

TORCH OF



REASON.

TRUTH BEARS THE TORCH IN THE SEARCH FOR TRUTH. — *Lucretius*

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Brotherhood.

O BROTHER man, fold to thy heart thy brother!
 Where pity dwells, a heavenly peace is there;
 To worship rightly is to love each other,
 Each smile a hymn, each kindly deed a prayer.

Follow with reverent steps each great example
 Of all whose holy work was doing good;
 So shall the wide earth seem a sacred temple,
 Each loving life a psalm of gratitude.

Then shall all shackles fall; the stormy clangor
 Of wild war-music o'er the world shall cease;
 Love shall tread on the baleful fire of anger,
 And in its ashes plant the tree of peace.

—[Whittier.]

The Need to Believe.

WE are all of us grouped into creeds or schools allowed in such matters as God, the soul, immortality, and all the transcendental questions, to express our preferences and our requirements as we should never dare express them in physics or chemistry, or the most rudimentary of house wife's science. This difference shows, as apologists have often remarked, that belief in things spiritual conforms to different rules from belief in things temporal. And therein I agree completely. But if religious thought can thus dispense with the kind of certainty required for even the simplest practical affairs, this must surely be only because no practical decisions are really based upon it; it is not a means to an end, but an end, even like art itself. If, therefore, WILL can enter into belief, it is only to my mind, as an expression of NEED, of the cravings of this part of our constitution. And in so far as the needs of different men differ, and the needs of different historical periods and racial types differ still more, it is not surprising that while Science and the practical operation thereof, have tended to that ever greater unity which we associate with the notion of objective truth, the creation of the religious instinct, the expressions of the WILL not to KNOW nor to SUCCEED but to believe, have been as various as the product of the æsthetic faculty.

Should there really exist, immanent and hidden in this world of phenomena, of humanly perceived and interpreted appearances, an Eus Realissimum in any way resembling the creatures who worship and burn, turn about, the image they have made of him, if there be such an one, is it not justifi-

able to suppose that, having created such various moral soil and climates and germs, the unknown First Cause might love to watch the different growths of soul and cherish the diversity of his spiritual garden?

If all philosophical progress unites in thinking, if it is true that all that we know we can know only in terms of our senses and our organic intellectual necessities, then must the objective First Cause remain for ever hopelessly holding from our knowledge, and the god whatever he be, whom we worship, we hope for or deny must be an idol of our own making, an idol the more potent that he is part of ourselves; but an idol in judging of whose qualities and possibilities we are only judging our own thoughts, dreams and desires; and the objective Real Cause might, had he qualities or form, rebuke us as the Spirit of the Earth did Faust:

“Dei gleichst dem Geist den du begünst, nicht mir!”

—[Vernon Lee in Fortnightly Review.]

Immortality and Infinity of Matter and Force.

BY PROF. LUDWIG BUCHNER, M. D.

MATTER as such is indestructible, it cannot be annihilated; no grain of dust in the universe can vanish from, and none can enter it. It is the greatest service rendered to us by chemistry that for the last hundred years it has taught us this indubitable fact, that the unceasing changes and transformations of phenomena, which pass daily before our eyes, the formation and destruction of organic and inorganic forms and figures, do not consist of the formation of matter previously non-existent, nor of the destruction of matter then present, as was generally thought in earlier times, but that this change consists in nothing save in a continual and unbroken rotation of the same substance, of which the mass and the quality remain unalterable and identical for all ages.

The phrases “mortal body” and “immortal spirit,” which have been repeated ad nauseam, are misnomers altogether. Exact thought might possibly reverse the adjectives. The body in its individual form or shape is indeed mortal, but it is not so in its constituent particles. Not in death only but throughout life it changes unceasingly, as we have seen; but in the wider

sense it is immortal, since not the smallest particle of it can be annihilated. On the other hand we see that what we call spirit, soul, consciousness, disappears with the cessation of the individual combination of matter; and it must appear to the unprejudiced mind that this action having been brought about by peculiar and very complicated unions, must come to an end with its cause, that is to say, with the cessation of those peculiar combinations.

Today the indestructibility or permanence of matter is a scientific fact firmly established and no longer to be denied. It is interesting to observe that former philosophers and thinkers also possessed a knowledge of this important truth, although in an incomplete form and rather as a presentiment than as a scientifically known and established certainty.

Equally uncreatable, equally indelible, equally imperishable, equally immortal as Matter is the Force bound up with it. United in infinite amount to the infinite mass of Matter, in most intimate union therewith, and like matter, it runs in an unceasing never-ending circle and emerges from each mode or union exactly the same in amount as when it entered in. As it is an indubitable fact that Matter can be neither newly created nor annihilated, but only changed in form, so must it be accepted as an absolutely certain experience that there is not a single instance in which a force has been brought out of nothing nor reduced to nothing, in other words born nor annihilated. In all cases in which forces make their appearance they can be traced back again to their sources, that is it can be shewn out of what other forces or energies a given amount of force has been obtained directly or through transmutations. This transmutation does not proceed arbitrarily, but according to definite equivalents or weight-numbers, so that the minutest amount of force can no more be lost than the minutest amount of matter in the transformation of matter.

As matter is endless in time or eternal, so it is no less without beginning or end in space; in its real existence it withdraws itself from the limitations imposed on our finite mind by the conceptions of time and space, conceptions from which it cannot free itself in thought. Whether we enquire about or investigate the extension of matter in the minutest or the greatest, we nowhere find an end or a final form,

whether we call to our aid experiment or reflexion. When the discovery of the microscope or the juxtaposition of magnifying glasses, opened up worlds unknown before, and revealed to the gaze of the investigator a fineness and minuteness of organic life and organic form-elements undreamed of until then, man cherished the audacious hope of coming on the track of the final organic element, perhaps on the very basis of existence.

The remarkable wheel-animalcule, formerly mistakenly classed among the Infusoria, which measures from 1—120th to 1—240th of an inch, has a gullet, toothed jaws, stomach, intestine, glands, ovaries, eyes, blood, vessels and nerves. A drop of sea-water contains a crowd of the most various and most curious forms, as balls, crosses, baskets, screws, stars, chesslike figures, horns, caps, helmets, etc., and each of these forms represents a perfectly developed independent living creature, endowed with sensation and power of movement.

As the microscope guides us in the world of the minute, so does the telescope direct us in the world of the vast. Here also astronomers audaciously dreamed of penetrating to the very limits of the universe, but the more they perfected their instruments, the more immeasurably did the worlds expand before their astonished gaze. The light white mists seen by the naked eye in the vault of heaven were resolved by the telescope into myriads of stars, of worlds, of suns, of planetary systems; and the earth with its inhabitants, so fondly and proudly deemed the very crown and centre of existence, fell from its fancied exaltation to a mere atom moving in immeasurable space. “All our experiments yield us not the slightest trace of a limit; each increased power of the telescope only opens to our gaze new realms of stars and nebulae, which, if not consisting of galaxies of stars, are self-illuminating matter.” (Grove) “With each sharpening of our tools which bear our gaze into the waves of light of the furthest starry realms, new waves of sun break forth from the limitless ocean of the stars.” (W. Meyer.) “Even with the most powerful telescopes we see so many faintly-shining stars that we are unable to doubt that on the further side of these there are yet others which will become visible by larger instruments.” (G. J. Klein.) “From all these experiments we conclude that the depth of celestial space cannot be sounded, and that we shall never succeed in reaching its bounds.” (Secchi.) — [Force and Matter.]