

THE
SEXES THROUGHOUT NATURE

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P R E F A C E .

IN the present volume, the leading Essay—*Sex and Evolution*—and the concluding Paper—*The Trial by Science*—are for the first time offered to the public.

Of the briefer articles, that on *The Alleged Antagonism between Growth and Reproduction*, appeared first in the *Popular Science Monthly*. The others, now slightly modified and rearranged, were first published in numbers in the *Woman's Journal*.

These essays, closely related in subject, are all hung upon a framework of criticism. The great names of the gentlemen whose positions are controverted, as the oak to the ivy, serve as an excellent support to the overgrowing theses. Moreover, it is

easier to pull down than to build up; yet I have earnestly attempted to do something of both.

Many women have grievously felt the burden of laws or customs interfering unwarrantably with their property, their children, or their political and personal rights. I have felt this also; but more than any or all other forms of limitation and proscription, I have realized in my inmost soul that most subtle outlawry of the feminine intellect which warns it off from the highest fields of human research. But now arises a question which—taken away from the protection of accepted tradition—is rather unexpectedly thrust forward for purely scientific recognition and settlement. Some of the grandest names known to science have already taken it up for investigation; but their conclusions are eminently unsatisfactory!

However superior their powers, their opportunities, their established scientific positions, yet in this field of inquiry *pertaining to the normal powers and functions of Woman*, it is they who are at a disadvantage. Whatever else women may not venture to study and explain with authority, on this topic they are more than the peers of the wisest men

in Christendom. Experience must have more weight than any amount of outside observation. We are clearly entitled, on this subject, to a respectful hearing.

In this faith, I offer the public these somewhat fragmentary papers; believing that they contain the germs of a new scientific estimate of feminine nature, from its earliest dawning in the plant up to developed womanhood in all its present complexity. They are probably faulty in many things, and may be proved to be wrong even on some very important points. The work is printed as it was written—in snatches—not because the writer would escape the labor of systematic revision, but from the conviction that it will be more acceptable to the general reader in its present form. There are occasional repetitions, but it is believed that each presents the subject in some new phase. The discussions are brief. Many other facts might be given, and many additional points brought forward in evidence of the main positions. But perhaps the book is quite long enough as it is.

The whole line of thought must submit, like all

other reasoning, to be tested by the accumulation of pertinent facts which will either expose its fallacies or furnish its final justification.

THE AUTHOR.

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SEX AND EVOLUTION.

THE STATEMENT.

IT is the central theory of the present volume that the sexes in each species of beings compared upon the same plane, from the lowest to the highest, are always true equivalents—equals but not identicals in development and in relative amounts of all normal force. This is an hypothesis which must be decided upon the simple basis of fact.

If the special class of feminine instincts and tendencies is a fair offset in every grade of life to corresponding masculine traits, this is a subject for direct scientific investigation. It is a question of pure quantity; of comparing unlike but strictly measurable terms. In time it can be experimentally decided, and settled by rigidly mathematical tests. We do not weigh lead and sunbeams in the same balance; yet the *savants* can estimate their equivalent forces on some other basis than avoirdupois. So if the average female animal is the natural equiva-

lent of the average male of its own type in the whole aggregate of their differentiated qualities, science, by turning concentrated attention to this problem, and applying the adequate tests, can yet demonstrate this fact beyond controversy.

Or if the male is everywhere the established superior, then science in time can undoubtedly affirm that truth upon a basis of such careful and exact calculation that every opponent must learn to acquiesce.

But the question is still very far from reaching the point of accurate solution. It is decided on both sides by inferences drawn from, yet untested data.

Nor is it in any way dependent upon the hypothesis of Evolution or upon any phase of that hypothesis. The leopard and the leopardess either are or are not mathematical equivalents when fairly estimated as to all their powers and capacities, physical and psychical. No question as to their origin or their mode of growth can affect that equation.

But each writer can best treat of any subject from his own standpoint, and hence, in the present

paper, the equivalence of the sexes is considered in the light of certain theories of development.

Mr. Spencer and Mr. Darwin, the accredited exponents of Evolution, are both constructive reasoners. Each, with a special line of investigation, is intent upon the unfolding of related facts and conclusions; and every fresh topic is destined to be examined as to its bearing upon the central points of *the system*.

Any positive thinker is compelled to see everything in the light of his own convictions. The more active and dominant one's opinions, the more liable they must be to modify his rendering of related facts—roping them inadvertently into the undue service of his theories. Add to this the immense concentrated work which both these famous investigators have undertaken for years past, and one may readily understand that on certain points to which they have not given special attention, these great men may be equally liable with lesser ones to form mistaken judgments. When, therefore, Mr. Spencer argues that women are inferior to men because their development must be earlier arrested by reproduc-

tive functions, and Mr. Darwin claims that males have evolved muscle and brains much superior to females, and entailed their pre-eminent qualities chiefly on their male descendants, these conclusions need not be accepted without question, even by their own school of evolutionists.

Men see clearly and think sharply when their sympathies are keenly enlisted, but not otherwise. But neither of these high authorities evinces the least vital interest in the dogma of male superiority. Smaller men, who are not pre-eminent over the majority of their own sex, might glory in the relative inferiority of the other. But here there seems to be but small temptation to narrow-mindedness. They accept the theory as a foregone conclusion. Of course they are bound to regard it philosophically when it is thrust upon their attention, and to ground it, like every other fact, upon a common scientific basis. But they both content themselves by pushing forward a few stones of strength, wedging them hastily into their places as underpinning, and leaving them there without being welded together by the cement of long and intent thinking. It is the more

annoying therefore, that we should be called on to accept their conclusions on this point, because of their great authority in closely related departments to which they have given almost exclusive attention.

When "Social Statics" was written, Mr. Spencer had some belief in the equivalence of the sexes. Reverting to First Principles, he became so intent on evolving a *system*, that *woman's place in nature* fell out of perspective in his thoughts. The subject must have seemed of too little importance to require long and laborious investigation. The four weighty volumes of Biology and Psychology all indicate that his attention was absorbed elsewhere; but in a line often running so marvellously near to that of the relation of the sexes, as affected by evolution, that he very narrowly missed giving it his fullest recognition.

In a subsequent paper on the "Psychology of the Sexes," Mr. Spencer does give us a strong, clearly-lined statement of his position; but the further exposition of it is brief and, for him, only feebly sustained. Now, as Mr. Spencer never yet woke up to any topic around which he was not able to recognize a thou-

sand side considerations, all tending to special modifications of the main conclusion, it is apparent that he has not yet aroused his energies to an adequate consideration of this question. It is analogically certain that, otherwise, he never would have attempted to crowd the discussion into half-a-dozen brief pages.

Mr. Darwin, also, eminently a student of organic structures, and of the causes which have produced them, with their past and present characters, has failed to hold definitely before his mind the principle that the difference of sex, whatever it may consist in, must itself be subject to *natural selection* and to evolution. Nothing but the exacting task before him of settling the Origin of all Species and the Descent of Man, through all the ages, could have prevented his recognition of ever-widening organic differences evolved in two distinct lines. With great wealth of detail, he has illustrated his theory of how the male has probably acquired additional masculine characters; but he seems never to have thought of looking to see whether or not the females had developed equivalent feminine characters.

The older physiologists not only studied nature

from the male standpoint—as, indeed, they must chiefly, being generally men—but they interpreted facts by the accepted theory that the male is the representative type of the species—the female a modification preordained in the interest of reproduction, and in that interest only or chiefly. To them, physiology was an adjunct of the special creation theory. They believed that Sovereign Power and Wisdom had created one vessel to honor, and the other to dishonor. Evolutionists depart widely from this time-honored basis. But how are we to understand the want of balance in their interpretation of natural methods? It is difficult to perceive what self-adjusting forces, in the organic world, have developed men everywhere the superiors of women, males characteristically the superiors of females.

Other things equal, children of the same parents must begin embryo life on the same plane. As many successive stages of growth have arisen between primordial forms and women, as between these and men. Mr. Spencer reasons, that the cost of reproduction being greater for the female than the male, female development is earlier arrested in pro-

portion. Hence woman can never equal man, physically or mentally.

Mr. Darwin's theory of Sexual Selection supposes that a male superiority has been evolved in the male line, and entailed chiefly to the male descendants. The females, sometimes, inherit characters originally acquired by the males; but this form of evolution is carried forward principally from father to son, from variety to variety, and from species to species, beginning with the lowest unisexual beings and continuing upwards to man. With a few inconsiderable exceptions, the more active progressive male bears off the palm, among all higher animals in size, and among all animals high and low, in development of muscles, in ornamentation, in general brightness and beauty, in strength of feeling, and in vigor of intellect. Weighed, measured, or calculated, the masculine force always predominates.

Possibly the cause to which Mr. Spencer assigns the *earlier arrest of feminine development* may be alleged as the sufficient reason for Mr. Darwin's *male evolution*. At any rate, Mr. Spencer scientifically *subtracts from the female*, and Mr. Darwin as scien-

tifically *adds to the male*. The inequality between them is steadily increasing along the whole length of all the internodes; and it seems to grow both upwards and downwards, as plants do, from all the nodes. Unless it meet with a check in some unknown law, the causes which originally superinduced the inequality between the sexes must continue to increase it to a degree which it is startling to contemplate!

These philosophers both believe that inheritance is limited in a large degree to the same sex, and both believe in mathematical progression. Where, then, is male superiority to end? Are all the races, because of it, threatened with decadence and death somewhere in the remote future? Or must the time arrive when inferior males will be systematically chosen, and the superior ones thus eliminated from existence? But would this be Evolution? Moreover, if we must fall back upon certain natural checks which will be able in the future to prevent too great an inequality between the sexes, it cannot be preposterous to suppose that in the past and in the present similar natural checks always have been, and

still are, in active operation. These, from the beginning, may have been able, progressively, to maintain a due balance, an approximate equilibrium and equivalence of forces, between the males and females of each species, as it has been successively evolved. To point out the nature of these functional checks, to show that they have produced many various structural modifications in different species, corresponding in each with varying habits and development, but all tending to maintain a virtual equivalence of the sexes, is the aim of the present paper.

The facts of Evolution may have been misinterpreted, by giving undue prominence to such as have been evolved in the male line; and by overlooking equally essential modifications which have arisen in the diverging female line. It is claimed that average males and females, in every species, always have been approximately equals, both physically and mentally. It is claimed that the extra size, the greater beauty of color, and wealth of appendages, and the greater physical strength and activity in males, have been in each species mathematically offset in the females by corresponding advantages—such as more highly dif-

ferentiated structural development; greater rapidity of organic processes; larger relative endurance, dependent upon a more facile adjustment of functions among themselves, thus insuring a more prompt recuperation after every severe tax on the energies. It is claimed that the stronger passional force in the male finds its equivalent in the deeper parental and conjugal affection of the female; and that, in man, the more aggressive and constructive intellect of the male, is balanced by a higher intellectual insight, combined with a greater facility in coping with details and reducing them to harmonious adjustment, in the female. It is also claimed that in morals—development still modified by the correlative influences of sex—unlike practical virtues and vices and varied moral perceptions, must still be regarded as scientific equivalents.

All characters, being equally transmitted to descendants of both sexes, may remain undeveloped in either, or may be developed subject to sexual modifications; and yet, as a whole, the males and females of the same species, from mollusk up to man, may continue their related evolution, as true equivalents

in all modes of force, physical and psychical. If this hypothesis can be shown to have a sufficient basis in nature, then Mr. Spencer and Mr. Darwin are both wrong in the conclusion that, in the processes of Evolution, man has become the superior of woman.

I do not underrate the charge of presumption which must attach to any woman who will attempt to controvert the great masters of science and of scientific inference. But there is no alternative! Only a woman can approach the subject from a feminine standpoint; and there are none but beginners among us in this class of investigations. However great the disadvantages under which we are placed, these will never be lessened by waiting. And are there any who will read this paper, and yet feel that it deals with a class of topics improper for a woman to investigate, and still more unfitting for her to discuss before the public? Not among men of science, surely; but in the appeal to a popular audience, one may expect to meet some remnant of this sentiment. Then, in the graver phases of relations which may involve modesty, I can but appeal to the old motto of chivalry—*Honi soit qui mal y pense*. Psychology and

physiology are inseparable. Who can escape from the first requisite of knowledge—"know thyself?"

THE ARGUMENT.

Mr. Spencer reasons that low organisms, with structures that have severally reached their separate limits of evolution, by the union of two cells or perhaps two parts of a cell "slightly differentiated," may effect a "redistribution" of atoms, fitting them to become the basis of a new organism. This explanation is satisfactory. But in the genesis of higher organisms, Mr. Spencer does not fully recognize the growing necessity for *evolution of the differentiation* in primordial cells, in correspondence with more evolved structures and relations. The "slight differentiation," which would suffice to inaugurate an almost homogeneous organism, must be inadequate to so redistribute the forces in two cells of highly complex molecules as to enable their union to evolve the more heterogeneous organism. Hence the evolution of sperm and germ cells must correspond with the evolution of their parent structures.