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## THE RELIGION OF BURNS' POEMS.

BY REV. ANDREW W. CROSS.

It has been remarked that the most difficult thing about the painting of a landscape picture is to know just where to sit down.

Before the vigorous, erratic, versatile genius of Robert Burns, reflect-as it does upon every conceivable phase of life, it is difficult in a short paper like this to know just where to begin. Amid such a galaxy of talent, the difficulty is apparent of finding an advantageous starting-point.

There is no more world-notorious fact in matters religious than the prevalence in Scotland of the sternest, most uncompromising species of bluest Calvinism. Dr. Oliver Wendell Holmes once passed a remark which the purport was: He could never understand how Scotland, Calvinistic, straight-laced Scotland, could clasp her national poet to her bosom without bursting her laces. Her laces *are* bursting. The pen of Robert Burns wrote the death warrant of Scotia's Calvinistic God. The sentence may be slow in execution, but his utter extinction is as sure as the immortality of Caledonia's national bard. "If the poet's arrows are barbed with wit," says Rev. David Macrae, a popular Scottish minister, "they were also barbed with truth, and Calvinism could not shake them off. The dogma of election ever since Burns's day has been ebbing from the forefront of Scottish theology. The tone of preaching has been insensibly changing." It has been declared with tiresome repetition that there is no religion in Burns's poems, but merely ruthless declamation. If a man was in the undesirable embrace of an octopus and valiantly rescued him from its cruel arms, you would scarcely expect him to reprove you for ruthlessly destroying his companion and not providing a more congenial comrade on the spot!

Robert Burns did exalt a nobler, purer conception of the Deity ("O Thou known, Almighty Cause"); but had he never done so our eternal attitude is his that, recognizing the futility of appealing to reason, he wielded his pen in gall and, with scathing satire, jeered the God of Calvinism into the bottomless pit from whence he came:

O Thou, wha in the heavens dost dwell,

Wha, as it pleases best Thyself,

Sends ane to heaven, and ten to hell —  
 A' for Thy glory,  
 And no for ony guid or ill  
 They've done afore Thee.

What was I, or my generation,  
 That I should get sic exaltation,  
 I wha deserve sic just damnation,  
 For broken laws,  
 Five thousand years 'fore my creation,  
 Thro' Adam's cause !

When frae my mither's womb I fell,  
 Thou might hae plunged me into hell,  
 To gnash my gums, to weep and wail,  
 In burning lake,  
 Where damnèd devils roar and yell,  
 Chain'd to a stake.

Such lines as these, such tart irony, might well have made a veritable devil blush for shame !

There is a transparent sincerity pervading all the prose and poetry of Burns. Critics have been candid about his faults, but no critic has been as candid as the poet himself. "I acknowledge," he says, "I am too frequently the sport of caprice, whim, and passion." In another epistle he declares : "God knows I am no saint. I have a whole host of follies and sins to answer for, but if I could,—and I believe I do as far as I can— I would wipe away all tears from all eyes."

Linked with this honest integrity was a spirit of indignant fury against those who gave rein to selfish follies and hid them under the fair cloud of religion :

God knows I'm no' the thing I *should* be,  
 Nor am I e'en the thing I *could* be,  
 But twenty times I rayther *would* be  
 An atheist clean,  
 Than under gospel colors hid be,  
 Jist for a screen.

The Scottish Presbyterian Church, strong now in her tremendous organization, stronger then than we can now imagine, was no paltry antagonist before whom to throw the gauntlet of defiance. The religious tyranny had not yet died that made her disfavor more feared in earlier times than was the Roman ban of excommunication. Her terrible anathema oftentimes brought the wolf of poverty to the door and paralyzed with terror even the ministering angel of pity.

I own 'twas rash, an' rather hardy,  
 That I, a simple countra bardie,

Should meddle wi' a pack sae sturdy  
 Wha, if they ken me,  
 Can easy, wi' a single wordie,  
 Lowse hell upon me.

But I gae mad at their grinaces,  
 Their sighin', cantin', grace-proud faces,  
 Their three-mile prayers, an' hauf-mile graces,  
 Their raxin' conscience,  
 Whase greed, revenge, an' pride disgraces  
 Waur nor their nonsense.

\* \* \* \* \*  
 They tak' religion in their mouth ;  
 They talk o' mercy, grace an' truth,  
 For what ? to gie their malice skouth,  
 On some pair wight,  
 An' hunt him down, o'er right and rath,  
 To ruin straight.

All hail, Religion ! maid divine !  
 Pardon a Muse sae mean as mine,  
 Who in her rough imperfect line  
 Thus daurs to name thee ;  
 To stigmatize fause freends o' thine  
 Can ne'er defame thee.

In similar vein, and illustrating his fierce wrath against hypocrisy, is his "Address tae the Unco Guid," still honoring true religion but stigmatizing her "fause freends":

O ye wha are sae guid yersel,  
 Sae pious and sae holy,  
 Ye've nought to do but mark and tell  
 Your neebour's fauts and folly !  
 Whase life is like a weel-gaun mill,  
 Supplied wi' store o' water,  
 The heapit happer's ebbing still,  
 And still the clap plays clatter.

\* \* \* \* \*  
 Wi' wind and tide fair i' your tail,  
 Right on ye scud your sea-way,  
 But in the teeth o' baith to sail,  
 It makes an unco lee-way.

\* \* \* \* \*  
 Then gently scan your brother man,  
 Still gentler sister woman ;  
 Tho' they may gang a kennin' wrang,  
 To step aside is human ;

One point must still be greatly dark,  
 The moving *why* they do it ;  
 And just as lamely can ye mark  
 How far, perhaps, they rue it.

Who made the heart, 'tis He alone  
 Decidedly can try us,  
 He knows each chord—its various tone,  
 Each spring—its various bias :  
 Then at the balance let's be mute,  
 We never can adjust it ;  
 What's *done* we partly may compute,  
 But know not what's *resisted*.

To many a sensitive religious soul that terrible poem, "The Holy Fair," appears to be a blasphemous and seditious lampoon on the commemorative supper of their Savior, and so, after perusal, the poems are laid aside with regret, and their author is condemned as an irreverent ribald. But, as the old saying hath it, "Circumstances alter cases."

"The land of brown heather and shaggy wood" has long been renowned for its religion—and its whisky. At one time, in the country districts of Scotland, the sacrament of the Lord's Supper was administered twice a year in the open air, the participants arranging themselves on benches erected round the church for the purpose. The minister and parishioners from the surrounding district gathered at the specially selected centre, and the occasion was popularly called "The Holy Fair." It is now notorious as having been the scene of drunken orgies and theologic brawls. Temperance was at a discount, and he was not half a man—certainly not half a Christian—who could not devoutly, with upturned eyes, break bread in remembrance of the death of his God in the morning, discuss with grim gusto the frailties of his fellows in the afternoon, and get helplessly, hopelessly drunk in the evening :

Here some are thinkin' on their sins,  
 An' some upo' their claes ;  
 Ane curses feet that fyl'd his shins,  
 Anither sighs an' prays ;  
 On this hand sits a chosen swatch,  
 Wi' screw'd-up face-proud faces ;  
 On that a set o' chaps at watch,  
 Throng winkin' tae the lasses.

\* \* \* \* \*

How monie hearts this day converts  
 O' sinners and o' lasses !  
 Their hearts o' stane, gin night, are gone  
 As soft as ony flesh is.  
 There's some are fou o' love divine ;  
 There's some are fou o' brandy—

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It was this vile travesty that awoke the indignation of Robert Burns and produced that vividly true picture, "The Holy Fair." Which was the greater blasphemy, that of the so-called Christian church or that of Burns, who poked such fun at their insipid burlesque that it was ridiculed into non-existence!

"The world has never known a truer singer," said Whittier. "They know little of Burns who regard him as the idle singer of an idle lay. Pharisees in the church and oppressors in the state knew better than that. They felt those immortal sarcasms, which did not die with the utterer, but lived on to work out their divine commission."

On the other hand, there is nothing more sublime, nothing more simply religious in the poetry of the world, than "The Cotter's Saturday Night."

What clerical utterance could surpass that "Prayer of Burns in the Prospect of Death"?

O Thou unknown, Almighty Cause  
Of all my hope and fear!

In whose dread presence, ere an hour,  
Perhaps I must appear!

If I have wander'd in those paths  
Of life I ought to shun--

As something loudly, in my breast,  
Remonstrates I have done--

Thou know'st that Thou hast formed me  
With passions wild and strong;  
And list'ning to their witching voice  
Has often led me wrong.

Where human weakness has come short,  
Or frailty stepped aside,

Do Thou, All Good! for such Thou art,  
In shades of darkness hide.

"The Cotter's Saturday Night" is too long for quotation; but after a peerless description of rustic simplicity the poet proceeds:

From scenes like these old Scotia's grandeur springs,

That makes her loved at home, revered abroad;

Princes and lords are but the breath of kings;

"An honest man's the noblest work of God!"

That last line is the keynote of much of the poetry of Burns. His emphasis upon the true dignity and worth of man, independent of the accident of birth or rank, has done great service in the propagation of the great principle of the brotherhood of man and its correlative idea of the fatherhood of God.

What tho' on hamely fare we dine,

Wear hoddin gray an' a' that;

Gie fules their silk an' knaves their wine,  
 A man's a man for a' that ;  
 For a' that, an' a' that,  
 Their tinsel show an' a' that,  
 The honest man, tho' e'er sae poor,  
 Is king o' men for a' that.

And what is Burns' plan of salvation ?

It's no in titles nor in rank,  
 It's no in wealth like Lunnon Bank,  
 Tae purchase peace or rest ;  
 It's no in makin' muckle mair,  
 It's no in books, it's no in fear,  
 Tae mak' us truly blest.

\* \* \* \* \*  
 Nae treasures nor pleasures  
 Could mak' us happy lang ;  
*The heart's aye the pairt, aye,*  
*That maks us richt or wrong*

By such teaching Burns brought contentment into many a poor home: he poured consolation upon hearts which battled unsuccessfully against an overwhelming and unrelenting fate. "Rank is but the guinea stamp." God cares for *men*—and the more they need His tender solicitude, the greater will be his loving care. Take courage, my poor brother; there is more real satisfaction to be derived from the wonders and surpassing beauties of nature, free to all, than from the gorgeous halls of a palace.

The laverock\* shuns the palace gay,  
 And o'er the cottage sings ;  
 For nature smiles as sweet, I ween,  
 Tae shepherds as tae kings.

It has been truly said that the cause of Liberty is a sacred one, and Robert Burns has every right to the dignity of a saint in her calender. "Oppressors in the state, as well as pharisees in the church, felt his immortal sarcasms." On one occasion he had been to church and heard thanks offered to God for a British victory. He wrote :

Ye hypocrites ! are these your pranks,  
 Tae murder men an' gie God thanks ?  
 For shame ! gie o'er, proceed nae further ;  
 God winna hae your thanks for murther.

When republican France had overcome the forces of Europe united for the repression of the republic's newly-enforced rights, Burns sang his triumphant song of congratulation ; and when the Tree of Liberty was planted where the Bastille had stood he once more burst into song :

Upon this tree there grows sic fruit,  
 Its virtues a' can tell, man ;

It raises man aboon the brute,  
 It mak's him ken himsel', man.  
 Gif ance the peasant taste a bit,  
 He's greater than a Lord, man.

\* \* \*  
 King Louie thought to cut it doon  
 When it was unco sma', man.  
 For this the watchman cracked his croon,  
 Cut off his head an' a', man.

The lover of freedom as Burns was, it was but meet that much of this spirit should be dedicated to his native land :

Wha for Scotland's king an' law  
 Freedom's sword will strongly draw,  
 Freeman stand, or freeman fa',  
 Let him follow me !

By oppression's woes and pains,  
 By your sons in servile chains,  
 We will drain our dearest veins,  
 But they shall be free !

Lay the proud usurper low,  
 Tyrants fall in every foe,  
 Liberty's in every blow,  
 Let us do or dee !

That is Scotia's national song, a call to defend her liberty, her freedom against the world. Nor could those strong-limbed sons of Albion ever invoke the spirit of their national bard or sing those inspiring words as a preface to a war of oppression, any more than they could swing the claymore in a battle of wrong and coercion, and sing their national anthem without a blush. Nay! it is the keynote of a larger freedom that reverberates wherever lovers of liberty dwell, and rises into a triumphant supplication :

Then let us pray that come it may,  
 As come it will for a' that,  
 That man tae man the war' o'er  
 Shall brithers be an' a' that.

Something has been said about the suggestions of immorality to be discerned in some of the poet's fancies. When Burns was nearing death he said he was well aware that his death would occasion some little noise, and that every scrap of his writing would be revived against him to injure his future reputation ; that letters and verses written with unguarded and improper freedom, and which he earnestly wished to have buried in oblivion, would be handed about by idle vanity or malevolence, when no dread of his resentment would restrain them or prevent the censures of shrill-tongued malice, or the insidious sarcasms of envy, from pouring forth all their venom to blast his fame.

Much has been said about the poet's loose life—a large proportion of it is not true. It is the bitter prerogative of genius to be misunderstood. It is only in the deep furrows of sorrow, in the fields of isolation, that God plants immortal seeds. The beautiful blossoms upon the tree of eternal truth have been fertilized by crimson moisture wrung from bleeding hearts.

Let us consider this man Burns, a veritable genius with all the fiery emotions of the muse sweeping through his soul, working daily at the plough, fighting prosaic poverty; in his own words, "hunted from covert to covert under all the terrors of a jail"; involved in continual difficulty; picked up by fashionable society, lionized, the novelty worn off thrown aside like an exhausted bauble; this month a ruined peasant, his wages five pounds a year, and these taken from him (a great deal of excess he could afford in these circumstances); next month petted and patted by fashionable prigs; and then—the tribute that fashionable English society and literary Scotland paid to this child of the gods—they set his brilliant genius to *ganging beer* at a salary of fifty pounds a year! Driven out of even that beggarly pittance because of his stalwart free expression, and only kept from starving by the *charity* of a kind patron, at last health and spirits gone, hope fled forever, contumely casting vile slanders at his name, his wife and family clinging to him and begging for bread, he went from this to a kindlier sphere, madly craving with his latest breath from this world which owed him so much, "For God's sake send me five pounds!"

This is no apology for the poet's life. It needs none. At his death he was 37 years of age. His record is unparalleled. No man in the whole history of literature ever achieved so much with such niggardly help, with such terrible impediments, as did Scotia's famous poet in the short space of thirty-seven years. With Nathaniel Hawthorne we would say, "Consider his surroundings, his circumstances; the marvel is, not that the poet sinned, but that he was no worse man, and that with heroic merit he conquered these hindrances so well."

Still the burden of his song  
Is love of right, disdain of wrong;  
Its master chord  
Are manhood, freedom, brotherhood;  
Its discords but an interlude  
Between the thoughts.

Now they raise heaven-threatening monuments to his memory. "Even the blind earth knows not its angels of deliverance till they stand glorified 'twixt earth and heaven." Just one hundred years from now he died, and to-day there is not a spot where literature is known that the wreath of fame has not been woven for his brow. Truly—

He left his land her sweetest song,  
The earth her saddest story.\*

\* Reprinted from THE ARENA, Boston.

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## LOOKING BACKWARD TO MORE'S UTOPIA.

BY R. F. UNDERWOOD, CHICAGO, ILL.

SIR THOMAS MORE'S "Utopia," though a famous book and one of the English classics, is not much read in these days. Knowledge of it is confined chiefly to scholars. A summary of More's description of the way the Utopians lived and managed affairs may be of interest to many who have neither the time nor the inclination to read a book written nearly four hundred years ago. I give, therefore, the main ideas of "Utopia," partly in the author's own language.

But first, a few words in regard to the work. It was written in 1515-16, when the author was about thirty-seven years old. More was a young man of twenty when Columbus first touched the Continent named after Amerigo Vespucci, who made his famous voyages in the years 1499-1503. Thus when Utopia was written men's conceptions of the world had been suddenly enlarged and their imaginations were wonderfully active. The account of the voyages of the Florentine Amerigo Vespucci, published in 1507, were fresh in the minds of all readers when Utopia was written. More imagined a traveller—Raphael Hythloday—who had sailed with Vespucci on his last three voyages, but had not returned from the last voyage until after separation from his comrades. During his travels he had found the island of Utopia. This name is from Greek words meaning "nowhere." The book was printed in the latter part of 1516 under the editorship of Erasmus. Its ironical praise of English policy, praise for doing exactly what was not done, was enough to prevent its circulation in England when it first appeared. Indeed, it was not printed there in the time of Henry VIII. In 1517 Erasmus advised a correspondent to send for Utopia if he had not yet read it, and if he wished to see the true source of all political evils.

Raphael Hythloday, after referring to evils resulting from poverty and wealth, says: "From whence I am persuaded that till property is taken away there can be no equitable or just distribution of things, nor can the world be happily governed; for as long as that is maintained, the greatest and the far best part of mankind will be still oppressed with a load of cares and anxieties."

"On the contrary," answered I, "it seems to me that men cannot live conveniently, where all things are common; how can there be any plenty, where every man will excuse himself from labor? For as the hope of gain doth excite him, so the confidence he hath in other men's industry may make him slothful; if people come to be pinched with want, and yet cannot dispose of anything as their own, what can follow upon this but perpetual sedition and bloodshed, especially when the reverence and authority due to magistrates fall to the ground. For I cannot imagine how that can be kept up among those that are in all things equal to one another.

"I do not wonder," said he, "that it appears so to you, since you have no notion, or at least no right one, of such a constitution; but if you had been in Utopia with me, and had seen their law and rules as I did for the space of five years, in which I lived among them, and during which time I was so delighted with them, that indeed I should never have left them, if it had not been to make the discovery of that world to the Europeans; you would then confess that you had never seen a people so well constituted as they."

There is no property among the Utopians and "every man freely enters into any house whatsoever. Every ten years they shift their houses by lots." Every man has a trade, "and if after a person has learned one trade, he desires to acquire another, that is also allowed, and is managed in the same manner as the former. When he has learned both, he follows that which he likes best unless the public has more occasion for the other." Six hours are devoted to work three before and three after dinner. Eight hours are taken for sleep, and the rest of the time is employed in reading and such proper exercises as accord with the various inclinations. Public lectures are given every morning before day-break, "at which none are obliged to appear but those who are marked out for literature." Since all are employed at some useful labor, there is a great abundance of all things; "so that it frequently happens that for want of other work vast numbers are sent out to mend the highways. But when no public undertaking is to be performed, the hours of working are lessened."

None of the cities are allowed to have more than six thousand families "besides those of the country round it." From cities that grow fast are transferred people to those that do not otherwise increase. If there is an increase over the entire island, citizens are drawn from the several towns and sent to the neighboring continent, where, if there is uncultivated soil, the form colonies, taking the inhabitants in with them, if they are willing, but if they refuse, driving the natives out of "those bounds which they mark out for themselves. For they account it a very just cause of war, for a native to hinder others from possessing a part of that soil, of which they make no use, but which is suffered to lie idle and uncultivated; since every man has by the law of nature a right to such a waste portion of the earth as is necessary for his subsistence."

The oldest man of every family is its governor. Wives serve their husbands and children their parents. No family may have less than ten, and the maximum number is sixteen, although for children under age there is no determined number. Children of larger families are removed to those that have fewer. Every city is divided into four equal parts, in the middle of which is a market-place from which every father supplies his family, without paying for it or leaving anything in exchange, with whatever is needed. To this market-place is brought and put in houses appointed for the purpose all articles manufactured by the several families.

"There is no reason for giving a denial to any person, since there is such plenty of everything among them, and there is no danger of a man's asking for more than he needs. They have no inducements to do this, since they are sure they shall always be supplied."

In every street are great halls that lie at an equal distance from one another. At each of these halls thirty families have their repast, "for though any of them will may eat at home, yet none do it willingly, since it is both ridiculous and foolish for any to give themselves the trouble to make ready an ill dinner at home when there is a much more plentiful one made ready for him so near at hand."

Both dinner and supper are begun with a short lecture on moral subjects. The people sit long at supper and always have music. While those in the towns thus live together, in the country every one eats at home, and "no family wants any necessary sort of provision, for it is from them that provisions are sent into those that live in the towns."

If any one wishes to travel only over the precincts of his own city, to do so, he has only to obtain his father's permission and his wife's consent; but when he goes into the country he must, to be admitted into the houses, labor with the people. There are no taverns, no ale houses or similar places of resort.

According to their plenty or scarcity, the towns of the island supply or are supplied by one another. Two years' stores are kept laid up to provide against bad seasons. Corn, honey, wool, flax, wood, tallow, leather and cattle are exported to other nations, to whose poor a seventh of the goods is given. The rest are sold at moderate rates in exchange for the few things they need from abroad, including iron, and for gold and silver, which they keep for use in time of war, in hiring foreign troops and in raising mutual jealousies and producing dissensions among their enemies. Having no use for money, they value precious metal only for the power it gives them over other nations. They will not even allow it to be worked into any sort of plate or drinking vessels, lest the people become so fond of it as to part with it reluctantly when needed in time of war. Instead, they make chains and fetters for their slaves, and such articles as tend to make the people associate it with what is repulsive and disgusting.

The slaves among them are such as are condemned to that state during life for crime, or such as their merchants find condemned to death in countries where they trade, whom they sometimes redeem at low rates, or such of the poor of the neighboring countries as of their own accord offer to leave them.

Women must not marry before eighteen and men not before twenty-two.

Before marriage some grave matron presents the bride naked, whether she is a virgin or a widow, to the bridegroom, and after that some grave man presents the bridegroom naked to the bride." They wonder at the folly of the men of those nations who are so particular in buying a horse and who are so careless in the selection of a wife, on whom depends their happiness or unhappiness for life. Divorce is granted only for adultery or "insufferable perverseness," and then the state dissolves the marriage, giving the injured person the right to remarry, but denying this privilege to the guilty party. Husbands may correct their wives and parents chastise their children. The punishment for most crimes is left to the Senate. If any man aspires to office, he is sure never to get it. Monuments are erected in honor of men who deserve well of their country. The Utopians have no lawyers. Every man pleads his own case.

They detest war, yet their men and women are both trained up to military exercise and discipline, and when necessary they know how to inflict the most injury possible upon an enemy with the least consequent injury to themselves. They promise great rewards to those who shall kill the prince and other persons of rank. They have these promises circulated through the enemies' country. They offer large sums for the betrayal of those in high position. They observe the promises which they make most religiously, and look upon this way of corrupting their enemies as the best way to prevent a long war and the slaughter of those who would otherwise be killed. They secure thus the death of those most guilty. If they cannot disunite an enemy with domestic broils, in doing which they can use vast sums, they engage neighboring nations against him, supplying gold and silver plentifully, and hiring troops from nations that are in their debt, especially from the Zapolets, a rude, wild and fierce people. The Utopians hold this for a maxim, that as they seek out the best sort of men for their own use at home, so they make use of this worst sort of men for the consumption of war, and therefore they hire them with the offers of vast rewards, to expose themselves

to all sorts of hazards, out of which the greatest part never return to claim their promises.

They force no man to go into foreign wars against his will, yet praise and encourage those women who go along with their husbands and stand with them in the front of the army. They use all prudent methods to avoid endangering their men, letting the brunt fall upon troops that they hire ; but if it becomes necessary for them to engage they fight with bravery, for they know that if they fall their children will be well looked after, and the wise sentiments instilled in their minds animate them with invincible determination. The education of youth belongs to the priests, to whom great honor is shown, and who are never punished for crime whatever its nature.

Their punishment is left to God and to their own consciences, for they do not think it lawful to lay hands on any man how wicked soever he is, that has been in a peculiar manner dedicated to God. They have but few priests. The priest accompanies the soldiers appaeled in sacred vestments, and during action kneels in a place not far from the field and prays first for peace and then for victory on their side. There are different forms of religion in Utopia, but the Utopians agree in the main in worshipping the Divine Essence.

This traveller, after describing Utopia, says : " Therefore I must say that as I hope for mercy, I can have no other notion of all the other governments that I see or know, than that they are a conspiracy of the rich who, on pretence of managing the public, only pursue their private ends and devise all the ways and arts they can find out ; first, that they may without danger preserve all that they have so ill-acquired, and then that they may engage the poor to toil and labor for them at as low rates as possible, and oppress them as much as they please. And if they can but prevail to get these contrivances established by the show of public authority, which is considered as the representative of the whole people, then they are accounted laws. Yet these wicked men after they have by a most insatiable covetousness divided that among themselves with which all the rest might have been supplied, are far from that happiness that is enjoyed among the Utopians ; for the use as well as the desire of money being extinguished, much anxiety and great occasion of mischief are cut off with it. And who does not see that the frauds, thefts, robberies, quarrels, tumults, contentions, seditions, murders, treacheries and witchcrafts, which are indeed rather punished than restrained by the severities of the law, would all fall off, if money were not any more valued by the world. Men's fears, solicitude, cares, labors, and watchings would all perish in the same movement with the value of money ; even poverty itself, for the relief of which money seems most necessary, would fall.

" Consider any year that has been so unfruitful that many thousands have died of hunger ; and yet if, at the end of that year, a survey was made of the granaries of all the rich men who hoarded up the corn, it would be found that there was enough among them to have prevented all that consumption of men that perished in misery, and that if it had been distributed among them none would have felt the terrible effect of that scarcity ; so easy a thing would it be to supply all the necessities of life, if that blessed thing called money, which is pretended to be invented for procuring them, was not really the only thing that obstructed their being procured."

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## RECENT BRAIN SURGERY IN ITS PSYCHOLOGICAL BEARINGS.

BY S. MILLINGTON MILLER, M.D.

II. (*Conclusion.*)

CASE II. This case can be found in the records of the Orthopædic Hospital and Infirmary for Nervous Diseases in Philadelphia, Record Book, S. I., p. 123. A young girl of about twenty-one was admitted to the infirmary in October, 1891. She said that her attacks of epilepsy, from which she had suffered for two years and a half, always began in the right thumb. This fact having been verified, it was decided to remove the centre for the thumb, for the same reason as in the last case, i.e., to stop the very beginning of the fit. It was especially desired to remove only the centre for the thumb, and not that for the hand, in order not to interfere more than was necessary with the usefulness of her hand, upon which she depended for support, as she was a mill-girl. This was an unusual and minute attempt at localization, and a very severe test of the accuracy of the mapping of the brain by vivisection. On October 6, 1891, the "fissure of Rolando" was first located, and a disc of bone an inch and a half in diameter was removed, the centre of it being two and five-eighths inches to the left of the middle line. Both the bone and the brain, when exposed, seemed to be normal. The fissure of Rolando was seen crossing the middle of the opening, downward and forward. By the battery the brain was stimulated at certain definite points until the thumb-centre was recognized, and also the face-centre, which lay somewhat below it, and the wrist-centre, which lay—as it ought by experiments on the monkey's brain—a little above. Each of these centres was recognized by the movement of the part supplied by it (thumb, face, wrist) when the centre was touched by the poles of the battery. Stimulation of the thumb-centre produced a *typical epileptic fit*, such as she had suffered since her admission, beginning in the thumb, as she had asserted. The portion of the brain corresponding to the thumb-centre, a piece about half an inch in diameter, was removed, and by the battery it was determined that the portion removed was the whole of the thumb centre. She recovered promptly and without disturbance from the operation. It was necessary in this case to be unusually accurate, and not to remove any portion of the brain other than the centre for the thumb, and for three reasons: First, if too much were removed upward and backward, the wrist and fingers would be paralyzed; second, if too much were removed forward, the muscles of the face would be involved; third, a little further down lies the centre for speech, and had this part of the brain been injured, this important faculty would have been destroyed, thus producing serious and unnecessary trouble.

Note now the accuracy of experimental cerebral localization. As soon as the patient had recovered from the ether and was in suitable condition, her ability to move the face and hand was attested. All the muscles of the face were entirely intact, and could be moved with absolute ease. Her speech was also unaffected.

Now just consider for a moment what a thought-exciting operation this very simply described "feat" really was. It would not be very hard—if we likened the brain to an apple, and if we were convinced that a certain limited portion of

that apple were rotten, by its manifestations on the skin, to cut into the substance of the fruit and remove carefully and absolutely every whit of the discoloured tissue. We would have the eye to guide the operation. But in this instance and in this operation upon the substance of the brain, there was no such *visus* assistance. Had there been, he were a poor surgeon who could not with his scoop remove all that was defective and exactly all—and perpetrate no encroachment upon sound brain-substance.

But the apple and its rotten portion fails utterly to convey an explicit idea of just what a marvellous thing was done in this instance. We will liken the human brain again to an apple. And we have ascertained, by certain scientific experiments,—no matter what,—that there is a certain well-defined portion of that apple which is bitter to the taste. It is only this bitter part that must be removed. Not an iota of the sweet fruit flesh must be removed. But all of the bitter part has to come away. And there are tremendous penalties indictable upon the cutter if he removes more or if he removes less; *he must remove only what is bitter*.

And this is just what Dr. Keen did to perfection. If he had left any of the diseased thumb-centre behind, there would have been an uninterrupted sequence of mitigated epileptic attacks—not so severe, perhaps, still prevalent. If he had removed any portion of the sound surrounding brain-substance, there would have been paralysis of the fingers—permanent paralysis—following a slip upon the side; and permanent paralysis of the elbow, or shoulder, following a slip upon that.

Now do you know of anything more wonderful in its microscopical exactness than this operation in the whole realm of modern mechanical advance?

The results of these operations in the brain have had some very curious tendencies. The operators have found (I should have stated previously that these sense and motor centres exist *in duplicate* in the human brain, that is, that there is one of each for each side of the body) that the paralysis of motion which attacks certain limited parts of the body immediately after the removal of brain-substance, while marked at first, soon begins to disappear, and in time, for some marvellous reason, is almost as perfect—I mean the motion is almost as perfect—as it was before the operation.

Now, what is the exact significance of this? Does it indicate that the brain, as a healthy, constantly developing and self-propagating body—has deliberately, though gradually, supplied a new motor-centre in place of that removed? We cannot tell. The only way in which we could find out would be by means of *post-mortem* performed upon that patient, for instance, whose thumb-centre had been removed, and whose thumb had in time re-acquired its power of motion and who had later died a natural death. And this field is entirely too new territory for any such instances of death naturally succeeding such operation have occurred.

But then there is another way of looking at the subject. What is known as the Vicariate, or "Mutual Aid Society of the Senses," is a well established physical law. I mean to say, that when one sense is lost, the other senses seem to struggle forward with absolutely headlong haste to act as a kind of crutch to their disabled sister. The deaf child learns to hear with his eyes; the blind child learns to see with his fingers.

Again, I want to call your attention to the prevalence of this "Vicariousness" even in the physical tissues of the body. One eye becomes blind, from injury

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or disease. In a short time the powers of the other eye seem to be doubled, and soon the man or woman has just as good sight to all intents and purposes as they had before. Or one arm, or one leg, is amputated. It would seem as if the very cutting of the knife acted as a stimulant to the muscle-cells in the opposite member. And the one leg or the one arm of the maimed man becomes able in a very short time to bear twice as much weight, or to lift twice as much weight, as it did or could when it had a fellow-member to help it in almost every action. It is not at all improbable that this same "Vicariousness" exists in the brain, and that the centres of one side (when those of the other are removed or destroyed) find or build new fibres of connection to the other side of that organ, and that these fibres in some way become continuous with the efferent nerve on the disabled side.

Some very remarkable operations have been performed on animals which may hereafter produce very important results. Two dogs have been etherized at the same time, and identical portions taken from the brain of each dog and transferred to that of the other dog. These portions of brain-substance thus transplanted, have flourished in the new soil, and have at least caused no disintegration of brain action. It is as yet a problem as to whether the brain tissue of lower animals can be transferred to the brain of man, and whether, after it has established itself in its new site, it will properly perform its functions. The motor centres of animals are the only ones which can be so transplanted, for thus far the sense centres of animals have not been found to be identical with those of man.

In closing, I would refer to the very remarkable case reported by Dr. McEwen, of Glasgow. This was that of a man who suffered from "psychical blindness," or "mind blindness." His sense of sight was not impaired, but his mind was not able to translate what he saw into thought. Dr. McEwen located the lesion in the "angulaa gyrus," and found on removing a button of bone, that a portion of the inner layer of this bone had become detached and was pressing on the brain. One corner of it was imbedded in the brain substance. The button of bone, after detaching the splinter, was replaced in its proper position, and the man recovered his health and all his faculties.<sup>6</sup>

## THE GOSPEL ACCORDING TO INGERSOLL.

I BELIEVE in the gospel of Liberty, in giving to others what we claim for ourselves. I believe there is room everywhere for thought, and the more liberty you give away the more you will have. In liberty extravagance is economy. Let us be just. Let us be generous to each other.

I believe in the gospel of Intelligence. That is the only lever capable of raising mankind. Intelligence must be the savior of this world. Humanity is the grand religion, and no God can put a man in hell in another world, who has made a little heaven in this. God cannot make a man miserable if that man has made somebody else happy. God cannot hate anybody who is capable of loving anybody. Humanity—that word embraces all there is.

So I believe in this great gospel of Humanity.

<sup>6</sup> Reprinted from THE OPEN COURT, Chicago.

"Ah! but," they say, "it will not do. You must believe." I say No. My gospel of health will bring life. My gospel of intelligence, my gospel of good living, my gospel of good-fellowship will cover the world with happy homes. My doctrine will put carpets upon your floors pictures upon your walls. My doctrine will put books upon your shelves ideas in your minds. My doctrine will rid the world of the abnormal monsters born of ignorance and superstition. My doctrine will give health, wealth and happiness. That is what I want. That is what I believe in. Give us intelligence. In a little while a man will find that he cannot steal without robbing himself. He will find that he cannot murder without assassinating his own joy. He will find that every crime is a mistake. He will find that only that man carries the cross who does wrong, and that upon the man who does right the cross turns to wings that will bear him upward forever. He will find that even intelligent self-love embraces within its mighty arms all the human race.

"Oh," but they say to me, "you take away immortality." I do not. If we are immortal it is a fact in nature, and we are not indebted to priests, for it, nor to bibles for it, and it cannot be destroyed by unbelief.

As long as we love we hope to live, and when the one dies that we love we will say, "Oh, that we could meet again," and whether we do or not it will not be the work of theology. It will be a fact in nature. I would not for my life destroy one star of human hope, but I want it so that when a poor woman rocks the cradle and sings a lullaby to the dimpled darling, she will not be compelled to believe that ninety-nine chances in a hundred she is raising kindling wood for hell.

One world at a time is my doctrine.

It is said in this Testament, "Sufficient unto the day is the evil thereof;" and I say, Sufficient unto each world is the evil thereof.

And suppose after all that death does end all. Next to eternal joy next to being forever with those we love and those who have loved us next to that, is to be wrapped in the dreamless drapery of eternal peace. Next to eternal life is eternal sleep. Upon the shadowy shore of death the sea of trouble casts no wave. Eyes that have been curtained by the everlasting dark will never know again the burning touch of tears. Lips touched by eternal silence will never speak again the broken words of grief. Hearts of dust do not break. The dead do not weep. Within the tomb no veiled and weeping sorrow sits, and in the rayless gloom crouched no shuddering fear.

I had rather think of those I have loved, and lost, as having returned to earth, as having become a part of the elemental wealth of the world. I would rather think of them as unconscious dust, I would rather dream of them as gurgling in the streams, floating in the clouds, bursting the foam of light upon the shores of worlds, I would rather think of them as the lost visions of a forgotten night than to have even the faintest fear that their naked souls have been clutched by an orthodox god. I will leave my dead where nature leaves them.

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## IMPLICATIONS OF PHYSICAL PHENOMENA.

BY PROFESSOR DOLBEAR.

A PHYSICAL phenomenon is a phenomenon which involves energy. Every change of condition in matter is brought about by the action of energy upon it in one way or another. It may be gravitative energy or heat or light or electric or any other ; but every physical change has a physical antecedent as well as a physical consequent, and the explanation of any given phenomenon consists in pointing out the precise antecedents that brought it about. There is a common saying that like antecedents produce like effects, but this is far from being true in the popular sense. If it were true, the development of science would not be the difficult and painfully slow process it has proved to be. Electricity may be produced by turning a crank, by dissolving a metal, by twisting a wire, by splitting a crystal, and in other ways. The product is the same, but the antecedents are so different that no one can tell by examining the product how it was produced. If it became important to know what caused the electrical phenomena, it would not be sufficient to know that electricity could be produced in these different ways ; one would need to know the specific apparatus employed. The more complicated the phenomenon the more difficulty there is in unravelling it.

So far as experiment and experience have led us, the antecedents of every physical phenomenon are themselves physical, and more than that, all reactions are quantitative, that is, the product is proportional to the antecedent, and this is sometimes embodied in what is called the doctrine of the Conservation of Energy, which every one knows about.

The exchange relations between the different forms of energy—mechanical, thermal, chemical, electrical, etc.—which are so well known, being quantitative, are therefore mathematical. They have therefore become a corporate part of the body of knowledge, and are no longer subject to any questions as to their validity under any circumstances whatever. One who should challenge them would be no more deserving of attention than if he should offer to prove that he could square a circle.

The fundamental postulates of physical science are binding upon one who understands them, for the same reason that the multiplication table is. There are no contingencies and no possibilities of hedging. If any one of them could be overthrown, the whole body of science would go with it. This is said, because there are not a few who appear to think that what is called physical science may not be so certain as its advocates think, and that there may be factors which have not yet been reckoned with, that may quite transform the whole scheme. Science is a consistent body of relations, not simply a classified body of facts.

These relations have been discovered by experiment, not by deduction. Some of them are the following :

1. Physical changes affect only the condition of matter, not its quantity. One cannot create or annihilate it, nor can one element be changed into another.
2. Every atom is continually exchanging energy with every other atom, the rate of the exchange depending upon their difference in temperature.
3. The different forms of energy are transformable into each other, but the quantity of energy is not altered by the transformation.
4. Complex organic molecules differ from simpler inorganic molecules in possessing more energy. The differences in this respect are definite, may be measured in foot pounds, and are practically enormous.
5. Every physical change has a physical antecedent, is therefore mechanical, and is conditioned by the laws of energy.

These principles are the outcome of modern investigation, the evidence for them is overwhelming, and a working knowledge of them needs to be a part of the mental equipment of every investigator, especially of the one who takes it as his province to explain phenomena.

Science is strong here if it is anywhere ; and any description of any event, any explanation of a genuine phenomenon that practically ignores these, cannot be true, and can have no claim to consideration.

Before any explanation is needed, there is always the advisability of ascertaining that the alleged event really happened, and whatever is not professedly miraculous must not be in discordance with the best knowledge we have.

With the above principles in hand, one is prepared to fairly judge as to whether a given statement is credible or not. It is not necessary, as some seem to suppose, that one should be able to explain a phenomenon if he rejects the explanation of another one, or to assert with emphasis whether a thing is possible, or probable, or impossible.

In La Fontaine's fable, the Philosophers were at the theatre witnessing a play in which Phœbus rose into the air and disappeared overhead. They undertook to explain the phenomenon. One says Phœbus has an occult quality which carries him up. Another says he is composed of certain numbers that make him move upward. Another says Phœbus has a longing for the top of the theatre, and is not easy till he gets there. Still another says Phœbus has not a natural tendency to fly, but he prefers flying to leaving the top of the theatre empty. Lastly, a more modern philosopher thinks that Phœbus goes up because he is pulled up by a weight that goes down behind the scenes. The last is an explanation. From a physical standpoint, the others are not simply inadequate explanations ; they are absolute nonsense. They make the antecedents of a phenomenon involving energy, factors that have no more relation to energy than has moonshine to metaphysics. Yet there have been a large number of

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men in all ages—men able in many ways, too—who have ventured to explain phenomena in such a *non-sequitur* way, and who have spurned the mechanical philosopher and his explanations.

In that class of phenomena called spiritualistic, there is a large body of reputed physical phenomena, vouched for by large numbers of witnesses, such as the movements of furniture, chairs, tables, books, pianos, etc., the playing upon musical instruments, guitars, accordions, pianos, the appearance of lights, of faces, of full forms clothed, of conversations with materialized spirits, and so on, in great variety. I suppose no one doubts that to move a body of any magnitude requires the expenditure of energy, and to do a definite amount of work requires always the same amount of energy; yet I suspect there are many persons who give credence to statements of occurrences which practically deny the above proposition, thinking it to be probable that spiritual agencies may have control of powers that mankind knows nothing about. This may be true enough; but the question is, not as to what this or that agency can do, but whether, if spirits do a certain kind of work, it takes less energy than if a man should do the same thing.

Whenever a weight or a resistance and a velocity are given, it is always possible to compute the energy spent to produce or maintain it. Let us study a case or two. In olden times, it was related that one of the prophets was carried through the air by the hair of his head from Babylon to Jerusalem. In later times, it was said that Mrs. Guppy was similarly transported from Edinburgh to London. The distance is about 400 miles, and if I remember rightly, she made the transit through the air in less than one hour. This makes the velocity to be about seven miles a minute, or 600 feet per second, which is three times faster than the highest tornado velocity. The resistance offered by the air to the movement of bodies in it is very well known. Pressure in hurricanes has been observed as high as 90 pounds per square foot, and as the pressure increases as the square of the velocity, it follows that at 600 feet per second the pressure per square foot would be about 800 pounds; and if the exposed surface of Mrs. Guppy was no more than six square feet, the total air pressure must have been not less than 4,800 pounds. Now, the energy of this is found by multiplying the pressure by the velocity per second:

$$4,800 \times 600 = 2,880,000 \text{ foot-pounds;}$$

and as a horse-power is equal to 550 foot-pounds per second, it follows that it took not less than

$$\frac{2,880,000}{550} = 5,236 \text{ horse-power,}$$

to move Mrs. Guppy in that way at that rate.

It was reported when Madame Blavatsky was living that she was in the habit

of receiving letters from distant correspondents, brought to her by some occult agency and dropped upon her table. These letters were said to have been written only a few minutes before by persons living in the most distant parts of the world. It takes but a little figuring to discover the amount of energy necessary to do a work of this kind. Thus, let the distance be 10,000 miles, the time ten minutes. The pressure per square foot due to such a velocity in the air will be 17,000,000 pounds, or 118,000 per square inch. Assume but one square inch as the area exposed to such a pressure, then the energy needed to transport it with the speed of 16.6 miles per second will be—

$$\frac{118,000 \times 5,280 \times 16.6}{550} = 18,000,000 \text{ horse-power.}$$

Unless such packages were protected by occult agencies also, they would be burned up before they had gone the first mile of their journey.

The popular idea is, that at death the spirit leaves the body, but that it may, and often does, remain in the locality, and is frequently in the presence of its friends, unperceived by them, though occasionally they may be seen and communed with through the agency of certain preternaturally gifted persons called mediums. This proposition has so many physical data, and involves so many physical implications, it will be worth while to look squarely at some of them.

1. A spirit is supposed to be a conscious entity dissociated from matter, having ability to move at will, and to be more or less interested in what is going on in the world, and capable of giving information on matters remote from observation or the knowledge of man. Suppose, then, such an entity, a disembodied spirit, without a corporeal body, but anxious to be in the neighborhood of its former friends. Seeing that it now has, according to this view, no longer a hold upon matter, it has ceased to be in any way affected by gravity and inertia, for these are attributes of matter. Now, the earth has a variety of motions in space. It turns on its axis, so that a point on the equator is moving at the rate of a thousand miles an hour. It revolves about the sun at the rate of nearly seventy thousand miles an hour; and, with the sun and the rest of the bodies that make up the solar system, it is drifting in space at the speed of sixty thousand miles an hour or more; so that the actual line described in space by any point upon the earth is a highly-complex curve, drawn at the rate of upwards of a hundred and twenty-five thousand miles an hour. Now, any object whatever keeping up with the earth, without the help of gravity, must maintain a velocity in space of not less than a hundred and twenty-five thousand miles an hour. And that is not all. As the movement is not in a straight line, any such object wishing to keep in a particular locality, say a room, would have to be on the alert constantly, for the earth wobbles for numerous reasons: and what seems to us who have bodies held by gravitation to the earth, as so quiet and smooth-running that we are never conscious of the motion for an instant, is so simply



because gravity takes care of us. Once surrender that, and undertake to depend upon some supposed private source of energy, and one would instantly discover he had an engineering problem of a high degree of complexity. If one assumes, as some have done, that such spirit is composed of, or associated with, some sort of matter, and that navigation is accomplished by an act of the will, it will not change the foregoing factors in the problem at all.

2. Suppose, as some have done, that disembodied spirits lose their hold upon matter, and that they do not remain at the earth. Then, if they remain at the point where separation from the body took place, in an hour the earth will have moved forward one hundred and twenty-five thousand miles. But over the earth there is certainly a death every minute all the time, and such are left in the rear by the earth never to return to them, for the movement of the earth is not a circuit, but an apparently endless drift. Think of the dead of the earth for the thousands of years since man has lived upon it! On this view, the spirits might be seen like the tail of a comet reaching backwards for millions on millions of miles—the trail of the dead!

In any view, time and space and energy cannot be ignored or ruled out.

At *seances*, the reported phenomena are mostly of a physical sort, the trance of the medium being a physico-mental phenomenon. The phenomenon of sound implies the expenditure of energy. It is a vibratory motion of the air or other elastic body, and in order to produce it some antecedent force must be spent. It may be produced by mechanical means, or heat, or electricity, or by the muscles. Its production does not imply any specific method, any more than articulate speech implies a person, as Faber's talking-machine and the phonograph prove.

Let us consider some of the more subtle phenomena that are reported. First, as to so-called conditions. One of the primal ones of these for such phenomena as the movements of bodies and materializations, is said to be darkness. This is of so much importance that it must be fully attended to. To one who has not paid any attention to what has been done in molecular science within the past fifteen or twenty years, the phenomena of light may and probably do seem to be due to a unique agency, as much as heat or electricity; therefore he looks upon light as he looks upon the others in the hierarchy of the physical sciences, and expects that in its absence a potent agency or kind of energy is lacking. That this idea and conclusion are all wrong will be apparent when it is recognized that *what we call "light" is a particular sensation in the eye, and that to produce the sensation there is no one antecedent that is essential.* Press the eye with the finger in the darkest night, and one will see a ring of light with great distinctness. An electric shock, a bump upon the head, will also give one the sensation of light, and in the absence of other aids to a judgment, no one could tell what was the antecedent of a given light sensation.

Radiations from a luminous body, and reflections from a non-luminous one were not long ago thought to consist of three different kinds of rays—heat, light and actinic rays. It has been discovered that there is no such distinction of fact. What a ray will do depends upon what it falls upon. The same ray that falls upon the eye and produces the sensation of light would heat another body or do photographic work. The only difference in rays is in their longer or shorter wave lengths, and the energy of a wave does not depend upon its length. From this it follows, that there is no such thing as light as distinguished among forces or forms of energy. *Light is a sensation*, and in the absence of eyes no such distinction could possibly be discovered. Light, then, as a particular kind of agency, takes no part in phenomena outside of the eye. The eye of man is adapted to respond to certain wave-lengths, and the eyes of other animals are adapted to respond to other wave-lengths. If our eyes were adapted to perceive all wave lengths, the whole universe would be always light about us, and every object, whatever its temperature, could always be seen as easily as we now see objects when the sun shines.

These facts make it quite impossible for a physicist to understand why darkness should be an essential condition for the occurrence of such phenomena as are described. Again, every ray of light when traced back leads to a vibrating molecule or atom. Indeed, light or ether waves in general all imply vibrating atoms or molecules; and what is called spectrum analysis is but a development of this fundamental principle, and by it not only the kind of matter, but the physical condition is revealed. If Moses had had a spectroscope when he saw the burning bush, it might have told him the nature of that conflagration.

So, when luminous forms appear at a dark *seance*, there are, first, the ether waves of such length as to affect the eye; these, traced to their source, must arise from vibrating molecules; that is, matter expending energy in the production of ether waves, for no matter ever shines without some source of energy. If the matter that gives out the light be ordinary matter, there is no difficulty in understanding it; for matter can be made to shine in various ways—by impact, by high temperature, by electric vibrations, by chemical reactions; and no one could tell, from the simple fact that the matter shone, what the origin was. But it is said that these forms that are seen and thus affect the eye; that are touched and thus affect the sense of touch; that are warm, and thus testify to vibrating molecules; that speak and appeal to the ear through air vibrations, are *materializations*; meaning by that that the body with its various organs and their functions is built up *de novo* out of material at hand, as Adam was said to be made of the dust of the ground, and as the lion that pawed to free its hind parts from the soil out of which it thus grew. What are the materials that make up a human body? Ultimately, these are carbon, hydrogen, oxygen, nitrogen, iron, phosphorus, sulphur, potassium, sodium, and several other ingredients

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less importance. From a hundred to a hundred and fifty or more pounds of these are needed for a full-grown person.

Many of the materializations that have been described, from Samuel the Prophet to Katie King, have appeared to be veritable specimens of humanity, even to avoidupois and all that is implied in that. If the matter of such bodies was a creation and not a collocation, then one of the fundamental principles of physics is simply not true; for matter can be created and annihilated by any spirit that knows how to find a suitable medium. If the material is gathered from the environment—and this sometimes is asserted—then the difficulty is nearly as great.

One must take notice of the difference there is between inorganic or relatively simple chemical compounds and those that make up the bodies of living things,—the bones, the tissues, the muscles, the nerves, the brain, the blood. For building up a single pound of such tissue as muscle or of fat requires the expenditure of energy represented by about sixteen million foot-pounds; and as, in such a body as we are supposing, there could hardly be less than twenty-five or thirty to be reckoned, it follows that not less than four hundred million foot-pounds of energy are necessary, a quantity equal to upwards of twelve thousand horse-power, if done in a minute, and if done in half a minute, then twice that quantity. I cannot but wonder if those who think they have witnessed such phenomena could have been conscious of the stupendous amount of energy which was being evolved before their eyes. Then dematerialization involves the annihilation of the same amount of energy. There has been either the creation and annihilation of matter, or the creation and annihilation of an enormous amount of energy, without antecedents and with no residuals. This is not saying that such events have not taken place; it only points out the factors of energy which are implied if they do happen. One who is unaware of such implications of phenomena may easily suppose the most improbable things can take place. Those who are aware of such implications cannot hear of such events without instantly perceiving how almost infinitely improbable they are.

Reports of such phenomena have never come from any man who understood the relations of phenomena. Scientific men have been often told of their incompetency to investigate so-called psychical phenomena; but if the latter involve physical phenomena, then who else can properly investigate them?

This paper is not to be understood as implying that there is no relation between the living and the dead, for the writer does not believe that doctrine.

Instead of that, he thinks we are very near to a discovery of a physical basis for immortality that will transform almost all our thinking. If spiritual communication is not accompanied with physical phenomena in the alleged way, it does not follow that it may not happen in other ways that do not do such violence to our fundamental knowledge, as most of the reported cases do. The universe is

large ; not much of it has been explored. We live and move and have our being in an environment about which our knowledge is most meagre ; but our knowledge of energy we get not only from the earth, but from the sun and the most distant stars and nebulae, and it is not probable that any contribution whatever will materially modify our present knowledge of it.



## THE OLD YEAR AND THE NEW.

BY WALT. A. RATCLIFFE, LISTOWEL, ONT.

FAR in the North-land the virgin Aurora  
Rustled her curtain soft woven in light,  
Deep within deep bosomed many an ember,  
Glow-worms resplendent of icy December,  
Lighting the noon-tide of night.

Lightly the East-wind trod where the Snow-sprite  
Slumber'd awhile in the woodland below ;  
The Rill through the meadow crept, counting his pebbles,  
And sang 'neath his breath, in his soft, silv'ry trebles,  
" Pansies sleep under the snow."

Out of the dell where the shadows had gather'd  
Shadowy wayfarers glided that night ;  
Weary and feeble was one, heavy-laden ;  
Strong was the other and fair as a maiden ;  
Fair was their armor and white.

" Oh ! " said the sage, as they journeyed together ;  
" Gladly I'll hence with my burden to-night ;  
Into the blue with my folly and madness,  
Heartaches and sighings, my tears and my sadness,  
Hatred and railing and spite.

" Hopes have I gathered as maids gather roses,  
Shrivell'd their forms in the red autumn glow ;  
Wanton the winds of my garland bereft me,  
They and the reaper have ruthlessly left me  
Nothing but ashes of snow."

Then from the hill-top he rose with his sighing,  
Rose with his heart-aches, his railing, his tears ;  
Rose till a gem in night's diadem gleaming,  
Down on the snowy earth lovingly beaming,  
Brightest of sons of the years.

" Whither away ? " of the youth then I queried.  
" What dost thou carry, and whence dost thou come ? "  
Softly the muff'd Rill there in the meadow  
Trill'd me this answer back out of the shadow :  
" He till to-morrow is dumb."

## A DEFENCE OF THE INQUISITION.

BY JAMES A. CONWAY.

IN these closing days of the nineteenth century, when every wind brings news of discovery, and when every word that falls from the lips of humanity adds a gem to the crown bestowed on modern progress, the Atheist, the Infidel, the heretic, impelled by religious prejudice or blinded by ignorance, still points a finger of scorn at the mediæval ages when the Church of Christ ruled with the sceptre of faith the civilized world.

Many are the charges brought against the peoples of those times, which, if true, must have made those ages sad indeed. Foremost among these charges, most grievous in its nature, and most ready to the tongue of every opponent of Catholicity, is the Inquisition, which we have in purpose to examine. History divides the Inquisition into two distinct tribunals: the Roman Inquisition and the Inquisition of the Spanish Government. Great care must be taken not to confound the two. One is purely ecclesiastical, the other strictly secular. The one was undertaken and must be defended from a religious standpoint; the other was established and perpetuated by the civil government, and must lean for its justification on national rights and privileges. But to give a fair, unbiassed judgment upon either, one must set truth in one eye and personal disadvantage in the other, and look upon both indifferently. He must identify himself with the customs, habits, and opinions of the people who lived in those ages; he must take into account their education, *and most of all their religion*, and beget in his soul the reverence and love with which they cherished the time-honored traditions of their forefathers. This done, we will see that, in the times of which we speak, all the world embraced the teachings of the Catholic Church. King and subject, prince and peasant, rich and poor, priest and people,—all believed her doctrines not only to be true, but incapable of being false. Schools and churches, assemblies and meeting-houses, echoed and re-echoed with her tenets and dogmas. And so, quite naturally, it seemed to all who lived in such surroundings, and rightly too, that anyone who sought to destroy the faith of a nation, which is at all times its most priceless treasure, was as great an enemy to the State as one who contrived to undermine its civil institutions.

Moreover, since all statesmen and public officers were at the same time Catholics, it is most easy to understand that they enacted laws and punishments in keeping with their religious convictions. To put it briefly, in those Middle Ages there was the greatest union of Church and State. This union was the natural outcome of the beautiful marriage of civil and religious institutions. The State then, as it should now, protected and defended her holy bride from danger and persecution; the church softened the might and impetuosity of her sterner com-

panion with gentleness and mercy. The State made enactments and laws for government of its citizens; the church inspired and seasoned them with justice and wisdom. All the laws, then, had a tinge of Catholicity, and they were carried out in a manner savoring of the principles of that universal religion. Consequently, it is evident that one who was a heretic then, was by that very fact in opposition to the spirit of the laws and customs of his country—in other words, a disturber of the public peace, and an underminer of civil society. And so it was that, in the year 1184, when Tuscus III. sat upon the throne of Peter, the Roman Inquisition was formally established to bring to trial the Cathari [the Albigenses]. And at the same time bishops established special tribunals in different places, to examine into the charges against other persons who were suspected or known to be heretics.

But the Inquisition was not fully established until in 1248, Innocent IV. took the tribunal out of the hands of the seculars, and *turned it over to the Dominicans*, who had done great work in converting the Cathari. The Dominicans, according to their mission, introduced the Inquisition into all countries, and *diligently sifted out and indicted heretics of every description.*

There were three classes of heretics, and three were the kinds of punishment meted out to them. The first class were the Jews, who were punished very lightly; the second class were the ordinary heretics, who were condemned to banishment or else imprisoned; the third class, however, those heretics who were at the same time open disturbers of the peace and enemies to society, were punished to the full extent of the law. The church could suffer the pagans to worship, because they erred from ignorance; she could tolerate the Jews because they were the living and most singular witnesses to the truth; but never could she countenance or encourage a formal heretic, a foe to civilization, a barrier in the way to salvation, to scatter his poisons unmolested. But aside from the question of civil society, was the church justified in punishing heretics for that reason alone? *Most assuredly.* The church is the divinely appointed guardian of the revelations of Jesus Christ, and consequently has the right to rebuke those who, in any way, attack the purity of that faith. Besides, every one will admit that any society has the *right* to impose certain *obligations* upon its members and to reprimand and punish; and even exclude them from membership, if they do not comply with these duties. If, then, any society, no matter what may be its nature and aim, is free from blame in so doing, *a fortiori* it was not only not unjust but even obligatory and praiseworthy for the Catholic Church, which has been entrusted with the teachings of the Spirit of Truth, to exclude from within her sacred fold the wolves who sought to prey upon the innocent lambs, which she sheltered and guarded therein. Few, very few, at the charges brought against the Roman Inquisition; *it seems as though mankind has ever acknowledged the justice of its punishments.*

But when the Spanish Inquisition is spoken of, then Protestantism trembles, her knees quake, her lips falter, and a sickly pallor rushes to her countenance. All the chicanery of popery, all the secrecy of the confessional, all the darkness of deep-laid conspiracy, all the intolerance and oppression and persecution and religious thralldom of Romanism, are embodied in that dread word. Books have been written, libraries filled, talents misused, energies wasted, to picture the imaginary horrors of this wicked, marble-hearted tribunal. The cannons roar, the dungeons ring with the curses and groans of the despairing imprisoned, the streets are flooded, and the executioner's axe is red with the blood of innocent victims. As to the truth of these accusations, the faintest knowledge of history will show that they are either altogether false and malicious, or else, if true, exaggerated and multiplied—the sure outcome of prejudice and envy.

Before, however, I undertake to refute any of these charges, it is my purpose, most of all, to impress upon the minds of my readers, that the Spanish Inquisition was an *entirely royal tribunal*, and that, consequently, were the charges as "high as high Olympus," they could not cloud the glories of Catholicity. And, as in our justification of the Roman Inquisition, we relied much and drew great sustenance from the customs of the peoples who established and were ruled by it; so now, in our *defence* of the Spanish Inquisition, must we, no less than before, again fall back upon the manners and usage of the epoch in which it flourished. In those ages of faith, as from what has been said before will be easily understood, it was well-nigh impossible for a Jew or Infidel to ascend to prominence in any walk of life. And thus prescription of the Jews was dominant, not only in Spain, but in the other Christian countries as well; and resulted, in the mediæval era, as in our own, from the *intense feeling which Christians had against the Jews*, who were looked upon as the accursed race which had persecuted, mocked, and crucified Jesus Christ, whom they as Christians adored as the Son of God, the Redeemer of the world, and the founder and preserver of their holy religion. Statesmen and warriors, grandees and noblemen, harboring and cherishing dispositions such as these, would have as their friends and companions only those who were of their own faith. This was most galling to the avaricious Jew, and numbers of them, thirsting for wealth, while secretly remaining Jews, *pretended* to profess the Catholic faith, were baptized, pushed into the courts and kingly palaces, became holders of large estates, and even were found among the priests and prelates of the church of God. In this hidden, underhand manner, they were seeking to overturn the institutions, not only of the Catholic Church, but also of the *Spanish Nation*. And the fact is, that, in time, this consumptive germ did not fail to cause great trouble and danger and alarm in Spain. Such a state of things called for immediate action; but since there was no doubt but that very many of the Jews were honest in their conversion, *what to do* was a very perplexing question. Hence arose a great difficulty—a

difficulty, which, as all will agree, could be overcome only by an inquisition. To establish an inquisition, Ferdinand asked the permission of the Pope, Sixtus I. That pontiff, however, was at first unwilling to grant Ferdinand's request, but was so urged by the court of Spain, that he finally agreed, and in the year 1478 the Spanish Inquisition sprang into existence.

But before the first trial was opened at Seville in 1481, the Pope withdrew his sanction because he had not been consulted as to the plan which had been adopted.

Nevertheless, pleadings on the one hand and anxiety for the Spanish nation on the other, again prevailed upon him to renew the permission, and from that time on there was a continual controversy between Spain and Rome. Often was the tribunal at variance with the popes, and most frequently were the victims condemned by the Inquisition pardoned on appealing to the successor of Peter—nay, more, so serious were the frictions between them, that several times the Holy See threatened the Spanish Inquisitors with excommunication.

But here I may be met with a very great objection: What need was there of the permission of the popes? If the Inquisition was *purely secular*, what had the Pope or the church to do with its actions? Ah! there is just the point. The permission of Rome was necessary for many reasons, but chiefly for two. First, because the men who were appointed as inquisitors by the court of Spain were *priests and prelates and theologians of the church*, and were, for that reason, under the *jurisdiction of the popes*; and secondly, and most especially, because the Inquisition was instituted to try people on *matters of faith*. Truly indeed, did Ranke call it *a royal tribunal furnished with ecclesiastical weapons*. "In the first place," says the liberal-minded and authoritative Protestant historian ("History of the Popes," Vol. I., p. 242, etc., in original German edition), "the Inquisitors were royal officers; the king having the right to appoint and dismiss them; the tribunals of the Inquisitors were subject to royal visitations" (which meant royal control), "just as any other authority under the king." In the second place, all the profits and advantages resulting from confiscations fell to the king. "And in the third place, it was by means of this tribunal that the Spanish nation was completely rounded off and finished. The king obtained a tribunal from which neither grandee nor archbishop could escape." As the tribunal is founded upon the king's power, so its exercise redounds to the king's advantage. "It is one of the spoils of ecclesiastical power which the Spanish nation snatched to itself, and by which it has become powerful. In its meaning, object, and aim, it is, above all, a political institution. It is the Pope's interest to stand in its way, as often as he can, and he does so; it is the king's interest always to keep the way clear for it, and he does." So far says Ranke. Le Bon ("History of the World," Vol. II., p. 431, etc.), Guizot ("Cours D'Histoire Moderne") and Menzel ("History of Modern Germany," Vol. IV., p. 196), and Protestant writers, declare the Inquisition a State machine.



So far we have said nothing of the Inquisition against the Moors, for the reason that the same causes and circumstances concomitant to the Inquisition against the Jews in 1481 gave rise to the Inquisition against the Moors in 1500. These Saracens had crossed over from Africa to Spain in great numbers, and had practically conquered the whole Peninsula. They held sway in Spain for a long time, and were not completely driven back until the time of Ferdinand and Isabella. This may be called the reconquest of Spain by Spaniards; and nobly, and like true sons, did those swarthy southerners rescue from bondage and oppression—yes, from destruction—the land which had given them birth. To rid their country of the danger, they rose up in their might, and after a long struggle finally succeeded in expelling the infidels. Some of the Moors, however, rather than go were baptized, and in this way the same troubles arose as with the Jews. And if the Inquisition purged the Spanish nation of the plotting Jew in 1481, it proved no less a blessing against the revengeful Saracen in 1500. They were *ousted, or imprisoned, or put to death*, and Spain was proudly and gloriously out of the dangers which had threatened her with utter destruction.

When we review these facts, and take into account the royal advantages and the ecclesiastical disapproval of the Spanish Inquisition, we, as Catholics, maintain, and have for authority, the best and most upright and learned historians, Protestant as well as Catholic, among whom I enumerate, in addition to those quoted above, Balmes, Hefele, De Noso Cortes, Demester and Reuben Parsons; that it grew out of peculiar circumstances; that it was introduced by the State, empowered, fostered, and cherished by the State; that its punishments were inflicted by the *braccium saeculare*; and that, consequently, no matter what outrages were committed by the Inquisition, they cannot be laid at the threshold of the Catholic Church. But the fact of the matter is, there were *no outrages committed by the Spanish Inquisition*, and let us here refute some of the charges brought forward against it.

They say that the Dominican, Torquemada, the Grand Inquisitor, slew 11,400 victims in his time of office, and that during his first year alone as Inquisitor he put to death 2,000 heretics; and that during the whole existence of the tribunal itself, in all 34,100 victims perished. These charges we flatly deny. They are taken from Llorente, a Spanish historian. Now, who was Llorente? He was a renegade Catholic, an apostate priest, *an ingrate*, who, in order to satisfy his ambitions and glut his own desires, like some of the so-called ex-priests of our own day, hesitated not to trample under foot the honor of his family, his country and his church. The history of such a man is not to be credited with authority, even though we had no other reason for doubting his writings. But he attempts to quote Mariana, and here, as the expression has it, we have him "on the hip." Mariana says that during the whole Inquisition about 2,000 were killed. And, as far as Torquemada is concerned, the most honest historians declare him to

have been a pure, upright, just, humane, uncorrupted and undaunted Inquisition. The same Llorente tells us that on February 12, 1486, 750 victims were punished; but, even granting these figures to be correct, he does not add that a single one of these victims was put to death. The same may be said of the charge that April 2 of the same year added 900 more victims in Toledo. No one was put to death. All that most of the condemned had to do was to make the "auto-da-fe." This word, so terrifying to bigots, is nothing more than the corruption of the Latin *actus fidei*, an act of faith. When, then, we say that those found guilty were compelled to make the "auto-da-fe," we mean that those who had been publicly brought to trial and forthwith condemned and punished were obliged to make some outward manifestation that they were really and true members of the Church of Christ. In fact, the Inquisition was a very merciful tribunal; I repeat it, *almost a compassionate tribunal*. Very few of those condemned were sentenced to death; and a man was *only allowed to be racked once*, which no one can deny was a *most wonderful leniency* in those times.

Again, they say that the Inquisition, during the time it existed, hung over Spain like a dark, heavy cloud, enslaving the spirit, robbing the poor country of the free manifestation of all that is dear to natural life. The truth is that, during the flourishing period of the Inquisition and shortly after, in the arts, the sciences, in knowledge and grandeur, in empire and dominion, Spain was the envy of the civilized world. No nation was more enlightened, more powerful, more extensive. In those days, her sceptre swayed princes and potentates, and the muses seem to have deserted the rest of the earth and nestled only on her soil. Under their enlightened guidance, the illustrious Lope de Vega, the writer employed his talents to delight all Christendom with his beautiful works; and the renowned Cervantes, the father of novel-writers, brought into the world his famous "Don Quixote." Up rose the great Himenez, the statesman and orator; and the heroic Columbus braved the unknown seas and opened up to the world a new-found continent. In the midst of the Inquisition was born the conqueror Cortez and the explorer De Soto. And scarcely had it ceased to exist when the church was enriched with Ignatius Loyola, Francis Borgia, Francis Xavier, and the great St. Theresa, the greatest warriors for the faith who Spain has begotten.

O Spain, beautiful, smiling Spain, loaded with calumny, held down beneath the scorn of thy sister nations, struggling and struggling, yet in vain, to regain thy long-lost grandeur; fair mother of saints, warriors, heroes, discoverers, explorers, land of chivalry and conquest; who could but admire and extol thy greatness and fame?

It was such charges and slanders as these that forced the Count de Maistre to exclaim that "*History for the past three hundred years has been a conspiracy against the truth.*" But truth crushed to earth will rise again, more beautiful from its long obscurity. And the atheist, the infidel, and the heretic will have to own that Catholicity, after three hundred years of calumny and persecution, yet, as she always has been, as she ever will be, far from being injured, made more glorious and sublime in her struggle for truth and salvation.\*

\* Reprinted from THE CATHOLIC MIRROR.

## EVOLUTION AND MODERN "PSYCHISM."

BY J. SPENCER ELLIS.

THE clever article by Mr. Underwood, entitled "Evolution and the God Idea," which appeared in the December number of the *DOMINION REVIEW*, while admirable in many ways, seems to call for some remarks in regard to a few matters of great importance. The history of philosophy has been almost as full of folly and arrogance as that of religion, and I think from the same cause,—radically, that the philosopher, like the theologian, has attempted to deal with matters that are utterly beyond the grasp of the human mind. The problems of existence and of the origin and destiny of the universe, have been attacked by both the theologian and the philosopher in all ages, and have naturally led to dogmatism and persecution in the church and to interminable disputes in metaphysics. The reason seems to be the same in both cases. Instead of commencing, in a true philosophical method, with a clear definition of terms, or with a terminology that has a real meaning—carrying out the inexorable rule, if truth is to be arrived at, that "every proposition must be stated in terms of the known"—certain terms have been used and treated as the foundation of valid arguments, though these are terms concerning which opinions are the most divided and of which our real knowledge is the most meagre. The theologian has argued about "god" and "the supernatural," "heaven" and "hell," and so on, the metaphysician of "the soul," "spirit," "noumena," "ego," "infinity," etc., and, without attempting to state what these terms really include, have proceeded to discuss them as if their contents were well known and needed no definition. The results have been sufficiently grave to make us beware of the use of words which possess no tangible meaning, a use which in our own day is leading large numbers of Free-thinkers, but yesterday emancipated from one superstition, into another hardly less deleterious to their mentality. It seems to me that Mr. Underwood, in the article referred to, lends himself, perhaps unintentionally, to this movement.

It is an easy task to show how Evolution disposes of the "innate idea" of god. Perhaps Mr. Underwood might have taken a shorter method, and founded his refutation on the fact that *one intelligent man* can be found who has no idea of any sort concerning god. Mr. Underwood himself, and many other well-known Free-thinkers, could be cited who are totally wanting in any idea of deity; and the theory is necessarily exploded without any further argument than the one fact which is irreconcilably and diametrically opposed to it; even were it not the case that it is utterly vitiated for want of a definition of its chief term, whatever may be the idea involved in the phrase, "a broader view of god." Mr. Underwood rightly says:

"Such words as 'intelligence' and 'design' are still used by theologians in referring to God, but thinkers see that they are inadequate and inapplicable. *Intelligence implies perception and external objects perceived*; ideas, or impressions based upon perceptions; reflection and reasoning. . . . *Intelligence implies organism and evolution, genesis and growth, new experience, added knowledge,*" etc.

I have purposely italicized some of these more or less axiomatic passages. As knowledge necessarily depends upon a correlation of an organism with its environment, being in reality the interpretation by one part of the universe, in *suitably organized form*, of its sensations as produced by the phenomena presented to it by the rest of the universe or by its own constituents, to speak of the "Ultimate Reality" as intelligent, of Absolute Knowledge, or of an Infinite Intelligence, is necessarily idiotic.

I do not see why we should invoke the shade of Goethe to learn a lesson in wisdom in talking about "the Great Being whom we name the Deity." If what has been said about intelligence have any value, Mr. Underwood's own phrase "Words inadequate to describe the Infinite," might better be rendered: "The Infinite" is a term totally discrepant from anything which can be correlated with knowledge or intelligence." Nor can I weep with Mr. Fiske over the loss of "the infinite and inscrutable God of the cosmos," even if it be replaced by a mere strand in the web of phenomena." Indeed, I conceive that this "strand in the web of phenomena" is the very first thing to be secured, before we shall have taken the first step on the road to any sort of knowledge of the "infinite and inscrutable" things we hear so much of; though we shall, of course, never really find out anything about them if they are *inscrutable*.

Mr. Underwood quotes Tyndall's questions: "Who or what made the sun or gave to his rays their alleged power? Who or what made and bestowed upon the ultimate particles of matter their wondrous power of varied interaction? Science does not know. The mystery, though pushed back, remains unaltered. The mystery is as old as human thought, and to-day we can only answer, as science teaches us that what we know as Nature is but the manifestation of forces which are inherent in the things perceived, and, indeed, without which the substances themselves would disappear and cease to be perceptible. To speak of *intelligence* in connection with this imperceptible substratum—even if dignified by being called "Being," with a capital B and in the words of Goethe, seems to me to be reversing our logic. *Being*, existence, is what we know as Nature, the Ultimate Reality, which is said to be above, beneath, behind, or beyond Nature, is simply *Not-Being*."

So far, I have not much to say against Mr. Underwood's positions, but under the heading "Philosophical Materialism," he says:

"Philosophical materialism, which ascribes sensation and thought to physical causes, and assumes that matter is the ultimate cause of phenomena, finds as follows

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justification as does anthropomorphism in the teachings of modern science. There is no proof, *but all the proof the case admits of is opposed to the view* that a motion or collision of material atoms is ever transformed into feeling or thought. Feeling and thought are subjective phenomena; motions and collisions of matter are objective. That two or more *insentient atoms*, by moving and changing space-relations to one another, should give rise to the consciousness of 'I,' or to a feeling of pleasure or pain, is a fancy as wild as any of the fancies of the old mythologists."

This last statement appears to me to be a gigantic *petitio*. I take it, that consciousness, feeling, thought—all that distinguishes men and animals from "blocks of wood and stone"—are undoubtedly the result of evolutionary processes in the materials of which they are composed, and depend upon the qualities and conditions of the organisms which manifest them; and if these things be so, then I contend that *all the proof the case admits of* is in favor of the view that thoughts and feelings are produced by and are the necessary outcome of changes in the materials of those organisms. No further proof of this proposition is needed than can be found in the common experiences of a hospital ward. A knock on the head deprives a man of consciousness, often for many days. And if this "collision of insentient atoms" be objected to, as showing only how consciousness may be destroyed, then we may instance the fact that a proper supply of oxygenated blood is one essential factor in the production of psychic phenomena. As Professor Dolbear says, in his "Matter, Ether, and Motion:—"

"There is such a formal agreement as well as actual connection between consciousness and the life of the brain, that it is not to be supposed any one who has properly attended to the facts will venture to deny them. Argue as one will, it is true there is no experimental knowledge that is a part of science, of consciousness separable from a material structure called brain, in which physiological changes take place as the conditions for thinking as well as for acting. This is the only known relation of mind and body. However this association of such apparently different provinces is to be explained, it is still true that for every phenomenon in consciousness there is a corresponding phenomenon in matter. Psychologists have pointed out that the phenomena indicate an identity at bottom between the activity of consciousness and cerebral activity. To follow this out into particulars would be interesting and perhaps profitable to most; but the significance of it here is that, even in the psychological field where the opportunities for investigation are right at hand and most known, there is no evidence for consciousness apart from a material structure, or that the law of conservation of energy does not hold as strictly true here as elsewhere in physics. So there is no experimental reason for assuming the existence of incorporeal intelligences. There is no psychological question that is not at the same time a physiological question."

It is clear that we neither know nor can conceive of any phenomena that have not a physical basis, and the use of the word phenomena seems itself to presuppose such a basis. I therefore look upon the argument as stultifying. It

is argued that the idea of God is a product of Evolution, and that, as evolution advances, this idea of God—or supernaturalism—gradually becomes eliminated. Now, if Evolution be accepted as the universal law, I see no alternative to the acceptance of the fact that all ideas, and consequently all thoughts and processes of thinking, are the result of physical evolution. And to prove that thoughts and feeling are not the result of "a collision of insentient atoms," or whatever may be the physical process by which the warp and woof of the web of Evolution is carried forward, it will be necessary to show—(1) that such a collision or combination of atoms is not this process; and (2) that atoms are insentient. If the former be demonstrated, then it will remain to be shown what is the basis of the evolutionary changes; if the latter, it must be shown at what period insentient atoms become converted into sentient substances. To pretend that sentience is an entity apart from substance appears to be as irrational as the old theology.

Scientists appear to be fairly agreed upon a certain order or progressive series in the material universe: (1) the ether, which serves as the foundation or medium for all existence and for the interchange of energy, but which in itself is imperceptible and imperceptible; (2) the atomic "elements;" and (3) the molecular substances in their various combinations. We need not stop to inquire whether it is true or not that the ether, by a system of vortices or otherwise, is converted into the ponderable atoms, as these latter are by chemical action combined into the molecules of different substances. What seems certain is, that as the ponderable substances increase in complexity, a greater amount of energy is needed for their building up and maintenance, and a capacity for what we term sentience is developed, and still higher in the scale a capacity for what we term thought. Philosophical materialism simply accepts Evolution as expressing in one term the modes by which all these developments are effected in one unbroken series of events, and rejects the postulated but unproved and utterly inconceivable intervention of any outside and disturbing force. Further on, Mr. Underwood says:

"Indeed, the qualities and states of matter, so regarded by us, are named in different ways in which our consciousness is affected. Light (luminousness) is a mode of consciousness, and does not exist where there is no eye. Professor Newcomb proposed to abolish the word 'light' from physical science, since *light is a psychological, not a physical phenomenon*. There is no musical quality in the waves of the air, as the mind through hearing constructs it. There is no fragrance in the rose, the standing only for the sensations produced in us through the sense of smell by the object, the ultimate nature of which is inscrutable. . . . Our position is, that which underlies phenomena—that which is not seen and is known only as *verbal consciousness*—is such that, given a perceiving, thinking mind, it manifests itself objectively as matter and force, and subjectively as feeling and thought. Man, in his essential nature, belongs to it, for the *substance and basis* of his being is in the *noumenal world*, of which the world we see is but the appearance, the show of the *symbolical representation*."

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When Goethe says, "the great Being whom we name the Deity *manifests himself*, not only in Man, but in a rich and powerful Nature, and in mighty world-events," he simply misuses words. "Manifests himself" is a phrase totally out of place except in the mouth of a clergyman enforcing the Design argument. What we do know is this: that though in "man, in nature, and in mighty world-events," we see wonderful transformations, no man has yet penetrated beyond the phenomena recorded so as to be able to say by what agency those transformations are brought about. The utmost that has yet been done is to observe their relations and sequences; and so far as these have been observed, they are all so uniformly regular and correlative, that, instead of manifesting an intelligence which could deal in different ways to suit the varying circumstances and needs of man, they appear to be but manifestations of powers inherent in the matter of the organizations involved in the changes—powers of a rigid and unending nature, to which the laws of the Medes and Persians were but as a rope of sand. And when Mr. Underwood speaks of "that which underlies phenomena"—the Ultimate Reality—being *revealed in consciousness*, I beg respectfully to dissent. I contend that nothing has ever yet been revealed in consciousness but the phenomena that we term Nature, and that to speak of "inscrutable" or "infinitesimal" things as being *revealed* is a misuse of words. Where our knowledge of phenomena ends, all we can know is, that what is beyond is unknown to us. We can feel our ignorance and a desire for more knowledge, but we cannot say that this feeling *reveals* any new phenomena, least of all any spiritual existence or "noumena."

Now, if the preceding observations are of any value, they prove that all perceptible phenomena have a physical basis; that is to say, our consciousness of the existence of things is the result of mental states produced by impressions received from the outside world. To me, it seems the height of absurdity to talk about abolishing the term "light," on the ground that the phenomenon we know as light is a psychical phenomenon; for, if this were done, the vibrations which produce in us the effect of light and enable us to see objects would still exist, and a new name would have to be invented for the observed effect. The two essential terminal factors for the production of light are undoubtedly the vibration-producing or incandescent object and the sensitive brain. To some extent only the intermediate links are known; yet, because the final process is unknown by which the light-producing vibrations cause this sensation of light, are we to conclude that some new factor has stepped in to perform the operation? Is it not sufficiently obvious that vibrations—"collisions of insentient atoms" (?)—of a certain sort, have produced the effect we call light, and that our only reason for calling it a "psychical" rather than a "physical" effect, is that we do not know the first process of change?

But Mr. Underwood, in a preceding paragraph, has only just told us, — very

rationally, it seems to me, for I cannot conceive how it is possible to dissociate matter and mind, substance and energy,—that,

“Greater than any conceivable personal being, greater than any known intelligence is the Ultimate Reality, in which all phenomena (physical and psychical) have a *common basis*—the foundation of the cosmic order we observe, and of that marvelous series of evolutionary processes by which from star dust have been produced myriads of worlds with their inhabitants, the brain and heart of man, his conscience, his hopes and aspirations, his wonderful achievements, his chequered history, his possibilities for the future.”

And yet he tells us that this *common basis* is “that which is not an organism which has no genesis and growth, but is the cause and basis of all phenomena. I venture to suggest that all this argument to prove the existence of the “psychical basis” is not a whit less inconsistent and irrational than the arguments used to prove the existence of a personal deity. It is simply an effort to invest with *qualities superior to intelligence* an entity which the rational part of the argument clearly proves to be entirely wanting in the organization necessary for the manifestation of intelligence. So far as it is a rational argument, it proves that physical and psychical phenomena have a common basis. And, indeed, there is no more reason for postulating a Psychical basis for psychical phenomena than there is for postulating a Vital basis for the phenomena of life; a Vegetative basis for the phenomena of vegetation, or a Crystalline basis for the phenomena of crystallization.

The quest for a *psychical or spiritual basis* is but part of the hankering after a solution of the insoluble which has led so many of our theologians and philosophers away from the study of real and vitally important knowledge. God may think it “little” for a man to be soothed and satisfied by what he terms “an artful evasion,” and he may think it “great” to rise to “a higher point of view;” but, whatever this latter may be, the fact remains, as Mr. Underwood points out more than once, that the more a man knows of Nature the less he knows of God; and that the most ignorant people are just those who are the most positive in their assertions about the infinite and the inscrutable; and it seems to me that, however “little” it may be, in regard to the “infinite,” “inscrutable,” and the “Ultimate Reality,” or by whatever other name that which is beyond human cognizance may be known, the Agnostic position, whether it be soothing or artful or neither, is the only rational one.

I agree with Mr. Underwood’s condemnation of Nature-worship. I do not see how a rational man can “worship” that which gives us earthquakes, tornadoes, rattlesnakes and tarantulas. But why worship anything? If we must worship something, it is simply because we are ignorant; and it certainly does not appear to me as any evidence of a “higher” mentality that we should be seeking something to worship in a sphere which includes only that which is confessedly *inscrutable*.



## THE STAGE AND ORCHESTRA.

### The Month in Toronto.

THE first month of the year was comparatively a very satisfactory month for both stage and orchestra, taking of course into consideration the discouraging result of the earlier portion of the season. Mr. Walker Whiteside reappeared at the Grand Opera House the first week in January. He did not crowd the house, it is true, but he had as intelligent and appreciative audiences as a man need wish for; Mr. Whiteside gave four performances here and presented a different bill each time. First we had the "Merchant of Venice," with Mr. Whiteside as Shylock, in which role he displayed marked ability and an intelligent conception of a character over which critics have wrangled for many years, and about which they will doubtless continue to wrangle. "Hamlet," "Eugene Aram," and "Othello" followed; all these presentments were appreciated, but the interest centred certainly in "Eugene Aram," which melancholy play was given with an amount of finished power that rivetted the attention of the largest audience Mr. Whiteside was favored with, and proved that this trying role was in eminently capable hands. Mr. Whiteside is gathering friends all round him as he goes, and on his next visit to Toronto I think he may anticipate a great popular success.

The comic opera produced at the Grand by Mr. Frank Daniels, "The Wizard of the Nile," was a production of much robust burlesque but very little wit; neither in a musical nor a literary sense was there anything in it; the "stonecutters' chorus" was a popular number, but was so evidently suggested by the tinkers' chorus in "Robin Hood" as not to be entitled to any credit of originality. Still the piece did well here.

The visit of the Bostonians was the notable event of the month. This excellent organization appeared in Toronto for the first time on the 12th of December, 1889, and its reappearance here last month was the first return visit. After a lapse of so many years it was a pleasure and a surprise to find so many of the members of the original company with the organization still. The company gave three performances of "Robin Hood" and one of "Prince Ananias." The company is an all-round excellent one, but pre-eminent among the ladies in the company were Miss Hilda Clark and Miss Jessie Davis; Miss Gracia Quiver, a young lady new to this city, also deserves mention as having a voice of much promise. A satisfactory feature of this engagement was the flattering response it elicited from the public. At each performance (except on Saturday evening) the house was crowded to its full capacity; Saturday evening is usually a dull theatrical evening in this city, and the habit some companies have of "laying off" the star members and substituting understudies, without any announcement beforehand or on the evening bill, is coming to be generally known. This kind of thing may be fun for the understudies but it is a fraud on the public that the public will no doubt quite know how to resent.

The return here of Mr. James Herne with his own production, "Shore Acres," was satisfactory, as showing that the verdict given last season by the public and the press—and the two are not always in accord on these questions—was most emphatically re-endorsed, and an admirable play admirably played did excellent business the week it was here.

The month closed at the Grand Opera House with a week of Mr. Roland Reed and his wife, Miss Isadore Rush, in "The Wrong Mr. Wright." Mr. Reed always was a favorite here, and he is satisfied to find, so he says, that the good people of Toronto are as fond of him as ever.

After the repeated financial failures which have been the result of entertainments on an ambitious scale given at the Massey Music Hall the success of the Mendelssohn Choir on the 28th ult. was remarkable and gratifying; every seat was sold before the doors opened. A fine performance was given, and close on two thousand dollars was cleared over expenses. This is as it should be, and leads us to think there is hope for a musical organization in Toronto yet.

At the Toronto Opera House we had a good production of "Little Lord Fauntleroy," with Mr. J. H. Gilmour in his original part; the performance was an all-round good one, but it did not meet with an encouraging amount of success. On the other hand, a piece called "When London Sleeps," containing in itself enough plot and counterplot, conspiracy and murder to furnish material for a dozen ordinary melodramas, was presented to crowded houses at nearly every performance. This of course will shock those people who consider that when public taste does not conform with what they consider taste that the public is wrong and the individual right; but it is no use quarrelling with the public, and if they like highly-spiced drama, and like to pay for it, we may be sure they will have it, and for one manager who objects one hundred will be perfectly ready to oblige as soon as they know that there is money in it.

A piece which ran for a week at the Toronto, called "The Cotton King," had great success and deserved it. Emotional melodrama will always be popular, and such pieces as "The Cotton King" present this form of entertainment in its best aspect. Some of the situations in this play were strong; the company was a good one, and the business done was good for times like these.

Altogether we may be pleased to know that in a theatrical sense at least we are holding our own in Toronto, and business in the show line is decidedly better; we have some things coming along of the first artistic merit, which will no doubt receive adequate support. The season, however, will close early, probably the end of March or the first week in April.

WILFRID WISGAST.

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#### ART FOR TRUTH'S SAKE IN THE DRAMA.

In an article in the February *Arena*, on the above subject, Mr. James Herne says:

"It is generally held that the province of the drama is to amuse. I claim that it has a higher purpose—that its mission is to interest and to instruct. It should not *preach* objectively, but it should teach subjectively; and so I stand for truth in the drama, because it is elemental, it gets to the bottom of a question. It strikes at unequal standards and unjust systems. It is as unyielding as it is honest. It is as tender as it is inflexible. It has supreme faith in man. It believes that that which was good in the beginning cannot be bad at the end. It sets forth clearly that the concern of one is the concern of all. It stands for the higher development and thus the individual liberty of the human race."



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## FROM OUR OWN OBSERVATORY.

### Municipal Reform in Canada.

The examples set by some of the British cities in the management of their own affairs, such as lighting, street railways, etc., are of such a striking and valuable nature, and by comparison reflect so much on the mismanagement of our own cities, that all citizens and well-wishers to Canada should be led to take a deeper interest in them, as pointing out the road for us to travel, if we wish our municipalities to escape from the slough of incompetence and corruption into which they have fallen. Instead of availing ourselves of the experience of the cities of older countries, and beginning on better and more rational lines, our municipalities appear to be unable to avoid passing through every phase of corruption, incompetence, and extravagance that has marked beadleism in Britain.

### The Dispute with the Gas Company.

Among the many matters that demand attention at the present time, the dispute with the Gas Company is one of the most important. Not only does it affect seriously the pockets of gas consumers, but it involves a breach of the original agreement with the city, embodied in its charter, which is liable to cause a final loss on the part of the city of several millions of dollars should the municipalization of the gas works be finally decided upon. This risk has been incurred through the legislation of 1887. Under the original agreement, the company were to be entitled to 10 per cent. interest on their capital, and profits beyond that amount were to be applied in reducing the price of gas. Were this agreement honestly carried out, the company would have no object to serve in keeping up the price of gas. Under their last act, however, they have acquired rights and privileges which make it to their advantage to increase as far as possible the cash value of their assets and franchises; and thus, while the citizens have slept, the nimble gas officials have watered, if not their capital, at least their plant, to a very considerable extent. The offer to refer the matter for final settlement to a board of arbitration, the inquiry to be limited to the last two years, and the costs to be paid by the company, is one that could not be entertained for one moment. The inquiry should be made by a judge, it should be carried back to the original charter, and should be finally settled by an Act of Parliament.

### What the Price of Gas Should Be.

As to the price of gas, while the Gas Company are taking great credit for reducing the price without being legally compelled to do so, it will be well for the citizens to find out what the actual price of gas should be, not what it is in cities like New York, Boston, etc., subject to corrupt influences similar to those at work in Toronto. Some years ago, at the instance of the solicitors of a proposed new company, we investigated this matter, and we found that the cost of the gas should not exceed 25c. to 30c. per 1,000 feet. This was under the old regime of coal gas. These figures have been amply borne out by reports from many towns. A few weeks ago, the *Toronto Globe* published the balance-sheet of the Lincoln (Eng.) municipal gas works. The figures showed that, on an outlay of \$105,000, there was a profit of \$62,000, gas being sold at 56 cents per 1,000 feet. It is clear that the net cost of the gas amounted to only about 22½c. per 1,000 feet. A recent report from Boston regarding the poisonous "water gas"

which has of late years caused so many deaths (41 in eleven months in Boston), says that its cost is but "a few cents" per 1,000 feet. This is the gas which is supplied to Toronto citizens.

#### **The Water Works and Aqueduct Scheme.**

Another pitfall for the innocent citizen is opened by the Aqueduct scheme. On the merits of the scheme itself we say nothing; but the attempt to force the city into an agreement to guarantee bonds or to help to float the venture was an outrageous piece of business. An Act should be passed prohibiting all bonuses and tax-exemptions, thus placing cities and citizens alike on an equality. In no case should privileges be granted to a private company which would interfere in any way with the full control by the city's officials of its water supply.

#### **Municipal Insurance.**

The much-talked-of question of municipal insurance is one that is deserving of serious consideration. The business at present is in the hands of a clever and experienced set of men, and there would be every reason for engaging the services of some of these men under a scheme of municipal insurance. Such a scheme, however, should have a much larger scope than the existing system. It should cover all insurable property, and premiums be replaced by a fire-rate. A rate equal to one-half the present premium rates would probably soon accumulate an immense surplus available for any emergency ever likely to arise; and a moderate increase in the police and fire-brigade staff, to be utilized for inspection and other duties connected with the department, would with reasonable regulations render frauds almost impossible. If the 1897 Council is to do useful work, this is one of the most important matters to be attended to.

#### **The Hospital for Sick Children.**

Another very important matter is that of the Hospital for Sick Children. If there is one case more than another in which the municipality should step in and—not aid, but—replace private charity by fully supporting a nominally charitable institution, it is the case of this Hospital. The gentleman who for many years has made it his special business to look after this charity, Mr. John Ross Robertson, deserves the thanks of every citizen for his efforts and sacrifices in its behalf. To call it his hobby, as some have done, is to sneer at the noblest efforts of the most philanthropic men. But it is time that the city placed the Hospital above the necessity of making appeals for financial support. A community which allows its waifs and strays to perish in its streets or depend for life upon the chance of meeting a charitable passer-by, is in a state of savagery.

#### **Free Mail Service for Newspapers.**

A matter which seriously affects cities as well as the country at large, is that of the free carriage in the mails of newspapers. At the late meeting of the Press Association, the Postmaster-General unequivocally expressed his opinion that a change must be made; and though there were signs among the majority of the Press men present that they hardly expected such a decided opinion, it seems to us that it would be only fair that newspapers should pay a rate sufficient to cover the cost of carriage. The present system no doubt encourages a large amount of imposition, in the shape of advertising sheets palmed off as newspapers; and a small postal rate would tend materially to reduce this fraud.