebec supporters agree to accept as a temporary settlement in view of the general elections? It is absurd to imagine that anything done by the present Parliament can be a permanent settlement of this question. Whatever is done will have to be revised by the new Parliament, after Manitoba's Legislature has had an opportunity of considering it. As it stands, the proposed law erects a new and irresponsible body to control the Separate Schools to be established under the Act, -a body the existence of which would certainly not be tolerated by any Province which had not decided to abdicate its Provincial rights.

# Statistics of the Toronto and Montreal Street Car Companies.

The following statistics would seem to show that the Street Railway Company in Toronto have been excessively extravagant in purchasing real estate, in constructing roadbed and rolling-stock, or in watering The cost of the line in Toronto appears to be about double that of the Montreal line, though only 80 miles to the latter's 75:

Capital Stock Capital invested, roadbed and real estate. Gross earnings Net earnings. Running expenses Earnings on capital	Toronto. \$6,000,000 9,531,412 992,800 503,350 49.30 %	 Montreal. \$4,000,000 4,948.412 1,102,777 449,933 59.20 %	
Passengers carried	5.28 %	 9.09 %	
Transfers given	7,257,000	 25,877,000	