

# THE SYDNEY GUARDIAN.

A Journal of Religious, Literary, and Scientific Information.

UNDER THE SUPERINTENDENCE OF CLERGYMEN OF THE UNITED CHURCH OF ENGLAND AND IRELAND.

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## THE SYDNEY GUARDIAN.

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### NOTICE TO SUBSCRIBERS.

THE Proprietors of the *Sydney Guardian* are desirous, with the publication of the sixth number, to acquaint the Subscribers and friends of the undertaking that its circulation has continued steadily to increase from its commencement, and that it may now be considered fully established, *provided only the subscriptions still remaining unpaid be transmitted to the Publishers, Messrs. COLMAN and PIDDINGTON, Sydney, previously to the issue of the seventh number.* At the close of the first half-year, they deem it necessary to compare the amount of the receipts with the expense incurred, and they are much gratified to perceive that there appears to be sufficient encouragement to continue the work; and they trust that it will prove useful to the Church in this colony, as an instrument of diffusing amongst her members correct views of her doctrine and discipline, and of communicating intelligence, which, though particularly interesting to Churchmen, would not be likely to find admission into the columns of a newspaper.

Pecuniary advantage is not sought by the Proprietors for themselves. From the first it was their intention to devote any profits which might arise to some religious or charitable object in connexion with the Church of England; but the public announcement of this intention was delayed from the difficulty in determining the object that possessed the most urgent claims. After much consideration they have selected the "Fund for the Support of the Widows and Orphans of Clergymen in this colony;" and they trust that this mode of appropriating the proceeds will stimulate the zeal of Churchmen and excite them to increased efforts to extend its circulation.

The Proprietors beg to offer their thanks for the assistance they have already received from their several contributors;

and they indulge the hope, that should the work be permanently established, they will be favoured with still increased literary aid in their undertaking; and they assure their readers that arrangements have been made to obtain regularly from England all the leading Periodicals which profess to be under the influence of, or in connexion with, the members of the united Church of England and Ireland.

With respect to the appointment of Country Agents, which at first seemed desirable, they have now to remark that from the very small amount of the quarterly or half-yearly payments, they cannot offer any remuneration for the trouble which would be worth any one's acceptance; but as several gentlemen and persons of respectability have kindly offered to receive and forward the subscriptions of others in their respective neighbourhoods, they will be glad to avail themselves of the services of some one respectable person in every district in the colony, and to acknowledge their kindness by sending each his own copy gratuitously.

Should, however, the payment of subscriptions due for the past half-year be delayed to a late period in the month of November, the publication of any future number will be suspended, (not discontinued), on the ground of expediency, as it will not be possible to determine the exact number of *bonâ fide* subscribers, and consequently it will be impracticable to regulate the number of impressions required for circulation.

They would particularly direct attention to the fact, that not more than one-half the subscriptions have as yet been paid.

### Theology.

#### THOUGHTS ON CONTROVERSY. INFALLIBILITY. NO. II.

It will assist us to understand the Romish theory concerning an infallible, never-failing guide in religion, if we can ascertain the precise place which he occupies in their system. It is a place, I conceive, intermediate between the Saviour on the one side, and the ordinary priesthood or ministry on the other: a place *nearly* corresponding with that occupied by the Holy Scriptures in the true Christian system, (note 1.) The infallible guide, be it remembered, does not undertake to act without a ministry; neither are the Scriptures anywhere proposed to us as the

sole means of Christian instruction. A ministry is employed in either case: but with this difference that the priesthood of Rome are more directly interposed between the people and their infallible guide, than are the ministers of Protestant churches between the people and the Scriptures. There is scarcely one point of immediate contact where the Romish people meet and receive their religion directly from the infallible guide himself; his response reaches them chiefly if not solely through their priests. It is, on the other hand, the well-understood duty of the Protestant minister to bring his people to the Bible itself, to encourage them to test their faith and purify their hearts by earnest study of the pure and solemn word of God. Many important questions arise out of this part of the subject which we will not now examine. It is sufficient for the purpose of the argument to observe that the Romish unmistakeable guide does not act without the assistance and interposition of a priesthood.

I proved in my last letter, that the attributes ascribed by Romanists to their infallible guide relate rather to the *communication* than to the *perception* of truth. Scripture, as they acknowledge, is the sure word of God and therefore an *unerring* standard of doctrine. "But," they contend, "it does not give out its meaning with sufficient clearness and precision. A guide is wanted who can speak to the people in *unmistakeable* language. A living, speaking guide is needed, who can conduct mankind into the way of salvation."

A living speaking guide! There is a charm in the words. They call up in our thoughts the image of the blessed Redeemer, who, when on earth, went about doing good and preaching to the poor and simple the hallowed Gospel of the Kingdom.

A living speaking guide now on earth! Alas! it is but a dream and a delusion. Who has heard the voice of the living speaking guide of the Romish Church? Who can even pronounce his name or tell who he is, or where? The Romish Church which has never seen his face, nor heard his uttered speech, points to his written words. What are they?

What are the words of the unmistakeable guide? Here we have reached another "*cecazta questio*," another subject of interminable argument, another gulf in our way which no man can cross.

When looking for the infallible words,

must we confine ourselves to the decrees of Ecumenical Councils, or should we include also the Bulls and Briefs of Popes, living and dead?

One thing at least is manifest. The living speaking guide *never speaks*. HE ALWAYS WRITES. Both Councils and Popes have chosen for the transmission of their oracular thoughts that very same vehicle (*written language*) which in Scripture conveys to us, direct from the Holy Ghost, the unerring word of God.

It is certainly a very large assumption, and one requiring incontrovertible evidence for its establishment, that employing the very same means which the apostles inspired by the Holy Ghost have used, he has employed it with success immeasurably superior to that which has attended their writings.

But before we pass from this part of the argument, let us enquire once more, what are the words of infallibility?

If they extend the attribute of infallibility, and the corresponding attribute of unchangeableness to all the solemn enunciations of the Papal Chair, to the Bulls of Popes, living and dead, this church then becomes compromised to principles which shock every feeling of humanity, and from which, I sincerely believe, the majority of its members (at least in this colony), would recoil with abhorrence.

If, on the other hand, the claim of absolute infallibility is limited to the decrees of Councils, we must go back three centuries, to the Council of Trent, to find the *living speaking guide*. Nay, we must go back to a period still more remote; for if the tests *even of Romish theology* be searchingly applied to that Council, serious doubts would be raised whether it was indeed an Ecumenical Council, *representing and representing fairly the whole mind of the Church*.

But let this pass—and let the reader fix his attention upon the irreverence and utter fallacy of the assumption, that the decrees of Councils and Bulls of Popes, issuing from *uninspired* (note 2) men, were not only conceived in an infallible spirit, but also expressed in language of such *unmistakeable* clearness and precision that they can dissipate all the doubts and errors which (it is alleged) surround the writings of the heaven-taught prophets and apostles. I admit fully, that the language of man, whether written or spoken, is an imperfect vehicle for the conveyance of spiritual thought. I admit further, that the human mind is tainted and disordered from various causes, and thus unfitted for receiving the purest truth in its purity. I admit therefore, that to proud, blinded, erring man, the Scriptures do not prove a never-failing guide; they are weak, not in themselves, but through the weakness of the flesh. (note 3) But I cannot admit that Popes and Councils can succeed, where inspired apostles have failed. Roman Catholics tell us that the Scriptures are not a secure rule of faith, because they do not convey the same impressions to

every mind. "They are," say their divines, "an enigma which every man solves in a different way. *Tot fides, quot voluntates*." On this subject they have recourse to arguments and statements, which are equally fallacious, irreverent, and pernicious. They grossly exaggerate the divisions which exist among Christians who draw their faith from the Bible; they attribute those divisions to a wrong cause; and in the zeal of contention they have ventured to employ language about the Word of God, which, if not absolutely blasphemous, is at least adapted to wound the Christian ear, and shock every Christian feeling. On this more hereafter. For the present let their objections be admitted, and what follows? Can we also admit, that the pen of Pope or Council can succeed, where the pen of an apostle, guided by the Holy Ghost has failed? Can we assume that their language will be more precise, more intelligible, more distinct, more *unmistakeable*, than the Word of God.

"By their fruits you shall know them." Let us examine the effects which the teaching of this infallible guide has produced. Has the purpose of their unerring head never been misunderstood? I will adduce a few cases where there must have been a mistake somewhere. Let moderate and right-minded Romanists themselves be the judges, and they will not only readily admit, but even anxiously and earnestly contend that the *unmistakeable* guide should not be responsible for the doctrines and practices I shall now refer to, and that in reference to them, his meaning must have been misapprehended by the people.

If we believe the advocates of infallibility, we must conclude that throughout the Church over which their fabled guide is presiding, there must ever be a mystic influence going forth, which destroys the very seeds of false doctrine, and that nothing erroneous, nothing spiritually pernicious, can exist in the atmosphere which he breathes. Yet surely we have read that to defray the expenses of erecting the Cathedral of St. Peter, and to maintain the splendour and luxury of the Papal Courts, indulgences were sold. And we have read the language which Tetzel habitually employed in crying up the value of his spiritual wares.

Suppose the Apostle Peter himself, having returned visibly to this world, were requested by his pretended successor to point out the worst and most hateful heresy which has ever disgraced the the professing Church of Christ, could he find a single false doctrine, or ungodly practice, more impious, more monstrous, more abominable, more utterly subversive of faith and righteousness, more destructive of all reverence for God, and a greater outrage upon common sense and common decency in man, than was that sale of indulgences?

If the Romish controversialist replies, that "the Pope must not be loaded with all the offences of Tetzel, who in his infatuated ravings greatly exceeded his in-

structions." We can admit this, without any injury to our argument. There is no doubt whatever, that the honour of the Popedom was very deeply compromised in that wretched business. But suppose that Tetzel and not Leo X. (who long refused to silence him) was the real criminal—what follows?

Or, if you think proper, remove the direct guilt of this transaction to a still greater distance from the Popedom, and fix it neither on Leo, nor on Tetzel, but entirely on the people. Let us say with Luther, "I do not so much censure the disgusting zeal of the vendor of indulgences, (Tetzel) as the false interpretation which the poor, simple, and deluded people put upon them," what will then be the natural inference? Why this—that the Pope or the infallible guide, (whoever he is) may not only fail to put away out of his spiritual dominions all false and pernicious doctrine—but that in the conveyance of doctrine from his throne of infallibility downwards—the doctrine may, in the impure channels through which it flows, receive so foul a taint as to become the very poison of perdition before it reaches the souls of the people; and that as the Popes' messengers and servants are not infallible, in the transmission of doctrine, and the people are not infallible in the reception of doctrine, after all, the latter, if they rightly understand their condition, *must be in great uncertainty about the truth and their duty*. And if (as some Romanists argue,) *absolute certainty* be essential to the *performance of an act of faith*—then, for the attainment of that certainty, not only the Church itself, and the Church's head, but also every member of the Church, however obscure, who has only a soul to be saved, must be gifted with infallibility.

Are Romanists prepared to carry the delusion to such a length?

You will perceive, gentlemen, that in referring to the sale of indulgences by Tetzel, I have selected for my first example a circumstance of such notoriety, that contradiction or denial cannot be attempted. That transaction is inscribed so deep in the imperishable page of history, and the results of the contest which arose out of it have been so important, that never, while European civilization remains, can it be misrepresented or forgotten.

Here I stop for the present; in another letter, if permitted, I will show a few more *mistakes* that have arisen out of the teaching of the infallible and *unmistakeable* guide.

I have the honour to be,  
Gentlemen,  
Your obedient Servant,  
M. K.

#### NOTES.

I. A close analysis of the doctrine would probably lead us to the conclusion that the "infallible guide" usurps also some of the functions of the Holy Spirit; and he assuredly encroaches upon the legitimate province of the human reason. It appears to me that in practice he fills up the whole space occupied

by the Scriptures in the true Christian system and stretches beyond it on both sides.

II. Does the Romish Church claim direct inspiration for her infallible guide? I have never seen the question argued, but believe that direct personal inspiration whether for Councils or Popes, is not pretended. When, therefore, I met the following in the pages of the *Dublin Review*, it seemed to my mind a novelty.

"Returning to Innocent I., we read in his letter to Rufus of Thessalonica, &c., &c. 'If any causa major, should arise, which cannot be decided by your fraternity, let a deputation be sent to us, *that under the inspiration of the Lord we may write back to you what he reveals to us*, herein exercising our right to take the matter into our own cognisance, as the tradition of the ancient ordinance, and the reverence due to the Apostolic See require.'"

The reader will be surprised on observing that one who was about to speak under the *inspiration of the Lord*, and deliver a *direct revelation*, and who therefore could speak with the highest authority, should ever have appealed to human *rights and traditions*. However, here a claim is put forth to the miraculous gift of inspiration; we may therefore devote a few words to the enquiry "whether any of the usual marks of inspiration can be discerned in the operations of the infallible guide."

When God, in His Providence works by natural means, it is then His glory to work darkly and mysteriously, and with a wonderful complication in the moral machinery which He employs. The chain of causes and events along which His purpose runs, composed as it is for the most part of human motives, has innumerable links, some of which may be perceived, but the greatest part are entirely hidden from the observation of man.

But when God works by miracle, when He desires to make His power known, there is such a sublime and startling simplicity in the operation, that the interference of the Divine hand is manifest. The thing is either done in a moment without any intermediate cause adequate to so great an effect, as when Moses raised his rod and a plague came upon the whole land of Egypt, the horns were blown and the walls of Jericho fell down, our blessed Lord sent His summons into the depths of the sepulchre and Lazarus rose up from among the dead. Or else agents are employed wholly unequal to the task enjoined them, who go forth in entire and manifest reliance upon the miraculous power of God; as when a few rude fishermen of Galilee were sent out to evangelise the whole world. In all such cases the miracle is apparent. The hand of God is visibly displayed.

But when the infallible guide delivers his response, the scene is changed. Before the oracle can speak, a vast and complicated machinery must be prepared; there is an endless array of arrangement, a most towering attention to technicalities, a leaning upon secondary causes, and human means; there is consultation, and doubt, and perplexity, and debate, and intrigue; there is a straining, and a striving, and all which marks the conscious impotence and bungling inefficiency of poor weak man. We miss entirely that impressive simplicity and ease which proves the work of God.

And the success of the operation seems helplessly dependent upon the preparatory arrangements. Sometimes it has happened that from some secret error or mishap in the adjustment of the machinery, the spiritual engine has gone wrong. A Pope has delivered a hasty judgment. A Council has spoken, but not infallibly.

When comparing the extravagant pretensions of the infallible guide with his inadequate performance, I am reminded of the fabled deity Vulcan, who, when afflicted with incurable lameness, ingeniously endeavoured to obviate the defect in a manner which did honour to his skill as a blacksmith, but little suited his celestial rank. He formed two figures of exquisite workmanship and moved by hidden machinery, and by these supported on his right hand and on his left, he was able to conceal his infirmity, and enter the assembly of the Deities, with the stately bearing which became his station.

And thus this impotent infallibility pretends to move with the step of inspiration, while it leans helplessly upon human contrivances.

## CHURCH SERVICES.

NO. I.

It is, unhappily, an incontrovertible fact that very great ignorance prevails among the members of the Church relative to her distinguishing principles, and also as to

the basis upon which many of her doctrines and practices rest. And, as a necessary consequence, they are utterly unable to defend themselves against attacks which might easily be repelled were they, as is their duty, ever ready to give an answer to those who ask them a reason of the hope which is in them. Thus the "railing accusations" of the political, and the conscientious scruples of the honest dissenter, meet with no satisfactory reply when addressed to multitudes of professed Churchmen; and as a natural result, the one is confirmed in his errors, while the other is shaken in his faith.

In order, therefore, to place in their hands arguments in confirmation of their faith, and in support of their ritual, we purpose to go through the services of the Church in order, and show as we proceed the suitability of every part.

With the greatest propriety, the public worship commences with the reading of a few sentences from Holy Scripture, by the Minister, calculated to awaken the careless sinner, encourage the penitent, humble the proud and the self-righteous, and to excite to holy aspirations the merely formal worshipper.

The congregation are then affectionately reminded by their Minister, in the exhortation, of the necessity of acknowledging their sins before their Heavenly Father, with humble, holy, penitent, and obedient hearts, and of imploring pardon before they presume to offer up any other supplications. They are invited to join him in making that confession of sins which is essential before forgiveness can be obtained:—to accompany him with a pure heart and humble voice to the throne of the heavenly grace, that they may obtain forgiveness through God's infinite goodness and mercy.

Upon the invitation so given, all, Minister and people, falling low upon their knees before the footstool of the Most High, with one heart and one voice, seek the pardon of their manifold transgressions of thought, and word, and deed, of omission and commission, from Him who alone forgiveth sins, for His sake, who by His precious blood shed upon the cross made a full, perfect, and sufficient sacrifice, oblation and satisfaction, for the sins of the whole world. They pray not only for pardon for the past, but grace for the future, that they may live godly, righteous, and sober lives, and by their holy and consistent walk and conversation, may glorify the Name of their most merciful Father. Their confession of unworthiness, and supplication for mercy and restoration to the favour of God, they make pleading the promises of God declared unto mankind in Christ Jesus our Lord. As miserable offenders, in whom there is no health, they can claim nothing as of right, but wrath and indignation: and therefore they seek for every blessing in his name and for his sake, who "became sin for us who knew

no sin, that we might become the righteousness of God in him."

This full and unreserved confession of sins having been made, the forgiveness of sins is pronounced by the Priest in the Absolution which follows. He pronounces in favour of all those that *truly repent and unfeignedly believe* the Gospel, that God, who desireth not the death of any sinner, but rather that he should be converted and live, pardons and absolves them. He assures them, on the authority of God's most holy Word, that all their offences shall be blotted out of the book of God's remembrance, and that they shall be again admitted into his favour: and this declaration he makes in virtue of the power and authority which God has given to his Ministers to proclaim the absolution and remission of their sins to all his penitent people. What comfort must this "truly evangelical appendage to our Daily Service" afford to every sincere penitent. Coming into the awful presence of the Most High, of that God who searcheth the hearts, and cannot look upon iniquity, he feels that he is indeed a very worm, and no man, and under a consciousness of his unworthiness, he would be ready to shrink from the apparent presumption of approaching a Being of such infinite perfections. But, having confessed his sins with a godly sorrow, and having heard from the lips of the duly commissioned ambassador of heaven the sentence of pardon pronounced upon him, he may now be lifted up with a holy and humble confidence, and make his supplications and offer his praises upon the renewed assurance of his Father's forgiving love. Besides the declaration of forgiveness, the absolution contains also an exhortation to pray for that true repentance from which alone acceptable confession can proceed, or effectual pardon be obtained; and also for the assisting and co-operating grace of the Holy Spirit both now and hereafter. So may those things, in which the congregation is then engaged, the sacrifice of prayer and praise, be pleasing to God; and so may the residue of their lives be pure and holy.

"When we add our 'Amen' to this declaration, we not only profess our cordial belief of God's forgiveness, but also give in our solemn assent to the terms of the Gospel, namely, an entire renunciation of our sins, and a willing surrender of ourselves to the influences of God's Holy Spirit. By so doing, our present service will be accepted through the merits of our Redeemer, 'the rest of our life hereafter will be pure and holy,' and so at last we shall come to his eternal joy, through Jesus Christ our Lord."—(Whythead.)

Surely the strict propriety as well as beauty of this opening to public worship must be deeply felt by all who, in using it, have their hearts and minds, as well as their lips, engaged; surely none who have ever felt the comfort to their own soul as the words of pardon fell from the lips of the Minister would be willing to exchange

these truly devotional and scriptural forms for any other that might be presented to them. But alas, there are formal as well as spiritual worshippers; and as there are those who having never realized in their own hearts the power of religion, are insensible to its influences, and deny its power; so there are those also who having been, it may be, often present at the services of the Church of which they profess themselves members, without having ever had one sense of sin excited in their hearts, or one sense of comfort at hearing the declarations of forgiveness, are ready to enter at once into the views of those who treat those things with ridicule and contempt. For their sakes, then, as well as for the sakes of the sincere but ill-informed, we would point out the light in which confession and absolution are regarded by the Church of England, and the place they hold in her formularies as contrasted with the Romish view.

It is no uncommon thing to see violent and unscrupulous attacks made upon our liturgical forms of worship in a quarter where ignorance cannot be supposed to exist, but where misrepresentation, for purposes of policy, must be supposed to be the influencing motive. And as the forms of absolution to be found in our ritual supply one main ground of attack we are desirous of commending that subject especially to the consideration of our readers, in order that they may not be led astray by bold and confident assertion. The charge is sometimes made that in the Book of Common Prayer are contained some of the worst errors of Popery, and in support of this charge the forms of absolution are appealed to. Now the authors of such an accusation could scarcely mean, we imagine, to condemn *all* forms of absolution as Popish; though dealing in declamation more than argument, it is not very easy to determine how far they are prepared to go. If such is their meaning, we reply to them in the words of one who was quite as good a Potestant as they themselves can be we refer to the wise, the good, and moderate Melancthon. The words of that eminent German Reformer are:—"The gospel contains two things, loosing and binding. It looses when it remits the sins of any, whether that remission be pronounced publicly or privately. For as Christ would have us baptised, that by that sign our faith might be confirmed; so he would have the gospel pronounced privately, or have us privately absolved, that he might confirm the conscience when it hears that a divine sentence is passed respecting it."

We will suppose, however, that it is against the forms used in our Church, and not against absolution generally, that the accusation is made. And although somewhat premature, we will for convenience sake, unite together the whole of these forms, whether as occurring in the more public worship, or in the more private visitation of the sick. Now, it must, surely, to the mind of any thoughtful man,

appear something nearly akin to an absurdity, to charge with Popish tendencies men, who laid down their very lives at the stake, rather than conform to that Anti-Christian system. What stronger proof could they give of their sincerity? How could they display more unequivocally their abhorrence of Rome and her abominations, than by giving their bodies to be burnt, and setting an example to all posterity of heroic suffering for the truth? Yet it is of these sainted men, great and wise, and holy as they were—martyrs for the true faith of Christ—that slanderous tongues are found in these days, to declare that they knew not what manner of spirit they were of—that while they thought they were opposing Popery, they were themselves Papists—that while they fancied they were setting forth the saving doctrines of the cross, they were in reality retaining and teaching the deadliest errors of Popery, in the formularies of the Church they had undertaken to reform!

Surely if men would but give themselves time for reflection, and if they would but use the intellect, be it much or little, which they may happen to possess, they would see the exceeding folly of all this, and refuse to listen for a moment to those who so unblushingly endeavour to impose upon them. Moreover, be it remembered, the charge does not rest upon our own reformers only, but upon the most eminent of those of Germany also, for they expressed the warmest approbation of the Anglican Liturgy. Martin Bucer declared concerning the Communion Service and daily prayers, in which two of the forms of absolution objected to are contained, "In the order of the Communion Service and daily prayers, I see nothing appointed in the book which is not taken out of the Sacred Scriptures, if not in express words, as the Psalms and Lessons, yet in sense, as are the Collects. Also, the manner of these Lessons and Prayers, and the times when they are to be used, are constituted very agreeably both with the word of God, and the observation of the ancient Churches." And with reference to the *whole* office for the visitation of the sick; in which the third form, (the one most generally objected to,) occurs, he says, "*It is written most agreeably to the rule of Holy Scripture.*"

Would that those who are so ready to condemn opinions expressed by men of such pre-eminent piety, devotedness, learning, judgment, and discretion, could be persuaded to make themselves *really* acquainted with the subjects upon which they declaim with so much self confidence and so little knowledge; then should we find them heartily thanking God for the inestimable blessing He bestowed upon England, in guiding the hearts of her reformers, so that they performed their arduous task with unexampled prudence and moderation; then should we find them, instead of impugnors of her liturgy, her zealous and devoted children, and labouring to forward those high and holy

ends for the accomplishment of which we believe her to be destined.

Absolution pre-supposes confession.

There can hardly be any question, says Professor Garbett, that holy writ, both directly, by example and precept, and indirectly, by its whole spirit, *does* encourage between Christians a communication of their spiritual wants and necessities; they are bound together so strictly in the bands of the closest spiritual brotherhood, that *all* are interested in the joys and sufferings of each member of Christ. When the soul therefore, is smitten with a sense of sin, and fearful of having forfeited the love of God, and incurred the suspension of the covenanted blessings secured to those who are one with Christ; or when in that fearfulness of profaning holy things, which a sense of unworthiness may inspire, it dreads approaching to the holy mysteries in which we receive Christ; it is not only the natural dictate of the heart, but the clear suggestion of reason, that we should unbosom ourselves to our brethren. "Only," says Origen, "be circumspect in making choice of the party to whom thou meanest to confess thy sin: know thy physician before thou use him." Moreover, in addition to the blessing of ghostly counsel, there is assistance to be obtained from the prayers of godly men, who through the merits of the mighty Intercessor have power to plead for their brethren at the throne of grace. And this is the very ground on which St. James exhorts Christians to mutual confession, because the prayer of the righteous man availeth much.

From this it will legitimately follow, that *it may be for the good* of the soul, though not indispensable, that confession should be made, even for secret offences, as it often was in the primitive church, before the assembly of the faithful, and that the united prayers of the assembled church should rise to God on behalf of their afflicted brother. (Amb. de Penit.) But it is *pre-eminently* to the minister of Christ, watching, under the great Pastor, over the souls committed to his charge, that such confession should be made; the wounded spirit should find in him a physician, the bewildered a guide, and the penitent a comforter; one who may point out the remedies, and so instruct that the sinner may mourn without despair, and hope without presumption. I do not say that men *must* come, but it is a blessed thing in trouble and distress, so to come. For though such an one might go immediately to God, and must from him obtain forgiveness at the last, yet there is not always enough of faith or of courage to draw near to the mercy seat. It is hardly possible, for example, that he who has once tasted of the heavenly gift, and the powers of the world to come, and yet fallen away from grace, crucified the son of God afresh, and put him to an open shame, should be able at once to approach his Lord, as a merciful and faithful High Priest, who is both able and willing to save to the uttermost, all those that come to him. Surely it is but right that such mourners should have recourse to some one who has authority to give them succour and direction; who can rightly apply the word of God to their souls, and give them a true apprehension both of him and of themselves.

The ministers of Christ can usually judge better of the condition of sinners than they themselves, and than an ordinary Christian, and not only is it his office to call them to repentance, and to intercede with almighty God, but he has an express power, when he finds them real penitents, to declare them absolved by God, and restored to his favour; to assure them further comfort, on the authority of his commission, that there are no sins which God will not forgive, if they bring with them to the mercy-seat the condition of pardon, repentance for their sins, and a vital, fruit-bearing faith in Christ their Saviour. And upon this account it is that the Church of England, though she does not bind it upon all men to make a particular confession of their sins to their minister in all cases, yet does in one specified emergency require it at their hands. "If there be any of you, who by this means cannot quiet his own conscience, (i. e. by confession to God alone), but require further comfort and counsel, let him come to some discreet and learned minister of God's word, and open his grief; that by the ministry of God's holy word he may receive the benefit of absolution, together with ghostly counsel and advice, to the quieting his conscience, and to the avoiding of all scruple and doubtfulness." And in making private confession and absolution not necessary to all, but only to those whose special cases require it, and who cannot else obtain peace, our own church keeps closer, not only to Scripture, but to the practice of the primitive ages, than the church of Rome.

So much for the comfort of confession and absolu-

tion in many cases to the sick conscience, and its moral necessity in others.

But the Church of England does, in fact, require a public confession of sin and unworthiness from all her members, before the absolution is pronounced by the minister, which proclaims God's full forgiveness of all transgressions to those who have hearty penitence and a true faith; to all who have *confessed in this spirit*, and pleaded at the throne of grace for those divine gifts which are necessary to maintain the soul in union with its Lord.

With respect to the forms of Absolution used in the services of the Church of England, we cannot, we think, do better than give the words of one of the most eminent divines of the present day, Dr. Jelf, Principal of King's College, London, and Canon of Christ's Church, Oxford. Speaking of the ministry of the forgiveness of sins being committed to the Christian priesthood, he points out certain reasons why ministerial absolution, even when raised to its highest importance, "can never, in its effects, be otherwise than more or less *conditional*, amounting in some cases to moral certainty, in others perhaps to little more than a charitable hope." And then he goes on to say—"Here, by way of illustration, I would call your attention to the nice discrimination observable in the practice of our own Church. It is well known that in the service for morning and evening prayer, in the communion service, and in the office for the visitation of the sick, the forms of absolution differ respectively from each other. The first seems chiefly *declaratory*, the second chiefly *precatory*, and the third at once *declaratory, precatory, and authoritative*. The reason of the difference appears to be in the difference of the intended recipients. In the common prayer the worshippers are miscellaneous, like the fish in the net of the parable, good and bad; the confession too has been *general*. To pronounce, therefore, *absolutely* the forgiveness of sins, as equally applicable to each particular case, would be manifestly improper and dangerous. In the Communion office those only are present who are presumed to be in a true Christian frame of mind, longing after the bread of life; those who, if they were so minded, may have specially opened their griefs and confessed their sins, and who, if they have not resorted to some 'discreet and learned minister of God's Word,' may be presumed not to require it. The confession, too, though common to all who are drawing near with faith, is more earnest, self-accusing, and special. Here, then, with the greatest propriety, the absolution takes the form of confident prayer, not unmixed with a shade of authority. In the visitation of the sick, the sinner is alone, one whose manner of life ought to be known to his own pastor; chastened by sickness, with death, and judgment, and eternity before him; having unburdened his conscience, if need be, by a special confession of his sins; in such a case, if anywhere, the priest may hope to approximate to the truth, and therefore he is authorised (*if the sinner himself HEARTILY desire it*), premising the condition on which he acts,

to pronounce the solemn words—"Our Lord Jesus Christ, who hath left power to his Church to absolve all sinners who truly repent and believe on him, of his great mercy forgive thee thine offences. And by his authority committed to me I absolve thee from all thy sins, in the name of the Father, and of the Son, and of the Holy Ghost.—Amen."

It should be observed, that this form, strong as it may appear to be, is far from being *absolute* and *unconditional*, as is clearly shown by the prayer which immediately follows it. Were it intended to be an absolute and unconditional pardon, nothing more would require to be done. "*The remission of sins*" having been, as the Romanists express it, "*sealed*" to the penitent, any further intercession would be manifestly improper, because useless. But so far is this view of the case from being maintained by the Church of England, she, immediately her form of absolution is pronounced, follows it by this prayer:—"O most merciful God, who, according to the multitude of thy mercies, dost so put away the sins of those who truly repent that thou rememberest them no more; open thine eye of mercy upon this thy servant, who most earnestly desireth pardon and forgiveness. Renew in him, most loving Father, whatsoever hath been decayed by the fraud and malice of the devil, or by his own carnal will and frailty; preserve and continue this sick member in the unity of the Church; consider his contrition, accept his tears, assuage his pain, as shall seem to Thee most expedient for him. And forasmuch as he putteth his full trust only in thy mercy, impute not unto him his former sins, but strengthen him with thy blessed spirit; and, when thou art pleased to take him hence, take him unto thy favour, through the merits of thy most dearly beloved Son Jesus Christ our Lord." Now we will venture to ask, how it is possible for any honest man, with this prayer before him, to assert that the form of absolution by which it is preceded can at all be identified with absolution as practised in the Church of Rome?

It is believed by the Romanists that the priest has power to forgive sins, *not ministerially but judicially*:—they believe that, no matter how sincerely penitent a man may be on account of his sins, he cannot obtain pardon of them from God, unless the priest pronounces absolution;—and absolution as maintained in the Church of Rome, makes the priesthood the very doorkeepers, as it were, of the kingdom of Heaven; so that whomsoever they declare will be admitted into those eternal mansions, will be admitted; and whomsoever they exclude from them, will be excluded in consequence of their sentence. In the canons of the Council of Trent, we read, "Though the priest's absolution is the dispensation of a benefit which belongs to another, yet it is *not* to be considered as merely a ministry, whether to publish the Gospel, or to declare the remission of

sins, but as of the nature of a judicial act, in which sentence is pronounced by him as a judge." Again, "Whosoever shall affirm that the priest's sacramental absolution is *not a judicial act, but only a ministry to pronounce and declare that the sins of the party confessing are forgiven*, &c., let him be accursed." The catechism speaks the same language—"Our sins are forgiven us by the absolution of the priest. The voice of the priest, who is legitimately constituted a minister for the remission of sins, is to be heard as that of Christ himself, who said to the lame man, 'Son, be of good cheer, thy sins are forgiven thee.'" Again, "The absolution of the priest, which is expressed in words, *seals the remission of sins*, which it accomplishes in the soul." Bellarmine says, indeed, "*negatur remissio illis, quibus noluerint sacerdotes remittere*—(Forgiveness is denied to those whom the priests will not forgive.) But this is carrying the priest's authority to an absolute sovereignty and arbitrary power, which has no foundation in Scripture or in the ancient Canons of the Church."—*Bingham*. Many more quotations of the same character might be made, but these are enough to show what is the doctrine of the Romish Church on the subject now under consideration. How very different to this is the doctrine of the Church of England. In direct opposition to Rome she maintains that the priest, in the discharge of his sacred functions, acts throughout, *not* judicially but ministerially, even when he speaks with most authority. She maintains that even when pronouncing the pardon of sins to one who, so far as human discernment can reach, is a truly humble and penitent believer, his declaration of forgiveness can only be conditional, inasmuch as it is God alone who searcheth the hearts, and therefore can alone know what is in man. Let any one contrast the belief and usage of the two Churches on this subject, and unless his eyes are quite blinded by prejudice, he must see, and be ready to acknowledge, the wide difference between them, a difference as wide as between truth and error,—between that which is scriptural and that which is opposed to the Word of God.

#### THE PRAYER BOOK AN AID TO MISSIONARY LABOURS.

From "Illustrations of the Prayer Book," an American work.

It was remarked at a late anniversary of the London Prayer-book Society, that dissenters in that country, surrounded by all the means of grace, had their little prejudices against the church, but that, if they went abroad, the first thing they would do, after making a translation of the bible, would be to translate the prayer-book; and, whatever difference of opinion may prevail respecting the value of liturgical forms to the inhabitants of Christian countries, it would seem indeed that a doubt could hardly be rationally enter-

tained of their importance under other circumstances. Upon the understanding of the untutored heathen, darkened through the ignorance that is in them, the truths of Christianity exert a feeble influence: and line upon line, and precept upon precept, are generally required before any lasting impression can be made. Something is absolutely necessary to fix their wavering and imperfect ideas; and, as might have been anticipated, experience has shown that the prayer-book is as well adapted to their wants as if it had been originally intended for them, teaching them how to pray, and supplying a form of devotion, in which all the fundamental doctrines of the gospel are fully embodied and methodically brought before their view; while the short distinct prayers into which it is divided are easily retained in the memory. The late Dr. Morrison, the Chinese missionary, himself a dissenter from the church of England, was so strongly impressed with its importance, that he even translated the more necessary portions before he had completed the version of the scriptures. In a letter to the English Board of Directors, under whom he acted, he says, "I have translated the morning and evening service just as they stand in the book of common prayer, altering only those parts which relate to the rulers of the land. These I am printing, together with the psalter, divided for the thirty days of the month. I intend them as helps for social worship. Mr. Milne wished me to modify them, so as to render them more suitable to our peculiar circumstances; but, as they possess here no authority beyond their intrinsic excellence, and are not binding upon the practice and conscience of any, and as they are not exclusive, I judged it better to preserve them as they are. Additional helps may be afforded, if they should not be found adequate. The heathen at first require helps for social devotion; and to me it appeared that the richness of phraseology, the elevated views of the Deity, and the explicit and full recognition of the work of our Lord Jesus Christ, were so many excellencies, that a version of them into Chinese as they were was better than to remodel them."

The testimony thus borne is amply confirmed by facts in reference to the aborigines of our own country, and the experience of church missionaries abroad. An instance of recent occurrence among the former is thus related by bishop Polk: "The lady in charge of the school for the Cherokee nation, and who is a missionary of the 'American Board of Commissioners for Foreign Missions,' having laboured among that people for above fifteen years, assured me that she found nothing so well adapted to her purpose as the book of common prayer. The whole arrangement was well suited to impress the truths of the gospel on the heathen mind, and particularly the regular recurrence of the same language and ideas in the Sunday services."

Bishop Chase, visiting some years ago an Indian tribe, discovered a copy of the liturgy, published in 1787, by the venerable Society for Propagating the Gospel in Foreign Parts, and was informed that they had been enabled thereby to conduct their public devotions every Lord's day, during a long series of years. He protracted his sojourn beyond the Sunday following, and united with them in their worship. "By proceeding," he observes, "with all the prayers, as the church has directed, the whole congregation through an aged reader could join in repeating and offering up the same petitions with myself, they in the Indian and I in the English language. My mind was most favourably impressed towards these poor people; and my attachment to our primitive liturgy was mightily strengthened by this instance of its great utility. Without such a help, how much of the missionary's labour is lost, like oil spilt upon the ground, without a vessel to contain and preserve it. Had it not been for this prayer-book, the worship of God would, to all human view, never have been perpetuated to the edification of this now interesting people."

Speaking of the New Zealanders, Captain Jacobs, of the East India service, observes: "Never did I witness a more attentive, orderly, and devout assembly, even in a Christian country. The whole congregation appeared to join in the singing, and in the responses, with the greatest possible propriety and devotion. Indeed, so intensely interested was I in the service, that it was with difficulty I could suppress my feelings when the notes of the organ were almost drowned by the full burst of these native worshippers, who, from having been once cannibal savages, were now uniting in the praises of God."

A missionary in India, visiting a dying native, was surprised at the composure and resignation which he displayed; and intimating a desire to know what had produced so happy an influence, the sick man drew from under his pallet of straw a copy of the prayer-book, and assured him it was that which had prepared him for death. A similar instance is related by one of the English missionaries to Greece. He presented a copy of the prayer-book in Romaia to the daughter of a noble family. The misfortunes of her kindred preying upon her spirits, had impaired her health; and she sought consolation in the prayers of the liturgy. During a painful and protracted illness she kept it constantly beneath her pillow; and the last hours of her life were spent in reading and meditating upon its contents.

Facts without number might be adduced in further proof of this position; for every people to whom a missionary has been sent would furnish abundant illustrations; but, not to increase unduly the size of the present work, it will suffice to quote, in conclusion, the evidence of bishop Wilson, of Calcutta, in whose ex-

tensive diocese the converting power of Christianity has been of late years so significantly displayed. "Practice and experience make way for our church beyond other forms of ecclesiastical government, by the excellence of her liturgy, her spiritual devotion, her stability, her safeguard against innovation, her assistance especially to the young and immature Christian, and the strength she affords to the native convert. I said practice and experience produced these results; but I look higher: it is the grace of our Lord Jesus Christ, which descends on the means of his own appointment, and on the primitive forms of devotion, which, from the birth of Christianity, have been used in the assemblies of the faithful."

#### Literary and Scientific.

#### DAWN OF THE REFORMATION IN ENGLAND.

PART III.

The points upon which Lord Cobham was condemned were the following:—1. His assertion "that in the worshipful sacrament of the altar is Christ's very body in form of bread;" in reply to which the Archbishop admonished him—"Sir John, ye must say otherwise." 2. His denial of the necessity of priestly absolution, if the curate "be an idiot, or a man of vicious living." 3. His denial of the Pope's supremacy as the successor of St. Peter; and 4. his positive renunciation of the merit of pilgrimages, and of all worship to the cross, to relics, and images of apostles, martyrs, "and all other saints besides, approved by the Church of Rome." These questions were now the subject of incessant debate among all classes, and the number of those who had adopted impressions more or less alien from the determinations of the Established Church was undeniably on the increase, notwithstanding the activity and severity exercised for the suppression of such persuasions. The junction of a nobleman of Lord Cobham's character with the ranks of the Reformers had given them a confidence such as hitherto they had not possessed. There can be no doubt that his conduct on his trial tended greatly to consolidate their cause, by proving him well qualified for the leadership which had been assigned to him. His example was contagious; multitudes were inclined to regard his opinions more favourably when they witnessed his fortitude in despising all threats, and refusing all solicitations to abjure his declared sentiments; although death and torment would be the certain consequence of his refusal; while they who already participated in his views were confirmed and established in their determination to continue faithful unto the end. When the Archbishop, towards the close of the proceedings, admonished him to return like an obedient child to the unity of his mother the Church of Rome, adding moreover, "see to it in time, for yet ye may have remedy; whereas soon it will be too late." The only reply returned by the undaunted prisoner was, "I will none otherwise believe in those points than that I have told you here afore. Do with me what you will." Finally, then, the Archbishop said, "Well, then, I see none other but we must needs do the law; we must proceed forthwith to the sentence definitive, and both judge you and condemn you for a heretic." Sentence that he should be delivered over to the civil power was passed accordingly, and he was remanded to the Tower in custody of Sir Robert Morley. The accounts which remain of the subsequent circumstances, his escape from the Tower, his flight into Wales, the recapture of him through the treachery of Lord Powys, are very uncertain; and above all, the question as to his consciousness of, and participation in, the rebellion attempted against the king, in which the Lollards were accused of being the principal movers, is involved in much obscurity. Such an act of treason would be wholly at variance with the principles which Cobham professed in his interview with Henry, which has been already related. Still it appears that he must have been condemned as a traitor, as he was dragged upon a hurdle to the gallows, where he first underwent the punishment of hanging; and was afterwards burned according to his original sentence; the first of these being the appointed mode of execution for treason as the latter

was for heresy. Our purpose, however, does not lead to the investigation of such questions; the professed object of this epitome being no more than to exhibit to what extent an eagerness for the reformation of religion had pervaded the nation, and thus to contradict the very current persuasion that the movement had its origin in the arbitrary will and variable affections of King Henry VIII. The evidences to the contrary become from this time more numerous and convincing; and the proof that the people's attachment to the primitive form of doctrine had assumed a substantive form is supplied by the fact that they henceforth required no leader, or man of eminence to head them. The adherents to the cause of reformation, though cruelly tormented, were able from this time to stand by their own sufficiency, upheld only from on high, until it pleased Him, who hath chosen weak things of the world to confound the mighty, that kings should become the nursing fathers, and queens the nursing mothers, of his long-oppressed and persecuted Church. The depth and firmness of the national feeling against the system of popery, and its principal doctrines, is manifested by the failure of so many examples of punishment to subdue it. The words of Fuller as to the effect produced by the martyrdom of Sawtre are scarcely less applicable to those many cases of extreme punishments for heresy to which, upon the failure of other and milder resources, the Church continued with increasing frequency to have recourse. "Though we be as far (remarks the Church historian) from adoring his relics as such adoration is from true religion, yet we cannot but be sensible of the value of such a saint; nor can we mention his memory without paying an honorable respect thereunto. His death struck a terror into those of his party who hereafter were glad to enjoy their conscience in private, without professing the same. So that now the ship of Christ, tossed with the tempest of persecution, had all her sails taken down; yea, her mast cut close to the deck, and without making any visible show was fain to be poor and private till this storm was overpassed." Overpassed, however, it was not for more than a century afterwards, and its continuance furnishes such evidence as cannot be gamed of the certainty of the conclusion now contended for, namely, that the revival of the ancient Anglican faith, which had prevailed before the setting up of the Saxon Church, and was partially overclouded by it, was not coincident merely with the times of Henry VIII., but had pervaded a great portion of the nation long before.

The occurrence of instances so continual as we have on record of recantations arising from dread of punishment, and of punishment actually undergone by those whose persons were more obnoxious, or their fortitude greater, must be received as proof that the offence of heresy prevailed in the nation to an extent which would unquestionably appear alarming to the supporters of the (so called) Catholic faith. And it is a proof, the force of which was continually augmenting; for, as the writer last quoted observes, every example of severity would render all others, who were conscious of entertaining the like sentiments, more cautious to conceal them; so that the numbers who escaped animadversion would continually bear a larger proportion to the numbers who were detected and brought before the judges. Affording to those who governed the Church in that age no more than the ordinary justice of supposing, that they would not wantonly outrage the feelings of mankind by exhibitions of barbarity, nor be brought to assent to them, except under an overwhelming persuasion that they were urgently required to arrest a disposition otherwise irresistible, we may refer to one act in particular as attesting most convincingly the extent of their apprehension. By the judgment of the Council, either of Constance or of Sienna, the bones of Wiclif, after they had lain more than forty years in the grave, were dug up, burned to ashes, and cast into the river. Whatever judgment posterity may have passed upon this act of posthumous revenge, the design of those who were the authors of it cannot be misunderstood. It was not enterprised or taken in hand unadvisedly, lightly, or wantonly, but with a very deep and subtle purpose of striking terror into many hearts; and the necessary inference from this is that it must have been well known that there were multitudes who had actually lapsed, or who were in imminent danger of lapsing, to the forbidden opinions; for the recovery or the preservation of whom such a pregnant proof of the implacable feeling entertained against what was called heresy, could not safely be dispensed with. And it seems not improbable that this exhibition did powerfully operate in *terrorem*. Yet was there no deficiency of professors; howbeit many were such as received seed in stony places, hearing

the word, and anon with joy receiving it; but when persecution and distress arose on account of the word, by and by they were offended. Nevertheless the very number even of such cases proved the extent to which the disposition for reformation was diffused. Foxe has enumerated at least two hundred cases, in the single diocese of Norwich, of persons called before the Ordinary to answer for their faith within the first four years of the reign of Henry VI., and there is accompanying evidence that they were regarded with very general sympathy. That historian has been broadly accused of declamation and abuse, railing and scoffing, and a species of banter often coarse, and sometimes profane. This charge may not be in all respects without foundation, so far as it affects him as the expounder of his own impressions, or occasionally prejudices; but as an authority for *facts* he may, with very trifling exceptions, be safely appealed to. Without entering farther into the general question of his credibility, we may securely say, that in the instance of the parties here spoken of, he is too minute in his references to names of persons, places, circumstances, and dates, all derived from authentic public documents, to be easily convicted of even unintentional misrepresentation. It is impossible to suppose, reasonably at least, or charitably, that the men into whose charge the conduct of these enquiries was committed could, from mere inclination, prove themselves grim and merciless executioners, taking delight in the sufferings of those whom they delivered over to the secular power: that is, in other words, to a death of agony. They acted no doubt under a rigid and painful sense of duty.

But then on the other hand it is plain that they must have surrendered to a system abhorrent from the tolerant spirit of Christ, their better feelings and principles, their natural sense of justice and humanity, their compassion for the weaknesses, and allowance for the partial perversity of men, whom in the great points of catholic truth, they ought to have acknowledged as fellow-believers with themselves, and with the church of the living God. And it is impossible that this opinion of the lawfulness and necessity of persecution even unto death, in the last resort, or when all other means of protecting this faith has proved ineffectual, should ever be eradicated from the mind of a Church thoroughly under the impression of its own exclusive catholicity. It is an injustice, and even an absurdity, to suppose that men of that stamp and character can delight in the infliction of torments for their own sake. But it is a sad reflection that a mistaken sense of duty will overcome in conscientious men the feelings of humanity: and perhaps they who are thus overcome are not so much to be blamed as that false system of a perpetual infallibility which they have imbibed, of which they consider themselves the divinely constituted agents, on which they cast the responsibility of their actions, and by means of which, even in opposition to reluctant conscience, they are able to justify their proceedings to themselves. In their cruelties however, they will be discriminating. They will not persecute wantonly. They are not averse for blood; they can have no affection abstractedly for the infliction of death. But they will select their victims with a due regard to circumstances, so that the stroke which falls upon one shall shake to the centre the apprehensions of hundreds. We see this exemplified in the martyrology of the reign of Henry VI. It displays the consummate art of a proficient in the science of compelling heretics to eat their words, and to strangle their convictions. Multitudes recanted: scarcely more than three were burned; Abraham, Waddon, and White. But who were they? Their qualifications prove the nice discrimination with which the selection had been made for the production of a sure effect upon the remaining body of ignorant and unlearned men. The three last mentioned "were more cruelly handled," than the rest, and "were put to death and burned." Of "Father Abraham," in manifestation of the repute in which he was held among his fellows: John Waddon was a priest from Colchester; and William White, in the same holy order, was the most distinguished for his zeal and ability in promoting the principles of Wiclif. "This man was well learned, wise, and a well-spoken priest;" he had recanted once at Canterbury, before Archbishop Chicheley; but afterwards removing into Norfolk, he had continually laboured to the glory and praise of the spouse of Christ, by reading, writing, and preaching. He appears to have been received by universal acknowledgment as the ablest propagator and defender of the anti-Roman doctrine; and by that eminence in ability and faithfulness he was marked out as the victim whose immolation would serve most fearfully to operate upon the resolution of those who looked

up to him as their leader in things pertaining to God. The king's letters came down "for the apprehending of Sir William White, priest, and other Lollards; and straightway being so taken, to send them to our next goal or prison, until such time as we shall take other order for their delivery." That delivery, in the case of William White, was on this wise. "He was brought before William, Bishop of Norwich, by whom he was convicted and condemned of thirty articles, and there was burned in Norwich, in the month of September, A.D. 1428." "This William White, and his wife, (for, his priesthood notwithstanding, he took unto himself a godly young woman to his wife), had their chief abode with one Thomas Moon, of Ludney. He was of so devout and holy a life, that all the people had him in great reverence, and desired him to pray for them; insomuch that one Margaret Wright confessed that if any saints were to be prayed to, she would rather pray to William White than any other." And when he was in policy singled out to be the stricken deer, it is natural to conclude, that the effect would be proportionate upon the common herd which followed him.

At the point which we have now arrived at, we are still sixty years from the birth of Thomas Cranmer, and still more from that of Henry VIII., who was slightly his junior; and the view of society here presented may suffice to prove how little of either verity or verisimilitude there is in the assumption, that they were the authors of the Reformation in England. Very just and apposite rather are the observations of Foxe, wherein he expresses his own conclusions from the eventful proceedings of which a mere abstract has been here presented. "These before named persons," he says, "and soldiers of Christ, being much beaten with cares and troubles of those days, although they were constrained to relent and abjure, (that is to protest otherwise with their tongues than their hearts did think), partly through correction, and partly through infirmity, being as yet but newly trained soldiers in God's field, yet for the good will they bare unto the truth, although with their tongues they durst not express it, we have thought good that their names should not be suppressed, as well for other sundry causes, as especially for this; either to stop the mouths of malignant adversaries, or to answer to the ignorance of them who following rather blind affection than the true knowledge of times and antiquities, for lack of knowledge, blame that they know not, accusing the true doctrine of the word of God for novelty, and earping at the teachers thereof for new-broached brethren; who if they did as well foresee times past, as they be willing to follow times now present, they should understand as well by these stories as by others before, how this doctrine of the grace of God, lacking no antiquity, hath from time to time continually sought to burst out, and in some places hath prevailed, although in most places through the tyranny and malice of men, Christ's proceedings have been suppressed and kept under from rising, so much as men's power and strength, joined with craft and subtilty, could labour to keep down the same." It deserves to be observed, as indeed it has not failed to be, that the course of events was at this time so ordered, as to divert the general attention from religious controversies to civil commotions; and to make the nation forget the stake while crowding around the standard. "This good was done by the civil war (of York and Lancaster); it diverted the prelates from troubling the Lollards; so that this very storm was a shelter to those poor souls; and the heat of the intestine enmities cooled the persecution against them." But with the restoration of internal peace, by the establishment of Henry VII. on the throne of England, the fires of persecution began to blaze again; at the same time furnishing proof, for the sake of which principally we allude to them, that the sufferers were regarded with earnest sympathy and affection by multitudes who privately embraced the same sentiments. A striking instance of this is supplied in record of the execution of Joan Boughton, widow, (in 1494), and of what took place at this time. This woman, who had come to fourscore years and more, was a convert to the opinion of Wiclif, and under that special charge was brought to trial for heresy, and being convicted, was surrendered to the civil power, and endured the punishment of the fire; in the midst of which she cried to God to take her soul into his holy hands. The very fact of its having been thought necessary to proceed to supply flagrant proof that the contagion of such opinions was greatly dreaded. Unless there had been a very prevalent disposition among the people to look upon them with too much favour, assuredly the clergy might have been satisfied to leave this aged woman, obstinate fanatic as they might deem

her, to employ the short remnant of her breath in an endeavour to gain converts. If there were danger of her succeeding in this, (as her execution manifests it to have been felt that there was,) that danger must be traced not to her ability so much as to the predisposition then reigning among the people, to listen with eagerness to even the feeblest agent appealing to their most cherished spiritual convictions. And that this propensity did very widely prevail we gather from a circumstance recorded by the historian, that the night after she was burnt, the greater part of her ashes were conveyed away by such as had a love unto the doctrine that she died for.

At the time of this occurrence Crammer was no more than five years of age, (having been born on the 2nd July, 1489), and therefore came not into the world until the seeds of the Reformation had been plentifully scattered, and had taken deep root; and had borne much fruit, which sprung not from the culture of his hand. In the year 1512, he was appointed reader or lecturer of Buckingham College, (now Magdalen), at Cambridge. At this period, we have the testimony of Erasmus, the spirit of learning and free enquiry had been awakened in that University, and it was encouraged and practised by those (of whom Crammer was one), to whom the name of *Scripturist* was popularly attached. It is scarcely necessary to explain that this had its origin in their practice of appealing in their lectures and other University exercises, to the written word of God, and not to the sentences of the schoolmen, by which that word had long been made of none effect. A slight comparison of dates will prove incontrovertibly that the impulse towards a reformation in religion in England was not derived from Crammer or from Henry VIII., but had prevailed during some centuries before either of these was born, and had been continually extending itself and gathering strength. A second conclusion equally indisputable is that Crammer's religious views did not derive their character from Luther, who was but six years his senior; and in the same year in which the lecturer of Buckingham College began to gather around him a crowd of students to be enlightened in the knowledge of Scripture, the monk of Wittenberg was crossing the Alps on his embassy to Rome as a representative of seven monasteries. Even six years later, Luther, according to his own statement, "was a monk, a papist of the maddest," prepared, he says, to put to death without pity or compunction any who should have the audacity to refuse the smallest act of obedience to the Pope. It is more than probable that at this time (namely, when the commotion arose on account of the flagrant abuse of indulgences) the views of Crammer were even in advance of Luther's. If they afterwards proceeded upon parallel tracks their paths were quite unconnected and independent, until the principles of each were so confirmed that neither of them could owe the first impression to the other. Crammer at Cambridge was placed in an element in which the ingredient of Anti-Romanism was continually becoming more predominant, as will be manifested by the mention of some who were his fellow-labourers and helpers at a time when Luther's doctrine had not been heard of beyond the circumference of his own personal intimacies; if indeed he had so early as this admitted, even in his own thoughts, any such conclusions as could be said to constitute a distinct form of doctrine. But in the English University, contemporary with Crammer, were many men of rising or established reputation, thoughtfully bent on an endeavour to reclaim the doctrines of the Church from the deplorable perversions to which a disregard of the controlling authority of Scripture had given rise. Among the principal of these was George Stafford, elected in 1515 fellow of Pembroke Hall, where are still preserved the Old and New Testament in Hebrew and Greek which he bestowed upon the college-library for the better guidance of the members in the study of divinity. He is eulogized as having been the first who read lectures out of the Scriptures. He held in Pembroke the same office which Crammer filled in Buckingham College, that of Reader or Lecturer in Divinity. Associated in his college with Stafford were Nicholas Paynel, Lecturer in Mathematics, and John Thixtel, University Preacher; these were all men of ability and erudition, and of corresponding weight in the university, wherein they strove indefatigably to extend their religious principles and impressions. It was necessary, as yet, to proceed with caution; in proof of which it is traditionally recorded that the favourers of those opinions were accustomed to meet, for the purpose of free discussion, at a house called the White Horse, in which there was access from the back of Queen's, King's, and St. John's Colleges, enabling such as came from these to enter unperceived into the place of assemblage. There

seems little reason to doubt that Stafford, Thixtel, and Paynel, with whom Thomas Allen, another member of the same college, was afterwards associated, laid a very deep foundation of Christian knowledge in the university at large. Among their disciples were Ridley and Bradford (both fellows of Pembroke Hall, and martyrs), Bilney, of Trinity Hall (also a martyr), Coverdale, and many others, including Hugh Latimer, of Christ's College, the partner of Ridley's doom. This eminent sufferer for the Gospel's sake was the special convert of Stafford. "It pleased God to call him unto the knowledge of the truth of God's Holy Word by the godly lecture of divinity read by Mr. George Stafford in the university school, and 'of a Saul made him a Paul'; that is to say, having been so blinded with zeal for the principles of the papistical faith as to go into the school for the purpose of making an oration to the students, dissuading them from this kind of new-fangled study of the Scriptures (to which he observed them continually more inclined), he was so mercifully called to the contrary that he preached afterwards daily in the university to the great admiration of all who had aforetime known him of a contrary severe opinion." Most of these whose names are here enumerated were thus imbued with a love of truth, and some acquaintance with it, at the very time that Crammer's mind was undergoing, beneath a similar course of study, that discipline which prepared and qualified him afterwards so effectually to serve the cause of the Reformation. It is therefore a mistake to suppose that the movement which was but at the same moment commencing in Germany could have given the primary impulsion to similar proceedings in England. It is very true, as is observed by Burnet, that "as these things did spread much in Germany, so their books came over into England," where unquestionably they were greedily received and sought after. But the historian himself proceeds to acknowledge that "there was much matter here already prepared to be wrought upon, by the opinions of the Lollards, which had been now in England since the days of Wiclif, for about 150 years;" and "before Luther had published anything against the indulgences. Indeed the almost innumerable instances of compulsory recantations recorded by Burnet, Foxe, and Strype, afford clear proof of the extent to which those opinions had reached; and the dates of those cases extend from 1509, the first year of the reign of Henry VIII., to 1529, the era of Crammer's first introduction to the King's acquaintance. The statements, extracted from the episcopal registry, as to the points of faith which the accused parties acknowledged to be held among them, while they confirm to the full the prevalence of a very general repudiation of the doctrines of popery, exhibit no less distinctly many marks of a crude private judgment, unchastised by the slightest deference for the just authority of the Church in controversies of faith, or in the interpretation of Holy Scripture. It must be admitted to have been providentially ordained, that while the light of truth was thus making progress extensively through the nation, a class of men was rising up in the universities who, at the decisive moment being accepted as the leaders of this movement, had ability and influence enough to have the cardinal points of Catholic belief incorporated in their new confession; at the same time that those incipient errors, which were floating in the Lollard scheme of doctrine, were expelled from intermixture with the Reformation as it finally settled down into the form which still exists. For this we are indebted in a great measure to the learning and judgment of Crammer; but, in some instances, to the better modelled views of doctrine entertained by those who were associated with him in his task, and who, endowed with more vigour and comprehensiveness of judgment than their great leader possessed, saw with more clearness than he the true law by which their proceedings ought to be governed. They concurred from the outset in the fundamental principle of true religion, that holy Scripture contains in itself all things necessary to salvation, and ultimately were no less unanimous in deciding that in determining the Articles of the Faith, the proper test upon disputed points lay in an appeal, not to the private judgment of each separate individual, but to the concurrent sense of primitive antiquity; the genuine voice of the Catholic Church. With respect to the share which the Sovereign's interposition and authority had in the introduction and progress of this memorable work, it can scarcely be affirmed that he did more than clear the way for the operations of the Reformers by that expulsion from his dominions of the supremacy of Rome in which his real motive may probably have been no other than a view to his own gratification. But admitting his motives to have been as gross in character as the most thorough-

paced of papal controversialists has ever represented them to be, this would afford no just ground for detracting from the character of the Reformation. The will and principles of Henry exercised little or no influence upon that character. He was indeed an agent in the work, as it is probable that the true authors of it could scarcely have proceeded in it, had he not been so seasonably raised up to afford them the opportunity. That he himself had not embraced the principles of the Reformation, but continued to the time of his decease a steadfast adherent to the Romish faith, is unquestioned; and upon the most important points he certainly agreed more nearly with More and Fisher, whom he beheaded, than with Crammer, whom he advanced to an Archbishopric.

Here then we terminate this imperfect summary of the events which prove that a very general desire for a reformation of religion had pervaded our country many ages before it was accomplished. We purpose, if it please God to afford us the opportunity, to extract from authentic records a corresponding summary of the principal tenets maintained by the Reformers in opposition to the creed of the Church of Rome. This we shall endeavour to arrange chronologically, so as to form a *catena* of opinions from which will be manifest to what extent the doctrines which first began to excite general attention in the reign of Edward III. corresponded with those which were finally and authoritatively adopted by the Reformed Protestant Church of England, as it is now by law established.

It may not be inexpedient to remark, in conclusion, that few attempts have been less successful than that which the Roman emissaries have so perseveringly made to call in question the truth and purity of the tenets of our Reformation by blackening the characters of those whom they represent to have been the authors of them. To this endeavour we may oppose several replies. First, we say that the persons on whom they strive to affix so many foul blots (as Henry VIII. and his contemporaries), were *not* the authors of our Reformation, but that every principle which was contended for and secured at that period of our history had been maintained by multitudes whose lives were unstained by crime, and whose deaths in the fires of persecution were genuine martyrdoms in defence of God's truth. Secondly, the charges which the papists alleged against the reformers were for the greater part shameless misrepresentations; and Thirdly, even if those charges had been proved to the fullest extent, they would determine very little as to the character of the controverted doctrines. Unquestionably every religious system is greatly recommended by the innocency of the lives of its professors; but this is not the sole criterion for determining what is truth. Were it so, the cause of Romanism must suffer more deeply than any other religious system could, by being made answerable for the faults of its principal supporters. It is undeniable that among the Popes themselves have been instances of vice and immorality that were perfectly monstrous. Now the fundamental principle of the Roman system is, that the entire maintenance, preservation, and perpetual continuance of their religion is involved in the person and office of the Chief Pontiff. If then they acknowledge it to be not inconsistent on the part of God to *uphold and preserve* Christianity through the agency of wicked men superintending the affairs of the Church, what greater degree of inconsistency can there be in supposing that He may in like manner employ the agency of wicked men for the purpose of reforming Christianity, or restoring it from a corrupt condition to the state of its primitive purity? If the one may happen, as has been the case according to the admission of the Romanists themselves, why might not the same thing take place in our case, without being necessarily followed by the conclusion that the doctrines of the Reformation must be erroneous? We say they are agreeable to the word of God, and to the genuine voice of the Church; and that they could not be proved to be otherwise even if they had been brought again to light by bad men. But that their first professors were bad men we steadfastly deny. It seems, indeed, impossible, in the ordinary course of events, that any religious reformation should be accomplished except through the agency of such as have been brought up under the shade of the corruptions which are to be removed; and, so far as vice or error may be justly imputable to those parties, it would be more fair and reasonable that the discredit attached to their characters should belong to the system under which their opinions and principles were formed, rather than to the profession which they enter upon at a later period. Admit that Henry VIII., for example, were gross, tyrannical, and capricious; was it the Reformation, we may ask, which made him so? and with what

degree of fairness can those qualities be turned to the discredit of the Reformation which the Reformation could have had no share in producing? There is much penetration and truth in the remark of Bishop Warburton, which may be quoted for the purpose of putting this much misunderstood question in the proper light. "When a reform happens to arise from within, it cannot be supposed to have its birth in a love of truth: hardly in the knowledge of it. Generally some oblique passion gratifies itself in decrying the grosser corruptions supported by, and supporting those it hates. The machine thus set a-going, truth has fair play: she is now at liberty to procure friends and to attach them to her service. This was the course of things in the revolution we are about to speak of, and is the natural rise and progress of religious reformations in general. For if in the state of such established error, Providence was to wait till a love of truth had set men upon shaking off the bondage, its dispensations could never provide that timely aid which we now find they always do to distressed humanity. For when the corruption hath spread so wide as to make truth, if by chance she could be found, an object of indifference, what is there left to enable men to break their fetters, but the clashing interests of the corruption itself? And it is knowing as little of the religious as of the moral course of God's Providence to upbraid those who have profited of this blessing with the baseness of the instruments that produced it."

\* ERRATA.—p. 68, col. 3, last line but one, for *divisively* interpreting, read *diversely*; interpreting: p. 69, col. 2, line 31, for a useful, read an awful.

## THE PRESENT STATE OF PHYSICAL SCIENCE.

(Abridged from the Quarterly Review.)

IN the consideration of the spirit and methods of science at the present period, there are two points to which we are solicitous to draw the attention of our readers.

The first of them is, the tendency and effect of present research to pursue, by direct experiment, those more subtle elements and occult relations of the material world, which heretofore have been chiefly the province of speculation and uncertain theory—the aspirations rather than the realities of science. The earlier experimentalists on light, heat, electricity, and the magnetic powers, penetrated partially indeed into these more obscure domains; and, as respects electricity more especially, even the dawning of our knowledge disclosed facts which could not but be received as the signals of future and more profound discovery. The electric stream brought down by Franklin from the thunder cloud, was in some sort a harbinger of the electric telegraph—that marvellous invention of the present day, by which human thought and intelligence are conveyed from place to place with a rapidity which human imagination cannot follow, and which human reckoning almost fails to express. In like manner, even the earliest researches as to light gave cause both to reason and fancy to look for ulterior results regarding this great and mysterious element, which, if not "telling its fountains," might yet disclose new properties and actions, and expound the nature of some of its mighty influences in the universe that surrounds us. And it is equally obvious that all such direction of science into the higher elements of the material world must, even from the outset, develop connexions amongst them, before unknown, or seen only through the dim light of analogy and conjecture.

While admitting, however, this constant and natural progress of physical knowledge from simpler truths and relations to those more recondite and universal, we must still contend that the sudden and remarkable extension of these methods of research within the last forty years, their better definition as principles of inquiry, and the vast results and wider generalizations which have arisen from them, constitute a distinct era in the history of science, which it is probable will be more clearly recognized hereafter than by ourselves. In this, as in other matters of literature as well as physics, the present time is so encumbered with details, and occupies so disproportionate a space in our minds, that it becomes difficult to detach and designate the great marks set upon our generation, or to affirm what will remain behind for the judgment or applause of posterity.

It would be interesting and instructive to note in detail, those particular events in each science which fulfil the conditions we have stated, and mark in some sort to each the commencement and character of the present era. A few such notices we put down as illustrative to our readers of the general view, and not designing to fill up the crowded picture of this period. *Erigurem tempus, si compules annos; si vices rerum, acum putes.*

Taking chemistry, then, as our first instance, we may rightly date the commencement of this era in the great discovery of the law of definite proportions, mainly due to Dalton, extended and better defined by Wollaston, Berzelius, and succeeding chemists. The attainment of this law has changed the whole course and aspect of the science, and especially given new and enlarged bases to the doctrine of chemical affinities. It may be fitly viewed as one of the greatest inroads made by man into the recesses of nature; and the knowledge so gained has this further condition of grandeur,—that it assumes a mathematical exactitude of proof, furnishes direct anticipation of results yet to be obtained, and methods the most perfectly fitted for obtaining them. The law of Isomorphism, due to Mitscherlich, and its modifications by Berzelius and Dumas, are corollaries from this higher principle, and related to it as all great truths are one to another. The late rapid progress of organic chemistry has been derived mainly from the same source: as also the recent doctrine of compound radicals, which if it be not itself a permanent truth, is assuredly one of the happiest of intermediate devices for attaining such. In concurrence as to time with this discovery, and scarcely less important in their influence, are Davy's researches on the chemical agencies of electricity, disclosing a vast and fertile field of inquiry; affording new and more subtle methods of analysis, as speedily proved by the decomposition of the earths and alkalis; and above all, interesting in the development of one of those great elementary relations to which we have alluded characteristic of the present state of science,

viz., the connexion between chemical actions and electric forces. We might further speak here of the ascertainment of the true nature of chlorine by the same eminent philosopher, and of the later discovery of iodine and bromine—elements which, from their presence in minute proportion in the waters of the ocean all over the globe, exemplify a principle largely developed in modern chemistry, viz., the effect of small quantities in composition. Other discoveries might be mentioned, having the same general character; such as the singular class of phenomena depending on what has been called catalysis—the reduction, by compression and cold, of various gases to the liquid or solid form, &c.; but the instances already given are enough to substantiate our statement of a period of rapid progress and higher generalizations throughout every part of chemical science.

In Electricity, the great discovery of Volta, combining new principles of action and power with new instruments of research, is little separated by time from the events just noted. An interval, prolific in results from this discovery, was followed by the sudden disclosure of another and equally remarkable class of phenomena, closely allied to the former, but by the happy suggestion of the discoverer, (Ersted, pointing out an untrodden path, which was instantly and eagerly pursued by men of science in every part of Europe. These researches, while evolving in their progress the new subject of electro-dynamics, led further to one of those great general results of which we have spoken—the identification of the electric and magnetic forces as one element, or the reduction of all magnetic power to the action of electric currents upon or within certain forms and qualities of matter. This discovery ranks in the same high class as that just mentioned, of the connexion of electrical and chemical forces, which in Faraday's hands has been raised to the expression and proof of identity: thus reducing to one element of action (if we may be allowed such a phrase) what were before received as three—a result to which we will admit that some links of evidence are still wanting, but yet explicit and certain enough to be fitly recorded as one of the great triumphs of modern science. The further determination by Faraday, of the identity of voltaic and animal electricity with that of the machine, and his researches relating to electric induction, electrolytes, and the definite measurements of electric power, all denote the same progress towards more general laws, and a closer concentration of knowledge on this subject.

In Optical science, the discoveries of Young, Fresnel, Malus, Brewster, and others scarcely less eminent, as to the diffraction and interference of light—double refraction and polarization in its several forms and incidents—the phenomena connected with the optical axes of crystals, and other properties of this great element—gave a sudden impulse and new directions to the inquiry which the genius

of Newton had originated. The undulatory theory of light, fortified by these discoveries, became the means of carrying them yet further; affording anticipations of unattained results—as in the case of the conversion of the plane polarization of light into the circular—which it was the province of the most refined experiment to justify and realise. And when Arago found it possible, through certain phenomena of polarized light, to determine, by a mere fragment of Iceland crystal, whether the light of comets is their own or not, and whether that of the sun is from its solid body or a gaseous envelope around it, it was evident that we were entering into the midst of principles and relations of the highest order. About the same time the several phenomena of the solar spectrum, ascertained by the elder Herschel, Wollaston, and Fraunhofer, laid a foundation for those more extended and delicate researches which have rendered the investigation of the solar beam, in its whole complete constitution, but particularly in its chemical relations and application to photography and thermography, one of the most interesting problems in physical science, the complete solution of which is yet reserved as a triumph for future inquiry.

In Astronomy, after Laplace had already completed the general theory of the solar system, by reducing all the known planetary perturbations within the Newtonian law, the science received a new direction and fresh vigour through the sublime discoveries of Herschel among the nebulae and double stars; involving elements of number, space, and time, which, to borrow the words of Pascal, "*l'imagination se lasse plutôt de concevoir que la nature de fournir.*" Scarcely, indeed, did they obtain entire assent until attested and extended by his son Sir J. Herschel, and other eminent astronomers, among whom Bessel and Struve stand foremost. The discovery of periods of revolution, in elliptical orbits, among the double and multiple stars, extended at once the common law of gravitation to those remote regions of space, and enabled science securely to penetrate where the hardest fancy has no power to follow. These revolutions (offering even eventual methods for determining the distance of such binary systems from the earth)—the proper motions of other stars, including our own sun, in the field of space—and the various forms and changes, whatever they may be, of the nebular systems—open out vast objects to future astronomers,—“things,” as Bacon says, “which may be done in the succession of ages, though not within the hour-glass of one man’s life.” While thus briefly noting them, we cannot wholly omit that signal triumph of the time in which we are writing—the discovery of a new and more distant planet in our own system; not by some happy accident in sweeping the heavens with a telescope, but as the happier result of a consummate calculation on the progressive disturbances

in the motions of Uranus; requiring to *satisfy the strict law of gravitation*, a disturbing body *acting from without*; and indicating from the nature and amount of the disturbances not merely the existence, but also the direction, distance, and mass of the yet unseen globe. Though not himself the first discoverer, the event occurred in the Observatory of Encke; a name attached to the comet whose short and accelerated revolutions—by making probable the existence, in the solar system at least, of an ætherial matter occupying space—have added one more to those general deductions which belong to the period before us. All these things are evidence that astronomy, while reaching earlier than other sciences to many of these great conclusions, has participated with them in that impulse towards still higher inquiry which we have described as marking the present era.

In Geology, again, to carry our illustrations a step further, the doctrine of Hutton, so ably developed by Playfair, and the controversy which ensued between the partisans of the igneous and aqueous theories, gave a sudden stimulus to the science, though far inferior in degree and permanence to that derived from the labours, concurrent as to time, which have rendered the name of Cuvier illustrious to posterity. His discoveries in fossil remains, given to the world in the spirit of true philosophy, were the robust germ of a science which has since grown with unparalleled vigour, forming at this time one of the most wonderful attainments in the circle of human knowledge; inasmuch as it deals with conditions of change of organized life all over the earth—the extinction of old genera and species, and the creation of new—with periods of time, and changes of form in the solid crust of the globe, too great to be measured, save in the latest period when man first appears as a tenant of its surface;—yet in the indications of order of succession, and general character of these revolutions, scarcely less perfect in evidence than those experimental sciences to which we lend our firmest belief.

We might readily pursue our illustrations further were it necessary. In Physical Geography, for instance, the travels and various writings of Humboldt, about the period in question, greatly enlarged the scope of this inquiry; multiplying and combining the objects of research so as to give it all the energy of a new branch of science; capable of larger generalization, and connecting itself with every other department of human knowledge. We might further speak of the various discoveries regarding Heat, as it comes to us in the solar ray—as it exists in planetary space—as it is present in the interior of the earth,—and as it acts, or is acted upon by the various forms of matter, in reflection, absorption, radiation, conduction, polarization, &c.;—researches begun by Black and Leslie; extended under high mathematical formulæ by

Fourier; and by the elaborate experiments of Dulong, Melloni, and others, carried forward to new and unexpected results. We might yet further allude to the Physiology of animal and vegetable life, where the attainments have been equally remarkable; bringing all sciences to bear upon vital phenomena—better defining the types of form and structural development—substituting cellular for vascular action in embryology and the formation of tissues—applying chemistry to objects and through methods heretofore untried—classifying anew the structure and functions of the nervous system—and from every side approaching to that mysterious line which it will probably never be given to human power to traverse.

But we think it hardly needful to go further in proving the position we have laid down, or in marking by other instances that sudden and enlarged impulse of discovery which in each particular science, and about the same period, carried men forward to inquiries more searching and profound than heretofore, establishing at the same time relations and connexions throughout every part of the material world, far more intimate and universal than had been surmised by the highest genius, or most ardent imagination of former times. Thus, while the circle of physical knowledge has been rapidly and widely extending itself, the sciences and objects it embraces have been ever acquiring greater concentration and unity; pressing inwards to certain common principles and laws, the further development of which may be regarded as one of the highest purposes, and most legitimate rewards of future inquiry.

The second great mark set upon science at the present day, is its *increased and still increasing exactness in all methods of research*; and as a necessary effect of this, the much greater precision and truth of all the results obtained. We may safely affirm that there is no branch of experimental science in which the results of any experiment made fifty years ago would now be received without repetition, no observation of natural objects, either by the eye or other instruments, made at that time, which has not been found to require revision; and we may equally affirm that the instances are exceedingly rare where such repetition and revision have not altered, more or less, the nature or amount of the results, often to so great an extent as to affect all the more material conclusions thence deduced. To the mathematical sciences of course this comment does not equally apply; but even here the greater exactness as to all facts and phenomena furnishes a much sounder basis for the processes employed.

What we have just stated will be recognised by men of science; but we are not aware that it has ever been put forward in such explicit form as the subject might well warrant. For an exposition of this kind, carried throughout all the physical

sciences, would be exceedingly valuable as a part of the history of human knowledge, or even of the human mind itself, in those various conditions of change it has undergone in the progress of ages, and in the distribution of men over the countries of the earth. The topic, in fact, embraces the principles and application of *evidence*, as concerned in physical research—a matter singularly curious and instructive in its history; and like every other part of the law of evidence, as received and applied in the affairs of mankind, furnishing a sort of index to the intellectual state of any given age or country.

For the disparity which manifestly exists in different minds in the perception of what are the proofs of truth, exists also in nations and communities of men; a fact variously attested to us, and in no example more distinctly than in the history of physical science, whether speculative or experimental. Much curious illustration might be given from the writings of Greek and Roman philosophers, as well as from the more familiar sources which make known to us the opinions and superstitions of their times. Some men, indeed, like Archimedes, stand apart from, and above all rule. But as a general fact we find, even in the best periods of antiquity, a singular want of all just perception of evidence in the observation of natural phenomena, strikingly contrasted with the urgent requisition for it in our own time—how far, in the case of the Greeks, owing to their peculiar vein of scholastic philosophy, to the influence of language, or other causes, we cannot now stop to inquire. During the intermediate ages, down to the very time of Bacon, little improvement occurred, or was to be expected under the circumstances concurring to prevent it. The subsequent progress, though slow perhaps, yet has been determinate and uninterrupted down to the period of which we are now treating. Since this time the change, as to all that concerns the exactness and strict demonstration of science, has been such in amount, and so rapid, as to justify the same brief illustration of this second characteristic mark of modern science which we have already given of the former. And to this we now proceed.

Recurring first then to chemistry—how wonderful is the difference between an analysis of the time of Bergman and Fourcroy, and one of the present day, coming from the hands of Berzelius, Mitscherlich, or Liebig! The chemist is now bound to render back as the weight of the constituent parts, be they solid or gaseous, what he receives as the weight of the whole. In the analysis of any given compound, instead of a rude per-centage of ingredients, with a large amount set down under the head of *loss*, he fixes the relative proportions with an exactness which is at once aided and attested by the great law of definite proportions, giving a mathematical character to the result. While what was once vaguely regarded as

loss, is now made to yield its contents; including, as often happens, minute fractional quantities of substances, heretofore unknown, yet essential, it may be, to the nature and integrity of the compound. The actual state of analysis, as applied to organic matters, is the most recent triumph, as well as the best example of the case we are stating,—an application still in progress, evolving every day new methods and higher refinements, and leading us nearer, not indeed to the nature of vitality, but to the power and processes through which it operates in the world around us. Physiology, aided by these new chemical resources, and by the increased power and delicacy of the microscope, is not merely enlarging its boundary, as already shown, but attaining at the same time an exactitude of results—far short, doubtless, of future knowledge—yet much greater than any hitherto possessed.

Let us take Meteorology as another example—a part of our knowledge still very imperfect, from the number of elements conjointly concerned, and the complexity of all the phenomena, yet how entirely altered from its state forty years ago! With instruments far more perfect, and at innumerable stations over the face of the globe, the most minute and authentic registers are now kept of the weight, temperature, and humidity of the atmosphere—of its electrical and magnetic conditions—of the direction, velocity, and duration, of winds—of the quantity of rain falling—and of the meteoric phenomena which more irregularly affect our planet, either from causes proper to itself, or from external agents in its orbital progress through space. It is in this part of science that the system of averages is chiefly instrumental in furnishing results. The number and precision of observations become therefore, of the highest consequence; and no one can duly appreciate the progress as to these points who has not compared the tables now constructed, with the vague and limited registers of weather which once formed our sole meteorological knowledge.

The same remark applies to Physical Geography at large. In the early part of the century it had scarcely become a branch of knowledge; now, as we have before stated, it ramifies itself through all; its objects enlarged and defined; its results, whether relating to surface, climate, productions, or other physical phenomena of the globe, increasing every day in number and exactness. We have already spoken of the great influence Humboldt has had in this department of inquiry. The strong vein of his talent, as of his actual labours, lies in this direction. A happy instance of it may be found in one of his more recent memoirs on the mean height of continents, and their centre of gravity, as influenced by mountain masses and chains. His other writings, and particularly his latest work, the *Cosmos*, abound in similar illustrations, all expressing a state of knowledge more special, exact, and minute.

In connexion with the same general

view, we may mention the pendulum observations of Sabine—the records of terrestrial magnetism, as derived from observations in every part of the globe—and the recent researches of Whewell and Lubbock on the tides, as examples of the ever-growing demand for exactness of results, obtained by more perfect instruments, and from averages of greater mathematical value.

Of the rapid extension of knowledge, depending greatly on increased exactness of research, Zoology furnishes a striking example. The new classification of the animal kingdom by Cuvier gave at once fresh stimulus to discovery, and a better basis on which to repose it. Such have been the zeal and enterprise of naturalists—favoured, indeed, by facilities of travel before unknown—that within the last twenty years the number of distinct species, collected and classified, has been nearly doubled in each class. We might particularise the ratio of increase of each, but will merely state as instances, that the Mammalia numbered in 1828, by Cuvier and Desmarest, at 700, now reach nearly 1200—the Fishes, estimated somewhat earlier by Lacépède at 2000, are now increased to about 8000—while the Insects, calculated by Humboldt, in 1821, at 44,000, have at this time reached the amount of more than 100,000 collected species! A profuse variety in the forms of animal life, scarcely less confounding to the imagination than are the numbers by which we measure the heavens, or record the velocity and vibrations of light. We might draw from the progress of Botany instances not less remarkable, did our limits allow of such detail.

In Geology we find the expression of a similar and equal change, principally due to palæontology, as a part of the subject. The study of fossil remains, to which we have already alluded as one of the greatest steps of modern science, has removed endless ambiguities and errors in the theory and classification of rocks. Connexion or identity, as to age and relative position, can be determined by this means for strata in remote parts of the world, even where all other marks of external resemblance are wanting. The recent recognition and classification of the Silurian system by Murchison, an important step in Geology, is derived chiefly from this source; and equally so the division of the tertiary formations proposed by Lyell—provisional, it may be, but founded on a rational basis, and rendering all future observations more easy and precise. A good economical example to our purpose may be found in the present exact knowledge of the carboniferous system, precluding hereafter any ignorant and expensive search after coal where none worth working can ever be found.

In Astronomy again, though exact observation began earlier than in other sciences, and, aided by the powers of the higher mathematics, attained wonderful results, yet have they been greatly ex-

tended and rectified by the more powerful and perfect instruments of the present time. The working astronomer has been sedulous in discovering causes of instrumental disturbance; and providing against them by artifices of precaution, which would seem almost to have reached their maximum of refinement. The great achromatic glasses of Munich (why not of London also?) by their signal excellence have given a power of penetration into space, to which we owe some of the finest discoveries. While the gigantic reflector of Lord Rosse, fashioned in its details with the delicacy of the microscope, has never yet been directed to the heavens without disclosing some new fact, or correcting some prior observation. *Cœli munimenta perripuit.* To this great perfection of instruments are due such observations as those which have recently determined the parallax of certain fixed stars—the proper motions of others, including our own sun and his system—the periods of revolution of double stars—the existence and perturbations of the five telescopic planets between Mars and Jupiter—and, as a rare example of refined research, the perturbation of the mean motions of the Earth and Venus, from the inequality of their periodic time, discovered by the Astronomer Royal, thought not exceeding a few seconds in amount.

There is no part of physical science, in fact, in which observation or experiment are concerned, where the same progress in perfection of instruments has not occurred. Space, time, force, motion, and weight, however expressed in the phenomena of nature, are all determined with far greater precision; and sources of error recognised and removed which heretofore were unknown or disregarded. When even the simple spirit-level has undergone various improvements in our hands, it may well be understood that the microscope, the pendulum, the instruments for measuring terrestrial magnetism, for analyzing the subtle and complex phenomena of light and electricity, and for indicating the several conditions of the atmosphere, have been the subject of still greater change and improvement. And not merely this, but the progress of discovery itself, and the larger and more direct application of science to arts and manufactures, have placed in our hands instruments altogether new, and capable of attaining new classes of results. We may cite, as a remarkable case in point, the thermo-electric pile, which Melloni and Forbes have made a means of measuring degrees of heat hitherto inappreciable; and of determining other properties of this great element before unknown; and which, in their approximation to the phenomena of light, became of high interest to philosophy. We will mention another singular instance. Though astronomy, through the transit of Jupiter's satellites, had shown the velocity of light, what but the exact resources of modern science,

vesting themselves in the most ingenious combinations, could have enabled Wheatstone to assign a comparative measure of speed to the electrical current, designating thereby those enormous velocities of which the electric telegraph is at once the exponent and the practical application?

In alluding to the connexion of physical knowledge with the arts of life, we cannot pass over the steam engine in its various forms, as the transcendent instance of what has been attained in the perfection and practical uses of machinery. At first a comparatively rude and powerless application of a natural agent, it has now, by a consummate adaptation of parts, and the removal of all that can impair or disturb its action, become the most powerful, as well as most certain and controllable minister of man, carrying him at the speed of fifty miles an hour along his railroad, stemming the wildest storms of the Atlantic, draining the deepest mines, and converting the great Lake of Haarlem to dry land, or giving continuous and orderly motion to the complex myriads of wheels which perform the work of a Manchester cotton mill. Familiar as these things now are to our daily view, they would have served as materials for the fairy tales of our forefathers; and in every point they singularly exemplify what we are now describing, viz., the great power which man has gained over the natural world and its most uncontrollable elements, by the variety of combinations and exactness of methods which are the characteristic of modern science.

We have dwelt much longer than we intended on these two topics; but we think the digressions will be justified to our readers by their intrinsic interest, as describing very remarkable changes in the extent and state of physical knowledge, and in the intellectual history of man. Linked together, as all the physical sciences are, by a chain of common truths, which is ever gathering more closely around them, yet is electricity foremost perhaps in its intimate connexion with all, absorbing some, as we have seen, expounding others, and developing actions and principles which from their universality give certain promise of disclosing other relations yet unknown and unsuspected. What results, for instance, may we not fairly anticipate from the principle of polarity, supplied as a basis of future inquiry to the different forms of matter and action around us?—a principle first brought into clear light by what may now be termed the electric currents of the magnet developed in every other part of electrical research, and now extended, under modifications which do not exclude the notion of unity of source, to the elements of light and heat, and to endless conditions and combinations of matter over the globe. All that belongs to chemical affinities, and to the phenomena of attraction and repulsion, will probably in the end merge in some common expression of this nature; and if future inquiry should resolve into a truth the theory of Æpinus, extended and

vindicated by the higher mathematics of Mosotti, that gravitation itself is but a residual force—a balance of attractive power arising out of definite atomical actions of attraction and repulsion among the molecules of matter and the electric element, severally and mutually—then do we at once extend the same principle throughout all known space, the highest attainment, it may be, and ultimate limit of our knowledge of the natural world.

TO THE EDITORS OF THE "SYDNEY GUARDIAN."

GENTLEMEN,—In compliance with your general invitation, I send you a paper hastily written, amidst other occupations, on the subject of Conchology, and I sincerely wish the *Guardian* may obtain an extensive circulation.

I remain, &c.,

K.

17th October, 1848.

#### CONCHOLOGY.—No. I.

Nihil inane, nihil vanum, nihil supervacaneum, in natura.—BACON.

Some centuries have passed since it was asserted by the immortal Bacon, that in the works of nature there can be found nothing which is either useless, or foolish, or superfluous. And indeed when we consider the Author of Nature, the great Creator of all things, and when we reflect how impossible it would be for infinite wisdom to occupy itself in works to which any of the above characters could apply, we may well record our agreement with the apothegm of the philosopher.

In truth, all the works of nature may be simply regarded as so many different methods, in which the all-wise Creator intends to convey some idea of his majestic attributes; and we cannot doubt but that the most minute, as well as the most stupendous of the works of God, were designed, and are calculated, to glorify Him who made them all. Man was, beyond dispute, created for this very purpose; and if we consider his animal frame, we shall see many proofs of the wisdom and beneficence of him who made him. And in a still higher degree, the history of his Redemption exhibits to himself and to angels, the love and mercy, the justice and sovereignty, of his great Creator.

The display of the different attributes of God being one of the objects of creation, it is a duty incumbent on all who have the power, to examine the proofs therein afforded. And man, being endowed with a rational mind, which has not been given to other animals, may and should exercise that mind in learning these lessons which creation was intended to teach. While studying, therefore, the works of God with a desire to glorify him, and to perceive the marks of his omnipotence, he is but fulfilling one part, and that not an insignificant part, of the great end of his living. "Do, you ask," wrote one who found peculiar pleasure in studying the wisdom of God in creation, "what compensation you will obtain for the time and labour which may be bestowed upon such studies? I answer that you will be sufficiently rewarded by those pleasures and gratifications in themselves innocent and honourable, which arise from the contemplation of the works of God."—(Ray.) Similar was the idea of Milton:

Thy desire, which tends to know  
The works of God, thereby to glorify  
The Great Workmaster, leads to no excess  
That reaches blame, but rather merits praise  
The more it seems excess.  
For wonderful indeed are all his works;  
Pleasant to know, and worthiest to be all  
Had in remembrance always with delight.

A poet who lived many ages before the English bard, had declared "The works of the Lord are great; sought out of all them that have pleasure therein." St. Paul also, in the beginning of the Epistle to the Romans, declared that the Gentiles, who knew not God, were "without excuse," for although they had not the light afforded by Revelation, they had before them the works of creation; and from these works the "Eternal power and Godhead" of the Creator might have been "clearly seen;" "being understood by the things that are made."

It is remarkable also that when God would declare to Job his own majestic sovereignty and power, he did so by referring to two of his creatures, Behemoth, and Leviathan. Whether by Behemoth, we may understand a Rhinoceros or a Hippopotamus, and whether Leviathan means a Whale or a Crocodile,

is not the present question. Doubtless the animals here meant were known to Job by these names. My purpose in referring to the description of them in the 40th and 41st chapters of the book referred to, is to show by the highest of all authorities, that we are treading on no uncertain ground, when we appeal to the works of creation to prove various of the attributes of omnipotence.

Solomon's knowledge extended from the "cedar, which is in Lebanon, to the hyssop which springeth out of the wall. He spake also of beasts, and of fowl, and of creeping things and of fishes." I know not whether the subject upon which I am about to write, may be considered as included among the creeping things, and therefore known to that wisest of men; but of this I am sure that if God himself endowed him supernaturally with such extended knowledge of the works of nature, as the passage above quoted leads us to suppose that he possessed, an enquiry into the wisdom and goodness of God in any of the works of creation, must not be esteemed foolish or trivial.

My present subject is *Conchology*. I have not, however, written the preceding remarks to apologise for having taken up a subject which will doubtless appear, to some at least, trifling and unworthy; but my desire has been to point out the object which should be kept in view in every investigation. And when the glory of God is the end at which we aim, some other objection than that which arises from its apparently trifling nature, must be found before we can be justly compelled to pass over any field of enquiry. And if, according to the old saying, "he is a good commonwealth's man who makes two blades of grass grow where there was formerly but one," I need not apologise for endeavouring, in however humble a manner, to increase the number of those who are able, with the poet so often quoted,

To look from Nature up to Nature's God,

and to view in some of the humblest of the works of creation, evidences of the wisdom, the power, the providence, and the kindness, of the great Creator.

It is true that the path upon which I am travelling has been well marked out by my numerous predecessors. Ray, in his *Wisdom of God in Creation*; Roget, in his *Bridgewater Treatise*; Sharon Turner, in the first volume of his *Sacred History of the World*; Paley, in his *Natural Theology*; and Derham in his *Physico-Theology*; have each, although for the most part from other instances, expanded the very same argument. But these books are not accessible to all, nor perhaps would they, if accessible, be read by some who may yet be induced to peruse an article in the *Sydney Guardian*. And the instances which I shall endeavour to bring forward, have not, I believe, been treated of at any length by the writers I have mentioned. Roget, indeed, has spoken of Molluscs among other orders of animals which have come under his notice. But his treatise does not enter much into particulars; such, at least, as those of which I wish to speak; a cursory mention may also be found in Turner's *Sacred History*. Paley devotes a couple of pages to the subject in the middle of his chapter on insects, in the volume above mentioned. Derham has a short note upon shells, but says that "it would be endless to descend to particulars." It is to these very particulars that it is my object to invite attention, believing as I do most firmly, that the more we study any of the works of God, either in their general features, or in their minute particulars, the more reason we shall have to admire, and to adore the wisdom, and the power, as well as the goodness and beneficence, of the Creator.

The animals of whose organization I am about to speak, may be described as possessed of a soft body, with, for the most part, an external skeleton, not necessarily attached to the body. They are generally known as snails and shell-fish, periwinkles, cockles, and oysters.\* I do not include lobsters, with Paley; nor tortoises, with Derham; inasmuch as in the latter case the animal is a vertebrate, being in fact a reptile, its skeleton necessarily attached to the body; while the lobster, in its articulated joints, and in its peculiar nervous system, is more nearly allied to spiders and other insects.

Although I have defined the Molluscous animals of which I am about to speak, by their soft bodies, yet it is to the formation of their external skeleton, which is usually called a shell, that I shall at present confine my attention.

To describe each species, or to enter into all the

differences which may be observed in the methods in which these shells are formed, would indeed be endless. I will therefore take one simple example which shall illustrate the manner in which this process is effected; and having explained this, it will be easy to point out some of the most remarkable instances in which animals of the same class differ from the type selected.

Every one knows what an oyster is. Every one knows that the living part of the animal is soft; and after the shell has been opened by its powerful enemy, man, there is nothing to protect the defenceless creature, although still alive, from the teeth of its devourer. This singular looking being lives in the salt water; and is subject to a variety of ill-treatment even when in its native element. Stones rolled about by the waves might fall upon it, and if it were unprotected, would crush it; insects of different kinds, with which the salt water abounds, would rejoice in having an opportunity of feeding on it. It is also often found left dry by the retreat of the tide. Were no provision made for this emergency it could not be kept moist, a state necessary to its existence, and the heat of the sun would soon burn and shrivel it. To protect it from all these dangers it has been provided in the most beautiful manner with the means of building its own house in a way exactly suited to its wants and requirements; and the apparently helpless oyster, when within its curious shell, is protected from innumerable dangers and inconveniences.

Although I am at present concerned with the shell alone, yet there is one part in the animal itself to which I must call attention. When the shell is opened, a dark part, called by epicures the fringe, is seen at one side, opposite to that large whitish mass, which is considered the most delicate portion, and which contains part of the viscera. This fringe is the edge of what is called "the mantle," a kind of skin which envelops the whole body of the animal. The mantle has the power of secreting and depositing calcareous particles in great abundance. And it is by this part that the whole work of forming the shell is performed. When in health and activity (for even oysters are active in their vocation), this edge or fringe of the mantle is placed along the edges of the shell, and the calcareous particles secreted by it are deposited upon the shell in a soft state. A thin lamina is thus formed, and by continual repetitions of this process the shell is enlarged in its superficial extent in proportion as the animal itself increases in size and requires increased accommodation. One beneficial result arising from the gradual increase in size of the shell appears in this, that it is always large enough to afford the animal the protection which it needs, and yet never too large to prevent its free access to the water, in which its food is found.

But although the thickened edge only of the mantle has the office of increasing the superficial extent of the shell, the whole of the mantle has the power of secreting calcareous matter. This it deposits upon the interior surface of each valve. The "naere," as it is called, so deposited, is different from the shell formed by the fringe, and is usually colourless. The shell is thereby thickened and strengthened, the more so, since the layers thus deposited lie in a different direction from those which have been formed at the edge. In the species known as the Water Shell, a large whitish Spondylus, from the Marquesas Islands, these layers are deposited in the lower valve, not altogether on the surface, but in a particular part, a little above it, so that a space is generally left between the two layers. On breaking the shell this part is found filled with water; and hence the name. A similar circumstance may be sometimes noticed in the large *Tridacna gigas*, the enormous shell often weighing more than five hundred weight, which is common among the coral reefs in Torres Straits. A friend of mine intentionally damaged the edge of one; and a few of the fragments chipped off by the ill usage, fell inwards. It was afterwards found that a calcareous layer had been deposited over them, forming a cavity which was filled with the loose fragments of the shell, and with water. The *Tridacna*, however, generally forms a solid shell.

On the surface of many bivalve shells, especially some species of *Venus*, such as that large species which is found abundantly in the Parramatta river, there are ridges formed, giving the shell an elegant appearance. Such ridges are generally formed with great regularity, and are due to a periodical increase in the quantity of calcareous matter secreted by the mantle. In the same way we account for the spines in the American Spondylus, and those on the *Venus Dione*. The varices, at times so highly ornamented, of *Murex*, and some other cancellous univalves, and those on the Harp shells, the Cassis, and some other

species of *Strombus*, are perfectly analogous, and are to be accounted for in a similar manner.

It has been noticed that the edge of the oyster's mantle is of a darker colour than the rest of the animal. The cause of that dark colour is to be sought in the presence of an infinite number of minute glands containing coloured pigments. These tinge with their peculiar colours the secretions of calcareous matter as they are deposited, and give the shell all its beauty. The gorgeous hues of some species, and the delicate tints of others, are all derived from the same source, and will be found in every instance perfectly to correspond with the same colours on the edge of the mantle.

A curious fact may here be briefly noticed. The colours of many shells are perfectly regular, proving that the glands containing the different pigments maintain always the same relative position; while in others the markings are most irregular, showing that the same colour does not always retain its position, but on the contrary that it gradually moves along the edge, at one time moving in one direction, and then back again. A *Venus* found in abundance in Port Jackson remarkably illustrates this; and while in some specimens the colours are regular, in others of the same species, they are in blotches or in irregular lines.

One part of the formation of the shell remains yet to be explained. On the outside of many bivalves, and of almost all univalves when alive, a comparatively soft external skin may be observed. At times it is very thick, resembling (in a species of *Triton*, for instance, sometimes found in Port Jackson,) very shaggy hair; at other times it is soft and downy, as in the *Pectunculus* of this coast; at others it composes a semi-corneous covering not very closely attached to the shell, as in the large *Dolium* of Port Jackson. It occasioned some little amusement a short time since when this "epidermis," as it is technically called, of a *Dolium* on my mantel piece cracked close to a person's ear who was standing with his back to the fire. Being in a very dry place the epidermis had gradually contracted, and at last the tension became so great that it cracked with a loud report. So strange a noise proceeding from an unknown cause startled my friend. It was not that he feared exactly, but that, like the poet, he wished to have the cause of the sound explained.

The Epidermis is formed at the time of building the surface of the shell. "The carbonate of lime of which the shells of bivalves is composed, is at the moment of its deposition embedded in a viscid secretion, that forms a kind of cement. If the proportion of this secretion be abundant, it hardens on the exterior of the shell, and constitutes what has very inaptly been termed the Epidermis."—(Rhymer Jones.) Its use is probably to protect the calcareous matter while hardening, and to assist in preserving it from injury. In some species it is highly ornamental. The delicate markings on the *Helix Mauritanicus*, and in many of the *Bulini* collected by Cuming at the Philippine Islands, exist only in the transparent Epidermis.

In many univalves this part is the first formed, and serves as a bed upon which to deposit the calcareous secretions. This is the case with the *Helix*, the common snail found in gardens and damp places. As the formation of these land shells is, especially with regard to the epidermis, a modification of the account which I have above given, a brief notice of the method adopted by them may be introduced in this place.

When the *Helix* wishes to increase the size of its habitation it fixes itself firmly in some quiet place, where it fancies itself secure from interruption. It then extends its mantle to a certain short distance beyond the edge of its shell, and secretes on the outside of it a quantity of viscid matter. This hardens by exposure to the air, and forms a most fragile and delicate defence of the same shape with the future addition to the shell itself. This process is repeated until a sufficient addition has been made to the size of the shell. Calcareous matter, regularly coloured, is then deposited upon this epidermis, and gradually hardened. And thus the new part is both beautified and strengthened.

In England this process may be readily observed every spring in the large snails which abound in the hedges. A calculation based upon these particulars gave the *Helix aspersa* about six years from the time of birth to arrive at maturity; or in other words, to form its final and perfect aperture. This was the average obtained from the examination of a large number of specimens.

I have sometimes thought that the number of ridges on some species of *Venus*, and the varices on various species of *Cassis*, *Harpa*, *Murex*, *Ranella*, *Triton*, and others, might afford some clue to enable us to ascertain the age of the shell. These ridges or varices are due to an abundant secretion of calcareous

\* These, with a few exceptions, comprise the whole of the animals which are commonly given to Molluscs of all descriptions. The savage inhabitants of the island of Errobb have a far greater variety in their Conchological vocabulary. Jukes, in his *Voyage of the Fly*, gives a list of thirty-two names by which different species are known.

matter at regular intervals of time. In England the Helices secrete and deposit the matter only in the spring of the year. So that by counting the number of secretions, the number of years, or the age of each individual, may be found. In warm and tropical climates, where the genera which I have named are found in abundance, there is not so much distinction as in England between spring and the rest of the year; and therefore these abundant secretions which cause these varices may possibly be found to be deposited at different seasons. A few experiments would be sufficient to give some clue; but they must be conducted with care, and by some one living close to the sea. The number of varices in some species is astonishing. In *Harpa minor* I have counted 50; in another species, *H. dentata*, the number was 72; *Harpa multicastrata* would have many more; and in some *Scalaria* they would amount to hundreds; a small specimen in my cabinet, from Port Jackson, (about half an inch in length) has about 136.

While speaking of these ridges and varices I may notice that they invariably take the exact form of the mantle; so that the beautiful foliations in those of some species of *Murex* and the singular contortions of the adult *Pterocera*, or spider shell, are but the exact representations in a durable form of the shape of the fleshy and perishable mantle by which they were made.

Such is a brief, and as I am aware, a very imperfect view of the manner in which these mollusks form their shells. Let any one who feels any interest in the subject take a single shell and compare it with the animal which has formed it. Take a living oyster for instance; look at the shell before it is opened, and see how admirably it is adapted to the purposes for which it was required. While the animal is alive the force required to open it is very great, and until the shell is opened its inhabitant remains secure. And does not the simple view of such a commodious and convenient habitation formed for its own use by an animal so insignificant and feeble, does not, I say, the simple view of so much ingenuity as that here displayed elevate our thought of the great architect of all things who created this animal—who enabled it to form its habitation, and who feeds it, when so protected, with food convenient for it?

We shall see as we go on fresh proofs of wisdom in the manner of opening and shutting these houses, in the habits, instincts, and abilities of the creatures which inhabit them. For the present let the simple fact of the existence of such habitations lead us to adore Him by whose power their fabricators are created.

And when we consider that in the same method, or in modifications of it, not the oyster alone, but a host of others differing from the oyster, construct their habitations, we may well be lost in contemplation. Dillwyn has described 2325 species of recent shells; his work was published in 1817, since which date the number of species known and described have increased in a very large degree; and I think I am speaking within bounds when I say that the number of species known at the present time is beyond 10,000; of these, very many are microscopic, and one at least, *Tridacna gigas*, before mentioned, attains often the enormous weight of 500lbs.; one specimen has been known to weigh 712lbs.

BASIL.

October 16, 1848.

(To be continued.)

## Poetry.

## ODE.

BY JAMES B. LAUGHTON.

"And let the Beauty of the Lord our God be upon us."—Ps. xc., 17.

How fair is this world of thine,  
O God, in the morning light!  
When the summer king starts from his ocean bride,  
And climbs the blue vault with a giant stride,  
And chases the dews of night.

How bright is this world of thine,  
O God, in the noontide air!  
When the sun-bird thirsts for the burning ray,  
And drinks with his eye at the fount of day,  
And the lion lies down in his lair.

How sweet is this world of thine,  
O God, when the sunbeams fade!  
When Zephyrus are breathing, and softly afar,  
In her watch-tower shines the pale evening star,  
And the valleys are wrapped in shade.

How glad is this world of thine,  
In the spring of the joyous year!  
When the turtle dove warbles his dulcet note,  
And odours of balm on the breezes float,  
And bounds in the forest the deer.

How blest is this world of thine,  
When the happy harvests fall!  
Then rises from earth the prolonged acclaim,  
And with timbrel and song we praise Thy name,  
The Maker and Giver of All.

Alas! in this world of thine,  
That ever the icy darts  
Of winter should break the witching spell,  
That summer and sun-light have twined so well,  
And fastened around our hearts!

But oh! there's a world of thine,  
Where winter can never come!  
O God, when the trumpet shall rend the skies,  
May we in the beauty of holiness rise,  
And dwell in our Father's home!

ERRATUM.—In the references to the Hymn entitled "The Names of Christ," in our last publication, under the name of Judge, for "Ps. lvi." read Ps. lxxii.

## Miscellanea.

"SEMPER EADEM.—We are often told that Popery, like everything else, has partaken of the modern spirit of improvement. That system, say many of the liberalists of the day, is not what it was in a barbarous age. Evidences of this change for the better sometimes ooze out, with which it is only fair that the bigoted public should be made acquainted. As an evidence of which we extract the following:—"THE RELICS OF ST. ANDREW.—The *Tablet* records the following from the *Gazetta di Roma*, of the 3rd April.—On the morning of the 1st instant, his eminence the Cardinal Vicar caused the following notice to be published:—God has deigned to hear the prayers of the Sovereign Pontiff, and of the pious population of Rome, in causing the head of the glorious Apostle St. Andrew to be miraculously recovered. To celebrate this happy event, the superiors of all the churches are to have the bells of all the churches ring this evening for the *Anc Maria* for half-an-hour, as upon festival days. Scarcely had this notice been issued by the Cardinal Vicar than the sound was heard of all the bells in the city, and all the houses were spontaneously illuminated. An extraordinary illumination of the façade, of the portico, and cupola of St. Peter's, as it were carried the news of this happy event to the inhabitants of the mountain districts. Next day a solemn *Te Deum* was chanted in the Church of St. Andrea della Valle, in the midst of an immense concourse of the Faithful of all classes. We hear (adds the Editor of the *Tablet*), the circumstances were as follows:—The chief of the police, despairing of success, had informed the Holy Father that a large reward must be offered for the discovery of the relic; the exchequer would not allow of this, and his Holiness told the chief of the police he was certain the relic would be discovered. Next day Pius IX. spent some time in prayer in the Church of St. Peter's, and before night a person came and informed the chief of the police that if he sent to a place which he described the relic could be discovered, which happened accordingly. This is not the only remarkable incident connected with the prayers of Pius IX."

HORRORS OF WAR.—France in the course of twenty three years' war, that is, between 1791 and 1814, called out to arms, and sent to fields of war, including her independent states, 8,648,000 men, of which, in killed and wounded, and in internal massacres, guillotins, &c., she lost 5,628,590 men, and all other nations 3,455,000. La Vendee alone lost in men 900,000. The loss of Great Britain was half a million. This is exclusive of the field of Waterloo and the rest of the campaign of 1815, which exceeded 260,000 men lost by all nations, and cost above £200,000,000.

LORD HARDINGE.—The first public act of Viscount Hardinge, on returning to his seat at Penshurst, after achieving in the service of his country victories as warrior and a statesman which well deservedly had down his name to posterity among the great ones of our land, was the laying the foundation stone of a new church, a few days since, in the parish of Penshurst.—*Oxford Herald*.

THE SLAVE TRADE.—The total number of vessels captured by her Majesty's squadron on suspicion of being engaged in the slave trade, during the years 1846 and 1847, was 106—viz., 30 in 1846, and 67 in 1847. The total number of slaves landed from prizes taken by her Majesty's ships, and liberated at Sierra Leone, in the fourteen years commencing with 1832 and ending with 1845, was 38,577.

CHINESE EPICURISM.—Dogs are fattened and eaten in China as a delicious food, and are always found at the tables of the great. Horseflesh, rats, and mice, are standard articles of food, and sold publicly at the butchers' shops. Birds nests are another article of food; but neither mud nor sticks enter into their

composition. The nests are found in the rocks along the coasts of Tonquin, &c., and are built by birds resembling the swallow. They are constructed, as is supposed, of a small species of sea-fish, cemented by a glutinous matter exuding from the bird itself; and when usually formed, resemble the rind of a large candied citron. Bear paws form another favourite dish; they are rolled in pepper and nutmeg, and dried in the sun. When about to be dressed they are soaked in rice-water to make them soft, and then boiled in the gravy of a kid, and seasoned with various spices.—*Chinese Olio*.

THE MOUNTAINS OF GILBOA.—On the following morning, ere the sun had risen, we pursued our way through a territory unrelieved by a single shrub or blade of verdure; where for many leagues no trace of a habitation was visible. Its savageness struck us the more forcibly after the beautiful plains of Genesaret we had so lately left. But the path grew more exciting as we drew nearer the mountains of Gilboa; there was a solitary grandeur and stern sublimity in the scene, on which the traveller could not help pausing to gaze, even had he not waked no vivid associations of the times of old. Utter solitude was on every side; the precipices and pointed summits in some parts into naked precipices and pointed summits; there were no dwelling places for man save for the wandering shepherd, whose search for pasturage must often have been vain. Amidst these solitudes was fought the battle in which Saul and his sons were slain, and the curse of David on the fatal scene seems to have been fulfilled, that there "might be no rain or dew on the mountains of Gilboa, where the shield of the mighty was cast away."—*From Carne's Travels*.

## Register of Ecclesiastical Intelligence.

## DENOMINATIONAL SCHOOLS.

(From the Government Gazette of Tuesday, Oct. 24.)  
COLONIAL Secretary's Office, Sydney, 18th October, 1848. His Excellency the Governor directs the publication of a letter from the Board for superintending the Denominational Schools in the Middle or Sydney District, with the statement alluded to therein of the proposed distribution of the sum voted by the Legislative Council for their support during the year 1849, and General Regulations for their conduct, which have been approved by his Excellency.

By His Excellency's Command,  
E. DEAS THOMSON.

No. 48-105.

Denominational Board Office,  
Sydney, 12th October, 1848.

Sir,—We have the honour to forward, for the approval of his Excellency the Governor, and for insertion in the *Government Gazette*, the distribution proposed by us of the sums placed at our disposal by the vote of the Legislative Council in support of the Denominational Schools of this district for 1849.

We also transmit general regulations for the conduct of the schools placed under our charge.

We hope to be shortly enabled to submit for the information of his Excellency the Governor, the names of the parties selected to be members of the Local School Boards by the heads of the denominations, and approved of by us.

We have the honour to be, Sir,  
Your most obedient humble servants,  
C. D. RIDDELL,

Chairman of Denominational School Board.  
GEORGE ALLEN,  
GEORGE MILLER,

The Honorable the Colonial Secretary.

## GENERAL REGULATIONS FOR THE CONDUCT OF THE DENOMINATIONAL SCHOOLS.

1. The Schools are to be open at nine o'clock in the morning, and shut at four o'clock in the afternoon, or at any later hour that may be appointed and approved of by the Local Board.

2. The schools to commence and close with prayer, and the devotional demeanour of the children during these periods to be especially attended to by the teachers.

3. The scholars are to be divided into classes, according to advancement in the course of education, and will be successively taught

Reading,	Grammar,
Writing,	Geography,
Arithmetic,	History.

Except in Infant Schools the boys and girls will be formed in separate classes.

4. Teaching by monitors under the superintendence of the master to be encouraged.

5. The teachers will see that the children attend

\* This school is substituted for the model school at St. Mary's, previously sanctioned by the board.

MELBOURNE DIOCESAN SOCIETY.—We are happy to state that this Society, the establishment of which was reported in our last number, is making satisfactory progress. In the course of only one month the sum of £350 has been subscribed, and that without solicitation. May not the Churchmen of this part of the Colony take a lesson from their southern brethren?

THE DEATH OF THE ARCHBISHOP OF PARIS.—Although the Register of Ecclesiastical Intelligence is designed to be a record of events affecting either directly or indirectly the Church of which we are ourselves members, yet the peculiar circumstances attendant on the death of the Archbishop of Paris are such as to demand especial notice. No one can read the account of the conduct of the Archbishop at the fatal barricade, without being struck with admiration at his heroic bearing while labouring to bring to a successful issue the truly Christian mission he had taken upon himself. With a view to check the flow of blood, and reason with those who, through the arts of evil and designing men, were engaged in an unnatural warfare, calm and serene he stood between the contending parties while bullets poured like hail around him. The excitement of battle may lead men really destitute of courage to rush boldly to the cannon's mouth and encounter almost certain death in the hope of purchasing thereby a place in the annals of their country's history. But not such were the hopes, or such the source of the courage displayed by that messenger of peace. Not to slay, but to save, was the work in which he was engaged; not to animate to deeds of blood, but to still the angry passions of men, was the task he had undertaken to accomplish. In the fulfilment of his holy mission, in the path of duty and of true glory, he fell. "Blessed are the peacemakers for they shall be called the children of God." Would that we could here stop. Would that in paying this tribute to the memory of one whose self-devotion excites our admiration, we had nothing to condemn. But it is impossible to avoid tracing in the expressions which fell from his lips, the baneful influence of Romish Theology. "May my death expiate the sins which I have committed during my episcopacy." "Never part with this cross, place it near your heart, it will bring you happiness," were the words of the expiring prelate. Alas! he expiates his own sins, and needs not a Redeemer's merits. A material cross in his view brings happiness to its possessor. On these broken reeds does he place his trust and confidence. Let us hope that amidst these mistaken views he yet was able to look in his last moments to Him who made by the sacrifice of himself, a full, perfect, and sufficient satisfaction for the sins of the whole world; and whose blood alone cleanse us from all sin. But his whole life showed too clearly the estimation in which he held supposed holy relics, and the ascendancy that Romish superstition had gained over his mind. It is moreover to be feared that he had himself a politico-religious connexion with the republican movement. How far that feeling may have influenced him in his forwardness to encounter personal danger in the cause, and whether this may at all detract from the purity of his self-devotedness, it is scarcely for us to determine. We publish the following extracts from authentic documents, which may enable our readers to form a more correct judgment as to how far he is entitled to their admiration and sympathy. An exhibition of relics took place at the Cathedral of Notre Dame, in Lent 1845, of which the following programme was published in a *mandement* of the Archbishop of Paris. 1. The glorious relics of the Passion of our Lord Jesus Christ,—to wit, the piece of the true cross, the holy crown of thorns, and the holy nails, will be exposed to the worship of the faithful during the first four days of Holy Week, and Good Friday, at the entrance of the choir of the Metropolitan Church. 2. On Palm Sunday, at the close of the Chapter Office and High Mass, which will commence at nine o'clock precisely, we shall solemnly transport these holy relics from the great sacristy to the altar, which is destined to receive them; and before depositing them there, we shall present them to the chapter and clergy to be worshipped. During the procession and adoration of the Cross, the choir will chant the hymn *Vexilla Regis prodeunt*. The sound of the Great Bell will announce this ceremony. 3. On Holy Monday, Tuesday, Wednesday, and Friday, the exhibition will commence at seven in the morning, and will terminate in the evening after the close of the *retraite* for men. 4. On Good Friday, after the *retraite*, which closes the *retraite* for men, we shall give the blessing with the holy relics, and shall carry them in solemn procession to the place where they are to be kept. 5. We grant to the faithful who

shall attend on this procession, and to those who during this holy week shall come to worship the relics and shall recite five *Pater-Nosters*, and five *Ave Marias*, with an act of contrition, forty days indulgence for each time. 6. For the future the glorious relic of the true Cross of our Lord will be exposed on the 3rd of May, being the feast of the invention of the Holy Cross; the 14th September, being the feast of its exaltation; and the first Sunday in August, being the feast of its susception. The Holy Crown of Thorns will be exposed on the feast of its susception, according to the ancient custom of the Metropolitan Church." On the breaking out of the insurrection of 1848, no sooner had its success become apparent by the subversion of the throne of Louis Philippe, than the Republic was saluted with hearty and unanimous gratulations by the episcopate of France, headed by the late Archbishop Mons. Denys d'Affre, who was raised to that see by Louis Philippe, under the Ministry of Thiers. On the 1st of May, 1847, congratulating the King on his birthday, the Archbishop thus opened his address. "Sire:—To-day we come into the royal palace to present to you our respectful homage. To-morrow we shall go to our temples to pray for your majesty and your august family." On the 24th February, 1848, the same Archbishop of Paris testified his hearty good-will towards the Revolution which had dethroned his sovereign, by a Circular addressed to the Clergy of Paris, wherein he says, "Our first impulse in presence of the great event which has just been enacted in the Capital, was to weep for the fate of the victims whom death has struck down in so unforeseen a manner. Accordingly you will, as soon as possible, cause a solemn service to be celebrated with as much pomp as your church-funds will admit of. The service is to take place as soon as you can give notice of it to the faithful, even though it be on a Sunday. During Mass\* a collection is to be made for the relief of the indigent families of the dead and wounded, N.B.—In the event of its becoming necessary or desirable to establish temporary hospitals in your churches, you will not hesitate to offer them for that purpose, even though it should involve the omission of the Sunday service." This is very laudable and Christian in its spirit, except that it rather too plainly marks the writer's sympathy and accordance with the principles of a rebellious movement, which had overthrown a monarch to whom he had given oaths and other pledges of fidelity and allegiance. The Archbishop however was prepared to testify with even less reservation his rapid conversion from royalist to republican principles. In the *Ami de la Religion* of March 4th, he published a *Mandement*, ordering special prayer for the welfare of France, in which document occur numerous passages of a very questionable character. "On hearing this frightful clap of thunder, which without previous warning shivered in an instant a throne surrounded by so much power, who among us could help recognizing at once the mysterious design of him who delights in showing to kings that theirs is but a borrowed majesty? Let us invoke that Wisdom which so often forsakes the thrones of the earth, but who from all eternity is seated by the side of the throne of the Creator of the world. Let us invoke Her that She may inspire our representatives: above all, let us invoke Her that she may defend their work, if it shall be worthy of France, against the contemptible interests which will perhaps endeavour to prevent it. Civil courage, which defends society at the risk of life is the gift of God, for every perfect gift comes from Him. The political principle upheld by the Church of Rome (the Catholic Church he terms it) has ever been that the welfare of the people is the supreme law! Let us not forget that according to the Divine counsels, man, regenerated by the Gospel, was to seek, above all an eternal kingdom. But, lo! how wonderful! while pursuing his immortal destinies man has fallen into what constitutes the true prosperity of political societies." If this mean anything it must be that rebellion springs from the cultivation of religion, and contributes beyond all other occurrences to promote the welfare of nations. But how then was it that "the Church under the ancient monarchy never thought of demanding a democratic constitution?" The answer is ready, "because France had never thought of demanding it." But now the will of the nation has been expressed; and the Church is prepared to join in the demand for an absolute democracy formed on universal suffrage. "Our wish

is," says the Bishop of Briene, in his Circular, "that the electors of every parish, priests, and laity, should proceed together to the place of election, and should not separate, if possible, all the time they will have to remain in the chief place of the canton. After recording their votes they will return to their parish church, observing the same order in returning as going." The Minister of Public Instruction, (Carnot), in an address to "The Archbishops and Bishops of the Republic" eagerly exerts himself to promote this political association of the clergy with the interests of the republic. "Above all," he says, "suffer not the clergy of your diocese to forget that being citizens, they as such are shapers in the exercise of all political rights, and that in the electoral assemblies, and upon the benches of the National Assembly, to which the confidence of their fellow-citizens might call them, they have but a single interest to defend: that of the country which is intimately connected with the interest of religion." In accordance with this hint the *Ami de la Religion* of 23rd March, mentions a report "which, however, it does not guarantee," that several bishops, and among these the Archbishop of Paris, had been proposed as candidates for the National Assembly. This report appears to have been groundless, unless the purpose were laid aside in consequence of the strong jealousy awakened by what was considered the too partial favouritism of Mons. Carnot towards the Archbishop; a suspicion being thus excited that the latter, by his zeal and earnestness in the cause, might be seeking to obtain the primacy of France for the Metropolitan See of Paris. The *Univers* expresses this feeling in the following terms:—"We regret to find that the Minister in all his circulars studiously distinguishes the Archbishop of Paris from his venerable colleagues. The effect which this produces is the more unpleasant, as M. Carnot has the credit of certain notions of ecclesiastical centralization which it would be impossible to attempt to realize without raising an irresistible opposition in the episcopate, and in the clergy at large."

SECOND ANNIVERSARY OF THE FOUNDATION OF CHRIST'S COLLEGE, TASMANIA.—This event was celebrated on the 4th of October, with the usual observances. From the financial statement it appears that the funds of the Institution are in a flourishing condition, the receipts during the year having amounted to £7002 14s. 4d., and the expenditure to £6085 1s. 4d., leaving a balance of £917 13s. The number of students in the College was not stated in the report we have received.

CONSECRATION OF ST. AUGUSTINE'S COLLEGE, CANTERBURY.—The new College of St. Augustine was consecrated on June 29th, with great solemnity, at Canterbury, by his Grace the Archbishop. The alms collected at the Offertory at the Morning Service at the Cathedral and at the Chapel amounted to £900. We regret that the very late period of the month at which the intelligence of this event reached us prevents our giving a detailed account of it in our present number, as we shall hope to do in our next.

QUANREYAN.—On the 11th October, a fancy sale for the benefit of the Church of England Schools in the district was held at the above-mentioned town. The sum realised was £38, which, considering the paucity of persons in the district, and some of those holding unfavourable opinions upon the subject, was a great deal more than could be expected. The weather, upon which the success of the sale depended, was most propitious. There is no doubt but that one of the greatest benefits that can be conferred on this colony is, to give sound instruction to its youth. Great liberality was displayed by some few who, by sickness or some other good cause were prevented from being present, and appointed deputies.

The Rev. T. B. Naylor, B.A., of Carcoar, has been appointed Incumbent of St. Andrew's Cathedral.

The Rev. P. P. Agnew, late Chaplain of the Gaol at Darlinghurst, has been appointed Minister of the District of Carcoar.

#### TO CORRESPONDENTS.

C. C. L.—In our next.

J. B. L.—Many thanks for the extracts: they will be at all times acceptable. We have space for a very few of them this month.

X.—Received.

\* The Collection is never made in the Roman Catholic Churches except when Mass is said. It was for the purpose of making a distinction from them that the Reformers created our Offertory to be gathered even when the Communion is not administered.