

blend in any other direction than at the point of junction between the two kinds of being, on the other hand, is something altogether new. The botanical research of our own day has revealed to us animal characteristics in the distinctly vegetable kingdom, has shown us that not only do animals sink into vegetative life, but that plants, in certain directions, may be said to rise into animal life. The facts have, indeed, been long familiar, but the curious habit of regarding them as exceptional—mere *lusus naturæ*—“as if,” says Dr. Gray, “the play of Nature were different from her work,” blinded naturalists, in the pre-Darwinian era, to their true scope. We will here again copy, instead of summarising, our author:—

“Is there not an independent movement, in response to an external impression, and in reference to an end, when the two sides of the trap of *Dionæa* suddenly enclose an alighted fly, cross their fringe of marginal bristles over the only avenue of escape, remain quiescent in this position long enough to give a small fly full opportunity to crawl out, soon open if this happens, but after due interval shut down firmly upon one of greater size which cannot get out, then pour out digestive juices, and in due time reabsorb the whole? So, when the free end of a twining stem, or the whole length of a tendril, out-reaches horizontally and makes circular sweeps, and secures thereby a support, to which it clings by coiling, so bringing the next tendril nearer the support; when a free, revolving tendril avoids winding up itself uselessly around the stem it belongs to, and in the only practicable way, namely, by changing from the horizontal to the vertical position, until it passes by it, and then rapidly resumes its horizontal sweep, to result in reaching a distant support,—is it possible to think that these are not movements in reference to ends?”

And this selective movement with reference to ends may surely be described as one of the chief characteristics of animal life.

While, then, at one end of the scale the largest genera of natural objects lose the exclusive unity which has been ascribed to them; at the other end, those smaller unities which we know as species exhibit a like uncertainty in their boundary line. The field of botany is one on which this uncertainty is brought forcibly home to the observer, and if it filled the domain of natural history, we can hardly imagine that the theory of the immutability of species could ever have existed. Every one who has ever tried to name a newly-found wild flower, knows how hard it is to make any floral characteristic the absolute test of species. “The patient and plodding botanist,” says Dr. Gray (p. 40), “spends much of his time in the endeavour to draw specific lines between the parts of a series, the extremes of which are patently different. . . . When he is addressed by the popular argument—‘if one form and one species have been derived from another, show us the intermediate forms which prove it’—he can only ejaculate his wish that this ideal vegetable kingdom were the one he had to do with.” The one with which he is conversant exhibits, we may almost say, little except intermediate forms. Dr. Gray says he feels towards species somewhat as the unbeliever in ghosts, who said he had seen too many to believe in them. He has “been at the making and unmaking of too many, to retain any overweening confidence in their definiteness and stability.” And, indeed, one would think it must always have required the strongest theoretical propensities in any observer of the vegetable kingdom to feel anything else. The very conception of individuality, says Dr. Gray—taken as it is, primarily from our own consciousness—becomes vague and shadowy in plants, and as we descend in the scale, we find ourselves in that region, fully realised only in the mineral kingdom, where there is no question of many or few, but only of more and less. Nothing is more instructive with regard to the true character of species than this intermediate position of the vegetable world between the distinctness of animal life and the continuity of mineral existence. Less than any other student of nature, is the botanist able to forget that he follows at a long distance behind the subtlety of Nature, forcing her delicate variations into rough compartments, of which the artificial character is revealed by the fact that he is obliged to be constantly changing them. The views of the new and the old science may be compared respectively to the musical knowledge of a learner who should know only the common chord, and that of one who should recognise this as a succession of stages in the sequence of semitones which we know as the chromatic scale. Nature strikes the chord for our ear, she does not allow us to follow the gradual progression by which she passes from key-note to third, to fifth, and to octave. But a fine ear catches an intermediate note now and again, and recognises the audible part of the scale as a series, differing only in degree. Even so, the change from plant to animal—and *a fortiori*, from one species of either domain to another—was accomplished, we may be well assured, by delicate gradations of which Nature allows us a glimpse here and there,

but refuses to exhibit in their completeness. It is only those who know her through books who can imagine, whatever they may believe, that the framework in which we have arranged her productions is anything but a human invention.

To the naturalist, therefore—even if he were also an earnest Theist—the publication of Mr. Darwin's first scientific work (we would carefully thus limit our assertion), came as a welcome deliverance from a confusing entanglement with notions which it was impossible he should ever have really incorporated with his scientific creed, and which had no vital connection with any other. In the pre-Darwinian era, that large and varied circle of catalogued observation known as *natural history*, which, for so many, forms the most interesting region accessible to the explorer of the kingdom of Science, was a mere outlying province, paying rich tribute, but hardly incorporated with the imperial government; and still retaining a certain amount of hostile allegiance with which it was dangerous to intermeddle. While you might not venture to deny that the difference between a primrose and a cowslip was supernatural, you could hardly consider yourself the inhabitant of a domain loyal to the single authority of the laws of Nature. This uncertain tenure of valuable territory was for ever ended by the publication of the *Origin of Species by Natural Selection*. Mr. Darwin then justified the title, up to that time so inappropriate, which we might fancy had been bestowed on botany and zoology by a sort of prophetic instinct;—he made natural history historical. He changed a series of clumsy guesses to a genealogy. And the sudden fame of his work measures not only its own value, though that is much, but also the large amount of craving for some such intelligible scheme of organic existence, ready to precipitate itself as opinion at the first opportunity. Here was a coherent, intelligible scheme of things bringing order into confusion, and demanding, in its original form (and very little in the form in which Dr. Gray accepts it), absolutely no concession that any one can help making who uses his eyes and ears, and who is not prepared to assert that a sickly creature is likely to live as long as a strong one, and other absurdities of that kind. For part of this scheme was, we are here happily reminded, as little open to question as the assertion “that round stones will roll down hill further than flat ones,” and though it is with some reserve that Dr. Gray accepts what is truly hypothetical in it—he believes, if we have not misunderstood him, that the gradual process of variation is at the production of a new species quickened by some high tide of creative power, perfectly natural, but hitherto mysterious, much as individual life is thus quickened—we know not that Mr. Darwin would consider that this modification interferes with his argument, and we are certain that, from a logical point of view, the theory is left untouched, in its main features, by any similar change. Now, what, from a theological point of view, had to be given up, to accept this? Nothing, on the one hand, that might not be accepted by a devout Theist, and nothing, on the other hand, that had any hold on the intellectual world. We think Dr. Gray a little underrates, and that it is the fashion somewhat to underrate, a concession not included in these words. So far as Christianity was committed to any theory of the historic origin of human society, Christianity and Darwinism could not both be true. But it was a small minority of thinking Christians who believed that Christianity was thus committed, and the only narrative to which such persons clung with anything that could be called conviction—the history of Christ—stands apart from the scheme endangered by Darwinism to an extent that would surprise many who either have never ventured, or never cared to examine their connection. The notion that Mr. Darwin's hypothesis is antagonistic to Christianity in the sense that on logical ground it provides some rival for a Creator, is wholly baseless. Natural selection cannot be invoked as the cause of that on which it operates. Probably nobody ever said it could, certainly Mr. Darwin never did. But much of what is vaguely called Darwinism demands some such assumption, and it is by no means superfluous to point out, as Dr. Gray does, that all which is in the new philosophy to take the place of Creation remains just as inexplicable as it ever was. Natural selection does not explain why there are various forms of living organisms, it only explains why there are not more. It is of itself a mere source of destruction, the origination comes from elsewhere.

Still, we have to confront the unquestionable fact that almost every thinker of eminence who has accepted Darwinism, has

rejected Christianity, and even Theism; and that the new science has, beyond all doubt, given a strong stimulus to the dominant materialism. We wish that Dr. Gray had justified his avoidance of any attempt to explain this fact by distinguishing the so-called philosophy of Evolution from the hypothesis of Darwinism, as clearly as he has distinguished the hypothesis of Darwinism from the facts of natural selection. We must not here attempt to fill the hiatus, but we may point out that the true issue, as it lies between Materialism and a belief in the Unseen, may be thus stated. Supposing natural variation, under the sifting influence of natural selection, to be fully adequate to account for the difference between a man and a jelly-fish, still, it may be asked,—Is the fact which you call variation, ultimate, in the same sense in which the fact of creation is ultimate? Unquestionably, it is *familiar*. It is a true cause, working under our eyes. Whether it has done all or not, it must undoubtedly have done much. But let us not confuse familiarity and ultimateness. I come into my room, and find that some papers of great value, which I had carelessly left on the table, are smouldering on the hearth. The window being open, I have no difficulty in believing that a sudden gust has destroyed what I valued. I see papers blown about by the wind often enough. But it is no more an ultimate fact that air should move than that paper should move. Suppose me to be told, on the other hand, that at the moment I was endeavouring to save the remnant of my papers, a vindictive and unscrupulous enemy was seen hurrying from the house, an explanation of their destruction is suggested to me which is an explanation in a different sense from the first. The *purpose* of destruction does not simply add another link to the chain of cause and effect, but brings it in contact with something more original. Supposing that it became a fact because it was first an aim, it is explained in the fullest sense in which any fact can be explained. Change in the outward world is explained, when it is construed as purpose in the inner world; here we attain something ultimate, and the mind is satisfied, and seeks no further regress.

We have chosen a case of human destruction to set side by side with the theory of the Divine Creation, because human purpose is, unhappily, so much more often exhibited in that form; but our object is now simply to make the issue clear, as interpreters of Dr. Gray's views upon it. Natural selection, which was supposed to *obliterate* purpose, affects the argument for it, he considers, only in lengthening the chain of preliminary event, before it reaches that act of initial will beyond which there is no regress. We think that this weighty truth would be clearer, if he had recognised explicitly, as he does implicitly, the distinctness of the two questions,—Does the theory of natural selection leave the argument for design unimpaired? and—Does this theory add any new perplexity to Theism? The second is not a mere restatement of the first in a different dialect, and we, at least, should answer them differently. Dr. Gray in one place does the like, but the truth is, we should imagine, that it is not easy for him to represent to himself clearly and steadily the mental condition of one who supposes that belief or disbelief in God depends on any speculations as to the origin of things. Purpose in the outer world, we should say—and we imagine he would agree with us—has always been discernible to him, and to him alone, who discerns purpose in the inner. If the moral law witnesses to a lawgiver, the Creation will witness to a Creator. But there are different degrees of non-demonstrative evidence, and we believe that the change introduced by Darwinism makes the dependence of the outward on the inward testimony very much closer. Perhaps Dr. Gray means much the same in conceding that though Darwinism has not originated any new difficulty, it has brought into prominence those which were already existing. But his meaning would have been more distinct, here and elsewhere, if he had remembered that in saying Darwinism has brought in no new difficulty, he is not answering those who consider that it has weakened evidence which they could fall back upon in confronting old difficulties. We have always thought, for our own part, that such books as Paley's *Natural Theology* raised as many difficulties as they solved. But those who felt the argument there set forth a prop of their faith in creative will, cannot but have found their faith affected by a theory which would not accommodate itself to that argument, all difficulties, meanwhile, remaining what they were.

However, the interest of this little book—and to us, it is a very

profound and vital interest—is not that it puts in a new light the perplexities which our time has evoked from comparative shadow, but that it forces us to feel that one who has spent a lifetime in the studies which emphasize and illustrate those perplexities still finds them insignificant, in comparison with all that bears witness to an abiding order, far below the ebb and flow of visible things which for a time conceals it. To know the seen order, and discern the unseen, is a distinction in our time wonderfully rare. It has not always been so, and the time will doubtless come when it will cease to be so; but for the present, there can be no doubt, as a matter of fact, that the students of the visible order are led away from all belief in the Invisible,—a fact forced upon us, if by nothing else, at least by the numerous attempts at mediation between Science and Faith, which almost rival, in their prominence, the separate utterances of either. We believe that what is demanded of those who would approach such a difficulty is less that they should solve it, than that they should recognise it. What renders so many attempts to deal with doubt futile is not that the faith which meets it is too weak, but that it is too blind; it cannot discern those hindrances which hide its object from the sight of others, and is therefore powerless—we do not say to remove them, that is rarely within the scope of any human power—but to give those who see nothing else the confidence that it is possible to see them, and also to see something larger. We pay a high but not extravagant compliment to Dr. Gray, in saying that he may be cited as an exception to this rule.

The best contribution that can be brought towards the healing of the long strife is that one who knows each antagonist should declare that he finds a common element in their message, even if he be unable to translate it. And this weighty contribution to a remedy for the great disaster of our day is what we find in the little work—slight and unpretending as it is—the main purport of which we have in the preceding remarks attempted to set before the reader.

MR. PAYN'S LATEST NOVEL.*

THERE is more plot in Mr. Payn's latest novel than there was in its immediate predecessor, *A Grape from a Thorn*, upon whose heels it treads with surprising closeness. *For Cash Only* reminds us of the earlier style of the "novel-writingest" man of the time, who does not, however, show any signs of writing himself out. Mr. Payn is not likely to perform that too familiar operation, so long as he chooses to go on writing at all, for he can never be at a loss for the materials with which he works, and his skill in the handling of them gains in deftness and nicety by practice. He is a close observer, a sedulous picker-up of traits and indications of character; his intimate acquaintance with modern life in a variety of aspects gives him a great facility for contriving scenes and circumstances which display his portraits to advantage, and his cheeriness and chattiness may always be depended upon to relieve the effect of even his sternest choice of incidents. We believe that the great popularity which Mr. Payn has attained as a novelist—popularity attested by the issue of edition after edition of his works in various forms and sizes—is largely due to his genuine homeliness (in the accurate meaning of that word), and to the sound common-sense that pervades his writings. He does not parade or sentimentalise the one, as Dickens did, nor does he insist upon and lengthen out the other, as Trollope does; but both are always to be found in his books as they are to be found in honest, ordinary English lives, and they are recognised and liked with a heartiness and unanimity that speak well for the reading public, and contrast favourably with other examples of literary popularity.

Mr. Payn has always been a good hand at depicting a villain, and he has rarely yielded to the temptation of making his villains attractive. There is no Eugene Aram in the tolerably long list of his murderers; there is no Paul Clifford among his thieves or swindlers; he never fails to invest villainy with its almost inseparable characteristic (in real life), base and ever active selfishness. He has also a happy knack of portraying a fool; but he is at his best when his subject is so well adjusted a combination of villain and fool as the young gentleman who does the lying and the smaller dirty work in *For Cash Only*, under the guidance and inspection of the leading villain. Gerald Lyster might be described in the terms of Quilp's apostrophe to Sampson Brass, just before the drowning of the dwarf;

* *For Cash Only*. By James Payn. London: Chatto and Windus.