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WITH VERY PROFOUND RESPECT THIS
WORK IS DEDICATED TO
ALEXANDER VON HUMBOLDT

Preface

To the few who love me and whom I love, to those who feel rather than think, to the dreamers and those who put their faith in dreams as in the only realities, I offer this book of truths, not in its character of truth-teller, but for the beauty that abounds in its truth, constituting it true. To these I present the composition as an art product alone – let us say as a romance – or, if I be not urging too lofty a claim, as a poem.

What I here propound is true, therefore it cannot die; or if by any means it be now trodden down so that it die, it will “rise again to the life everlasting”.

Nevertheless, it is as a poem only that I wish this work to be judged after I am dead.

– Edgar Allan Poe

Eureka
A Prose Poem

IT IS WITH HUMILITY REALLY UNASSUMED, it is with a sentiment even of awe, that I pen the opening sentence of this work: for of all conceivable subjects, I approach the reader with the most solemn, the most comprehensive, the most difficult, the most august.

What terms shall I find sufficiently simple in their sublimity, sufficiently sublime in their simplicity, for the mere enunciation of my theme?

I design to speak of the physical, metaphysical and mathematical – of the material and spiritual universe; of its essence, its origin, its creation, its present condition and its destiny. I shall be so rash, moreover, as to challenge the conclusions, and thus, in effect, to question the sagacity of many of the greatest and most justly revered of men.

In the beginning, let me as distinctly as possible announce, not the theorem which I hope to demonstrate – for, whatever the mathematicians may assert, there is, in this world at least, no such thing as demonstration – but the ruling idea which, throughout this volume, I shall be continually endeavouring to suggest.

My general proposition, then, is this: in the original unity of the first thing lies the secondary cause of all things, with the germ of their inevitable annihilation.

In illustration of this idea, I propose to take such a survey of the universe that the mind may be able really to receive and to perceive an individual impression.

He who from the top of Etna casts his eyes leisurely around is affected chiefly by the extent and diversity of the scene. Only by a rapid whirling on his heel could he hope to comprehend the panorama in the sublimity of its oneness. But as, on the summit of

Etna, no man has thought of whirling on his heel, so no man has ever taken into his brain the full uniqueness of the prospect; and so, again, whatever considerations lie involved in this uniqueness have as yet no practical existence for mankind.

I do not know a treatise in which a survey of the universe – using the word in its most comprehensive and only legitimate acceptance – is taken at all, and it may be as well here to mention that by the term “universe”, wherever employed without qualification in this essay, I mean, in most cases, to designate the utmost conceivable expanse of space, with all things, spiritual and material, that can be imagined to exist within the compass of that expanse. In speaking of what is ordinarily implied by the expression “universe”, I shall take a phrase of limitation: “the universe of stars”. Why this distinction is considered necessary will be seen in the sequel. But even of treatises on the really limited, although always assumed as the unlimited universe of stars, I know none in which a survey, even of this limited universe, is so taken as to warrant deductions from its individuality. The nearest approach to such a work is made in the *Cosmos* of Alexander von Humboldt. He presents the subject, however, not in its individuality but in its generality. His theme, in its last result, is the law of *each* portion of the merely physical universe, as this law is related to the laws of *every other* portion of this merely physical universe. His design is simply synoeretical.* In a word, he discusses the universality of material relation and discloses to the eye of philosophy whatever inferences have hitherto lain hidden behind this universality. But however admirable be the succinctness with which he has treated each particular point of his topic, the mere multiplicity of these points occasions, necessarily, an amount of detail, and thus an involution of idea, which preclude all individuality of impression.

It seems to me that, in aiming at this latter effect and, through it, at the consequences – the conclusions, the suggestions, the speculations or, if nothing better offer itself, the mere guesses – which may result from it, we require something like a mental gyration on the heel. We need so rapid a revolution of all things about the central

point of sight that, while the minutiae vanish altogether, even the more conspicuous objects become blended into one. Among the vanishing minutiae, in a survey of this kind, would be all exclusively terrestrial matters. The Earth would be considered in its planetary relations alone. A man, in this view, becomes mankind; mankind a member of the cosmic family of intelligences.

And now, before proceeding to our subject proper, let me beg the reader's attention to an extract or two from a somewhat remarkable letter, which appears to have been found corked in a bottle and floating on the *Mare Tenebrarum** – an ocean well described by the Nubian geographer, Ptolemy Hephestion, but little frequented in modern days unless by the Transcendentalists and some other divers for crotchets. The date of this letter, I confess, surprises me even more particularly than its contents, for it seems to have been written in the year two thousand eight hundred and forty eight. As for the passages I am about to transcribe, they, I fancy, will speak for themselves.

Do you know, my dear friend – says the writer, addressing, no doubt, a contemporary – do you know that it is scarcely more than eight or nine hundred years ago since the metaphysicians first consented to relieve the people of the singular fancy that there exist but two practicable roads to Truth? Believe it if you can! It appears, however, that long, long ago, in the night of time, there lived a Turkish philosopher called Aries and surnamed Tottle. [Here, possibly, the letter-writer means Aristotle; the best names are wretchedly corrupted in two or three thousand years.] The fame of this great man depended mainly upon his demonstration that sneezing is a natural provision, by means of which over-profound thinkers are enabled to expel superfluous ideas through the nose; but he obtained a scarcely less valuable celebrity as the founder, or at all events as the principal propagator, of what was termed the deductive or a priori philosophy. He started with what he maintained to be axioms, or self-evident truths, and the now well-understood fact that no truths are self-evident really does

not make in the slightest degree against his speculations. It was sufficient for his purpose that the truths in question were evident at all. From axioms he proceeded, logically, to results. His most illustrious disciples were one Tuclid, a geometrician, [meaning Euclid] and one Kant, a Dutchman, the originator of that species of Transcendentalism which, with the change merely of a C for a K, now bears his peculiar name.

Well, Aries Tottle flourished supreme, until the advent of one Hog, surnamed "the Ettrick shepherd", who preached an entirely different system, which he called the a posteriori or inductive. His plan referred altogether to sensation. He proceeded by observing, analysing and classifying facts – instantiæ naturæ as they were somewhat affectedly called – and arranging them into general laws. In a word, while the mode of Aries rested on noumena, that of Hog depended on phenomena, and so great was the admiration excited by this latter system that, at its first introduction, Aries fell into general disrepute. Finally, however, he recovered ground, and was permitted to divide the empire of philosophy with his more modern rival; the savants contenting themselves with proscribing all other competitors, past, present and to come, putting an end to all controversy on the topic by the promulgation of a Median law, to the effect that the Aristotelian and Baconian roads are, and of right ought to be, the sole possible avenues to knowledge. "Baconian", you must know, my dear friend – adds the letter-writer at this point – was an adjective invented as equivalent to Hogian, and at the same time more dignified and euphonious.

Now I do assure you most positively – proceeds the epistle – that I represent these matters fairly. And you can easily understand how restrictions so absurd on their very face must have operated, in those days, to retard the progress of true science, which makes its most important advances, as all history will show, by seemingly intuitive leaps. These ancient ideas confined investigation to crawling, and I need not suggest to you that crawling, among varieties of locomotion, is a very capital thing of its kind. But because the snail is sure of foot,

for this reason must we clip the wings of the eagles? For many centuries so great was the infatuation, about Hog especially, that a virtual stop was put to all thinking, properly so called. No man dared utter a truth for which he felt himself indebted to his soul alone. It mattered not whether the truth was even demonstrably such, for the dogmatizing philosophers of that epoch regarded only the road by which it professed to have been attained. The end, with them, was a point of no moment whatever: "The means!" they vociferated. "Let us look at the means!" And if, on scrutiny of the means, it was found to come neither under the category Hog, nor under the category Aries (which means ram), why then the savants went no further. Calling the thinker a fool and branding him a "theorist", they would never, thereafter, have anything to do either with him or with his truths.

Now, my dear friend – continues the letter-writer – it cannot be maintained that, by the crawling system exclusively adopted, men would arrive at the maximum amount of truth, even in any long series of ages, for the repression of imagination was an evil not to be counterbalanced even by absolute certainty in the snail processes. But their certainty was very far from absolute. The error of our progenitors was quite analogous with that of the wiseacre who fancies he must necessarily see an object the more distinctly, the more closely he holds it to his eyes. They blinded themselves, too, with the impalpable, titillating Scotch snuff of detail. And thus the boasted facts of the Hogites were by no means always facts – a point of little importance but for the assumption that they always were. The vital taint, however, in Baconianism – its most lamentable fount of error – lay in its tendency to throw power and consideration into the hands of merely perceptive men, of those inter-Tritonic minnows, the microscopic savants, the diggers and peddlers of minute facts, for the most part in physical science, facts all of which they retailed at the same price upon the highway, their value depending, it was supposed, simply upon the fact of their fact, without reference

to their applicability or inapplicability in the development of those ultimate and only legitimate facts, called Law.

Than the persons – the letter goes on to say – than the persons thus suddenly elevated by the Hogian philosophy into a station for which they were unfitted, thus transferred from the sculleries into the parlours of science, from its pantries into its pulpits; than these individuals, a more intolerant, a more intolerable set of bigots and tyrants never existed on the face of the Earth. Their creed, their text and their sermon were alike – the one word “fact”. But, for the most part, even of this one word they knew not even the meaning. On those who ventured to disturb their facts with the view of putting them in order and to use, the disciples of Hog had no mercy whatever. All attempts at generalization were met at once by the words, “theoretical”, “theory”, “theorist”; all thought, to be brief, was very properly resented as a personal affront to themselves. Cultivating the natural sciences to the exclusion of metaphysics, the mathematics and logic, many of these Bacon-engendered philosophers – one-ideaed, one-sided and lame of a leg – were more wretchedly helpless, more miserably ignorant, in view of all the comprehensible objects of knowledge, than the veriest unlettered hind who proves that he knows something at least in admitting that he knows absolutely nothing.

Nor had our forefathers any better right to talk about certainty when pursuing, in blind confidence, the a priori path of axioms, or of the Ram. At innumerable points this path was scarcely as straight as a ram’s horn. The simple truth is that the Aristotelians erected their castles upon a basis far less reliable than air, for no such things as axioms ever existed or can possibly exist at all. This they must have been very blind indeed not to see, or at least to suspect, for, even in their own day, many of their long-admitted “axioms” had been abandoned: “ex nihilo nihil fit”,* for example, and a “thing cannot act where it is not”, and “there cannot be antipodes”, and “darkness cannot proceed from light”. These and numerous similar propositions formerly accepted, without hesitation, as axioms, or undeniable truths, were, even at the

period of which I speak, seen to be altogether untenable. How absurd in these people, then, to persist in relying upon a basis as immutable, whose mutability had become so repeatedly manifest!

But, even through evidence afforded by themselves against themselves, it is easy to convict these a priori reasoners of the grossest unreason; it is easy to show the futility, the impalpability of their axioms in general. I have now lying before me – it will be observed that we still proceed with the letter – I have now lying before me a book printed about a thousand years ago. Pundit assures me that it is decidedly the cleverest ancient work on its topic, which is “Logic”. The author, who was much esteemed in his day, was one Miller, or Mill, and we find it recorded of him, as a point of some importance, that he rode a mill-horse whom he called Jeremy Bentham. But let us glance at the volume itself.

Ah! “Ability or inability to conceive,” says Mr Mill, very properly, “is in no case to be received as a criterion of axiomatic truth.” Now, that this is a palpable truism no one in his senses will deny. Not to admit the proposition is to insinuate a charge of variability in truth itself, whose very title is a synonym of the steadfast. If ability to conceive be taken as a criterion of truth, then a truth to David Hume would very seldom be a truth to Joe, and ninety-nine hundredths of what is undeniable in Heaven would be demonstrable falsity upon Earth. The proposition of Mr Mill, then, is sustained. I will not grant it to be an axiom, and this merely because I am showing that no axioms exist. But, with a distinction which could not have been cavilled at even by Mr Mill himself, I am ready to grant that if an axiom there be, then the proposition of which we speak has the fullest right to be considered an axiom – that no more absolute axiom is. And, consequently, that any subsequent proposition which shall conflict with this one primarily advanced must be either a falsity in itself – that is to say, no axiom – or, if admitted axiomatic, must at once neutralize both itself and its predecessor.

And now, by the logic of their own propounder, let us proceed to test any one of the axioms propounded. Let us give Mr Mill the

fairest of play. We will bring the point to no ordinary issue. We will select for investigation no commonplace axiom – no axiom of what, not the less preposterously because only impliedly, he terms his secondary class – as if a positive truth by definition could be either more or less positively a truth. We will select, I say, no axiom of an unquestionability so questionable as is to be found in Euclid. We will not talk, for example, about such propositions as that two straight lines cannot enclose a space, or that the whole is greater than any one of its parts. We will afford the logician every advantage. We will come at once to a proposition which he regards as the acme of the unquestionable, as the quintessence of axiomatic undeniability. Here it is: “Contradictions cannot both be true – that is, cannot coexist in nature.”

Here Mr Mill means, for instance, and I give the most forcible instance conceivable, that a tree must be either a tree or not a tree – that it cannot be at the same time a tree and not a tree. All which is quite reasonable of itself, and will answer remarkably well as an axiom, until we bring it into collation with an axiom insisted upon a few pages before; in other words – words which I have previously employed – until we test it by the logic of its own propounder. “A tree,” Mr Mill asserts, “must be either a tree or not a tree.” Very well. And now let me ask him, why? To this little query there is but one response. I defy any man living to invent a second. The sole answer is this: “Because we find it impossible to conceive that a tree can be anything else than a tree or not a tree.”

This, I repeat, is Mr Mill’s sole answer. He will not pretend to suggest another, and yet, by his own showing, his answer is clearly no answer at all, for has he not already required us to admit, as an axiom, that ability or inability to conceive is in no case to be taken as a criterion of axiomatic truth? Thus all, absolutely all his argumentation is at sea without a rudder. Let it not be urged that an exception from the general rule is to be made in cases where the “impossibility to conceive” is so peculiarly great as when we are called upon to conceive a tree both a tree and not

a tree. Let no attempt, I say, be made at urging this "sotticism", for, in the first place, there are no degrees of "impossibility", and thus no one impossible conception can be more peculiarly impossible than another impossible conception; in the second place, Mr Mill himself, no doubt after thorough deliberation, has most distinctly and most rationally excluded all opportunity for exception by the emphasis of his proposition that, in no case, is ability or inability to conceive to be taken as a criterion of axiomatic truth; in the third place, even were exceptions admissible at all, it remains to be shown how any exception is admissible here. That a tree can be both a tree and not a tree is an idea which the angels, or the devils, may entertain, and which no doubt many an earthly Bedlamite, or Transcendentalist, does.

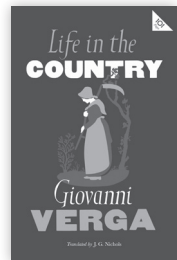
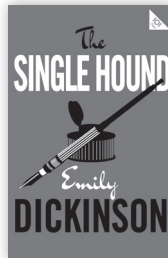
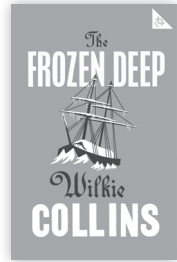
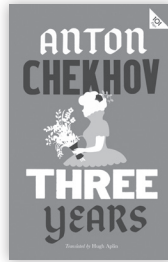
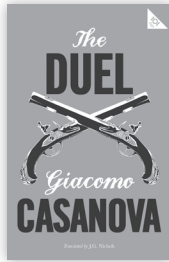
Now I do not quarrel with these ancients – continues the letter-writer – so much on account of the transparent frivolity of their logic – which, to be plain, was baseless, worthless and fantastic altogether – as on account of their pompous and infatuate proscription of all other roads to Truth than the two narrow and crooked paths, the one of creeping and the other of crawling, to which, in their ignorant perversity, they have dared to confine the soul – the soul which loves nothing so well as to soar in those regions of illimitable intuition which are utterly incognizant of "path".

By the by, my dear friend, is it not an evidence of the mental slavery entailed upon those bigoted people by their Hogs and Rams that, in spite of the eternal prating of their savants about roads to Truth, none of them fell, even by accident, into what we now so distinctly perceive to be the broadest, the straightest and most available of all mere roads – the great thoroughfare, the majestic highway of the consistent? Is it not wonderful that they should have failed to deduce from the works of God the vitally momentous consideration that a perfect consistency can be nothing but an absolute truth? How plain, how rapid our progress since the late announcement of this proposition! By its means, investigation has been taken out of the hands of the ground moles and

given as a duty, rather than as a task, to the true, to the only true thinkers, to the generally educated men of ardent imagination. These latter – our Keplers, our Laplaces – “speculate”, “theorize”; these are the terms. Can you not fancy the shout of scorn with which they would be received by our progenitors were it possible for them to be looking over my shoulders as I write? The Keplers, I repeat, speculate, theorize, and their theories are merely corrected – reduced – sifted – cleared, little by little, of their chaff of inconsistency, until at length there stands apparent an unencumbered consistency, a consistency which the most stolid admit, because it is a consistency, to be an absolute and unquestionable truth.

I have often thought, my friend, that it must have puzzled these dogmaticians of a thousand years ago to determine, even, by which of their two boasted roads it is that the cryptographer attains the solution of the more complicated ciphers, or by which of them Champollion guided mankind to those important and innumerable truths which, for so many centuries, have lain entombed amid the phonetic hieroglyphics of Egypt. In special, would it not have given these bigots some trouble to determine by which of their two roads was reached the most momentous and sublime of all their truths – the truth, the fact of gravitation? Newton deduced it from the laws of Kepler. Kepler admitted that these laws he guessed – these laws whose investigation disclosed to the greatest of British astronomers that principle, the basis of all (existing) physical principles, in going behind which we enter at once the nebulous kingdom of metaphysics. Yes! These vital laws Kepler guessed, that is to say, he imagined them. Had he been asked to point out either the deductive or inductive route by which he attained them, his reply might have been, “I know nothing about routes, but I do know the machinery of the universe. Here it is. I grasped it with my soul; I reached it through mere dint of intuition.” Alas, poor ignorant old man! Could not any metaphysician have told him that what he called “intuition” was but the conviction resulting from deductions or inductions, of which the processes were so shadowy as to have escaped his

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