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ETHICS AND THE STRUGGLE FOR LIFE.

THIS world of ours is a world of strife. Wherever we turn our eyes, there is war and competition and struggle. Battles are fought not only in human society, but in animal society also; not only in the animal kingdom, but in the plant kingdom; not only in the empire of organized life, but in the realm of inorganic life—between the ocean and the land, between water and air, among minerals, and among the different formations of mineral bodies, among planets and planetary systems, among suns and clusters of suns. Strife is identical with life, and struggle is the normal state of actual existence.

We can easily understand that a superficial observer of nature will feel inclined to look upon life as a chaotic jungle without rhyme or reason, in which the wildest hap-hazard and fortuitous chance rule supreme. A closer inspection, however, will show that there is after all order in the general turmoil and that a wonderful harmony results from the conflict of antagonistic principles. Nay, we shall learn that all order proceeds from the antagonism of factors that work in opposite directions. It is the centrifugal and centripetal forces that shape our earth and keep it in equilibrium. It is attraction and repulsion that govern the changes of chemistry. Gravitation throws all things into one centre, and radiation disperses the store of energy collected in that centre. And the same antithesis of hostile principles manifests itself in love and hate, in surfeit and hunger, in hope and fear.

There are many people who are not satisfied with this state of things. They dream of a paradise where there is no strife, no war, no conflict; where there is eternal peace, unmixed happiness, joy without pain, and life without struggle. Whenever you try to depict in your imagination such a condition of things, you will find that a world of eternal peace is an impossibility. The world in which life does not signify a constant struggle is not a heaven of perfection (as is imagined), but the cloudland of Utopia, an impossible state of fantastical contradictions. Should you succeed in realizing in imagination the dream of your ideal of peace without inconsistency; it will turn out to be the Nirvana of absolute non-existence, the silence of the grave, the eternal rest of death.

Natural science teaches that hate is inversed love

and repulsion inversed attraction. Annihilate one principle and the other vanishes. Both principles are one and the same in opposite directions. Thus they come into conflict and their conflict is the process of life. Science does away with all dualism. The dualistic view appears natural to a crude and child-like mind. The Indian might say that heat is not cold and cold is not heat, yet the man who learns to express temperature by the exact measurement of a thermometer must abandon the duality of the two principles. Monism is established as soon as science commences to weigh and to measure. The divergence in the oneness of existence creates the two opposed principles, which are the factors that shape the world, and the encounter of conflicting factors is the basis from which all life arises with its pains and joys, its affliction and happiness, with its battles, defeats, and victories.

The world being a world of struggle, life teaches us the lesson that we live in order to fight; and we must not blink at this truth, for we cannot shirk the combat. Ethics, accordingly, if it is true ethics, and practical ethics, must above all be an ethics of strife. It must teach us how to struggle, how to fight, how to aspire. In order to teach us the *how*, it must show us the goal that is to be striven for, and the ideal which we should pursue.

The progress of civilization changes the weapons and abolishes barbaric practices; yet it will never abolish the struggle itself. The struggle will become more humane, it will be fought without the unnecessary waste which accompanies the rude warfare of the savage, but even a golden era of peace and social order will continue to remain an unceasing strife and competition. You cannot abolish competition even in the most complete co-operative system. There will always remain the struggle for occupying this or that place, and the competition for proving to be the fittest will continue so long as the world lasts; and it is the plan of nature to let the fittest survive.

There are ethical teachers who imagine that the purpose of ethics is the suppression of all struggle, who depict a state of society where there is pure altruism without conflicting interests, a state of mutual love, a heaven of undisturbed happiness.

The ethics of pure altruism is just as wrong as the ethics of pure egotism. For it is our duty to stand

up manfully in battle and to wage the war of honest aspirations. It is the duty of a manufacturer to compete with his competitors. It is the duty of the scholar, the philosopher, and the artist to rival the work of his co-laborers; and the progress of humanity is the result of this general warfare. Organized life from its lowliest beginnings developed higher and higher by a continued struggle; and it is not the victor alone to whom the evolution of ever higher and higher organisms is due, but to the vanquished also. The victor has gained new virtues in every strife, and it is the brave resistance of the vanquished that taught him these virtues.

There is an old saga of a northern hero, to whose soul, it is said, were added all the souls of the enemies he slew. The strength, the accomplishments, the abilities of the conquered became the spoils of the conqueror; and the spirits of the slain continued to live in the spirit of the victor, and made him stronger, nobler, wiser, better. This myth correctly represents the natural state of things, and we learn from it the great truth, that our efforts, even if we are the unfortunate party that is to be vanquished, will not be in vain; our lives are not spent in uselessness, if we but struggle bravely and do the best we can in the battle of life. Furthermore, we learn to respect our adversaries and to honor their courage. We are one factor only on the battlefield, and if our enemies existed not, we would not be what we are. We are one part only of the process of life and our enemies are the counterpart. Any contumely that we put upon them in foolish narrow-mindedness, debases and degrades ourselves; any dishonesty that we show in fight, falls back upon ourselves. It will injure our enemies, as was intended, but it will do greater harm to ourselves, for it will disgrace us; and our disgrace in that case will outlive the injury of our enemies.

Ethics teaches us that all struggle must be undertaken in the service of a higher and greater cause than our egoistic self. He alone will conquer who fights for something greater than his personal interests; and even if he be vanquished, he will still have the satisfaction that his ideal is not conquered with him. He will find successors to continue his work. His ideal, if it be a genuine ideal, will rise again in his successors and they will accomplish a final victory for his aspirations.

The Teutonic nations,—the Anglo-Saxons, the Franks, the Germans and their kin,—are, it appears, in many respects the most successful peoples in the world, because of their stern ethics of undaunted struggle to which they have adhered since prehistoric times. It was no disgrace for the Teutonic warrior to be slain, no dishonor to be vanquished; but it was infamy worse than death to be a coward, it was a disgrace to gain

a victory by dishonest means. The enemy was relentlessly combated, may be he was hated, yet it would have been a blot on one's escutcheon to treat him with meanness. It was not uncommon among these barbarians for the victor to place a laurel wreath upon the grave of his foe, whom in life he had combated with bitterest hatred. There is an episode told in the *Nibelungensaga* which characterizes the ethical spirit of the combativeness of Teutonic heroes. Markgrave Rüdiger has to meet the grim Hagen and to do him battle. Seeing, however, that his enemy's shield is hacked to pieces, he offers him his own, whereupon they proceed to fight.

The moral teacher must not be blind to the laws of life. Ethics must not make us weak in the struggle for existence, but it must teach us the way to fight and must show us the higher purpose to be realized by our struggle.

Naturalists give us most remarkable reports about the degeneration of those organs and their functions and abilities which are not used. If man could live without reason, without education, language, without reason, mankind would soon degenerate into dumb brutes.

Do not attempt to preach a morality that would deprive man of his backbone. Man acquired his backbone because in the struggle for life he had to stand upright, thus to keep his own. If it were possible at all to lead a life without struggle, the backbone of man would soon become a rudimentary organ. But as it is not possible, those men alone will survive that are strong characters, that stand upright in the struggle and fight with manly honesty and noble courage. The men with a moral backbone alone are those to whom the future belongs.

Ethics must teach us how to struggle; it must not hinder us in the combat but help us. And ethics will help us. Ethics demands that we shall never lose sight of the whole to which we belong. It teaches us never to forget the aim which humanity attains through the efforts of our conflicting interests; it inculcates the lesson to do our duty in the battle of life, not only because this is required by our own interests, but because it is the law of life that we have to obey. By a faithful obedience to the ethics of the struggle for life, we shall promote the welfare of mankind and contribute to the enhancement of human progress.

FROM MY ROMAN NOTE-BOOK.

BY MONCURE D. CONWAY.

I.

THROUGH a valued friend, a French priest, well acquainted with my heresies, I received an invitation to "assist" at the Consistory in the Vatican, December 30, 1889. The only conditions imposed were that my

ladies should appear in black, with veils for bonnets, and I in evening dress, with white cravat. I did not attend in any antagonistic spirit. On my way to the Vatican I almost wondered that no "survival" of the horror of "Romanism," in which I was nurtured, gave any stir within me. But my cab happening to be blocked in front of Hadrian's castellated mausoleum, I gazed on the great bronze archangel above it, sheathing his sword after the plague he was supposed to have caused, and found in it a symbol of the sheathed sword of papal dominion. The temporal power is forever sheathed, however compulsory the scabbard. When the battle is over the victors may fairly indulge themselves in magnanimity. Those who fear that the sword may be unsheathed again, may keep their weapons. Having no such fear I throw mine away. To-day, I said, bygones shall be bygones. To-day, freedom is even less liable to be harmed by Catholicism than by Protestantism; and apart from political freedom, where is the advantage? Why should I prefer Jehovah to Mary, or the bottomless Pit to Purgatory?

However, I was presently reminded that it was not to a manifestation of the religious side of Catholicism that I had come, but to a momentary "materialization," as the spirits say, of the defunct Temporal Power. My sympathetic sentiments were indeed somewhat chilled as I entered by the "royal stair" into that "Royal Hall," between files of soldiers, armed with muskets, pikes, and swords. But I presently recovered equanimity on observing that all the weapons were antiquarian, and the uniforms antiquarian. They did not "mean business." It was a sort of masquerade. Nay, was I not myself in full evening dress, at ten in the morning, as if just from a ball? So I examined the upheld swords. Some were two yards long, or more. They had quaint hilts, crosswise, jeweled, and among the curious was a crooked one that seemed to represent the Sword of Flame. No doubt each has its history, and may have symbolized the submission of some proud prince. The pikes had crooked axes a half yard from the point, and were upheld by men in striped raiment, something like the "beefeaters" who make picturesque exhibitions at the Tower of London. The "Swiss Guards" are on hand, but very meek as contrasted with their old days—which I can remember—when they were prompt to handle roughly any poor pious wight who might be kneeling in the path of a pontifical procession. There was a gallery for the ambassadors commissioned to the Pope,—Spanish, French, Spanish. But they were all behind Sir John Simmons, the only protestant representative. He is here because England has Catholic dependencies,—Ireland and French Canada,—but his office has yet to be passed on by the Commons, and he has no establishment; he boards at a hotel. The real Ambassador, to the king,

is on the floor with the rest of us, in evening dress, his wife and daughter being in one of the two tiers of ladies in black—who appear as if at a funeral. On looking and listening around me I perceive that the majority of the guests are English and American tourists, no doubt mainly protestants. We are in the place of the princes once received in this "Royal Hall" by the mighty Pontiff.

We stood patiently for nearly an hour. Then the papal procession began to enter. The choristers in scarlet and white filed into their places. Then there were Cardinals in ermine and scarlet, with long purple trains borne by pages, and red satin skull-caps; then Bishops in purple and lace. Finally two mighty fans of white feathers floating at the top of velvet-covered poles are visible; between them is the throne, borne aloft on the shoulders of men, and on it seated Leon XIII, the white old man whom the Catholic world calls Holy Father.

The first thing that impressed me was the pathos of it all. This thin man of eighty years, whose life is prolonged only by constant precautions, appeared so lonely up there in the air! Him no tender arm of wife or daughter awaits, when, exhausted and ill, he returns to his solitude. He waves his benediction on the company beneath him with hands half covered with white mittens, and light flashes down from his huge seal ring, set round with large diamonds. This is the ring of his wedlock,—wedlock of the Church as Bride, and the heavenly Bridegroom. Our very evening dresses and white cravats are now supposed to be sanctified. Some pious ladies are said to have carried many rosaries, to be afterwards presented to their friends as having been blessed by the Pope.

The Cardinals and Bishops have taken their places in the reserved enclosure, and bend low as the Pope is borne past them. He is let down gently, and supported to a larger throne. Then they all take their seats, like the lords spiritual and temporal in the British House of Lords, and the choir breaks out with a triumphant anthem. Meanwhile the Pontiff sits still, and with his brilliant robes, and his triple crown, reminds me of certain Hindu deities that I have seen in their temples. The music ended, the work of the day proceeds. Three Cardinals are to be created—all from the "secular clergy"—that is, belonging to no Order. One of these is Monsignor Richard, Archbishop of Paris; another is Monsignor Foulon, Archbishop of Lyons; the third is the Austrian, once eminent as General Shoenborn. This third one alone is a striking figure,—a tall, handsome, Bismark-like personage. His air is military, and one cannot help wondering that such a man should become a Cardinal. He was engaged in the mortal struggle at Sadowa, and was one of the only two offi-

cers of his regiment who survived. Then he became a priest, and ultimately Archbishop of Prague.

The Secretary reads some official document; a Cardinal recites a prayer; the *Te Deum* is sung. The Pope's shoe is removed. The new Cardinal approaches, and is presented by the Pope's hand with a brimless crown-shaped hat of bright red satin. This is held by an attendant over its possessor's head as he bends to kiss the Pope's foot, then rises to kiss the Pope's hand. The Pope then embraces the new Cardinal, kissing him on both cheeks. This being thrice repeated the ceremonies of the Royal Hall are over. With some evidence of feebleness the Pope reaches the throne on which he entered, and is borne out as he came, again waving benedictions on us with unconsciously graceful movements of his hand. I had a better opportunity of observing his face. He has a large aquiline nose, curving over a sweet but melancholy mouth; his chin is weak, his eyes are blue and frank; his brow is not strong, but there is a scholarly look about him, as if he read much.

As the Pope floated out I remarked on the back of his aerial throne the papal arms, richly wrought, and a sun with rays worked in gold and silver. This recalled the well-known incident which occurred at the close of the Convention in Philadelphia, in 1787, which framed our Constitution. As Washington was leaving the chair in which he had presided over the Convention, Franklin approached and pointed to the image of the sun carved on its back. He said that at various junctures of the debates he had wondered whether it were a rising or a setting sun. "But now," he added, "I feel certain that it is a rising sun."

It is a terrible ordeal these prelates have to endure in marching beneath critical eyes, without the shield of any beard or of any hat. Every line of the shaven face comes out; the thick lip, the sensual touch, the double chin, the bovine neck, the corvine nose, are visible here and there, contrasted with other faces with touches of beauty and spirituality. But I must admit that the Cardinals as a body did not impress me so favorably as the Bishops. Perhaps it was that every expression of humility is lost under the loudness of such raiment.

After conducting the Pope to his apartments the prelates and cardinals and choir returned, moved through the Royal Hall, and we followed them into the Sistine Chapel. There was a brief service, which included some grand singing,—for a good voice is essential for a prelate. I found myself standing immediately beneath Michael Angelo's great ceiling pictures,—Eve received by the Almighty as she emerges from Adam's side; Eve and Adam receiving the apple offered by the serpent, which has the face and breast

of a beautiful woman (Lilith); Eve and Adam driven out of Paradise. The service was carried on at an altar on the wall otherwise completely covered by the greatest mural painting in the world—Michael Angelo's Last Judgment. In the lower corner is pictured a Cardinal, girdled by a serpent,—this being the artist's punishment of the prurient prudery which wished to drape his pictures. The figure of Jesus as a ferocious judge, his mother trying to restrain his fury, is there witnessing the tremendous terrors which led to the worship of Mary. I do not wonder that Hawthorne was scandalized by this representation. "I fear I am myself among the wicked," he wrote, "for I found myself inevitably taking their part, and asking for at least a little pity." In other words, Hawthorne did exactly what Mary is doing in the picture; he touches, without realizing it, the secret of Mariolatry. He complains that Jesus should "ever be represented in that aspect," forgetting that it is the scriptural aspect. The fact is that when the Puritans destroyed the idea of the maternal divinity, they rendered inevitable a feminine evolution of Jesus. Hawthorne's Jesus is really a Madonna.

While I am gazing on the grand picture, to which the choir makes a sort of antiphon, the service ends. The three new Cardinals take their stand, in the order of age, at the hither end of a reserved space, and each is greeted with kisses by all the rest. The hand is grasped, and the kiss is on both cheeks. Then they disappear from the public, and are received in secret consistory. Here the papal Allocution is read in Latin. There is also the ceremony, which must be curious, of shutting up the Cardinals. The Pope with his fingers closes the mouths of the new cardinals to indicate that as Cardinals, they are not to talk. As priests (if such they are, for laymen may be Cardinals) they may speak, but nothing that they say is in any case to carry authority or weight as coming from a Cardinal. The kissing of the Pope's foot and hand is thus not an idle ceremony; his Cardinals are to be as his silent bodily members obeying the papal brain.

Leaving the Vatican, I find myself recurring to the gold-and-silver Sun on the throne, and asking Franklin's question—Is it a rising or a setting sun? So far as the Temporal Supremacy is concerned, it is long after Sunset; what we have seen is Afterglow. The Allocution by its very complainings reveals the growing sense of hopelessness. Clearly nothing has been gained to the Church by its irreconcilable attitude towards the State, but something has been lost. The government having found abuses in the administration of charitable foundations,—abuses of a kind that invariably grow around endowments from the Past,—have had to take them in hand, and we adapt them, in harmony with changed circumstances. This

was done in England not many years ago, where it was found that money, bequeathed to the poor in parishes where no poor remain, was enjoyed by the rich. The English Church resisted change, but, when overborne, joined in carrying it out. But now that the Pope has denounced the new law, it is difficult to see how the Church can have any share in the future distribution of these important charities. It would appear imprudent to transfer entirely to the secular hand the credit for alms and bounties hitherto associated by the people with their pastors. If this suicidal policy continue the future of the Church in Italy may be seriously affected. But probably it will not continue. When the present Pope dies—and the hour cannot be distant—there will be a crisis. The Church will have to decide whether its irreconcilable attitude, and a claim of martyrdom that has become stale, are worth what they are costing. It may see in England, in Germany, what good things state churches possess when they consent to temporal subordination, and what vast services they may render to the poor. Much will depend on the next Pope, and perhaps more on these dumb Cardinals.

AGNOSTICISM VS. GNOSTICISM.

BY PAUL R. SHIPMAN.

[CONCLUDED.]

THIS conclusion* gathers force from a further scrutiny of the language that involves it. In the philosophy of Kant, from which the Editor avowedly has drawn the staple of his own philosophy, the phrases "existence in general" and "things in general" mean respectively, as indeed their words import, *existence in itself* and *things in themselves*; they refer not to phenomena, but to noumena. And yet the Editor, who doubtless knows his Kant by heart, declares in the citation just made that "existence in general," though not subject to the law of causation, "must be accepted as a fact"; in other words, he declares in effect that the unknowable is unquestionable.

And, again "The question itself, as to the cause of existence in general," these are his words, still lingering in the reader's mind, "is not admissible, for the law of causation is applicable to all phenomena of nature, but not to the existence of nature, which must be accepted as a fact." Very well, say we all: but, as the phenomena of nature constitute the manifestation of existence in general, and as the manifestation is under the law of causation and existence in general is above it, existence and its manifestation, contrary to his doctrine, are not one thing, but inevitably two things; of which existence, as free from causation and absolute in certainty, does not admit of being either grasped or

doubted. If existence in general and its manifestation were one, the law of causation obviously would be applicable to the former as well as to the latter; and, hence, in declaring that it is not applicable to existence in general, which notwithstanding must be accepted as a fact, he confesses—nay, proclaims—that this unique reality not only differs from its manifestation, but is an insolvable mystery.

The conclusion gathers fresh force, out of a crowd of other things, from his definition of reality as "the sum total of all that is";* for, as Kant affirms, the "conception of a sum total of reality is the conception of a thing in itself, regarded as completely determined"; and the conception of a thing in itself, *hervorresco referens*, is the conception of the unknowable. Can it be that monism is based not simply on noumena, but on noumena in the positive sense? Is it possible after all that monism is no other than the beast dualism?

"That which is unknowable in substance," he says, "is unreal and non-existent," continuing: "The whole of reality, with its inexhaustible wealth of problems, lies within the bounds of knowability, while beyond that limit is empty nothingness." The question "as to the cause of existence in general," it would seem, is admissible after all, in his opinion; for, if nothing is beyond the bounds of knowability, the existence to which he refers must lie within them, and must consist of phenomena, to which, as such, the "law of causation is applicable." The question as to the cause of existence whereof this is true, forsooth, not only is admissible, but admits of a ready answer—to wit, the familiar process of which the product is an abstraction. But this is not the kind of existence in question. The existence which is independent of sensation, but on which sensation depends, is not existence in the abstract, but in the concrete—not the mere idea of existence, but something existing—not an abstraction, but a reality: a reality of which the existence is revealed in the kaleidoscope of mind, but which in its proper nature, be that what it may, is impenetrable to thought, as the objects in a kaleidoscope are impenetrable to vision. His averments here, the reader will mark, are mutually contradictory. If existence in general is independent of causation, as he concedes, it cannot consist of phenomena, and does not lie within the bounds of knowability, but must lie beyond them; and if, though lying beyond them, it "must be accepted as a fact," it cannot be "empty nothingness": it must be something, and must be unknowable. That is to say, if the law of causation is not applicable to existence in general, existence in general is incapable of being

* Referring to the preceding sentence, which alleges that the case against agnosticism is surrendered.

* This definition stands at the head of *The Open Court*, to whose Editor I am rejoicing; but in "Fundamental Problems" reality is defined, less aptly, I think, though not less consistently with my argument, as "the sum total of all facts that are, or can become, objects of experience."

known in its causes, and can be known only as a fact; which is the definition of the unknowable.

"We cannot comprehend," he repeats in another relation, "why planets materially exist, and why force exists inseparably connected with matter. The material existence of planets, that their mass endowed with motion exists at all, is a fact." If we cannot comprehend "the material existence of planets," we of course cannot comprehend "material existence" at large; which, accordingly, apart from its mere actuality, is unknowable. If, again, we cannot comprehend "why force exists inseparably connected with matter," we cannot comprehend matter or force; and both, excepting the fact of their existence, are unknowable—not the words, mark you, or the conceptions they signify (possibly all of which the Editor takes account), but the external realities from which the conceptions are drawn. These realities are incomprehensible, he admits: they lie beyond "the bounds of knowability." And yet beyond these bounds, he says, is "empty nothingness." Is then "empty nothingness" incomprehensible? And can that which is incomprehensible be said to lie within the grasp of cognition? What indeed is "a fact" that "we cannot comprehend" but an unknowable reality—a reality known as a fact but not knowable in its causes? Nothing. The recognition of it is agnosticism pure and simple. It is the vice of the Editor's philosophy, as I conceive, that he mistakes the products of ideation for the external realities which give rise to them, and in turn mistakes these realities for nonentities; and this even when, as in the present instance, he stands face to face with the realities in their sublimest forms, and seems to sweep his eye across their measureless breadth, to lift it up to their infinite height, to fix it on their impenetrable depth. His philosophy banishes mystery to enthrone delusion.

The Editor, as befits a good evolutionist, holds that man, in common with all other organisms, is the product of development,—the result of the action, reaction, and interaction of natural forces, which, as the factors originating consciousness, are external to consciousness; so that, as the outcome of his doctrine, we have beyond consciousness an existence which is the source of our existence, but which, nevertheless, is nothing, while we are something. We have all heard of the juggler who climbed a ladder supported by nothing, and pulled up the ladder after him; but none of us, I take it, ever suspected that this audacious drollery is a stock piece on the solemn stage of the universe—the roaring farce that relieves the tragedy of things. *Ex nihilo nihil fit* used to be accounted sound philosophy, but our arch-gnostic has changed all that; in his hands the maxim reads *Ex nihilo aliquid fit*. He unwarily has put the new wine of evolution into the old bottles of pantheism, with the natural re-

sult, this novel version of the time-honored aphorism marking one of the lines of fracture in the shivered bottles. The scriptural warning on this point should not have escaped the attention of so alert and lucid a thinker.

The Editor has a good deal to say about the sum of things—the totality of existence—the All, with a big *A*; which, we may be sure, he brings somehow (satisfactorily to himself) within the limits of the knowable. The steps in this particular instance, it turns out, are only two. He assumes, first, that nature has nothing in any of its parts, extensive or intensive, that is essentially different from the part of it accessible to human comprehension—which assumption, by the way, begs the question in dispute; and, secondly, that the infinite is another name for the indefinite. Grant these two assumptions, and the wide world passes into the confines of the knowable, as the huge Afrite in the Arabian tale entered the fisherman's bottle. But these assumptions cannot be granted. He does not consistently stand by them himself. In admitting that sensation is different from the external reality producing it, he admits that every part of nature has something not comprehensible by man; and, when he looks up at that starry heaven which so kindled and awed the imagination of Kant, he must tacitly recognize that the indefinite is neither the infinite nor a real copy of it. Still, he makes these assumptions, and attempts to maintain them.

"The infinite," he says, "is a symbol for a mathematical process. When I count, I may count up to a hundred or two hundred, to a thousand or to a million, or to whatever number I please. If I do not stop for other reasons, I may count on without stopping—in a word, into infinity." Here we have both assumptions, taken in the airiest manner, the suggestion being that what man does not understand is as understandable as what he does understand, and that all he has to do to comprehend the sum of things is to go on knowing and to know, as far as he pleases, and whenever he stops, though but from weariness or caprice, he may congratulate himself that he sees through the All, or as much of it as he likes, which is the same thing; it is as easy as counting, or lying. "This will never do."

One may realize the indefinite by stopping when he pleases; but, if he would realize the infinite, he must go on forever, which would be likely to put a finite being to his shifts. The indefinite admits of limit, conditional, though not unconditional; but the infinite admits of no limit, conditional or unconditional. Our gnostic's free and easy logic, if he will pardon me, misses fire. He aims at the infinite, but brings down only the indefinite; the infinite remains safely perched in its cosmic eyrie.

"Infinite is never an accomplished process," he

tells us. It is never a process at all, but always a property, abstracted from infinite things; it is not a process, but the product of a process, and of a perfectly accomplished one. Trying to count "into infinity," however, were anybody mad enough to try it, would be a "process," and undeniably "never an accomplished process"; seeing that it would take infinite time to accomplish it.

He appears to look down on the infinite as "a mathematical term." Yes, it is a term in mathematics; it is also a term in philosophy; and, what is more to the purpose, it has the same meaning in both. Whether applied to quantity or being, it means that which is greater than any assignable thing of the same kind. And surely a thing is not to be made nothing of because it is so great as to have no conceivable limits. It may be suggested, as Spinoza held, that the infinite *suo genere* is not the absolutely infinite; but, in respect to existence, this distinction is lost, the infinite *suo genere*, as comprehending all possible modes of infinity, being also the absolutely infinite.

The infinite he also calls an "abstract idea." It is an abstract idea, to be sure; but it is abstracted from realities—infinite space, infinite time, and, above all, the infinite existence that fills both. Infinity is an abstraction, but infinite existence, the Editor himself being judge, is the synonym of reality—the All of monism.

"We look upon the forms of our existence," he says, "as upon a specimen, so to speak, of the forms of existence in general." Here, once more, I may note, he recognizes, in Kantian phrase, existence in itself, taking its reality for granted, and going so far as to hint at the possibility of bringing it within the bounds of the knowable; but this in passing. The forms of infinite existence, to return, are themselves infinite, if we may reason on the matter at all; for the properties of a thing partake of its nature, and to assume that the forms of the infinite are finite would be to abolish the infinite. A specimen, furthermore, presupposes a class of things like itself, to which it belongs, and of which it is a representative; but finite forms do not belong to the class of infinite forms, and for this reason cannot be specimens of them. The minutest part of a parabola, indeed, represents the whole, though produced to infinity, but only because the property of a parabola is assigned by definition, and belongs entire to every point in the curve. As, however, existence does not receive its properties from definition, or pack them in barren points, whose endless iteration develops no new property, we are not at liberty to assume that we know all the properties or the whole of any property even of finite existence, far less that the complex of these properties undergoes no change in the forms of infinite existence. The notion

that infinite existence is merely finite existence infinitely repeated has no ground in reason. It would be equally admissible, saying the least, to hold that infinite existence is finite existence changed qualitatively, as it were, by means of infinite quantification—finite existence not infinitely extended but infinitely transformed. But no particular predication of infinite existence is legitimate; infinite existence is unknowable, and that, once ascertained, ends the question. To pursue it would be to go astray, without star or compass, in the night and chaos of self-contradiction.

Wherefore, infinite existence, unlike tea or wheat, cannot be sampled. We know that it is; but what it is we know not, and by the constitution of our faculties are incapable of knowing. It lies beyond the possible grasp of cognition. The simple transcendency of this awful something—its existence beyond consciousness, and independent of consciousness—would paralyze comprehension; but when to its transcendency we add its infinity, and superadd its absoluteness, the most confirmed gnostic, even of the monistic species, must begin to suspect, one would think, that there is something in heaven and earth not dreamt of in his philosophy.

It is time to close. But in closing I must do myself and the Editor of *The Open Court* the justice of paying afresh the tribute of my admiration to his rare excellence as a writer. The energetic yet easy play of his faculties, the massive simplicity of his style, the mingled sympathy and reverence of his tone, his imperturbable temper, and his masterly lucidity, are above praise. Even his errors, or what I hold to be his errors, are more improving than the truths of most writers. I must not forget, however, that I am closing.

My summary shall be short; and, to this end, partially *ad hominem*. Monism is founded on the oneness of the All. As the sum total of reality, the All is transcendent; as illimitable in space and time, it is infinite; as dependent on nothing outside of itself, it is absolute. Transcendent, infinite, absolute, the All, by this triple token, is the Unknowable; on which, such being the case, monism rests as its foundation. And so the leopard of agnosticism, fulfilling in a way the roseate prophecy of Isaiah, lies down with the kid of gnosticism—the latter inside the former. "Let us have Peace."

ONTOLOGY AND POSITIVISM.

THE basal idea of Positivism or Positive Monism is that it takes its stand on facts; and there is unquestionably no thinker of the present age, who is imbued with the scientific spirit of the time, that would offer any objection to this principle. Yet former philosophies did not take the same ground. They tried to find a footing in empty space; they attempted to explain

facts by deriving them from some abstract conception that they postulated. Their favorite starting-point was the idea of abstract existence. Hence their method is called *ontology*, which may be translated as meaning "thought-structures of abstract existence." The vaguer the broader, the more general and metaphysical this abstract conception was, the deeper and profounder an ontological system appeared to be, and the more it was appreciated by the astonished public.

One of the ablest, and certainly the most famous, among ontologists was Hegel. Hegel started with the abstract idea of being or existence in general, and claimed that this concept in its emptiness was identical with non-existence. Abstract being, he said, is at the same time an absolute negation of concrete being; it is pure nothingness. These two concepts accordingly are in one respect absolutely identical, in another respect absolutely contradictory. Each one disappears immediately into its opposite. The oscillation between both is the pure becoming, *das reine Werden*, which, if it be a transition from non-existence to existence, is called *Entstehen*, "growing, originating, waxing," and if it be a transition from existence to non-existence, is called *Vergehen*, "decrease, decay, waning." Having arrived, by this ingenious method of philosophical sleight of hand at the concept of Becoming, Hegel's ontology touched bottom. From the Utopia of non-existence, above the clouds, he got down to the facts of real life; and here he applies to everything the same method of a *thesis*, an *antithesis*, and the *combination* of both.

We would be obliged to go into detail if we intended to show how truly grand was the application of his method to logic, to history, to natural science, to art, to æsthetics, to religion, and to theology. Here is not the place for doing this. Yet, while objecting to the ontological method, we wish incidentally to emphasize the fact, that Hegel was one of the greatest, boldest, and most powerful thinkers of all times, whatever his mistakes may have been, and from whatsoever standpoint we choose to look upon his philosophy.

Ontology starts from abstract ideas and comes down to facts. Positivism, on the contrary, starts from facts and rises to abstract ideas. Abstract ideas, according to the positive view, are derived from and represent certain general features of facts. Ontology is bent upon explaining the existence of facts from non-existence, and ontologists therefore regard it as their duty to bridge over in their imagination the chasm between nothingness and something. Positivism does not require such mistaken procedure. It takes the facts as data and possesses in their existence the material out of which rise the sciences and philosophy. Philosophy is no longer a pure thought-structure of

abstract being, but a general survey of the sciences as a conception of the universe, based upon experience.

Ontological systems did not disappear and lose their influence over mankind suddenly, but dissolved themselves first into a state of philosophical despair. The uselessness and sterility of the ontological method were more and more recognized and found their philosophical expression in agnosticism.

Agnosticism is the most modern form of the obsolete method of ontological philosophy. The agnostic philosopher has discovered a concept that is broader and vaguer even than that of "existence in general." This concept is the Unknowable. Something that is real and at the same time absolutely unknowable is a self-contradiction. But never mind. That makes the idea the vaguer and it will thus be more easily turned to advantage. Agnostics are never afraid of arriving at self-contradictory statements, at unknowabilities, or at insolvable problems—these three terms mean the same thing—for they are just the things they believe in.*

Positivism regards the construction of philosophy upon abstract ideas as idle effort. Instead of coming down from an abstract conception as if it were out of a balloon to the solid ground of facts, positivism takes facts as its data. It starts from facts and arranges them properly in good order. It derives its abstract conceptions not by a theological revelation nor by intuition and metaphysical inspiration, but by the method of mental abstraction. And it discards all those abstract conceptions which have not been derived from facts. Philosophical knowledge is not at all a going beyond facts, but it is the proper and systematic arrangement of facts, so that they do not appear as incoherent single items without rhyme or reason, but as one intelligible whole in which every part appears in concord with every other.

The principle * Positivism *, certainly, is very simple, but its application is by no means easy. Even the mere statement of facts requires much care and exactness, while their systematic arrangement as scientific knowledge is the privilege only of a few exceptional thinkers.

What are facts? Facts are all the events that take place; the thoughts and acts of living beings as

* Agnosticism blindfolds us in clear daylight. I wish every agnostic would read the following passage from our great American Logician, C. S. Peirce:

"One singular deception, which often occurs, is to mistake the sensation produced by our own unclearness of thought for a character of the object we are thinking. Instead of perceiving that the obscurity is purely subjective, we fancy that we contemplate a quality of the object which is essentially mysterious; and if our conception be afterward presented to us in a clear form we do not recognize it as the same, owing to the absence of the feeling of unintelligibility. So long as this deception lasts, it obviously puts an impassable barrier in the way of perspicuous thinking; so that it equally interests the opponents of rational thought to perpetuate it, and its adherents to guard against it."—(*The Illustrations of the Logic of Science*. (See *Popular Science Monthly*, 1877, p. 291.))

well as the motions of not-living things, great and small; the oscillations of atoms and the movements of suns; in short all natural processes that happen. The central fact among all other facts is to every one the activity of his own consciousness. This central fact, however, must not be supposed to be either the ultimate fact or the simplest fact. To call any fact ultimate is not justifiable, because if any single fact among facts is ultimate, all facts are ultimate. Facts, if they are facts at all, are equally real; their reality cannot be regarded as of a greater or less degree. To look upon consciousness as a simple fact would imply that it is eternal, which is contrary to our experience. Consciousness is a very complicated fact; it is the sum of many smaller facts and must be supposed to be the result of a co-operation of innumerable processes.

This, however, is stated only incidentally in opposition to certain philosophers who believe in the simplicity of consciousness and build upon this hypothesis a grand philosophical system called idealism. For our present purpose, in considering consciousness as the central fact among all other facts, it is of no consequence. It is here sufficient to state that consciousness being to every one of us the basis of our knowledge of facts, need not at all be the originator of facts; being the centre of our intellectual world, it need not at all be an indivisible unit or a mathematical point. Facts are stated as facts when they are represented in consciousness, and the means by which facts are represented in consciousness are sensations. This is to say: The philosophical problem according to positivism is the arrangement of all knowledge into one harmonious system which will be a unitary conception of the world and can serve as a basis for ethics.

A unitary conception of the world implies and presupposes the idea of a continuity of nature, which, it is true, has not as yet been proved in all its details. Nevertheless, it is more than simply probable. The continuity of nature is the indispensable ideal of science; every progress of science is, rightly considered, nothing but an additional evidence of the truth that nature does not contradict herself; she is continuous and self-consistent. There are no facts, proven to be facts, that can overthrow the ideal of a continuity of nature. Therefore, the solution of the problem to construct a unitary system of knowledge, we most emphatically declare, is not only possible, it is also necessary, it is an indispensable duty of man as a thinking being; and its realization is the very life of science. If a systematization of knowledge were impossible, science would become impossible, and philosophy would be resolved into useless vagaries.

To sum up. The philosophical problem, accord-

ing to ontology, is to derive existence from non-existence. Agnosticism, finding the problem of deriving something from nothing insoluble, declares it to be an inscrutable mystery. Positivism maintains that the problem is illegitimate. Taking its stands upon facts, positivism can dispense with the *salto mortale* of ontology.

P. C.

POSITIVE SCIENCE VERSUS GNOSTICISM AND AGNOSTICISM.

IN ANSWER TO MR. SHIPMAN'S CRITICISM "AGNOSTICISM VS. GNOSTICISM."

1. WHENCE COME FACTS?

FACTS, we declare, are the data of knowledge; and the existence of things, the existence of nature, must be regarded as a fact. Here Mr. Shipman thinks that he has got me in a fix. Whence do we get the facts?

The law of cause and effect applies to things only, i. e., to the forms of existence, but not to existence in general, as I admit. Ergo, Mr. Shipman declares, existence in general is one thing and its manifestation another: existence in general is free from causation, is absolute and unknowable, while the manifestations of existence, its forms, are knowable.

The law of cause and effect, as defined and explained in *Fundamental Problems*, is the formula under which we comprise all the changes that take place in the world of actual existence. The law of cause and effect does not explain why matter exists or why energy exists, but it explains how and why one form changes into another form.

The law of cause and effect does not admit of any other application; for instance, it cannot be applied to the question "Why is there any existence at all?" We can trace the chain of causes and effects up to a special, for instance the present, state of things, and we can comprehend why things and their arrangements are as they are, but to search for a cause of their existence at large, why they materially exist at all is illegitimate. To comprehend material existence in this way is impossible, because it is inadmissible. There is, however, no concession on my part, no admission, as Mr. Shipman declares.*

The law of cause and effect applies to changes of form and as soon as we apply it otherwise, we must in the end arrive at contradictions—which in my mind do not prove the dogma of agnosticism, but are a sign that there is something wrong in our logic. The law of cause and effect is often erroneously applied to abstract conceptions. But it is wrong to speak of the cause of "whiteness" or the cause of "the existence of the world in general." I can investigate the cause that made a thing white; and I can explain the reason why a certain thing now appears to us, for instance, as white. But there is no cause of "whiteness in general." I can explain the process by which we arrive at the conception of whiteness. But the application of the concepts cause and effect to abstract ideas (as I employ the term *cause*) is as nonsensical as if I should speak of the undulations of goodness, or the heat of

*Mr. Shipman's quotation that "we cannot comprehend why planets materially exist," etc., makes a different impression when considered in its context. Six lines above the quoted passage we read, on p. 121: "There is nothing to be comprehended in existence in general. It is a matter of experience simply, to be stated as a fact. By the form, for instance, of planets, we understand their shape as globes (or rather as spheroids); by the form of their motions we understand their paths, which are conic sections. We cannot comprehend why planets materially exist, and why force exists inseparably connected with matter. The material existence of planets, that their mass endowed with motion exists at all, is a fact; but their existence as planets, why they exist as spheroids, and why they travel in paths of conic sections can very well be comprehended."

straight lines, or the changes of form that mathematical points undergo. The question how the different forms of existence came about, how they were caused, is legitimate; but the question as to the cause of existence in general is illegitimate.

But, given facts as the data from which philosophy and science start, and recognizing that they must come from somewhere, the question still remains, How do facts or how did facts originate?

This question may be viewed in two different ways:

(1) How is the present state of the world to be explained from a former state? Especially, How did its complicated cosmic harmony and manifold variety of form come about? and

(2) How is it that things exist at all? Why is there existence instead of non-existence? Why is there something instead of nothing?

These are the two interpretations of which the question "Whence come facts?" admits. In the former shape the question has found its scientific answer in the Kant-Laplace hypothesis of the origin of the solar system and in the Lamarck-Darwinian theory of evolution which was devised to account for the origin of species. In the latter shape the question has also found a scientific answer. The answer is formulated in the law of the conservation of matter and energy. The answer is that matter and energy are indestructible and uncreatable; they are eternal. "Eternal" does not signify anything mysterious or incomprehensible; it simply denotes something that exists, that has existed, and that will continue to exist.

No other answer can be expected to the question "Whence do facts come?" Mr. Shipman does not seem to consider the law of the conservation of matter and energy a sufficient solution of the problem. He would fain make us believe that the substitution of something unknowable is an answer more satisfactory than the law of the conservation of matter and energy. But it is not. The Unknowable explains nothing; and if one adopts the positive conception of philosophy, the Unknowable becomes quite a superfluous idea, which can most easily be dispensed with—nay more easily than it can be accepted. There is no place for it in a system of positive philosophy.

II. MYSTERY AND DELUSION.

Mr. Shipman says:

"It is the vice of the Editor's philosophy, as I conceive, that he mistakes the products of ideation for the external realities which give rise to them, and in turn mistakes these realities for non-entities; . . ."

I do not mistake the products of ideation for external realities. On the contrary, I have repeatedly declared that ideas are representations of things. Metaphysical essences and absolute existences are all that I have declared to be non-entities. The banishment of mystery, in my mind, is the main duty of science and philosophy, and I am not at all astonished that a mystic looks upon the attempt to expel mystery as a delusion.

III. THE SOURCE.

Mr. Shipman sums up the outcome of my doctrine in the following statement:

"We have beyond consciousness an existence which is the source of our existence, but which, nevertheless, is nothing, while we are something."

This is simply a gross misstatement. I never said anything like it. I mentioned the word source in one connection only. I said there is no source of existence—no source of the universe. The story of "the juggler who climbs a ladder supported by nothing and pulls the ladder after him," is applicable not to positivism but to that class of philosophers who in search for a source of existence find themselves urged to search further for a source of the source and so *ad infinitum*.

IV. THE THINKING SUBJECT A PART OF NATURE.

Mr. Shipman seems to suppose that the thinking subject is essentially different from the rest of nature. At least he objects

to "the assumption" that the thinking subject is a part of nature, and that the form of the thinking subject is, as it were, a specimen of the form of nature. He does not disprove my position. So I need not take the trouble to refute his view.

V. THE INFINITE AND THE INDEFINITE.

The infinite is by no means another name for the indefinite. Mr. Shipman, it appears, in declaring that I had said it is, did not understand the solution of the question as proposed in *Fundamental Problems*. The two conceptions, the infinite and the indefinite, are quite distinct. It is not my logic that is "free and easy," but Mr. Shipman's presentation of my views.

The infinite is a symbol to signify a process without a limit. If I count up to a hundred or to a thousand and stop there, I do not reach the infinite. I never said that I reach it by stopping indefinitely, as Mr. Shipman declares. Only, if I count on without stopping, I call the process infinite.

Infinity is not a thing, it is not an object; it is a process without a limit. A process carried on without a limit, is never finished, it is never a round, compact, concrete reality, but is conceived as being in a course of constant progress.

Mr. Shipman tells us that the infinite is "a property abstracted from infinite things." I must confess, (1) that I never met with an infinite thing in my life, and (2) that I do not believe in the existence of infinite things. Time and Space are infinite to be sure; but time and space are not things; and infinity is not abstracted from Time and Space, but attributed to them. Space is not, as metaphysical philosophers imagine, a large box possessing the inexplicable property of infinity, and containing the world within it. Space is the possibility of motion in all directions. If the point *A* moves in a straight line, it is possible for it to continue to move without stopping. We can imagine the process to be continued without a limit. The same holds good for every line in every possible direction. This is all we can mean by the idea that space is infinite.

It is the same with Time. Metaphysical philosophers imagine that Time is a mysterious something in which all events and happenings take place. But Time is not a thing. It is no more a thing than Space is.

We observe changes taking place around us. Time is nothing but a measure of these changes. We employ as measures such changes as appear most regular, such as days and years. But there is no time apart from changes. Since we can imagine that some changes will always take place, and, even if they did not take place, since we could measure the time of a supposed rest by some certain measure, (days, years, millenniums, billionniums, etc.), we say that Time is infinite. This is all that we can mean by the idea that Time is infinite.

If Mr. Shipman means by "infinite existence" the truth that existence will continue to be existence into infinity, (*viz.*, infinite time, or eternity), I gladly adopt the term. If he means that existence in its extension is infinite, I must hesitate to adopt it. If the infinite extension of existence means something immeasurable to us with the means of measurement at our command, I have also no objection. But if it means that the amount of energy and of matter in the sum total of all the sidereal systems of the universe is absolutely infinite, I must ask Mr. Shipman on what ground he makes such a bold assumption.

VI. KANT AND DUALISM.

Mr. Shipman's quotation from Kant proves that the latter believed in things in themselves. I know very well that Kant has a phase in his development which is thoroughly dualistic. But we are not discussing Kant here, so I waive the point.

VII. ARE THINGS IMPENETRABLE TO THOUGHT?

Mr. Shipman says: "The existence of reality is revealed in the kaleidoscope of mind, but its proper nature, be that what it may, is

impenetrable to thought, as the objects in a kaleidoscope are impenetrable to vision."

This simile throws light upon the difference between Mr. Shipman's conceptions and mine. I do not want either thought or vision to penetrate things. It would be but consistent with Mr. Shipman's agnosticism to declare that things are invisible. We see the outside of things only, and therefore objects are impenetrable to vision.

If Mr. Shipman's expression, "things are impenetrable to thought," is used in a figurative sense, meaning thereby that we cannot see in our mind the inside of things and the laws that describe* their formation (indeed, it can not be interpreted in any other sense), the idea is as untrue as that science is identical with ignorance.

We cannot look into the inside of people; yet a good physician who is not an ignorant quack but combines knowledge with ability and sound judgment, can and does penetrate with his thought into the organs of his patient. What would be the value of science, if that were not so!

A philosophy that levels all degrees of wisdom to the miserable *ignorabimus*, will come to the rescue of quacks and comfort their conscience with Solomon's great saw: "All is vanity! Knowledge is vanity! Wisdom is vanity!"

Does not the botanist see more in a tree than people ignorant of the wonders of plant-life? Do not our thoughts penetrate into the ground and do we not know that the roots are there that nourish the tree? Does not the mind of the scientist perceive the activity of the solar light which raises every little drop of sap that enters the leaves and blossoms to build up their structures? And are not the laws that describe these changes present in the mind of a man familiar with the subject so that he can upon the whole foretell what will happen, if some of the conditions were altered? If that is no penetration of thought into things, pray what is it?

VIII. UNKNOWABLE MACHINES AND THEIR INVENTORS.

Are those things unknowable also that we made ourselves? Were steam and the laws of steam impenetrable to the thoughts of a Watt and to a Stephenson? Is a watch unknowable to a watchmaker? Is the Eiffel tower and its structure unknowable to Mr. Eiffel? Is the phonograph an unknowable instrument to Mr. Edison? Is he hopelessly ignorant about the materials and their qualities of which its different parts consist? Must he not have a very exact and an exhaustive knowledge of the laws according to which the wonderful little machine acts?

Mr. Wake in his thoughtful essay *God in Evolution (The Open Court, No. 121, p. 1998)* brings out very strongly this point against agnosticism. We quote the following passage:

"To a philosopher in his study, or even in the presence of the ordinary phenomena of external nature, all our knowledge may appear to be resolvable into states of consciousness, but not to him who uses the qualities of matter or directs the forces of nature for working out some great useful design. The sculptor or artist can give outward form to his thought, and so can the engineer who tunnels under mountains or bridges arms of the sea. The discoveries of science, and their application in the manufacture and formation of works of art, are not consistent with the view that external phenomena are not truly represented in consciousness, whatever may be said of astronomy or any other science as the formulation of the laws of nature."

IX. REVERENT AGNOSTICISM.

In popular opinion I find that one of the strongest arguments in favor of Agnosticism is the preconceived idea that familiarity

* We purposely use the expression "natural laws describe," and purposely avoid the term "govern" in this connection. The expression "gravitation governs the motions of celestial bodies" gives rise to the misconception that the law of gravity is a power behind the phenomena of gravity. Thus we mystify ourselves by our own language and look upon gravitation as a metaphysical something that like a wizard rules the behavior of atoms and planets. The so-called natural laws are not laws, properly speaking, but comprehensive formulas which systematically and methodically describe certain natural processes.

breeds contempt. If a schoolboy gains a superficial knowledge of astronomy, the astronomer loses in his eyes the respect he before possessed. The mysterious, the uncomprehended, the unknown alone seem to command man's reverence.

Familiarity with scientific truth breeds contempt in him alone whose knowledge is superficial; all thorough knowledge will raise admiration and wonder and awe. Knowledge dispels superstitious awe and foolish fear, but the truly religious spirit, the recognition of the sublime in nature, is not lost through knowledge; it receives its only solid food whereon to live and to grow.

The savage will cease to worship a thunderer if he knows that thunder and lightning are produced through electrical tension. In that sense familiarity with a subject will breed contempt. But the scientist understanding the laws and the workings of electricity, will be more impressed with the grandeur of natural laws than the poor pagan, who bows down in the dust before the flash that shoots forth from the clouds.

It is one of the gravest mistakes of Agnosticism as presented by Mr. Herbert Spencer to base religion upon the Unknown, and—in order to give to religion a foundation which even the scientist dare not touch—to assert the existence of an Unknowable and recommend it as the basis of the future religion. The worship of the Unknown is no religion, but superstition, and the proposed worship of a chimera, such as the Unknowable, it seems to me, is no improvement upon paganism. The pagan indeed does not worship the thunder because he *does not know* what it is, but because he *does know* that it might kill him. He worships the thunder because he is afraid of it, because of the known and obvious dangers connected with it, which he feels unable to control. He worships that which powerfully influences his life and which he cannot alter or fashion as it pleases him. Religion, true religion, is the recognition of the unalterable laws of nature to which we must adapt ourselves. It is above all the recognition of the unalterable moral law which builds up human society and made man a moral being—and the recognition of these laws implies the fear of breaking them and the confidence that a community in which they are obeyed, will flourish and grow and prosper, and its citizens shall enjoy the benefit thereof.

Occasionally I meet with the strange expression "reverent agnosticism." Reverence for truth is certainly better shown by earnest and bold inquiry than by a halting and submissive respect—as if truth were unapproachable.

X. CONCLUSION.

In conclusion I have to state that the difference in the principles from which Agnosticism on the one side, and Positivism on the other, start, is so great, that the very meanings of words and terms are affected by it. Words like *cognition, knowledge, manifestation, properties of things* (i. e., qualities), *infinite*, etc., have acquired different shades of meaning. Every one of these terms, being definite and clear in Positivism, is overshadowed by the dim mystery of the Unknowable in Agnosticism; every one of them partakes of that holiness which Agnostics attach to the obscure, the vague, the incomprehensible.

We are informed by Mr. Shipman that the leopard Agnosticism has swallowed what he believes to be the kid Gnosticism; and he hints that the kid Gnosticism is the positive philosophy propounded by *The Open Court*. The leopard has swallowed something, no doubt, that it cannot digest; for the diagnosis shows all the symptoms of the disease of agnosticism. What, indeed, is it but a desperate case of philosophical dyspepsia? P. C.

"Man must hold firm to the belief that what appears incomprehensible to him is comprehensible, since otherwise he will not investigate."—*Goethe*.

THE AGNOSTICISM OF MODESTY.*

AGNOSTICISM is a most praiseworthy position if it signifies Socratic modesty concerning all those problems which we have not as yet solved. But then, of course, it is a personal attitude, not a philosophy; it is simply a confession of private ignorance, which will be of great service in dispelling that ignorance.

Darwin when urged to state whether he was a theist or not, uses the word agnosticism in this sense, saying: "I think that generally (and more as I grow older), but not always, that an Agnostic would be the more correct description of my state of mind," i. e., more than a theist. And even here Darwin feels constrained to add the three little words "but not always."

Darwin was no philosopher, and all his utterances concerning philosophical and religious problems were made most unwillingly and with great reserve. The term agnostic is characteristic of this reserve. It was intended as the expression of his personal attitude and not as a philosophical dogma. In his own province of research Darwin certainly did not adopt the principle that the origin of the species was an inscrutable mystery. He showed his reverence towards truth not in an overawed reserve but in courageous investigation.

Darwin says in his preface to the *Descent of Man*:

"It is those who know little and not those who know much, who so positively assert that this or that problem will never be solved by science."

Who dares to cite Darwin's authority in favor of Agnosticism—save the agnosticism of personal modesty—in the face of that passage?

Professor Ernst Haeckel is again and again erroneously quoted as an authority in support of agnosticism. When I visited him in Jena last summer, he very warmly expressed his sympathy with the attitude of *The Open Court* for taking such a decided and unmistakable stand against the *ignorabimus* of agnosticism. He called my attention in this connection to his own controversies with Virchow and Du Bois-Reymond (especially *Freie Wissenschaft und freie Lehre*.)

The first number of *The Open Court*, p. 17, contains the following quotation from Haeckel without reference:

"I believe that my Monistic convictions agree in all essential points with that natural philosophy which in England is represented as Agnosticism. . . ."

Professor Haeckel declared that he did not remember ever having written a sentence to that purport, and I come to the conclusion that there is something wrong about the quotation.

The agnosticism of modesty is a great thing, for it gives a stimulus to investigation. However, the dogmatic agnosticism which establishes a belief in the Unknowable erects a barrier to scientific inquiry. Agnosticism is truly, as the French express it, a *cul de sac*. It leads us into a blind alley where no further advancement is possible and maintains that there the world is at an end. All great enquirers were agnostics of the former class, but the agnostics of the latter class are the great mystery-mongers of a pseudo-philosophy, such as Plotinus and Jacob Böhme, who may have been very profound dreamers, very original geniuses, but not clear thinkers, not true philosophers. P. C.

TO THE MEMORY OF GEORGE W. DE LONG.†

BY A CLASSMATE, MAY 6, 1882.

Sent from the "Lena Delta,"

Briefly the message said:

"Captain De Long and party

Found by us here; all dead."

* Written with reference to several scattered items which appeared of late in various liberal journals.

† Read at the annual dinner of the U. S. Naval Academy Graduates Association. Copyright, 1887.

Dead! and the world that learns it
Feels, though the story's old,
A gloom as of night and silence,
The waste and the bitter cold;

Feels for a moment vaguely
That somewhere, far away,
Men that were brave lie frozen,
Then turns to its toil or play.

For the great world bears of sorrow
But a feeble, feeble part;
To know of all men's grieving
Would break the great world's heart.

Dead by the frozen river!
Twenty long years ago
I may have heard him giving
Its length and course, as though

This one for him meant nothing
More than the rest he gave.
We knew all lands and waters,
But none could name his grave.

Poor fellow! The winds and currents
Had taken us far apart,
But the boy's good-will, remembered,
Told of the man's great heart.

Hail to the dead, that, dying,
Keep the old cause alive!
Score one for the side of honor,
And the class of "Sixty-five."

Yea, though the crowd may mock me,
Though the carping few deride,
I'll own that a comrade's valor
Fills my whole soul with pride.

The lowliest name that's written
Where the graves lie most obscure,
Gets light from the golden letter
On the shaft that shall endure.

Bring me no canting theories
To prove that the spirit breed
Of fellowship and honor
Should die with the old things dead.

They well may fear and hate it
Who, scornful of worth, conspire
To cover us all with sewage,
And fish in the common mire.

For the men that stand united
In sacrifice and toil,
Are an insult to the pirates
Whose only bond is spoil.

Leaving a sword left idle
Home in a land at peace,
He shipped with his brave companions
For the war that can never cease;

War with the waste unconquered,
War with the depth and height,
War with the false triumphant,
War for the fact and light.

"What is the use?" men ask us;
"What can we hope to know,
More than that man can conquer
The storm and the ice and the snow?"

"What is the use?" 'Twere useful,
If only to give us an hour
Of rest from your weary gabble
Of stocks and of pork and flour ;

Useful to show the nations
That still, when honor calls,
Our flag has stars on azure,
And not three gilded balls ;

Useful to teach a lesson
To the puling dolts who'd weed
The lily of the liver
To the laurel of the head.

But think of the past ; remember
How much that we are to-day,
Comes from the strange devotion
Of lives that were "thrown away."

Sow, and then reap and garner,
Hoard and be rich ; but own
That wisdom has used the folly
That lives not by bread alone.

On many a bootless venture
Many a sail's unfurled ;
But some that start for India,
Find on their way a world.

Headless of good or evil,
Something within the soul
Points to the great unknown
As a needle to the Pole ;

Points and impels us onward,
Seeking what lies beyond
With courage the "wise" call folly,
And faith that the fool deems fond.

Sons of our *alma mater*,
Youngest of those who serve,
Cherish his name forever ;
So shall you well deserve.

Trust to the truth and follow,
Hopeful and strong and brave ;
For when all faith else is shaken,
This is the faith shall save.

WASHINGTON, D. C.

LOUIS BELROSE, JR.

CORRESPONDENCE.

THE INDO-EUROPEAN AND THE NEGRO.

To the Editor of *The Open Court* :—

HISTORY repeats itself, and the dictum of chief-justice Taney that "the negro has no rights which the white man is bound to respect" finds new and striking illustration in the proposition that the interests of the white race demand his compulsory emigration out of the only country which he has known for two hundred and seventy years. Just glance at this page of his history : To gratify the greed of Indo-Europeans the negro was stolen from his African home more than two and a half centuries ago and reduced to slavery. He was during this time accounted and treated no better than a thing, a dog. He was in fact in the eye of the law chattel property. The system of chattel slavery was maintained by the Indo-European race until it imperilled the life of the Republic. To save the Union the slave was made a soldier, to save a political party the former chattel was turned into a citizen. And now on the plea of preserving free institutions and the purity of the Indo-European race, the right of the negro to live where he was born, and where eight generations of his ancestors have lived before

him, is boldly denied. Forty years ago it was asserted often enough that this was a "white man's government." This old assertion is now bettered. For, translated by Prof. Cope, it reads : "This is a white man's country." But who made it a white man's country rather than a red man's or a yellow man's or a black man's country? The red race was here before and the black race came simultaneously with his Indo-European oppressor. What but the law of might makes America a white man's country, just as the law of might made her government a generation ago a white man's government? In his relations with the negro and the Indian the white man's "I can" has always measured the white man's "I may." It was this good old principle which planted African slavery in America; it is the same principle invoked by Prof. Cope to plant a greater wrong under the ribs of the old. Can a race any more than an individual man pursue with impunity a career of brutal and calculating selfishness? Is this the revelation which science makes "to the student of species-character in body and mind?" It is not possible for a strong race after inflicting the most erroneous miseries and wrongs upon a weak race through nearly three centuries, to terminate its relations and responsibilities to it by an act of final and transcendent selfishness and iniquity and then go on its way as if no wrong were done—aye advance the faster and the more for it. Is that a specimen of national morality with which the United States are to enlighten and lead the world? Is this a way to preserve its Indo-European purity of blood by such a colossal corruption of the resources of its moral life? For the peace of the realm and the purity of the holy Catholic worship the Huguenots were driven from France. For the peace of the country and the purity of the Indo-European race more than seven millions of colored people are to be deported to an utterly strange continent, to which for seventy years they have strenuously protested they do not wish to be sent. Is this the kind of liberty which republics cultivate in common with despotism, the liberty of the strong to execute without check their will on the weak? Let me tell Prof. Cope that an act like the one which he advocates would be productive of an amount of moral degeneracy on the part of his race, which no mere physical contact and mingling of whites and blacks could possibly work. Have the wrongs, which a superior race visits upon an inferior, no adverse effect upon that race's evolution from lower to higher levels of race-life. I have yet to learn that the practice of justice, the recognition of another's rights, the protection of the weak by the powerful have not in themselves virtue to raise races—even the Indo-European race to a height which mere flesh and blood force cannot attain. An initial wrong has power to taint the soul's blood to the remotest issue. It is therefore this contamination of the spiritual currents of a people, which even the Indo-European race ought above every thing to dread and guard against. The wrongs done the negro cannot be redressed by an act of final and tremendous enormity such as this country would be guilty of were it to do what Prof. Cope urges it to do. Our posterity a hundred years hence will, I doubt not, regard us as half barbarian, and as proof that we were they, I fancy, will only have to point to the proposition of an accomplished student of science, for the compulsory emigration of seven millions of people from their homes and country for the preposterous purpose of preserving freedom for the white race and the purity of the Indo-European blood in the United States!

ARCHIBALD H. GRIMLIE.

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HEADS OR TAILS.

To the Editor of *The Open Court* :—

IN a recent number of *The Open Court* there appeared an article on the mathematical chances of heads or tails in the successive throws of a coin.

The author would lead one to think that the chances of head or tail in any one throw are affected by the results of previous throws.

This is a mistake, as would in fact appear from the method of explanation used, had ∞ instead of 20 been taken as the illustrative number within which the number of heads and tails are to be equal. Following the method of reasoning there used, we have ∞ heads and ∞ tails as the result of ∞ throws. Now suppose five heads thrown. Then $\infty - 5$ heads and ∞ tails yet remain to be thrown, and the chance of a head on the sixth throw is expressed by $\infty - 5$ divided by $\infty + \infty - 5$. This ratio is, of course, exactly one half, showing the chance of a head to remain unchanged.

The expression ∞ is here used in its ordinary mathematical sense of — greater than any number which may be assigned. That ∞ is the number of throws that must be made before Bernoulli's law can be fulfilled will appear on a moment's serious thought. That is, if the ratio between heads and tails is to certainly vary from unity by an amount less than any assignable quantity, then the number of throws must be greater than any assignable quantity. Such being the case, any reasoning based on 20 or any other finite number as the number of throws, must be fallacious and misleading.

That the results of previous throws cannot possibly have any bearing on the chances of future throws will appear with a little thought.

In the first place, common sense teaches us that once a throw executed, it belongs to the past and we pick up the dollar anew to all intents and purposes as though the preceding throw had never been made. The chances of any individual throw depend solely upon the conditions which limit it, and these are wholly contained in the present. The past has lost all hold on them.

If the past could influence the present or future in such matters, it would follow that the throwing of our man would influence that of another. Suppose, for example, two men, each throwing in succession, and suppose one has thrown six heads; will the chances of the other's throwing a head be affected thereby? Assuredly not. Suppose the men to be in opposite parts of the earth and throwing independently of each other. Will the chance of A in Chicago throwing a head be affected by the fact that just previously in Calcutta, B has thrown six heads or six tails? Most certainly not. If A's chances were thus affected, there would be no such thing as the calculation of chances or probabilities; for pushing the principle to its logical limit, it would follow, in the case of the coin, that no man in any part of the earth could throw a coin and know that he had even chances of head or tail. The chances would depend not only on all the throws he had ever made before, but also on all that anybody and everybody have ever made.

And as with throwing a coin, so with all other events involving chance or probability. If a man were to shake a die, for instance, the chance of an ace would not be one sixth, but one sixth plus or minus a certain modification depending on all the dice-throwing that has ever been done.

But enough has been said to show that the principle is fallacious. The past, powerful as it is in many ways, cannot effect questions of chance or probability.

As above stated, the general and only safe guide in such matters is the cardinal principle that the probability of any event is determined solely and completely by the immediate conditions and limitations of its occurrence.

A failure to understand this principle and a belief that in some inconceivable way past results do affect present and future probabilities, are not infrequently met with. They appear in the schemes of gamblers for so disposing their bets in games of chance as to surely win—schemes utterly delusive, of course, as many know to their cost. We find the same idea also in the rather

quaint recipe for safety on board ship in time of action: viz., watch where the first shot strikes the ship, and then place your head immediately behind that spot.

A word or two in closing as to the elements which enter into the probability of throwing head or tail with a coin.

The assumption that with an indefinitely great number of throws the ratio between the heads and tails will indefinitely approach unity, can only be so when either event, *heads or tails*, can happen with equal readiness, and there is no element resembling a personal equation or bias tending to give one a slight preponderance over the other.

A slight lack of symmetry in the form or homogeneity in the mass of the coin would be such a disturbing influence, and its effect would certainly become apparent in a sufficiently great number of throws. Granting, however, a perfect coin, it seems at least highly probable that if an individual were to sit down and make a business of throwing it, that the ratio between heads and tails would not indefinitely approach unity, but that a tendency toward a preponderance in either heads or tails would become apparent. The causes of such a tendency would be in the nature of a personal equation and would result from his almost certainly falling into something in the nature of a routine of operations, which routine would affect slightly the results of the throwing.

If we pass from the case of one individual with one coin to that of many individuals with many coins, it is probable that the differences from exact fulfillment would be evenly distributed, and we might in this case perhaps fairly expect a close agreement with the theory. The effect in any case due to this element of personal equation is slight, generally inappreciable in the limited range of ordinary experiment, and from this cause as well as from the fact that it is almost impossible to submit the matter to anything approaching careful measurement, its consideration is omitted in the mathematical discussion of problems relating to chance, and probability.

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NOTES.

We have received a number of copies of *The Illustrated Medical News* (London, 48 Queen Victoria Street), a special magazine of excellent make-up. Of the articles of interest we may mention the series by G. W. Hambleton, L.K.Q.C.P., on the "Suppression of Consumption," and a contribution by the same author on "Physical Development." After an exhaustive review of the causes of pulmonary disorders and the unnatural conditions of modern civilization, Mr. Hambleton says: "When we look at the position such conditions hold in civilization, at the advances that are being made by man's increasing knowledge of the operations of nature, and his application of that knowledge to his own purposes, and at the progressive increase of such tendencies, then we see that in consumption we have one of the processes by which an adjustment is being made between the body and the work it has to perform under the changing conditions of advancing civilization, by the removal of those who have a body in excess of that work, and that the survival of the so-called fittest is thereby effected." Mr. Hambleton's suggestions regarding the methods by which consumption may be prevented and the development of the chest effected, are eminently practical and recommendable. Our readers will profit much by a perusal of the articles.

Die Ethische Bedeutung der Frauenbewegung (The Ethical Significance of the Woman's Rights Movement) formed the subject of the address of Helene Lange before the General Conference of the German Woman's Association at Erfurt in September last. It is eloquently and earnestly written. The sources of Miss Lange's inspiration are mainly American; but the *Ethics* of Höfding are often referred to in support of the general theses. (Berlin: L. Oehmigke.)