

**ADDRESS DELIVERED BEFORE
THE BRITISH ASSOCIATION
ASSEMBLED AT BELFAST:
WITH ADDITIONS**

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Address Delivered before the British Association Assembled at Belfast: With Additions by John Tyndall

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BY

JOHN TYNDALL, F.R.S.

PRESIDENT

SEVENTH THOUSAND

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'For I have learned
 To look on nature; not as in the hour
 Of thoughtless youth; but hearing oftentimes
 The still, sad music of humanity,
 Nor harsh nor grating, though of ample power
 To chasten and subdue. And I have felt
 A presence that disturbs me with the joy
 Of elevated thoughts; a sense sublime
 Of something far more deeply interfused,
 Whose dwelling is the light of setting suns,
 And the round ocean, and the living air,
 And the blue sky, and in the mind of man:
 A motion and a spirit, that impels
 All thinking things, all objects of all thought,
 And rolls through all things.' WORDSWORTH.

'There is one God supreme over all gods, diviner than mortals,
 Whose form is not like unto man's, and as unlike his nature;
 But vain mortals imagine that gods like themselves are begotten,
 With human sensations and voice and corporeal members;
 So, if oxen or lions had hands and could work in man's fashion,
 And trace out with chisel or brush their conception of Godhead,
 Then would horses depict gods like horses, and oxen like oxen,
 Each kind the divine with its own form and nature endowing.'

XENOPHANES of Colophon (six centuries B.C.), 'Supernatural Religion,' Vol. I. p. 76.

'It were better to have no opinion of God at all, than such
 an opinion as is unworthy of Him; for the one is unbelief, the
 other is contumely.' BACON.

PREFACE

TO

THE SEVENTH THOUSAND.

I TAKE ADVANTAGE of a pause in the issue of this Address to add a few prefatory words to those already printed.

The world has been frequently informed of late that I have raised up against myself a host of enemies; and considering, with few exceptions, the deliverances of the Press, and more particularly of the religious Press, I am forced sadly to admit that the statement is only too true. I derive some comfort, nevertheless, from the reflection of Diogenes, transmitted to us by Plutarch, that 'he who would be saved must have good friends or violent enemies; and that he is best off who possesses both.'¹ This 'best' condition, I have reason to believe, is mine.

Reflecting on the fraction I have read of recent remonstrances, appeals, menaces, and judgments—covering not only the world that now is, but that which is to come—I have noticed with mournful interest how trivially men seem to be influenced by what they call their religion, and how potently by that 'nature' which it is the alleged province of religion to eradicate or subdue. From

¹ Fortnightly Review, vol. xiv. p. 636.

fair and manly argument, from the tenderest and holiest sympathy on the part of those who desire my eternal good, I pass by many gradations, through deliberate unfairness, to a spirit of bitterness which desires with a fervour inexpressible in words my eternal ill. Now, were religion the potent factor, we might expect a homogeneous utterance from those professing a common creed, while if human nature be the really potent factor, we may expect utterances as heterogeneous as the characters of men. As a matter of fact we have the latter; suggesting to my mind that the common religion professed and defended by these different people is merely the accidental conduit through which they pour their own tempers, lofty or low, courteous or vulgar, mild or ferocious, as the case may be. Pure abuse, however, as serving no good end, I have deliberately avoided reading, wishing, indeed, to keep, not only hatred, malice, and uncharitableness, but even every trace of irritation, far away from my side of a discussion which demands not only good temper, but largeness, clearness, and many-sidedness of mind, if it is to guide us even to provisional solutions.

At an early stage of the controversy a distinguished Professor of the University of Cambridge was understood to argue—and his argument was caught up with amusing eagerness by a portion of the religious Press—that my ignorance of mathematics renders me incompetent to speculate on the proximate origin of life. Had I thought his argument relevant my reply would have been simple; for before me lies a printed document, more than twenty-two years old, bearing the signature of this same learned Professor, in which he was good enough to testify that I am 'well versed in pure mathematics.'

It has been stated, with many variations of note and comment, that in the Address as published by Messrs. Longman I have retracted opinions uttered at Belfast. A Roman Catholic writer is specially strong upon this point. Startled by the deep chorus of dissent which my dazzling fallacies have evoked, I am now trying to retreat. This he will by no means tolerate. 'It is too late now to seek to hide from the eyes of mankind one foul blot, one ghastly deformity. Professor Tyndall has himself told us how and where this Address of his was composed. It was written among the glaciers and the solitudes of the Swiss mountains. It was no hasty, hurried, crude production; its every sentence bore marks of thought and care.'

My critic intends to be severe: he is simply just. In the 'solitudes' to which he refers I worked with deliberation; endeavouring even to purify my intellect by disciplines similar to those enjoined by his own Church for the sanctification of the soul. I tried, moreover, in my ponderings to realise not only the lawful, but the expedient; and to permit no fear to act upon my mind, save that of uttering a single word on which I could not take my stand, either in this or in any other world.

Still my time was so brief, and my process of thought and expression so slow, that, in a literary point of view, I halted, not only behind the ideal, but behind the possible. Hence, after the delivery of the Address I went over it with the desire, not to revoke its principles, but to improve it verbally, and above all to remove any word which might give colour to the notion of 'heat and haste.' In holding up as a warning to writers of the present the errors and follies of the denouncers of the past, I took occasion to compare the intellectual pro-

pagation of such denouncers to that of thistle-germs: the expression was thought offensive, and I omitted it. It is still omitted from the Address. There was also another passage, which ran thus: 'It is vain to oppose this force with a view to its extirpation. What we should oppose, to the death if necessary, is every attempt to found upon this elemental bias of man's nature a system which should exercise despotic sway over his intellect. I do not fear any such consummation. Science has already to some extent leavened the world, and it will leaven it more and more. I should look upon the mild light of science breaking in upon the minds of the youth of Ireland, and strengthening gradually to the perfect day, as a surer check to any intellectual or spiritual tyranny which might threaten this island than the laws of princes or the swords of emperors. Where is the cause of fear? We fought and won our battle even in the Middle Ages; why should we doubt the issue of a conflict now?'

This passage also was deemed unnecessarily warm, and I therefore omitted it. I fear it was an act of weakness on my part to do so. For, considering the aims and acts of that renowned organisation which for the time being wields the entire power of my critic's Church, not only resistance to its further progress, but, were it not for the intelligence of Roman Catholic laymen, positive restriction of its present power for evil, might well become the necessary attitude of society as regards that organisation. With some slight verbal alterations, therefore, which do not impair its strength, the passage has been restored.

My critic is very hard upon the avowal in my Preface regarding Atheism. But I frankly confess that his honest

hardness and hostility are to me preferable to the milder but more unfair treatment which the passage has received from members of other Churches. He quotes the paragraph, and goes on to say: 'We repeat this is a most remarkable passage. Much as we dislike seasoning polemics with strong words, we assert that this apology only tends to affix with links of steel to the name of Professor Tyndall the dread imputation against which he struggles.'

Here we have a very fair example of subjective religious vigour. But my quarrel with such exhibitions is that they do not always represent objective fact. No atheistic reasoning can, I hold, dislodge religion from the heart of man. Logic cannot deprive us of life, and religion is life to the religious. As an experience of consciousness it is perfectly beyond the assaults of logic. But the religious life is often projected in external forms—I use the word in its widest sense—and this embodiment of the religious sentiment will have to bear more and more, as the world becomes more enlightened, the stress of scientific tests. We must be careful of projecting into external nature that which belongs to ourselves. My critic commits this mistake: he feels, and takes delight in feeling, that I am struggling, and he obviously experiences the most exquisite pleasures of 'the muscular sense' in holding me down. His feelings are as real as if his imagination of what mine are were equally real. His picture of my 'struggles' is, however, a mere phantasm. I do not struggle. I do not fear the charge of Atheism; nor should I even disavow it, in reference to any definition of the Supreme which he, or his order, would be likely to frame. His 'links' and his