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CREED OF A NATURAL PHILOSOPHER
 OF
 MODERN TIMES.

A popular exposition of the chief results of modern
 natural scientific investigation.

Translated from the second German Edition by

Prof. EDWARD WIEDE.

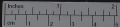
*To
 Mr. Devereux and
 the Board's highest esteem.*

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American and English papers please Copy!

Hamburg 1878.

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INTRODUCTORY REMARKS.

The original German issue of this exposition contains, after each separate section, copious quotations from the works of DARWIN, LAMARCK, BUTLER, HAECKEL, HUXFORD, KANT, QUINCY, REIL, ZÖGLINER, SCHOPFENHAUSEN, THOMASSEN, GROVE, KLEIN, ROE, MAYER, KLESKREFTS, MEIDAUER, FLAMMARION, PROCTOR, SIR WILLIAM THOMSON, WERNER and LEIDENBROFF, in proof of the correctness of theses, promulgated in each section.

The translator, in omitting these quotations, brought the "Creed" into a more condensed and yet concise form. Although highly interesting, he deemed these quotations unnecessary, each principle, put forth in the "Creed," appearing to the unbiased mind as self-evident, irrefragable truth, hence, speaking for and proving itself.

The translator, however, will be happy if this omission on his part, should induce the reader to take up any of the works of the above named illustrious benefactors to mankind, to whom will be due the

thanks of all coming generations for the light they have caused to shine into the darkness of the present century, delivering thereby from bondage the minds of all desiring to be free, from the fetters of ignorance and superstition.

He, who has ears to hear, eyes to see and brain to think: let him hear and see and think, that his progeny may inherit from him a larger share of mental capacity than he inherited from his progenitors and thus contribute his part to the general development of the human race until that *degree of perfectness will be reached* when the *"excellence of man"*—so far a misnomer—*will be an indisputable fact.*

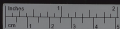
Let us all endeavour to contribute our mite, insignificant though it may appear, toward hastening on the glorious advent of that *sublime future, which in fact will be the millennium, when Satan, King of lies, will be bowed for ever and Truth reign triumphantly through-out the world.*

TO ALL OF EQUAL MIND GREETING!

§ 1.

A "Creed" I call this exposition. This, however, is not exactly correct, for a true naturalist of modern times believes

just nothing. He simply *adheres to what we know with (more or less) scientific certainty*, and of that there is so much that the naturalist of to-day is fully occupied



for life-time with an unceasing acquisition of new facts and new laws. For all he does not know with certainty, he satisfies himself—if need be, to fill up gaps in science—by drawing inferences from established facts, now inductively, then deductively, i. e. reasoning from a part to a whole, or from particulars to generals. Any and every thing not to be received in this manner, a true naturalist leaves resting on its own merits. Hence, the word "Creed" should be understood as: *That, which, with the accomplished naturalist of modern times, has taken the place of the dogma of believing souls, a "Creed of knowledge."*—If I may use this seemingly contradictory expression—, a statement of most general results, drawn from the contents of the *sum total of natural science, investigation and thinking up to the present day*, especially in regard to the universal system, immutable laws of nature, the formation and decay of celestial bodies as well as single organisms, the origin and activity of physical powers etc. and in regard to the position of man in the world.

§ 2.

Properly speaking, all that follows is part of what constitutes the natural science of to-day. But, owing to the deplorable division of naturalists into so many egotistic, specialists—paying little or no attention at all to other branches of, or the results of universal knowledge—there are many among the naturalists perfectly ignorant of the progress of natural science as a whole, some of whom perhaps not deeming it even worth their while to inform themselves so far as to acquire a general view of it.

How, then, could we expect this of the

general class of less instructed people, who, as a matter of course, can only receive their knowledge from those very specialists and who naturally will cling to the dogmas, instilled into their youthful minds, until they are taught something better. For, as the common class of people need believing in order to fill up the internally felt voids of knowledge (? Translator) intelligent men, or shrewd persons (inspired fanatics among them) have at all times made it their business to establish certain dogmas for the mass of the people.

It, therefore, appears perfectly in accordance with the spirit of the age to promulgate to the world in a popular manner the chief results of modern natural scientific investigation to enable every one to make himself acquainted therewith and to take his position in the realm of acknowledged facts accordingly.

This seems to be especially necessary for those who feel called upon, or fancy themselves to be ordained to work out for the common people what they are, or what they are not to believe. For these worthies in their quality as "the people's guardians" certainly can not desire to clash with acknowledged facts, as, at some future time they might have to suffer for it, for, no belief whatever, can be expected forever to successfully battle against acknowledged facts, resulting from dispassionate, scientific investigation.

If the sum total of human knowledge change in course of time, religious faith must needs change accordingly, because the latter only fills up the gaps existing in the former, as distinctly shown in the history of all nations.

The first proposition
is by no means entirely
new pronounced according
to ancient and modern
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philosophy (see
and, see (Wachter
, R. Beyer (Dynam
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like fact and the
Gottfried, H. J. K.
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"From the history of
Later philosophy in



§ 3.

The theses propounded in this exposition, are by no means entirely new. They have been pronounced more or less definitely by ancient and modern writers, viz.: *Kant*, (*Theorie und Geschichte des Himmels*), *Laplace* (*mécanique céleste*), *Humboldt* (*Kosmos*), *Græve* (*Wechselwirkung der Kräfte*), *J. E. Mayer* (*Dynamik des Himmels*), *Wiener* (*Grundzüge der Weltordnung*), *Haeckel* (*allgemeine Schöpfungs-Geschichte*), *Büchner* (*Kraft und Stoff*), *Eiel* (*Natur und Geschichte*), *H. J. Klein* (*Entwickelungs-Geschichte des Kosmos, allgemeine Himmelskunde, Giza*) and many others.

Several writers on natural science, however, have hinted only at their general fundamental principles, others, for fear of the predominating theology, or in obedience to courtly sycophancy, have expressed them, carefully wrapped up in verbal opaqueness, when still others have deemed it prudent entirely to avoid drawing, with scientific acuteness the necessary consequences of their own pronouncements.

To-day we need no longer hesitate to express natural philosophical truths fearlessly and without reserve. Nay, we are even obliged to promulgate without loss of time and without fear or favour the newly acquired results of our scientific labours to put a stop to that oscillating state of wavering of our present transition period, that *clearness and rest may enter the minds of men and the human society may devote themselves unreservedly to the sublime tasks of the new, ushering in period of mental culture:*

"FOR THE REIGN OF FACTS HAS BEEN VICTORIOUS."

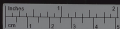
Natural philosophic investigation in con-

nection with both its science, *technique* and *the science of medicine*, is progressing surely and steadily. It has taken possession already of all better minds and is opposed only by visionaries and knaves. Already it pervades all spheres of knowledge, it regenerates all other sciences, it governs the whole life of family and state. It rules not merely in the factory, workshop and kitchen, but also in war-fare and diplomacy, in art and mercantile concerns: *it rules supreme every-where!* Why should the sphere of thinking of the common people be closed against it? Let its light illumine every mind. Away with hypocrisy, away with white-washing and dying in colours, no more attempts at mediating compromises! To-day that *only is to be called truth*, which, by the medium of our senses and under careful observance of the methods of observation and deduction, prescribed by the exact sciences, may be recognised as in reality, existing. (from: ex, out of, and sistere, to cause to stand; hence: *be standing* in reality, in German: in Wirklichkeit bestehend. Transl.)

§ 4.

According to the ancient view of the world—wrongly called the *Mosaic* it having been and is still prevailing among the nations in all parts of the globe—the world and all within it has been called into existence (*created*) in an arbitrary manner, is governed in the same way by acts of arbitrariness, and will perish in the same arbitrary manner (*last judgment, final doom*).

The so-called *Mosaic* and *Catholic* histories of the world's creation invest the creator with the roll of a potter, given to angry passion, who in the first place



forms his figures of clay, then, after they are ready, is dissatisfied with and destroys them in order to produce better ones. Why, it may be asked, did he not form them in a more perfect manner from the beginning?

The new natural scientific view of the world holds that *every thing in it happens according to immutable laws*, which, if only presented in proper form, appear most simple and self-evident. Nothing but the enormous multiplicity of phenomena and events in nature and the incomputable crossing and connections of the same among one another render it utterly impossible for the uninitiated to perceive, a priori, the working of the laws, which, without the assistance of thorough scientific knowledge, always must remain a vain attempt.

It is especially *Nature's* being and working in the highest degree to the purpose in view, met with on every step, by which the uninitiated is constrained to ascribe this circumstance to a constant higher ruling power.

Quiet contemplation, however, shows, in accordance with the investigations of antediluvian exuvial (*Paleontology*) that in the course of thousands of years that only could maintain its existence, or regenerate, which was best adapted to existing circumstances. All, created less to the purpose and consequently less able to resist unfavourable influences, have perished long ago and given way to their superior, consequently victorious competitors, in the animal and vegetable kingdoms as well as in the starry world.

These so-called *Darwinian* principles have been adopted by most of the natural

philosophers, in place of the teleological views of former times.

§ 5.

The same laws, the same powers, the same matter govern every-where in the whole world. The spectral analysis proves the existence on all celestial bodies of the same chemical matter, found on our earth. The physical laws of motion, attraction, of sound-light-and warmth-waves etc. are the same through-out the whole universe.

And wherever reasoning beings may be found the laws of logic and mathematics will undoubtedly govern their thinking apparatuses. Twice two are four the world over!

§ 6.

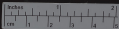
The world is eternal. Nothing is wasted, nothing new in it. All matter as well as power is indestructable, imperishable, neither can matter nor force be generated anew, out of nothing, as it were.

§ 7.

Nothing but the form of things is changeable. Force and matter are in a constant transposition, constantly changing their form. Nothing in the world is unchangeable, stable, every atom is subject to perpetual changing.

Matter and force, like mind and body, are inseparable from one another, their distinction is but a play of human thought, in reality not existing.

Nothing was ever produced out of nothing, (by an act of creation so-called) and nothing will ever perish into nothing. All that is, was from eternity and will continue in all eternity, albeit in constantly changing forms. All nature is an uninterrupted growing and decaying, an incessant process



of development and unwinding; a perpetual transition from one combination into another, from one formation into the other, with a final destruction of combinations and formations thus produced.

§ 8.

The world is boundless as to time and space, that is to say:

1. *The world has never begun and will never cease to be, it is eternal, was eternal and will be eternal.* Time knows no boundary, neither in the *antiquity* of history nor in the *minuteness* of divisibility of the moment.
2. *The universe is absolutely without boundary.* If not so, a nothing must fill the space beyond its boundary, which is sheer nonsense. There is no measure in regard to largeness or smallness of the universe, it is even *immeasurable*. In accordance therewith there is not in the world a limit of the smallest, the *divisibility of matter is infinite* as is demonstrated by the microscope as well as by chemical molecular investigation and the physical measuring of waves of light and air.

§ 9.

What was called "the world" so far, was *either* (in the earliest times) nothing but our solar system, or (more recently) the accumulation, reaching as far as the milky way, of fixed stars, to which our solar system belongs. This, our group of fixed stars is but a small part of the world, a *cluster of stars* (an *astral system*) as thousands of them may be seen further out into the universe, as so called *nebulae*. We look upon the latter as accumulations of "world matter" forming either developed

or growing *astral* (or world) systems, similar to that of which our sun with his planets represents an insignificant component part.

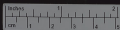
All these individual celestial bodies and astral systems are *undergoing* continual, though gradual *changes*. The stars *grow by degrees*, out of "world matter" (in all probability by a condensing "world fog"), they *exist* for a time as particular stars, are, during this existence, a still shorter time *inhabitable* for living organisms and *pass away* in one way or another, viz.: by exploding, burning, being swallowed by other celestial bodies, etc. etc.

Our sun and our earth pursue this very same course. Our earth, internally as well as on its surface, is *undergoing incessant transformations* of which the geological periods speak volumes of unmistakable proofs. This gradual transmutation affects even the most solid rocks, the highest mountains, the seas and continents, each of which shows the traces of these transformations. Nothing is now exactly as it was thousands of years ago, nor as it will be thousands of years hence.

§ 10.

The "world space" is *not empty* but filled firely and mainly with an immeasurably fine, though material air, which is able to transmit waves of light and warmth (commonly called *rays*), secondarily with innumerable infections, caused by *fragments of worlds* (aërolites, clusters of comets) and dust-like organic or inorganic particles, "world-dust", among which are found embryonic vegetable and animal formations.

The atmosphere of the earth is *without*



boundary, it dissolves, constantly growing thinner, into the infinitely thin air of the universe. It is connected with the latter by reciprocal action receiving on its way around the sun fresh oxygen, fragments of worlds and world-dust, and passing into the world-space infected air, dust, and dust-like organisms.

Owing to a very considerable degree of cold, prevailing through-out the universe, these organic germs retain their vitality for a long period.

§ 11.

As long as the world has been existing, i. e. from eternity, and every-where as far as it extends, i. e. into all directions boundlessly, organic life is existing in it in the shape of organized beings, fit for development, which are propagating as animals and plants are propagating on our earth.

Not any thing living has ever been created (out of nothing as it were) or sprang into life by itself from inorganic matter (by generatio æquivoca so-called). All that lives, sprang into life by means of propagation from previously existing living germs, cells, eggs etc. (Omne ovum ex ovo, omnis cellula a cellula, omne plasma e plasmate).

The countless germinant minute organisms (such as cells, spores and plasmas of lower plants, eggs of infusoria and other animals) render it possible that celestial bodies as soon as they have entered that state of cooling and moistness, requisite for the existence of plants and animals upon them, are rapidly provided with living organisms from without, which gradually prosper and develop into always higher

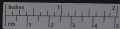
forms of animal and vegetable life. (Vide the works of Darwin and his followers.)

§ 12.

So also, by continued development in the course of thousands and thousands of years, the human race sprang gradually into existence, from other, previously existing animal formations. Man, in his present state of development is the firstling of a new form of development in the animal kingdom and distinguishes himself chiefly from the earlier grades of development of the quadrupeds (or mammalia respectively) by

1. His ability of walking uprightly, without using his hands in it, as do the quadrumanes, standing next to him in the scale of development—an arrangement by which the division of labour between hand and foot, and, as a consequence, a greater ability of both, in connection with a perfect development of the thumb, the calf and parts of the foot, may be secured.
2. The more strongly developed front parts of his brain, in which, according to the experience of physiologists, the higher reasoning powers, most prominently among which, the faculty of speech is located.
3. By the fact that man develops most slowly in his infancy, that, more especially, his skull ossifies more slowly, by which means the development of his brain takes a longer time, where-by his ability of being educated is greatly enhanced.

These three qualities have, in the course of thousands of years been steadily developing in the human race, where-by the transmutation of the so-called wild man,



or man of nature into the civilized one of modern times has been wrought.

Nevertheless man, as an incipient form of a new order of beings, is still a very imperfect creature, subject to, or afflicted with a great number of anatomical, physiological and mental deficiencies, the gradual removal of which, during the ensuing thousands of years, we may venture to hope.

As yet the so-called "excellence of man" is but a vain over-estimation of himself.

§ 13.

As all essential qualities of men, animals and plants are *inherited* (inherited instincts and faculties acquired by training with hunter's and shepherd's dogs, canaries etc. furnish ample proofs) all gradually *acquired intellectual and moral faculties and modes of thinking in the human race are inherited* also from one generation by another, so that most frequently the son reasons and feels like his father, and, in consequence thereof, finally, whole families and tribes distinguish themselves from others by their peculiar modes of thinking and reasoning.

[Although these two expressions are synonymous if the former is used philosophically, we mean to distinguish between them in this connection (Translator).]

The general history of nations furnishes many instances in proof of this assertion (f. i. just at present with the French, formerly with the Turks, Arabs, Negroes, Chinese etc.

What has been designated as *innate ideas* has its origin in this and in the fact that all human beings from their early youth *live and think exclusively within the*

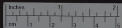
sphere of universal laws. Hence, as soon as a new universal law has been discovered and established, we readily will recognize it as *in unison with our own reasoning, i. e. conformable to reason*. This reasoning necessity in regard to all real universal laws, however, does not prove that besides us, and as a peculiar power, a so-called reason be in existence, taking possession of our heads, nay even governs the whole world.

Neither is the so-called moral law innate, but a production of many thousands of generations, hence it is different with different nations. Uncivilized peoples have arrived at the family-law only, not yet at the state-law. A *universal moral law for the whole complex of human beings (Humanity-law)* is existing as yet only in the heads of a few thinkers. At present every nation considers everything permitted to the nation itself.

§ 14.

The continued development of the human race to always more perfect beings rests in the main on proper education in bodily and mental respect, from earliest childhood through-out all following stages of life.

1. *In regard to the body* it depends especially on correctly applied nutrition and on proper bodily exercise, founded on physiological principles. (Gymnastics).
2. *In regard to the mind*:
 - a on the development of the higher faculties (activities) of the brain, distinguishing man from the brute, and
 - b on the suppression of the lower qualities, which indicate the animal.



- a. Higher mental activities are the clear processes of thought aimed at, and deducted from facts according to mathematical and natural scientific forms,
- b. lower, more animal functions of the brain are those *partly, or entirely unconscious ideas*, produced by impulses, sensations, presentiments, imaginations, poetical turns of mind, whims, desires etc. etc.

They place us on a level with Hottentot and Cannibal, albeit they are at present still looked upon as especially sublime, poetical or theological manifestations of a higher super-human reason, and circulated systematically among the people from nurseries, schools, churches (and universities, Transl.). Real substantial education can be founded on *truth* only.

Every attempt at educating the people by means of deception, pretences and imaginations leads downward on the road to hebetation and brutishness of the people!

In future times the epithet of being *really and truly educated* will be claimed by and granted to him only, who:

1. understands to discern always and every where between *facts* and figures of speech and imaginations, and has accustomed himself to take only the former as the foundation of his reasoning and acting;
2. has acquired the faculty of *thinking and expressing himself in strictly logical, mathematical and geometrical forms*, and the latter not only by words and speech, but also by means of *figures and diagrams*;
3. is possessed of a *knowledge of the universal laws*, the structure of the universe, of astronomy, of geographical, geological, physical and chemical sciences, and from own study and personal investigation is acquainted with the *three natural biospheres*, in general as well as more or less in particular;
4. is informed about the *structures and functions of the human organism* (body and mind) as well as about *hygiene*;
5. is *truthful and honest* in all things, consequently carefully avoiding every hiding of facts, even if it were for pretended benevolent and pious objects and purposes.

In contradistinction to these, all those, harbouring, fostering or trying to circulate among the people any kind of low sensational, half-unconscious ideas and invented untrue, or not to be proven assertions, will, at some future time be *declared fools, or branded as impostors.*—



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POSTSCRIPT.

The writer of "Glaukoschkenzie" even mentions Naturforscher," of which the above is a translation, has deemed it advisable to withhold his name from the eyes of the world although he himself pronounced in Section 5: "that we need no longer hesitate to express natural philosophical truths fearlessly and without reserve" say, that we are obliged to promulgate, without fear or favour, the truly ascertained results of our scientific labours."

It has been erroneously reported, that Prof. Virchow be the author of the "Creed" and this rumour has neither been contradicted by Virchow himself nor the publisher of the pamphlet; say the latter alludes to it by way of regretting, on the cover of the pamphlet, as item from a Dresden paper, in which Virchow's name appears in connection with the "Glaukoschkenzie" as its presumed author.

Whether this be intended by the publisher as a recommendation of the pamphlet, he himself only knows, there can be no doubt, however, in the minds of the initiated, that Prof. Rudolph Virchow never could have promulgated all the principles, contained in the "Creed," for, by doing so, he would have related his opinions, expressed publicly and in the presence of many illustrious thinkers from among all civilized nations.

In his oration: "On the Freedom of Science in the modern state," delivered at the meeting of natural philosophers at Munich, September 17th 1877, this gentleman acted the double role of politician and naturalist and, in this state of confusion, made front against Darwin, Haeckel and their followers, blaming them, indirectly, if it be true, for having set wide all considerations in regard to politics and religion and strongly argued against publishing at large the Darwinian development theory in its totality open room, for so long as we are discouraged a skull of a monkey, they might have served also as the head of a human being, it would never do to tell every "pissant boy" this we know and this we possess!

Without enlarging on these very peculiarly offered objections, we simply ask, what, in all the world, has exact science to do with the economics of politics, sociology, spiritualism and the visions and hallucinations of fabled saints? Surely, Virchow, with his expositions is far the readiest of materialists as Munich has not rendered science the service intended by him, for already the dignitaries in church and state have made the best of the world, spoken by so prominent and influential a man, by holding them open a shield against free investigation wherever it presents itself.

As early as Prof. Virchow has not risen in the estimation of his admirers by his recommendations at Munich, as early they will be sorry for having learnt, that the "Creed" is not the "Creed" of the teachers, were natural philosopher of modern times.

Translation.

1. has acquired the habit of thinking and expressing himself in strictly logical, mathematical and scientific forms, and the latter so only by words and signs, but their sense of figures and images.

2. is possessed of a knowledge of the natural laws, the structure of the universe, of astronomy, of geophysics, of anatomy, of physiology, of psychology, of general chemical sciences, and has not only and personal investigations is acquainted with the laws stated by them, in general is well as more or less in particular.

3. is informed about the structure and functions of the human organism and about its social relations.

4. is truthful and does not tell things, consequently readily admits every falling of his, and if it were for personal interests and pure objects and purposes.

In continuation is then of those, harboring, bearing or trying to convince among the people on the of law scientific, philosophical ideas and devoted efforts, as well as to present questions, all a new future time he should look at himself as inquiries.

are the clear... and... covering to math... scientific forms... functions of the... or entirely... by impulses... ideas, imaginations... of, whims, desires... on a level with... about they... looked upon as... or those... of a higher... and elevated... the people from... (and... Real substantial... ed on truth only... in calculating the... sciences, processes... and knowledge... of being... will be obtained... only, who... seem, always and... from facts and... and imagination... and himself to... as the found... and acting;