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PHYLOGENY AND ONTOGENY.

A FEW REMARKS FROM THE PREFACE OF THE FOURTH EDITION OF "THE ANTHROPOGENY."*

BY ERNST HAECKEL.

WHEN in the year 1874 the first edition of "The Anthropogeny" appeared, and when its third edition appeared three years later, the general conditions of the biological sciences were different from what they are now. The animated struggle regarding the cognition of the highest truths which had been called forth in 1859 by Charles Darwin's epoch-making book on the Origin of Species, it is true, had been decided in all main points in his favor. Yet the most important conclusion to be drawn from the doctrine of evolution, firmly founded upon his selection-theory, its application to man, was still objected to in large circles.

I had made in my "Morphology," 1866, and more particularly in my "Natural History of Creation," the first attempts to approach the hypothetical series of the human ancestry and to discover the diverse historical stages which lead to the formation of man. In this work I always bore in mind of what fundamental importance the treasure of the empirical knowledge of the history of the human germ is for the construction of the history of our race. Having been occupied for years with human embryology and having delivered academical lectures upon the elementary basis of physical anthropology, I felt encouraged to make the difficult attempt of applying it to our Phylogeny, i. e. the history of the origin of our race.

The full application of the basic biogenetic law to man, it appeared to me, was the more demanded and allowed, because the greatest number of embryologists did not want at that time to have anything to do with it. There was only one text-book on the subject which was much in use and that had appeared in four editions, I refer to the work of Albert K lliker. It represented the science connectedly and in its general principles since 1859, but it took the opposite standpoint. Even in its latest edition of 1884, its meritorious author still clings to the opinion, "that the evolutionary laws of organisms are even yet entirely unknown, and that in opposition to the Darwinian idea of a gradual transformation, it will accept the idea of a transformation of the organisms by leaps."

In opposition to the dualistic conception which at that time was still adopted in very large circles, I attempted to propound in 1874 in the first edition of my "Anthropogeny" a monistic conception of the embryological phenomena. I was guided by the following principles:

- 1) There is a direct causal connection between the empirical facts of the history of the human germ and the hypothetical history of the human race—the latter being hidden from view for obvious reasons.
- 2) The mechanical causal connection finds its simplest expression in the following biogenetic law: Ontogeny is a brief and imperfect recapitulation of Phylogeny.
- 3) The phylogenetic process, the gradual evolution of the higher vertebral ancestors of man out of a long series of lower animal-forms is a very complex historical phenomenon which consists of innumerable processes of heredity and adaptation.
- 4) Each single process is based upon physiological functions of the organism, and is either reducible to the activity of propagation (heredity) or that of nutrition (adaptation).
- 5) The facts of human embryology can be explained solely from phylogenetic processes. Yet the palinogenetic phenomena must be carefully distinguished from the kenogenetic phenomena.*
- 6) The palinogenetic phenomena alone (for instance the formation of the chorda, of the original renal organs, of the gills) are very instructive they alone give valuable information concerning our animal ancestors, because they represent inherited adaptations of certain full grown animals.
- 7) However, the kenogenetic facts (for instance the formation of the yolk-bag of the embryo, of the allantois, of the double heart) have only a minor and an

* The term "palinogenetic process" (or reproduction of the history of the germ) is applied to all such phenomena in the development of individuals as are exactly reproduced in consequence of conservative heredity in each succeeding generation, and which therefore enable us directly to infer the corresponding processes in the race-history of the full grown ancestors. However, the term kenogenetic processes (or disturbances in the history of the germ) is applied to all such processes in the germ history as are not to be explained by heredity from primeval parent-forms, but which have been acquired at a later time in consequence of the adaptation of the germ itself to the special conditions of its development. These kenogenetic processes are special additions which do not allow us to make conclusions concerning the genealogy of the race. On the contrary, they falsify and conceal the latter.

The term *palinogenesis* is derived from *παλιον*, again, and the term *kenogenesis* from *κενοσ*, meaningless.

* Translated from advance proof-sheets, sent to us by Prof. Haeckel.

indirect interest for Phylogeny, because they have originated through an adaptation of the germs to their embryonal development.

8) The numerous gaps of phylogeny which remain in the empirical materials of ontogeny, are filled out to a great extent by Palaeontology and comparative anatomy.

The application of these general biogenetic principles to the special case of the history of human evolution, as I have attempted it for the first time in the "Anthropogeny," being the first independent invasion of science into a new field, had, as a matter of course, to be very incomplete. Its sole main success could be to bring the new conception of scientific inquiry to the front and to suggest to other naturalists to try its value in their special province. When I compare the state of things of former times with that of the present time it seems to me that the "Anthropogeny" has amply fulfilled its purpose. The greatest number of naturalists who have ventured upon the attractive field of comparative evolution-history, have come to the conviction that the two main branches, contrasted by me as Ontogeny and Phylogeny, stand in the closest causal connection, and that the one cannot be understood without the other. The majority of the valuable results which have been brought to light through their diligent researches, can find appreciation only if the ontogenetic facts have found their phylogenetic explanations. Twenty-five years ago when my "Morphology" appeared, the history of the human germ seemed to be to many like a strange fairy-tale in which a series of odd and enigmatic phenomena was concatenated without any apparent causal connection. Today this chain of strange transmutations appears to us an historical document of first rank, it contains the history of our creation which gives us a reliable information concerning the most important changes in body and in habits, in the inner structures as well as the outer formation of our animal ancestors.

The great progress made in comparative evolution-history during the last two decades is often sought in other causes, in the great number of workers who give their attention to this new field and in the perfected technical methods of investigation, especially the improved instruments. Certainly this progress, especially that which we owe to the improvement of the microscope and the microtome, must be taken into consideration, but they receive their value through the application of the phylogenetic methods. We owe to the latter the immense expansion of our intellectual horizon so that we now understand the great wonderland of organic life from the beginning to the present time as one great mechanical process of nature in its historic growth. It is the duty of phylogeny to reduce the formative forces of the animal body to

the universal forces and life-phenomena of the universe. When the history of the race throws the light of explanation upon the enigmatic chaos of the history of the germ, it reveals the true laws of evolution.

That this is the sole road which leads to our goal, and that the facts of ontogeny can be explained through the hypotheses of phylogeny alone, has become plainer every year. The number and the weight of facts which are furnished by the two sister sciences of palaeontology and comparative anatomy, are also increasing annually. The more we know of them, the more do we appreciate the inner connection in which the historical documents of these two sciences stand to ontogeny. And the greater grows our conviction that all three are equally valuable for a construction of the history of our race.

* * *

If my "Anthropogeny" possesses any merit it is this, that it has kept in view its historical task to be one single and unitary whole and to have traced the relations of its parts to the whole. Here also Goethe's line is applicable: "Everything depends upon the relations." The evolution of a man from a simple cell, the wonderful chain of forms through which the primordial cell passes during the process of germination is in my mind one of the grandest and most interesting natural phenomena. And certainly it is a fact which fascinates every thinking man, for it contains the riddle of the life of man. The principle of the solution is contained in Lamarck's theory of descent which considers the heredity of acquired properties as the true mechanical cause that has produced in the course of a long history of the race the gradual evolution of our animal ancestors to higher planes. The difficulties which the old theory of descent, i. e. the Lamarckism of 1809, was unable to conquer were most successfully dealt with by Charles Darwin in 1859, who introduced the theory of natural selection as the great regulator, adjusting in the struggle for life the natural effects of heredity and adaptation.

It is an error of later days to have brought "Darwinism" as a matter of principle in opposition to "Lamarckism." A new school of transformism (we might call it Hyper-Darwinism) attempts to explain all transformation of organic forms through selection alone and thus excludes strange to say that factor which in my mind is the most important of all, viz. the inheritance of acquired adaptations. This conception has been represented with great success in Germany by August Weismann, in England by Galton, Wallace, Ray-Lancaster, and others. Notwithstanding the great merits which Weismann has gained through his excellent work in the enhancement of zoölogy and transformism, I must confess that his theories of the germ-plasm and the immortality of unicellular beings,

so much praised at present, appear to me untenable.

When with Weismann and Galton we deny the inheritance of acquired properties, we exclude for good the formative influence of the outer world. If adaptation, that is, transformation through the conditions of existence, cannot be transmitted by heredity, it possesses no phylogenetic value. The great fundamental idea of Lamarck's theory of descent as well as of Darwin's theory of selection, consists in this: that the cognition of the relations between the inner world of the organism and the outer world of its surroundings reveals to us the true causes which effect the slow historical transformation of its structures. In this process however the inheritance of properties acquired during the time of an individual life is an indispensable condition. Weismann maintains that there are no proofs for it, while in my opinion all the facts of Morphology and Physiology, of Comparative Anatomy and Ontogeny, of Palaeontology and Chorology, are one great arsenal of arguments. Even the direct proofs of experiments demanded by Weismann have been brought forth. Our whole artificial selection rests upon this premise. I am convinced that not one thinking and impartial experienced raiser of animals will deny the inheritance of acquired properties.

Through the new theories of Weismann, Naegeli, and others, the theory of Descent loses the greatest part of its explanatory value. For if we discard the known external causes of transformation, we are referred to the unknown internal causes which have to regulate the evolution of the organic world teleologically. These are found in such vague notions as "a great law of evolution," or "a physiological law of growth," or "an inner instinct to progress," or "an inner and pushing evolution principle," etc. All these indistinct "inner laws of evolution" which do not admit any formative influence to the outer world, rest ultimately upon dualistic and teleological conceptions; they are incompatible with monistic and mechanical principles, which according to our views of the physico-chemical conceptions of modern Physiology, regulate the activity and life-formation of the organic world.

WILLIAM JAMES LINTON.

THE WOOD ENGRAVER AND A PIONEER OF REPUBLICAN PRINCIPLES.

BY GEO. JULIAN HARNEY.

The February Revolution (1848) caused immense and universal sensation and excited either agitation or insurrection in most European countries. Addresses of sympathy and fraternity to the Provisional Government poured in from all quarters, England included. One of the English addresses was taken to the chiefs

of the Republic by Mr. W. J. Linton, the well-known wood engraver, poet, and political writer, who seized the occasion to seek and hold enviable converse with the author of "The Words of a Believer."

In a former article I have spoken of Lamennais as one of the Saints of our Republican Calendar and I shall now speak of Mr. Linton. Mr. Linton would not thank me for classing him as a saint; and indeed the hour is not yet come for *his* apotheosis, for he is still with us, or rather with *you*. Why, like Byron, he chooses self-banishment from his own country I do not pretend to know and will make no attempt to guess. Suffice it to say that England's loss is America's gain.

WILLIAM JAMES LINTON was born on the 7th of December, 1812, in London—another illustration of the many that could be cited, I will name but two: Milton and Byron, of the silly prejudice that classes all born in London as "Cockneys," i. e. effeminate, indolent, and ignorant, a kind of semi-fools! After serving the usual apprenticeship to G. W. Bonner, a wood engraver well known in his day, Mr. Linton began work on his own account, subsequently joining Mr. Orrin Smith, a clever artist. The partners had premises at 85 Hatton Garden. Mr. Orrin Smith died early, but Mr. Linton continued to exercise his profession for a number of years at the same place, perhaps not better known to those who sought the services of the artist than to those who sought his co-operation in movements for the promotion of Freedom and Progress. His adoption of advanced principles of Liberalism as then understood, whilst still a very young man, induced his first venture as a writer in a publication named *The National, a Library for the People*. Each number contained a spirited engraving. From that time he became connected with various publications, or those launched at his own risk, the work on the latter being, I suspect like virtue—its own reward, "only that and nothing more." Had Mr. Linton "stuck" to his wood engraving and left politics alone—as no doubt he was often counselled to do by well-meaning advisers, he might to-day have been a comparatively rich man. Whether he would have been any happier than he is now, I question.

Without naming the several books and publications with which Mr. Linton's name is associated as writer—both in prose and poetry—and illustrator, I limit myself to saying that, having become the trusted associate of Mazzini and the Polish exiles, he, at the beginning of 1851, commenced *The English Republic*. This publication underwent several changes but continued under the same name until April 1855. A full set cannot now be obtained, though odd volumes may occasionally be found among the London dealers in second-hand books. The happy thought has occurred

to Mr. Kineton Parkes of Birmingham to make a selection of the articles of permanent interest on "Republican Principles," "Republican Measures," "Methods of Government," "Combination and Strikes," "Nationality," "Non-Intervention," and other topics as much demanding attention and reflection to-day, as when the articles, or essays were written. To the publication of this selection Mr. Linton has given his consent. Mr. Parkes has prefixed a memoir, the whole making a neat volume of above 200 pages, published under the title of "The English Republic," by Swan Sonnenschein & Co., London, price 2s. 6d.

In a review, or notice of the new volume, the *Anti-Jacobin* spoke of it as a "Chartist Remnant." It is, if a remnant, a remnant of which no Chartist need be ashamed. But the description is hardly just to Mr. Linton. The superfine gentlemen of the London press always stupidly blunder when they meddle with Chartism. Mr. Linton was a Chartist, but "a Chartist and something more," as the title of his chief periodical sufficiently indicates. Associated with a particular section of the Chartists, he was as regards the greater number of the party with them but not of them. Perhaps he but imperfectly understood that the majority of the Chartists, or the bulk of that majority, fully sympathised with his ideal, but held that the obtaining of the Charter was the first practical work. The Charter was not obtained, save in part and by piecemeal in subsequent years; and apparently we are not yet nearing the English Republic as conceived by Mr. Linton; no more than we are near to that reformed and genuine Christianity which was the holy dream of Lamennais; but who will affirm that these ideals have been exalted in vain?

Mr. Parkes says that Mr. Linton, now in his seventy-ninth year, is enjoying excellent health at his home, Appledore Cottage, New Haven, Connecticut. A biographical sketch of Mr. Linton appeared in the *English Illustrated Magazine* for April last, rather treating of his artistic than his political career, and his great and original talents as a wood engraver. That sketch was accompanied by a portrait which I can vouch for as accurate and striking, having seen Mr. Linton within the last two years. He looks now the patriarch, and looks, too, as if he might experience and enjoy some approach to the traditional patriarchal age.

It happens that though issued by different publishers, the two volumes: "The Words of a Believer" and "The English Republic," appearing nearly at the same time, present in their outward aspect a close resemblance, and the one may be regarded as the complement to the other. Every lover of choice books, not choice in the sense of expensive printing and book-binding, but in the higher sense of intellect-

ual power consecrated to the service of mankind, Truth, and Freedom, should possess both. Felicité Lamennais is at rest, and the dull cold ear of death is insensible to our homage; W. J. Linton is still with us, still working and hopeful. Perhaps in all things their methods cannot be our methods, nor their thoughts exactly our thoughts; any more than the workers of the present may hope to dominate the future, for that is not to be expected. What then? It is not the Pioneers upon whose heads Victory places her laurel wreath, but they clear the way; not unfrequently with their brave hearts paving the path of the coming victors. Or, perhaps, it were better to regard them as the inspired harbingers of that gradual evolution which we may hope will take the place of the disappointing Revolutions of the past. Honor to such Pioneers, whether numbered with the illustrious dead or still to be counted among the living leaders of Advanced Thought! We may be unable to share in the simple belief and glowing devotion of Lamennais, and may be unable to exactly follow the lines laid down by Linton; but appreciating the value and the beauty of their ideals, we may best express our gratitude by urging thoughtful perusal of their writings, believing with Byron that

"Words are things; and a small drop of ink
Falling, like dew, upon a thought produces
That which makes thousands, perhaps millions, think."

PROMETHEUS AND THE FATE OF ZEUS.

THE Greeks possessed an old myth which in philosophical depth somewhat resembles the Teutonic Faust. The story of Prometheus is told in different versions by Hesiod in his "Theogony" (511 et seqq.) and in his "Works and Days" (48 et seqq.). Aeschylus, the first of the three great Athenian dramatists, gave in his great trilogy of the Fire-bringer Prometheus, the Bound Prometheus, and the Liberated Prometheus a third and undoubtedly the best, the most philosophical, and the profoundest version of the legend. And since these three great dramas exist only in fragments which bear witness to the grandeur of the Greek poet's thought, this greatest of all ideas, that of aspiring and conquering man—conquering through forethought—still awaits a great poet to give it a modern form. As Goethe created the final conception of the Faust-myth, so the poet of the future, perhaps still unborn, will let us have the final conception of the Prometheus legend.

Prometheus is the son of Themis, and Themis is the Goddess of law. Prometheus with the help of the eternal laws of existence has acquired the faculty of forethought. Prometheus means the man who thinks in advance.

Prometheus had a brother and his name was Epimetheus, that is the man who thinks afterwards, when

it is too late. There is a story about an old Gotham magistrate who had very wise thoughts, but they did not come to him until the session was over and all the foolish motions of the fathers of the town had passed. His best thoughts came when he walked down stairs in the city hall. This same kind of wisdom, the wisdom of the staircase, was the wisdom of Epimetheus, and thus the two brothers were very unlike each other.

In those days Zeus kept the fire for himself; he allowed the sun to shine upon the earth and when he grew angry he threw down his thunderbolts upon oaks and mountain-tops. But he was envious and feared that man might become too powerful. Prometheus foresaw the great advantages which the usage of fire would have for mankind. So he stole the fire from the heavens and brought it to the people on earth, teaching them how to build a hearth and to use it wisely. But Zeus punished Prometheus severely for his theft, he chained him to a rock and had an eagle swoop down upon him daily to devour his liver which always grew again during the night. Prometheus was afterwards liberated by the skill and courage of another daring man—by Hercules who shot the eagle and rescued the sufferer.

Why did Zeus not kill Prometheus? First we are told that Prometheus was immortal. But there is another reason still. Prometheus knew a secret which Zeus did not foresee, although it foreboded evil to the father of the gods. This secret, as we can surmise for several reasons, consisted according to the old mythological tradition in this: Zeus loved a goddess; her name was Thetis, and it was written in the books of fate that the son of Thetis should be greater, infinitely greater, than his father. According to the version of Aeschylus, Zeus became reconciled with Prometheus on the condition that he should reveal the fatal secret to him so that he might protect himself against the imminent evil. And we are told that Zeus resigned his love and ordered Thetis to be married to a mortal man whose name was Peleus, and the son of Peleus was the greatest hero of Greek antiquity, the noble, the brave, the proud Achilles.

This is the version of Aeschylus, but there is another version still left. That is the version of the poet of the future. Aeschylus believes that Zeus was saved. Zeus being reconciled with Prometheus knew of the danger and evaded it. Yet we now know, that he could not evade it. Let a god have a son and the son will be greater than the god, even though the son of God may call himself the son of man. Says Goethe: "The son shall be greater than the father,"—that is the law of evolution, the law of life, the law of progress. We now know that Zeus was actually dethroned by a greater God than himself and this greater

God was the son of man—the aspiring, the suffering, the conquering son of man.

Zeus is dead, but Prometheus is still living. Who is Zeus and where is Zeus? Zeus is the phantom-god of pagan antiquity. Zeus is a personification of the Divine in nature, he is a grand picture of God, but he is not God himself. If we expect that the picture we have made of God is God himself, if we imagine him to be a mind like ourselves, we shall fall into the same errors and pass through the same disappointments as did Prometheus. Says Goethe's Prometheus:

"While yet a child
And ignorant of life,
I turned my wandering gaze
Up toward the sun, as if above
There were an ear to hear my wailings,
A heart like mine
To feel compassion for distress."

It was most likely necessary that Prometheus should pass through his errors to arrive at truth, it was indispensable to brave the evils of life and to undergo severe sufferings in order to conquer. The errors as well as the sufferings, the very evils of life are good in so far as they help man to struggle and to progress. But in order to gain the victory, Prometheus ought to know that he must fight himself; he cannot rely upon the help of his phantom-god—of a Zeus above the clouds. The real God of nature is deaf to the prayers of those who pray in the hope that he will do the work for them.

There is more divinity in Prometheus than in Zeus. The God of the present time is the son of man and his symbol is the cross, which means that the way of suffering is the way of salvation, struggle is the condition of victory, the path of toil only is the road to a higher existence, the narrow gate leadeth unto life. The Zeus-idea of God is doomed and an infinitely greater, because truer, idea of God is dawning upon mankind. There is truth in mythology and there is a meaning in parables, yet the parable is told for the sake of its meaning and the truth is greater than mythology. Let us not be satisfied with mythology, but let us look out for the truth.

P. C.

CURRENT TOPICS.

I THINK it is told in Æsop's fables, that once upon a time there was a dry season; and as the crops were very thirsty, the farmers prayed for rain. Jupiter, moved by their supplications, promised rain if they would call a public meeting and appoint a day for the shower. As the meeting broke up in a row because they could not agree upon a day, they got no rain, and the harvest failed. The fable has found its application at last, in the controversies latent in the newly discovered art of making rain at will. Shall the rain maker be allowed to make holes in the sky, and let the waters which are above the firmament drop down to the earth, forty days and forty nights, if it shall please him so to do? Or shall the practice of his art be regulated by law according to the needs of the land? If so, who shall decide when it shall rain, and when the rain shall cease? Every day in the year some persons want sunshine while others want rain, and there is no

tribunal to decide between them. It involves a question of human rights, for if I want fine weather for picnic purposes, or for business reasons, shall my neighbor be permitted to make it rain? In such a case ought I not to have a remedy by injunction against the rain maker? If the skies are to be put under lock and key, the key ought to be kept in the Department of Agriculture, for no private citizen should be allowed to say where and when it shall rain. This new discovery is inopportune, for the list of social problems and political puzzles is already full.

* * *

That it is out of harmony with our political and commercial systems is a grave objection to artificial rain. Natural rain is bad enough, but artificial rain menaces an important industry, the business of irrigating the arid plains of the west. This occupation is threatened with ruin. For several years past, enterprising corporations have employed capital and labor in damming the mountain streams; and from the reservoirs thus made, those companies furnish water to the farmers in the valley. For moistening a quarter section the farmer pays to the irrigators about fifty or sixty dollars a year, and at a proportionate rate for larger quantities, according to the degree of dampness given to the land. An "un-American" scheme is now in operation to cripple the irrigating industry, by importing foreign water from heaven wherewith to fertilise the dry soil of Colorado. Unfortunately, this importation baffles the protective tariff. Rain cannot be confiscated at the custom house, and the supply of it appears to be large. The Dakotas too are preparing to provide themselves with water by the sinking of artesian wells, an infant industry which if blessed with twenty-five years' drought will give employment to many men. The owners of those wells promise to sell water to the farmers at reasonable rates. If a flood of cheap foreign rain can be kept out of Dakota for twenty-five years, this infant industry will be of age, and will no longer ask assistance from simoons and sand. As we cannot have any custom house officers on the boundary line between heaven and earth, to stop the importation of rain, we can at least make laws for the punishment of those who attempt to make rain by artificial means.

* * *

Seeking a little inspiration as I sometimes do from communion with my friendly pipe, I saw in the fantastic smoke of it two scenes of a weird and pathetic drama, having the everlasting land for its theme. In the one, I saw the Land problem bewildered by a multitude of rival theories, seeking its own solution behind the broad forehead of Herbert Spencer in the calm quiet of a little room in London; and in the other, I saw fifteen thousand sunburnt men working it out on the prairies of Oklahoma, not with any books or moral commandments, but every man of them with a persuasive pistol buckled on his thigh. And every pistol, had it the gift of speech, would say, "I am here to fight for land; the sentiment of hunger is more logical than the reasoning of Spencer." Fair is the dream of "Justice," but the reality of life is dark; and what shall we do when there is no longer left in America any more of what Mr. Spencer calls "primitive" land? In the present case there were thrown open to settlement five thousand quarter sections; and for these, there struggled and wrestled fifteen thousand men,—and one woman, but she was shot by the United States Marshall for "impatience," and thereby "lost her chance," such as it was. That was an object lesson more instructive than anything in the philosophy of Spencer, and more ominous.

* * *

The advent of Herbert Spencer's "Justice" is hailed by thousands as a new book of inspired scripture, and in its infallible chapter and verse many weary inquirers will seek rest for their own opinions on the land question, the labor question, the woman question, and other tumultuous problems of our day. Herbert Spencer's gospel of the land appears to be a compromise between

sentiment and reason, and it will not stand, because on the land question those disputants will not be reconciled. Speaking of land ownership, Mr. Spencer says:

"The landless have not an equitable claim to the land in its present state—cleared, drained, fenced, fertilised, and furnished with farm buildings, etc.,—but only to the land in its primitive state; . . . this only it is which belongs to the community."

The latter part of this doctrine was greatly overstrained by the pressure of fifteen thousand men at Oklahoma on the 22nd of September. At sunrise on that day, a million acres of land "in its primitive state" belonged to the community known as the United States; at sunset it had been broken into five thousand separate lots, each under individual ownership, the United States having surrendered its communal interest at noon. A piece of land larger than Derbyshire was communal in the morning, but individual at night, while its primitive character remained unchanged. The man who can read his title clear to a quarter section of that land may cultivate it, or he may let it remain in its "primitive state," and in either case, it will not belong to the community. What is the "primitive state" of land? And, speaking of land ownership, does Mr. Spencer mean by the "community," the State at large, or the People as individuals, the right of ownership in primitive land being in the first one who chooses to occupy it? And if three men seize it at the same time shall one of them have it; or shall it be divided equally among them all. At Oklahoma five thousand men got one hundred and sixty acres each, and ten thousand men got none. Should not the territory have been divided into smaller lots so that each claimant might have had an equal share?

M. M. TRUMBULL.

CORRESPONDENCE.

EMULATION VERSUS COMPETITION.

To the Editor of The Open Court:

MR. F. M. HOLLAND, in an article on "Competition and Progress" in No. 204 of *The Open Court*, treats those terms as in great measure synonymous, and concludes his observations with the remark that "those who believe in progress ought to encourage competition."

This seems to me to need qualification. If reference is had only to such pursuits as fall under the general term "business," competition unquestionably should be encouraged, for it insures lower prices, and perhaps brings out in the trades "the best work of which men are capable," both of which facts are in the interest of the general public. But this question has a broader significance than its mere business aspect. It is a question of civilisation, and a civilisation animated by and developed under the spirit of mercantile competition cannot be of the highest order. Under the influence of that spirit there must be retrogression rather than progress. For the spirit of competition, good, if restricted to mere mercantile affairs, when extended outside the shop to social life and thought becomes a very great evil rather than the good which Mr. Holland seems to consider it. For what is competition but an assertion of self-interest—an effort to promote one's own material good at the expense of that of others? Its very essence is selfishness. It has nothing of the spirit of benevolence or helpfulness. Consider the various trades. Is the competition everywhere rife rooted in a generous rivalry in good works? Does it lead to the production of "the best work of which each is capable" because men feel that to work out what is best in them is a duty which they owe to their fellow-men? Is it in any sense philanthropic, altruistic—or is it not on the contrary purely selfish, and does not each man in the competitions of business strive to excel almost solely for the money return that it brings?

Now if you carry into the social organism this spirit of selfishness that lies at the basis of all trade the result can be nothing

but hurtful. A society from which the altruistic spirit is eliminated and whose basis is pure egoism is necessarily dwarfed, sickly, incapable of attaining to full growth and vigor—for the health of society requires in large measure the subordination of self to the general good. Altruism rather than egoism must be its animating principle.

Surely the effect of this "system of struggle and rivalry" upon the intellectual life of society may be readily seen. The spirit of trade is essentially anti-idealistic. Not that the successful business man may not be a man of fine mental organisation and acquirements, or that the successful conduct of business does not require a tact that is closely allied to genius, but that having no other object than the making of money, its tendency is always toward the suppression of that part of the intellect—generally the highest—which may be made pecuniarily profitable. It is therefore opposed to all speculative knowledge, to all purely philosophic inquiry, to all investigation whose object is the ascertainment of abstract truth, and to all those intellectual endeavors and ideal perceptions, which, without the hope or expectation of reward, but with only an intense love and enthusiasm for science, have built up for us the splendid fabric of our knowledge. For all the purposes of trade if a man knows how to "drive a good bargain" there is little need for any other knowledge, and therefore the demand is for just that amount and quality of knowledge which is helpful to that end and for no other. For this reason I think the spirit of trade at war with the intellectual life of society. It sets up a false and vicious standard of intellectual qualification. It says to the young man just starting in life: "All knowledge that does not yield a proper return in money is useless and burdensome," thus fixing the limit of mental development at the point where knowledge ceases to be profitable in money, and discouraging all progress beyond that point. What we need in society is not competition but emulation—emulation to do good. Competition eliminates the ideal—emulation is the ideal in action. Competition is the rivalry of egoism. Emulation the rivalry of altruism in pursuit of the ideal for the benefit of human society. Therefore let us relegate competition to the shop and the stock-exchange, and trust to emulation only the inspiration of human civilisation and progress.

WM. MYALL.

REJOINDER.

I AM glad to find Mr. Myall think so highly of enthusiasm for science, and of love of truth for its own sake; and I certainly did not mean to encourage the idea that society can advance far without such inspiration. There seems to me however to be no sufficient reason for believing "the spirit of trade at war with the intellectual life of society." In ancient times, Athens was the centre of the world's intellectual life; but there were no keener merchants than the Athenians. Both commerce and science flourish to-day at London as they do nowhere else; and the harmony between them is as perfect there as it is in Boston and Chicago. A plan for starting a new scientific museum would meet with at least as much favor from leading merchants and bankers as from idealistic enthusiasts for what they call abstract truth. As for the tendency of competition to suppress the highest part of the intellect or hinder the production of the best work, it is well to remember that Shakespeare wrote his dramas in keen competition with his rivals in the theatrical business. When he was not trying to make money, but merely under the influence of emulation, he wrote "Lucrece" and other poems which scarcely any one reads. Competition forces an author to think of pleasing somebody besides himself, and thus leads him to his best work. Another fortunate fact is that the man who is merely trying to promote his own material good at the expense of others is not likely, under our present competitive system, to succeed as author, clergyman, physician, merchant, mechanic, or anything else. Society understands its

own interests too well to let the highest rewards fall to the most selfish. If I am not willing to do anything for the benefit of my neighbors they will not help me gain much success. Let me also point out the fact, that Mr. Myall, in admitting that competition is so necessary to business prosperity that it should "unquestionably be encouraged," concedes its place as an indispensable part of civilisation. A community must be able to make both ends meet, or it cannot make progress. Business, at least, must be based on competition; and therefore the schemes of Bellamites and Nationalists, are not adapted to make wealth but poverty universal.

F. M. HOLLAND.

JEFFERSON AND THE MECKLENBURG RESOLUTIONS.

To the Editor of *The Open Court* :—

I HAVE to correct an error in my paper on "The Declaration of Independence," in your issue of July 2d. The Mecklenburg resolutions which Jefferson pronounced mythical were not those passed May 31, 1775, and now known to be genuine, but another set said to have been passed at the same place on May 20th. There is a good deal of testimony to the effect that on receipt of the news of the massacre at Lexington a popular indignation meeting was held May 20th, and an aged gentleman, J. McKnit Alexander, compiled from memory resolutions which he believed then passed. The actual resolutions, of May 31st, were passed by the County Committee, and may have tempered the popular expressions of eleven days before, if these were put in resolutions. This, however, is conjectural. It may be ascribed to Jefferson's age that in 1819, when the supposititious resolutions were published, he did not remember the real ones, which were sent to Congress and, though not read in that body, industriously circulated. The memory of the whole country was, indeed, at fault, but in the North the resolutions had only in part reached the public. The *Religio-Philosophical Journal*, in pointing out my mistake, says the resolutions "were printed in Northern and Southern newspapers of that period, and there are several copies of the papers now in existence. A newspaper containing the resolutions was found at Washington in 1838." Your contemporary is in error. Dr. Welling, the final authority, says: "Mr. Force announced the discovery of these resolutions in the *National Intelligencer*, of December 18, 1838. We found them at first, as they had been partly reprinted in the *New York Journal*, of June 29, 1775, and subsequently he met with another condensed copy of them in the *Massachusetts Spy* of July 12th in that year. In the year 1847, Dr. Joseph Johnson found a copy of the entire series in the *South Carolina Gazette*, of June 13, 1775." There seems to be no paper in existence containing the entire twenty resolutions except the *South Carolina Gazette*, of which one copy is preserved in Charleston and another in the English State Paper Office. These resolutions do not, like the supposititious ones, declare independence, but they assume it; they declare all laws and commissions of the crown "annulled and vacated," and all who shall accept or attempt to exercise such commissions enemies; they organise, and prepare the further organisation of, a government "independent of Great Britain," to be in force until "the legislative body of Great Britain resign its unjust and arbitrary pretensions with respect to America." It was, therefore, a virtual declaration of independence," as Dr. Welling has shown, and the first attempt in the country "to cut this gordian knot" of determining what should take the place of the lapsed authority. (*North American Review*, April, 1874.) The resolutions made an impression on the British Governor of North Carolina, who wrote home, "they surpass all the horrid and treasonable publications that the inflammatory spirits of this continent have yet produced." That they should have made no impression on Jefferson seems incredible; his memory was feeble in 1819, and he had become jealous concerning his paternity of the original "Declaration." I have, however, done him an injustice by a lapse of

my own memory in supposing that he had discredited all alleged resolutions and movements for independence in Mecklenburg. For there was ample evidence elicited in 1819 that there had been such resolutions in May, 1775, though the particular ones produced by an old man's memory were untrustworthy. Soon after the appearance of my mistake a member of Congress wrote me about it; my delay in correcting it has been caused by a wish to refer to documents not very accessible at the seaside.

MONCURE D. CONWAY.

BOOK REVIEWS.

THE AGNOSTIC ISLAND. By *F. J. Gould*. London: Watts & Co.

Mr. Gould has done well to give us a professedly freethinking piece of fiction. For "many people read a song who will not "read a sermon." And there is much scope for the treatment of the rationalistic idea upon lines hitherto almost entirely unworked.

The story begins with a capital scene in Exeter Hall, London, where a meeting is convened to inaugurate the Oceanic Society's mission to the Agnostic Island. The characters of Bishop Crozier's two colleagues in the difficult—may possibly dangerous—work he has undertaken are excellently drawn. Mr. Phylactery is confident that "Agnosticism inevitably results in chaos, in desolation, in Egyptian darkness." Mr. Clerestory however cannot find it in his heart "to anticipate that the Agnostic Islanders are "altogether profligate and given over to the spirit of evil."

The trio are therefore not quite unanimous in the unqualified astonishment with which even the kindly Bishop receives the courteous and refined hospitality of Governor Marlow and his family. The charm and culture of the Governor's daughter indeed strike Clerestory with even more of admiration than surprise; while it fills the good Bishop's mind with apprehension from the first. Attendance at the meeting-hall of the Island gives the missionaries an unequivocal insight into the principles of the Agnosticism they had so much misconceived. Readings from Matthew Arnold and Emerson, with singings from Shelley, and even Bonar, prelude a "sermon" from Janet Marlow. Herein the fair freethinker shows her eclecticism by the exhortation: "Job "shall teach us patience; Socrates shall tell us what is virtue "Aristotle shall declare unto us the golden heroes; Jesus shall "preach the Sermon on the Mount. Buddha shall repeat his "parables." This cosmopolitanism is assuredly not borrowed from Christianity. And it seems a pity that Mr. Gould should have enshrined it in "our Agnostic Church," or "this new Catholic "Church"—a conception that plainly *is* so borrowed. Still the author otherwise consistently uses the language of an Agnostic Monist. "Does this Church exclude God?" Miss Marlow asks. And answers herself that the ordinary ideas of God must be "beyond us"; continuing, "Will you who cannot interpret a handful of earth presume to interpret the illimitable *All*?"

The "Sermon" of course creates a situation that the three missionaries have to discuss. They do so with great perturbation. The deep impression that the discourse has evidently made upon Clerestory adds to the general perplexity. Yet the Bishop determines to make one grand effort for his cause by the erection of a gospel-station that may yet prove a successful counterblast to the only too plausible preaching of sophistical scepticism. Marlow gives every assistance in the selection of a site and of a constructor. While building operations are in progress further examination of the settlement's institutions, with exploration of its own and neighboring territory fills up the time. Inspection of the school is the most important work undertaken by the missionaries. They are greatly struck with the deference paid to the instructors by the Agnostic youth. The educator, they learn, holds there the position occupied in Europe by the priest. The children surprise their interrogators even more by the sound moral notions than by the general information and intelligence that they

possess. And Clerestory feels another blow struck to his always broad and sympathetic Christian faith. A visit to another Island gives occasion to a scene in which Clerestory and Janet Marlow are in danger; and out of which they escape only to fall into the embraces of mutual love.

The next stage in the story is Clerestory's confession of Agnosticism before the Bishop and Phylactery. This leads to the final abandonment of the mission, and the return to England of its two surviving members. Clerestory of course has found his Eden and his Eve.

So ends a little religio-philosophical romance of much merit. Its hundred and a quarter pages contain indeed small space for any intricacy of plot and detail of description whether of people or of places. But whatever is attempted is drawn with clear insight, healthy humor, and firm touch. Every character and every scene stands out distinctly. Moreover all exaggeration is avoided. There is no illiberal blackening of opponent's views in order that personal opinions may stand out in unnaturally bright relief. Mr. F. J. Gould's "Agnostic Island" breaks new ground in a most admirable manner. It must be strongly commended to all interested in the treatment of our rationalistic religious problems upon the fresh and attractive lines of philosophic fiction. E. T.

NOTES.

The *Century* of October contains another richly illustrated article by Mr. George Kennen "My last days in Siberia."

We are in receipt of Prof. F. Max Müller's recent address which he read as the President of the Anthropological Section to the British Association for the Advancement of Science.

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