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WOMAN'S EDUCATION
AND
WOMAN'S HEALTH.

COMFORT.

WOMAN'S EDUCATION,

AND

WOMAN'S HEALTH:

CHIEFLY IN REPLY TO

"SEX IN EDUCATION."

BY

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AND

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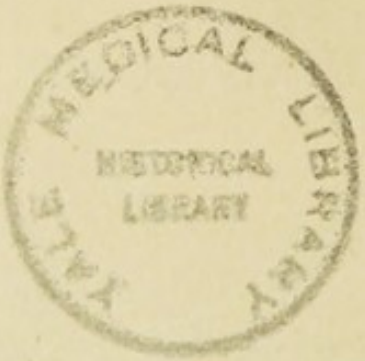

JOHN F. TROW & SON:
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NEW YORK.

TO

THE MOTHERS OF AMERICA,

WHO HAVE

DAUGHTERS TO EDUCATE,

This Work is

RESPECTFULLY DEDICATED,

BY

THE AUTHORS.

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INTRODUCTION.

"*Sex in Education.*"—The work of Dr. Edward H. Clarke, of Boston, entitled "*Sex in Education*," which first appeared in October last, has attracted the public attention in an unusual degree. Its captivating title; its flowing, graceful, and still pungent and popular style; its positive and uncompromising tone; the residence, rank, and former official position of the author; the interest which the late agitation of the subject of co-education has excited in the public mind; and the vital importance of the question which is discussed by Dr. Clarke to parents who have daughters to educate,—have all united to make the appearance of this work a very striking event in the current literature of the day.

The work of Dr. Clarke has received marked attention at the hands of the periodical press, from the fugitive daily newspapers, up to the more elaborate and critical quarterly reviews. A large portion of the criticisms of the press have consisted in allusions to

the contents of the book, with a general concurrence in the views therein expressed, but with a manifest lack of critical examination of the professional questions involved in the argument. In some cases a marked disapproval of the author's reasoning has been expressed in most forcible terms. But both the favorable and the unfavorable reviews appear to have been generally written from standpoints that had already been reached by their writers through other arguments than those involved in the peculiar line of discussion that is followed in Dr. Clarke's work.

The many favorable notices which the work has already received from the press, together with the forcible style in which it is written, have already led to some positive fruits. Some parents have already withdrawn their daughters from school through fear of the direful consequences which Dr. C. predicts. Some young women have decided to shorten their courses of study through the same fear. All this would be natural, justifiable, and logical, if our author's reasoning is correct. Indeed, to carry out his views to their ultimate results would require, as he distinctly and frankly asserts, an entire and radical change in the present American system of female education.

Critical Review.—Much good will come to the country from the discussion which Dr. Clarke's work has aroused. The thorough probing of our system of education will make manifest what are its weak, and what are its strong points. It will lead to a critical analysis of many features of social, religious, and national life in our country, which are directly or indirectly related to our educational system; and, through this analysis, to determining the degree to which our present educational system is justly chargeable with causing the present condition of poor health among American women, as compared with those of other civilized countries.

To show the degree and the extent to which the acceptance of the views of Dr. Clarke would throw darkness and confusion into the discussion, to point out the erroneous conclusions and inferences to which he would lead his readers, and to show to what extent his premises, his conclusions, and his illustrations are inappropriate and untenable (for we hold his work to be utterly wrong in all its essential features), must necessarily exceed the limits of an article for the periodical press. It is necessary to go to the very foundation of the argument, to trace it through all its essential steps, to point out where the fallacy enters, to follow the influence of the fallacy through the

whole of the reasoning, to point out the irrelevancy of what is claimed as corroborative proof, and to weigh the real amount of cumulative evidence.

Educational and Medical.—This subject, like all others relating to education, is very complicated, both in itself and in its bearings upon many of the most important elements in social life. Still, it must be viewed chiefly from two standpoints, the educational and the medical, or the psychological and the physiological. The authors of this review of Dr. Clarke's book have endeavored to present the main phases of the discussion from these two standpoints. The omission of either of these essential elements, even if the reasoning be founded upon data which are in themselves correct, must necessarily lead to one-sided and perverted views of the whole subject, with its manifold and complicated relations.

Additional Matter.—It has been impossible, however, to confine the discussion solely to these, its most prominent features. We have followed Dr. Clarke in his wandering through various side-issues, and have entered our protest against his skilful absorption into his argument of influences which do not legitimately pertain to it. We have also pointed out some very important omissions in his argument, and have treated at some length the character and the in-

fluence of the features which he has not considered. We have aimed also to advance the discussion, which is now occupying so prominent a place in the public attention, concerning the method and the scope of female education in America, by pointing out some of the steps that may be safely taken in advance, without in any wise imperilling true womanly quality, or infringing upon the family relation.

Professional.—It would have been more appropriate had Dr. Clarke presented his views to the members of his own fraternity, through medical journals, before giving them to the general public. The subject could there have been discussed by his professional colleagues with perfect freedom, and according to the laws of strictly scientific method. There is, besides, a certain degree of unfairness towards the general public, in giving out to them as fixed scientific truth what is at most a hypothesis of the writer. Dr. Clarke must be answered, however, before the same audience to which he has appealed.

Plain Speaking.—The intelligent treatment of the subject under discussion necessarily renders the use of very plain language indispensable. At this nothing but a false and prudish modesty can take offence. Where there is ignorance of the exact functions of the various parts of the human body,

the popular imagination is ready to receive the wildest vagaries as truths, and to give credence to any theory that is presented in a plausible and forcible manner. We have confined ourselves to those physiological considerations which are inseparably connected with the question at issue. To omit them would have been equivalent to yielding the argument, with all of its legitimate and momentous consequences.

In Conclusion.—We commit this work to the public, in the hope that it may contribute somewhat to clearing away the confusion with which Dr. Clarke has so successfully befogged the discussion of the relations of woman's education to her health, and to the future welfare of our race in this highly favored land.

WOMAN'S EDUCATION

AND

WOMAN'S HEALTH.

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I.

LOGICAL RESULTS OF DR. CLARKE'S ARGUMENT.

Argument Stated.—As this book may fall into the hands of some who have not seen Dr. Clarke's work, entitled "Sex in Education," we state here, in a few lines, the gist of his argumentation.

Dr. C. argues that an important portion of the existing ill health of American women is attributable to their studying in our schools, as now organized, while between fourteen and twenty years of age, or, more exactly speaking, during the four or five years immediately succeeding their arrival at the age of puberty; that rest of body and mind are necessary to the young

woman during the catamenial period in these years, in order that the reproductive organs may have a normal and healthy development; that, if this rule is violated, although the young lady may graduate with brilliant honors and with apparently blooming health, overtaxed nature will have her revenge in later years, by inflicting weakness or disease upon the brain, the nerves, or more especially upon the reproductive organs; that "boys' way" of learning is by uninterrupted study, while "girls' way" ought to be by interrupted study, the interruptions to coincide with the catamenial period; that, hence, "co-education," as this term is popularly employed, is disastrous to the present and future health of such girls and young women as shall study in academies, colleges, and professional schools, as they are now organized for boys and young men; and, further, that the female seminaries and colleges of America, by imitating the "boys' method of uninterrupted study," are causing results nearly or quite as disastrous to the future health of their students, as though they were arenas of "co-education."

Destructive Criticism.—Dr. Clarke's argumentation is a masterly example of modern "destructive criticism." He has shown how to tear down our present system of female education, but he has not so much as hinted how a better one can be constructed in its place. Once in a while he seems to get a glimpse of the chaos he would create, and he then naïvely relegates to educators, who have made the building up of our systems of schools and of instruction their cautious and conscientious life-study, the pleasant task of remodelling their work, which he would demolish in a few pages. But let us see the ruin he would create, and the condition of things to which he practically invites the daughters of America.

No Education for Woman.—As an inevitable corollary to Dr. C.'s argument, no two young women can recite together after they have arrived at the age of puberty; for with no two young women is, or can the catamenial function be coincident or alike in action. Much more is all class instruction impossible for ten or twenty young women together. In this disor-

ganized condition, still more is it impossible for one or two hundred girls or young women to take part in such varied class exercises as are requisite for the very existence of an organized school. Young women, thus, will not only be compelled to refrain from attending schools, whether academic, collegiate, or professional, which are designed for young men also, but even from attending schools of any kind whatever. It would be impossible to organize schools in which every pupil is to refrain from study, or from class exercise, for from four to seven successive days in each month. System, order, and regularity are as essential to the existence of a school as to that of an army, a bank, a farm, a millinery store, or a kitchen. It is not at all a question of co-education: it is practically a question as to whether by far the great majority of the young women of America shall receive any formal instruction at all, after they are fourteen or fifteen years of age. They certainly cannot study more than is now required of them in the primary schools or grammar schools, before they are fourteen years of

age. It would be utterly futile to attempt to have young women, after an intermission of five or six years, commence systematic study again, when they are twenty or twenty-one years of age. By Dr. C.'s plan the average American woman could not rise above the educational status of the peasant women of Germany.

Private Tutors.—The only practicable escape from this dreary prospect is through the aid of private tutors. For very manifest financial reasons, aid from this source, to any important extent, is beyond the reach of any but the daughters of the wealthy; and it is not these, as a rule, who are most anxious to secure a thorough education. And, further, only the rich who reside in large centres of population can secure such variety and excellence of tutorial instruction as is essential for anything that borders upon a liberal education. But it is rare that even the daughters of the rich can secure tutorial instruction from teachers of higher than second, third, or fourth class talent. To how many young women,—or young men

either, as to that matter,—could private instruction be given, to any extent, by Professors Pierce, Dana, Guyot, and Chandler? by Presidents Eliot, Porter, Barnard, and McCosh? by Max Müller, Huxley, Guizot, Taine, Lübke, Ranke, Mommsen, and Curtius? or by any of the other distinguished educators of Europe or America? Those paradises of tutorial instruction, Oxford and Cambridge, have kept English scholarship down to a plane far inferior to that which has been attained in and through the universities of France and Germany,—as is already keenly, if not bitterly realized by the English themselves. And further, with very are exceptions, Oxford and Cambridge are and can be attended only by the sons of the rich. Would Dr. Clarke duplicate in America for young women an English Oxford or Cambridge with the two million dollars or more which he suggests should be added to some existing American university which is now open only to young men, in order that an attempt might be made towards solving, in accordance with his peculiar theory, the problem of the higher

education of women? The use of extensive cabinets and apparatus, with experimental lectures, and of other costly appliances for illustrating instruction, is necessarily cut off with tutorial teaching.

No Female Teachers.—Dr. Clarke's system—if he would only be so good as to devise one with the characteristic features upon which he so strongly insists,—would not only deprive our country of by far the greater portion of its women of culture, education and refinement, who now, as wives and mothers, or as unmarried women, grace private homes where often neither affluence nor scarcely competence resides; it would also, as a necessary sequence, deprive the country of nearly all the instruction which is now given by female teachers in our public and private schools. He would neither permit them to acquire the education requisite to qualify them for their work, nor to use it after they had acquired it. Indeed he insinuates, but does not venture to assert, that the health of female teachers in America is inferior to the average health of other American women

of the same age who have not a liberal education. The importance of this element in the general question will be seen from the single example that there are over two hundred female teachers in the public and private schools of the city of Syracuse alone. In many other cities the number is proportionally larger.

Woman's Work.—Continuing his destructive criticism to other fields than that of "co-education," our author in many places virtually intimates that, in his opinion, an all-wise Creator has unfitted one-half of the human race for continued and regular physical as well as mental exertion, during several of the most important years of their lives. But here, as before, more skillful in tearing down than in building up, he does not so much as hint at a plan by which household work, or work of any kind, can be so organized and arranged, that the vast numbers of young women between fourteen and twenty years of age, whose circumstances do not permit them to attend school of any kind, but who are compelled to work at their own homes, or to go out into the cold world and gain their

livelihood by hard labor, can receive a vacation of one week during each month. Perhaps Dr. C. has a man-cook in his kitchen, or a China-man in his laundry; for a woman at work in those places "might have to stand when she ought to sit: or to walk when she ought to be in bed." Women may refrain from working in factories, stores, and millinery shops, and dress-making establishments. But if they do thus engage themselves to their employers, they must be regular at their work. Mrs. Smith would hardly be contented to be forced to start for Newport or Europe without her new dress or bonnet, simply because an unexpected irregularity had occurred with some of the employees of the dressmaker or the milliner. Neither in Europe, nor even in Nova Scotia, where Dr. Clarke finds such models of physical health among girls and women, do working women refrain from their work one week in each month.

Practical Alternatives.—We live in a real, not in an ideal world. We are forced to take things as they are, not as they might be. If

girls do not receive a liberal education, with what will they occupy their youthful years, and what will be their history in after-life? What reason is there for thinking that the girls and young women who are now attending school, would do better, should they not go to school, than other girls of the same age, and of similar financial condition and social status, who are not at school? If they are poor, would they not be compelled to work for a livelihood at home, or in other people's kitchens, laundries, stores or factories? If their parents are of moderate or extreme wealth, what ground is there for believing that they would be less giddy, fashionable, extravagant, and sickly than other young women of the same social spheres, who are growing up without the stimulus and the conservative influence of education?

II.

WRONG REASONING.

À Priori.—The question is not what ought to occur, but what does occur. It is the task of the physiologist and the physician, as well as of the naturalist, in any branch of his science, to tell what does take place, not what ought to take place. He must not permit a tendency to philosophizing to lead him beyond the rigid limits of exact facts. In tracing the effects of a certain cause, he must not attribute to it the results of other known or unknown causes.

Dr. Clarke finds a function called into action at a certain time, and acting thereafter with a regular periodicity. He argues that, therefore, cessation from mental and physical activity is necessary at these periods, during the four or five years following the first action of this function, or the system will be racked with ill health

in after-life. All his reasoning and illustrations are tinged with this *à priori* expectation of finding this result.

But man is a spiritual, as well as a physical being. Dr. C. has omitted, however, from his *à priori* argumentation all that conservative sanitary influence of education, which *à priori* reasoning would lead us to expect, and which is realized, to a greater or less extent in the experience of every person of liberal education. Of this we speak at length in a future chapter.

Hasty Generalization.—After eliminating this *à priori* expectation from his reasoning, we find Dr. Clarke's conclusions to be based upon extraordinarily hasty generalizations. He would not accept the same proportion of the available evidence that he adduces in support of this theory, as conclusive in determining the influence of tea or coffee upon the public health, in determining the cause of the epizootic, or of diphtheria, or in deciding whether cancer is a systemic or a local disease. He would not approve of the same hasty generalization in deciding the influence of free-trade upon national

wealth, or of capital punishment in repressing crime.

There are probably from one to two millions of American women who have devoted themselves to hard and consecutive study in our schools, while they were between fourteen and twenty years of age. Probably not less than half a million of these women have not only followed the "boys' way" of uninterrupted study, as Dr. C. expresses it, but they have done this in academies, seminaries, high-schools, and colleges, which were attended by boys and young men, being subjected to the same strict regimen as these boys and young men were; many thousands of them are graduates of these high schools, academies, seminaries, colleges, and professional schools. Tens, if not hundreds of thousands, of these women are now wives and mothers; doubtless some thousands are grandmothers; and a few are great-grandmothers. They are confined to no city, or section of the country, and to no class in society. Thousands of them are daughters of poor but high-minded farmers and mechanics, who, feeling in their

own experience the great disadvantage and misfortune of not being educated themselves, have made noble exertions and sacrifices to give their sons and daughters opportunity of securing an education commensurate with the requirements of this age of intelligence; many of these daughters of the poor have been called, through the attractions of their superior moral, esthetic, or intellectual culture, to preside at homes of wealth, refinement, and social distinction, and there they form the brightest ornaments of the highest circles of society; others adorn with equal grace the homes of moderate wealth, which form the strength and nerve of American national life; still others have lovingly and cheerfully accepted homes of humble poverty, and there, from their cultivated minds and hearts, pour forth upon their children the blessings of wisdom and intelligent nurture, more precious than an inheritance of diamonds and palaces on Fifth Avenue or Beacon street; such as find it their portion to live unmarried are more useful, more happy, and more honored by an apprecia-

tive public, if they are compelled to teach for a livelihood till they are even threescore and ten, than are other women, who, without an education, are compelled to labor even in old age at menial service or in factories.

Nor are women who have pursued rigorous and consecutive study in schools, while between fourteen and twenty years of age, confined to America, as Dr. C. suggests. They are found in large numbers in England and Scotland, as well as on the continent of Europe. A more extensive examination of Dr. C's. curious views upon the "European way" of educating girls is given in another chapter.

To measure with any precision the influence which study has had upon the health of American women, is a very complicated and difficult task. It will be necessary to make an accurate comparison of the average health of those women who have been thus educated with that of those who have not been thus educated. The fixing of either average is a difficult, if not an impossible task. The omission of one woman in each township and in each ward in

cities throughout the entire country, which would make about fifty thousand women, would invalidate either estimate. A few so-called crucial cases will not suffice for establishing so great a principle. The history of science, in all its branches, is strewn with the wrecks of striking, and even startling theories, which have been rapidly and ingeniously formed, but which have been soon swept away by the remorseless logic of facts. And unfortunately for Dr. C., even the few crucial cases, which he uses so ingeniously to support his theory, assume quite another aspect when critically examined.

Such, indeed, is the nature of this discussion, so extensive, difficult, and cautious are the observations which must be made, as an indispensable prerequisite for establishing a principle so sweeping and so full of important consequences as that announced by Dr. Clarke, that it must be manifest, even to those who have not made the study of medicine a specialty, that his conclusions are "hasty generalizations," and must be classed as "not proven," because they rest upon a very meagre, partial, and inadequate

examination of the data which necessarily enter into the argument. Indeed, Dr. C. naïvely says (page 144), "*Only a few female graduates of colleges have consulted the writer professionally!*" And on the following page: "*If* physicians who are living in the neighborhood of the present residences of these graduates have been consulted by them in the same proportion." These seem to form the basis of his strong and decided conclusion, as expressed on page 62: "But it is asserted that the number of these graduates who have been permanently disabled by these causes, is so great as to excite the gravest alarm, and to demand the serious attention of the community."

Doctors Disagree.—"Who shall decide when doctors disagree?" There is no uniformity in the testimony of physicians of the highest reputation and with the widest observation, with reference to the practical bearings of Dr. Clarke's statement. Some of the most experienced practitioners declare, with wise caution, that they have formed no decided opinions with reference to the truth of his statements.

Others declare, with rather more positiveness, that their observations lead them to no such conclusions; while still others declare positively that they consider his statements to be erroneous. Upon Dr. C. rests the burden of converting his own profession to his views, before the great public can be called upon to accept them.

Other Witnesses.—There are other observers, whose testimony upon the practical workings of this subject is as valuable and as reliable as that of physicians. First among these may be mentioned those educators who, favored with the habits and qualifications of mind which are requisite for making intelligent and trustworthy observations upon such a subject, have followed with the deepest personal and professional interest the history of the young women who have been educated under their supervision or by their aid, and then have gone forth into the world, and have, as wives and mothers, teachers, artists, or active workers in various other walks of life, been honorable and honored, useful, prominent and influential members of society. Some of these educators have seen the

daughters also of their former pupils graduate under their instruction. These educators ought to be able to verify Dr. C.'s sweeping generalizations and physiological prognostications, if they are founded upon fact. As valuable witnesses may also be mentioned many pastors of churches, who with deep and earnest interest have visited, during their long ministerial labors, the homes of the healthy and the sick in various social and financial conditions. Every pastor of a large church ought to be able to verify Dr. C.'s statements by referring to his record of funerals and to his present sick-list.

Indeed, every intelligent person can collate quite an amount of testimony upon this subject. It is easy to sit down and make a list of one's lady acquaintances of twenty-five years of age and over, and then to ascertain how many of these are graduates of academies or colleges, or have given some years to serious study, either in institutions of an upper grade where co-education is practised, or in schools for young ladies alone, where, as Dr. Clarke expresses it,

the "girls study in the boys' way." It is easy for a lady at least to ascertain with tolerable accuracy whether any of her lady acquaintances who have been thus educated are healthy and robust, have had healthy children, and have nursed them when infants. It is easy then to run over the remainder of the list and see how many of those who have not had a liberal education are healthy and robust, have had healthy children, and have nursed them when infants. According to Dr. C., the balance ought to be greatly in favor of those who have not had a liberal education.

Individual Cases.—Dr. Clarke says on page 62: "It is not asserted that *all* the female graduates of our schools and colleges are pathological specimens [of female and nervous diseases]." How does he excuse a single female graduate, or a single woman who has studied in the "boys' way" while between fourteen and twenty years of age, from not coming up to the mark? According to him, physiology says she ought to. "She has taxed her brain while the reproductive organs were being built up;—the system

never does two things well at the same time ;—the muscles cannot functionate in their best way at the same moment ;—a person cannot meditate a poem and drive a saw simultaneously, without dividing his force ;—the physiological principle of doing one thing at a time if you would do it well, holds as truly of the growth of an organization as it does to the performance of any of its special functions." And again, as Dr. C. says of some of his test cases : " She went to school regularly every week, and every day of the year, just as boys do ;—she had two tasks imposed upon her at once, both of which required, for their perfect accomplishment, a few years' time and a large share of vital force—one the education of the brain, the other the reproductive system ; the school-master superintended the first, and nature the second ;—she performed all her college duties steadily and regularly ; she studied, recited, stood at the blackboard, walked, and went through her gymnastic exercises, from the beginning to the end of the term, just as boys do ;—during the four years of her college life, her parents and the

college faculty required her to get what is popularly called an education ; nature required her, during the same period, to build and put in working order a large and complicated reproductive mechanism : she naturally obeyed the requirements of the faculty, which she could see, rather than the requirements of the mechanism within her, which she could not see ; subjected to the college regimen, she worked four years in getting a liberal education ; her way of work was sustained and continuous, and out of harmony with the rhythmical periodicity of the female organization."

Solomon asks, " Can one go upon hot coals and not be burned ? " Can a man, after being decapitated, coolly walk off with his head under his arms, as if nothing had happened ? The existence of a single example where a woman retains health in after-life, after graduating creditably in a " mixed college," or in a seminary or college where " girls study in the boys' way of uninterrupted study," and especially when this woman, after marriage, has healthy daughters, who also graduate with honor and in

health, is very awkward for Dr. Clarke's argument. But America and Europe furnish each thousands and tens of thousands of cases, where women have followed what our author calls "boys' way of study," and have lived to good old age in robust health, and have blessed the world with families of healthy children.

Clinical Cases.—The Germans have a proverb that "one swallow does not make a summer." One Tweed, one James Fisk, one George Francis Train, and one Victoria Woodhull, do not furnish fair representatives of the American character, although many Europeans, who are given to rapid generalization, insist that they do. We would not take a Japanese or Chinese prince, visiting our shores for the purpose of learning by personal observation the character of our people, to Auburn, Sing Sing, or the Oneida Community, to show him representative examples of the average moral character of the people of the State of New York. Neither the morals nor the health of a people is to be gauged by flagrant cases of crime or disease. The large numbers of women of liberal education

who are living in the enjoyment of excellent health, and who are distributed in variable proportions through different communities, have no occasion to make their health a matter of private conversation, much less of public discussion. They are thus liable to be lost sight of, and to be omitted from an estimate of the average health of a particular class of persons, and especially from an estimate of the force of certain recondite influences in producing, developing, or aggravating a tendency to a certain class of diseases. The clinical cases, which are given at such great length by Dr. Clarke, and which give his work its greatest popular effect, lose nearly all their significance, inasmuch as they are not representative of the class in which they are found.

Side Issues.—Our author does not adhere to his subject. He constantly wanders off into side issues, and skilfully insinuates other causes and influences into his argument, and steals their effects to strengthen it. Thus he says on page 25: "Corsets that embrace the waist with a tighter and steadier grip than any

lover's arm, and skirts that weight the hips with heavier than maternal burdens, have often caused grievous maladies and imposed a needless invalidism." Again: "Let the statement be emphasized and reiterated until it is heeded, that woman's *neglect of her own organization*, though not the sole cause of many of her weaknesses, more than any other single cause adds to their number and intensifies their powers. The saddest part of it all is, that this *neglect of herself in girlhood*, when her organization is ductile and impressible, breeds the germs of diseases, that later in life yield torturing or fatal maladies. The number of these which the writer has seen prompted this essay." Again: "The persistent neglect and ignoring by women, and especially by girls, ignorantly more than wilfully, of that part of their organization which they hold in trust for the future of the race."

In these and similar passages, does the author refer to *all* the neglect by woman of her own organization, or even to all this neglect during girlhood; or does he refer only to that portion of the neglect (admitting his ground in

this regard to be well taken) which legitimately refers to the subject of his work, that is, to the injury which he declares to come from *not refraining from study for one week in each month while the young woman is between fourteen and twenty years of age?* On page 31, he says: "Before describing the special forms of ill health that exist among our American women, and that are *often* (!) caused and fostered by our methods of education *and social customs.*" On page 48: "Sometimes these causes, which pervade, *more or less* (!) the methods of instruction in our public and private schools, *which our social customs ignore, and to which operatives of all kinds pay little heed....*" On page 54: "It is obvious that, to secure the best kind of growth during this period, and the best development at the end of it, the waste of tissue produced by study, *work and fashion*, must not be so great that repair will only equal it." Irrelevant matter of various kinds is introduced also into the accounts of the clinical cases.

Contradictions.—After what our author has said about corsets and skirts often causing

grievous maladies and imposing needless invalidism upon women, and of the harmful methods in working in factories and stores, a person who has not read the work under review will be surprised to see that, on page 23, the author makes the extraordinary assertion that "those grievous maladies which torture a woman's existence . . . are *indirectly* (!) affected by food, clothing, and exercise." Having at this particular time an eye to presenting his argument in the most forcible manner, he adds that "they are directly and largely affected by the causes that will be presently pointed out, and which arise from a neglect of woman's organization." (Here again he should confine himself to the special subject pertaining to his argument.) But, as Dr. C. says himself, in other parts of his work than those quoted above, and as all who have given even a superficial study to the subject of hygiene well know, *food*, *clothing*, and *exercise* are among the most potent and ever-present influences in causing nervous disorders and other diseases with which both sexes are afflicted.

Unaccounted For.—After touching upon some of the evil consequences of injurious food, clothing, and exercise, Dr. C. makes the remarkable statement that, "after making the amplest allowance for these causes of weakness, there remains a large margin of disease unaccounted for!" By what mysterious scales does he weigh with such accuracy just the amount of evil influence which a certain quantity or combination of injudicious, ill-timed, deficient, or excessive food, clothing, and exercise, will exert upon the future health of a new-born infant, whose original stock of vitality is, of necessity, an unknown quantity? Nobody, of course, claims that food, clothing, and exercise are the only elements which affect the health of women, or men either; but still, so intricate, so complicated, and so variable in quantity, intensity, and force, are the influences which enter into the equation which expresses the exact hygienic status of a particular person at a particular time, that it is impossible to weigh or measure the exact quantity of the effects of either of these influences, or of all of them combined;

none of that precision, nor anything approximating to it, is possible which is necessary in order to justify the statement that, "after making the amplest allowance for them, there remains a large margin unaccounted for." It is by such random statements as these that Dr. C. bewilders the argument, and skilfully prepares the way for introducing his peculiar theory.

Wrong Comparisons.—Our author states on pages 35 and 36: "In childhood boys and girls are very nearly alike. As maturity approaches, the sexes diverge. This divergence is limited, however, in its sweep and duration. The difference exists for a definite purpose and goes only to a definite extent. The curves of separation swell out as childhood recedes, and, as old age draws on, approach, till they unite in an ellipse again. In old age, the second childhood, the difference of sex becomes of as little note as it was during the first. . . Not as man or as woman, but as a sexless being, does advanced age enter and pass the portals of what is called death."

Every parent knows that in a family of chil-

dren the peculiar spiritual characteristics of the two sexes are manifest with the earliest dawning of the infant mind. These characteristic differences increase with the advancing development of both the bodies and the spirits of boys and girls during their infancy, their childhood and their youth; but the relative differences between the sexes are as manifest at the age of two, four, six, eight, ten, or twelve, as they are at fifteen, twenty, twenty-five, or thirty. Our author continues: "During the first of these critical periods (the passing into puberty), when the divergence of the sexes *becomes obvious* to the most careless observer . . . (!)" It must, indeed, be a careless observer who could not tell a boy from a girl till they are fifteen years of age! Most persons, in passing along a street, can tell a boy from a girl when they are but twelve, ten, eight, six, or even four years of age. If, while travelling in the cars, we hear behind us the voice of a child three years old, crying "Mamma, I want a drink," our ears tell us instantly whether it is a boy or a girl that is speaking. This difference between the sexes, which has

continued from birth, through childhood, youth, and middle age, is not diminished at forty-five, fifty, sixty, seventy, or eighty. Humboldt at ninety, and Titian at ninety-nine, were as distinctively men and not women, as Queen Elizabeth and Catherine de Medicis, at seventy, were women and not men. Whoever is blessed with aged grandparents, who at threescore and ten, or perchance at fourscore, still linger, with tottering step and feeble hands upon the shores of time, recognizes the sacred difference between grandfather and grandmother, as distinctly as that between father and mother, between sister and brother, or between son and daughter. Husband and wife, parent and child, brother and sister, lovingly trust that this difference is not confined to this world. No, it is not as a horrible, "sexless being that advanced age enters and passes the portals of what is called death!" Dr. C. insinuates his curious view of the divergence and convergence of the sexes, under the figure of an ellipse, to give additional force to his views about the education of girls.

Occasion for Cause.—The withdrawal of the

German troops from Paris, in 1870, furnished the occasion, but was not the cause of the fearful outbreak of Communism which devastated the streets of that beautiful city with fire and deluged them with the blood of its best citizens. The declaration of war between France and Germany was the occasion, but not the cause, of an outbreak of international antipathy which had been angrily slumbering since the days of Napoleon, and, indeed, of Louis the Fourteenth. In material and physical, as well as in spiritual things, it is necessary to discriminate between the occasion and the cause of particular symptoms or phenomena. Thus, when the physical constitution has been enfeebled by disease or exhaustion, whether inherited or not, any special tax upon the vital powers often becomes the occasion, without being the cause, of violent acute disease, or of painful and protracted ill health. We find in another chapter some of the many influences that have conspired to induce the comparative poor health of American women. When young women, with enfeebled vital powers, though charming vivacity

of spirit and manner, expose themselves to anything that taxes their endurance, whether it be to continued study in the schools, to the giddy dissipation of fashionable life, or to the cares, anxieties and perplexities of married life and maternity, no wonder that their beauty vanishes like mist before the morning sun, their systems yield in sudden collapse, and they die prematurely or become the victims of ill health for all the remainder of their lives.

These strains upon the physical system may indeed be regarded in the light of tests or gauges of its latent force and strength. The high thermometer does not cause, but it indicates the degree of heat on an afternoon in August.

III.

"CHIEFLY PHYSIOLOGICAL."

Wrong Premises.—In the chapter entitled "Chiefly Physiological," Dr. C. endeavors to establish the physiological premises for the *à priori* element, which enters so largely into his argumentation. But, in his treatment of the peculiar structure, and the development of the essential physiological characteristics of the female frame, the mode of expression, at least, of his views, is not untinged with lack of scientific precision. At times, this incorrectness is so marked as to vitiate a large portion, if not the essential portion of the conclusions which he deduces from wrongly-expressed premises. At other times, he takes positions which are greatly at variance with the latest well-established physiological principles.

Formation of Organs.—Our author says on page 37: "'The ovaries, which constitute,'

says Dr. Dalton, 'the essential parts of this apparatus, and certain accessory organs, are now rapidly developed.' Previously they were inactive. During infancy and childhood all of them existed, but they were incapable of function. At this period they take on a process of rapid growth and development. *Coincident with the process* (*?*), indicating it, and essential to it, are the periodical phenomena which characterize woman's physique till she attains the third division of her tripartite life. The growth of this peculiar development, of which humanity has so large an interest, occurs during the few years of a girl's educational life." On page 59: "Girls, between fourteen and eighteen, must have sleep, not only for growth and repair, like boys, but for the additional task of *constructing*, or, more properly speaking, of *developing and perfecting then*, a reproductive system,—the engine within an engine." On page 75: "A gifted and healthy girl, obliged to get her education and earn her bread at the same time, labored upon two tasks zealously, perhaps overmuch, and did this at the epoch

when the female organization is busy with the development of its reproductive apparatus." On page 94 : " Schools and colleges, as we have seen, require girls to work their brains with full force and sustained power, at the time when their organization requires a portion of their force for the performance of a periodical function, and a portion of their powers for the *building up* of a peculiar, complicated, and important mechanism, the engine within an engine." We have quoted Dr. Clarke thus extensively, to avoid a charge of misrepresentation upon an important question in physiology.

The organs of reproduction are completely " built up," " developed," " grown," " perfected," with the very first action of the catamenial function, which is nature's way of saying that the system is ready for performing the office of maternity. That a hardening and strengthening of the muscles of all the parts of the body, with boys and girls alike, takes place between the ages of fourteen and twenty, is well known. But there is no more difference between the structure of the reproductive organs at four-

teen, when the girl arrives at puberty, and at twenty-one, when the young woman perhaps gets married, than there is between the structure of the muscles of the arm, the lungs, or the heart at those same times. The ovaries and other organs of the reproductive apparatus are not built up or developed during the four or five years succeeding the commencement of action of the catamenial function, but during the few months, or at most a year or so preceding that event. Our author would seem to allude to this physiological fact in the first quotation, where he says, "At this period." But he uses the word "period" in various senses in the several preceding pages. This interpretation is also inconsistent with what follows, when he says: "Coincident with this process [of rapid growth and development of the reproductive apparatus] indicating it, and essential to it, are the periodical phenomena which characterize woman's physique, till she gains the third division of her tripartite life." It is singular that our author does not locate at this time,—the few months or the year preceding puberty,—

all that restriction of study which he deems necessary in order that "the system may not be required to do two things at the same time." It might have taken a good deal from the force of his argument, but it would not have been in violence to physiological fact. It is difficult to locate this time with any certainty, as it varies greatly with different persons, sometimes, though rarely, occurring before the legal age of puberty,—which is at twelve years of age, often occurring as late as eighteen, and, in rare cases, being delayed as late as till twenty or twenty-two. The difficulty is increased by the well-known fact, which is rather awkward for Dr. Clarke's argument, that, where there is robust health, the event comes almost entirely unannounced, and that, as long as the health remains unimpaired, the function is painless and undisturbed in its action.

Ovulation and Menstruation.—Our author says, on page 41: "Nature has reserved the catamenial week for the process of ovulation, and for the development and perfectation of the reproductive system;" and, on page 47: "It

[the catamenial function] is necessary to ovulation." The general reader will be apt to look to Webster's Dictionary for an explanation of the term ovulation, and will there see it defined as "the *formation* of the ova or eggs in the ovary, and the *discharge* of the same." Dunglison's Medical Dictionary gives exactly the same definition. In Webster it is added that, "In the human female, the discharge of the ova is *attended* by the phenomena of menstruation." The general reader will thus be greatly misled by Dr. Clarke.

The ovaries, the organs in which the ova are formed, are two ovoid bodies, about an inch by an inch and a half in diameter, lying adjacent to the uterus, and connected with it by the Fallopian tubes; they are composed of a close, spongy substance (called stroma), in which lie a number of small vesicles (called ovisacs, or Graafian follicles), which are filled with a clear liquid; these vesicles contain the ova (or ovules), which on ripening detach themselves and are carried into the cavity of the uterus. The ovaries and ova exist in a rudimentary state in the

new-born female child. *They acquire a rapid and full development in a few months, or perhaps in a year*, usually when the girl is fourteen or fifteen years of age. When the development of the ovaries has been thus completed, one ovum is ripened and is discharged through the Fallopian tube into the uterus. This is followed by another and another, at intervals of four weeks. The ovaries are the essential part, and ovulation is the essential function of the organs of reproduction in woman, the uterus serving as a lodging place for the growth of the coming infant till it is sufficiently developed to sustain an independent life.

As is rightly stated by Webster, "Ovulation *is attended*, in the human female, by the process of menstruation." This process consists in the exudation of ordinary venous blood through the mucous lining of the uterus. It is preceded by a congestion of the lining of the uterus and the adjacent parts, which congestion, with women of not perfect health, may be attended by some disturbance of the system, such as headache or nervous irritability; this disturbance of

the system is usually entirely relieved by the catamenial flow commencing. With persons of ordinary health menstruation continues from three to five days. During its process the ovum, which has been a long time in forming, is discharged from the ovary. Exceptional cases are cited by the authors on medicine, where ovulation and pregnancy have occurred without any menstruation at all.

From all this we see that it is not proper to state that "menstruation is necessary to ovulation," for, as Dr. Dalton says, "menstruation is in fact only the external sign and accompaniment of a more important process (the discharge of the ovum)." Nor is it proper to say that "Nature has reserved the catamenial week for the process of ovulation," for the ovum is in a state of formation for a long time anterior to menstruation; it is "ripened," as some authors express it, or perfected before menstruation, and it is discharged from the ovary at some time during menstruation.

This rather lengthy analysis is rendered necessary from the fact that the inexact language

and the incorrect physiological statements of Dr. Clarke will greatly mislead the general reader. The erroneous impression thus produced will greatly favor his argument.

That any young women should grow up in ignorance of their organization and of its judicious preservation from disease, and especially that they should be ashamed of it, as our author says, is a sad comment upon the training and instruction which they have received at home from their mothers, but it is no fault of the school, to which they are sent for general education, or the shop, or the factory to which they must go to gain their daily bread. Indeed it is a strange view of God's beneficent moral government, that would permit any person to be ashamed of any part or any function of their physical or spiritual organization. When God had finished the work of creation, he declared it all very good.

Elimination.—Our author says, on pages 46 and 47 : " Like the water flowing through the canal of Venice, that carries health and wealth to every house, and filth and disease from every

doorway, the blood, flowing through the canals of the organization, carries nutriment to all the tissues, and refuse from them. Its current sweeps nourishment in, and waste out. The former it yields to the body for assimilation ; the latter it deposits with the organs of elimination [depuration ?] for rejection. . . . The principal [sole ?] *organs* of elimination common to both sexes are the bowels, kidneys, lungs, and skin . . . To woman is entrusted the exclusive management of another *process* (!) of elimination, viz., the catamenial function. This, using the blood for its *channel* of operation, performs, like the blood, double duty. It is necessary to ovulation, and to the integrity of every part of the reproductive apparatus ; it also serves as a means of elimination to the blood itself." On page 64 : "The reproductive apparatus of woman uses the blood as one of its *agents* of elimination."

These passages are marked by a singularly inexact, or indeed inaccurate use of scientific language. Not all the organs of elimination serve the purpose of excretive depuration of the

blood, in which sense alone Dr. C. uses the term in the above quotations. All the glands are organs of elimination: some minister to the digestive operation, as the gastric follicles, the salivary glands, and the pancreas; others, as the lachrymal and mammary glands, serve various purposes. It has never been shown that menstruation is a process of depuration of the blood. There is every reason for not considering it to be so. Menstruation, as is stated above, is the merely exudation of ordinary venous blood through the mucous surface of the uterus, and of some of the adjacent organs. This blood is then to be removed, like any other foreign matter, from this "house within a house;" but with reference to the blood of the entire system, menstruation is not a "process of [depurative] elimination." If the action of the skin, the lungs, the bowels, or the kidneys, is arrested for any length of time, disease ensues, and death finally takes place; but before the age of puberty, during pregnancy, and during the third period of woman's tripartite life, menstruation does not take place, and still a

normal state of health continues,—which could not be the case, if menstruation is a process of eliminating waste and refuse matter from the blood.

This method of discussing this point may suffice for the general reader. It is singular that a prominent physician, who comes forward to teach the public his new theories upon the physiological bearings of education, should not be aware that the views he holds upon the point now under discussion are antiquated, and are completely overthrown by modern investigations. (The professional reader who has any doubts upon this subject may consult Krieger upon Menstruation, Berlin, 1869; and the microscopical researches of Kundrat and Engelmann, in Stricker's Jahrbücher, 1873). Our author gives, by implication, to even his antiquated views on this point, an importance and a bearing upon the general subject which is not logical and legitimate, even though his views were in accordance with the latest results of physiological investigation. At no time have the views he expresses been considered by med-

ical authorities as being more than a hypothesis or a theory. Now they are proven untrue.

Diversion of Nervous Power.—In speaking of one of his clinical cases, Dr. Clarke says: "Naturally there was not nervous power enough developed in the uterine and associated ganglia to restrain the laboring orifices of the circulation, to close the gates. . . ." All medical authorities give the *congestion* of the pelvic organs as the chief source of excessive menstruation. This may be attended by general nervous prostration, or by loss of muscular tonicity. That menorrhagia should be caused by the diversion of nervous power to the brain is merely an assumption by Dr. Clarke. The principle has no place in medical science. It is singular that Dr. C. should have presented such a physiological discovery to a popular audience, instead of first discussing it in the columns of a medical journal. Was he tempted to give rather rashly, for an additional support to his argument, a hasty theory for a well-established physiological principle?

Precautions.—With women who are in robust health, the catamenial function comes into its first action, and afterwards remains in its regular periodic action, without disturbance to the system, and generally without being announced by any very marked premonitory symptoms. But few precautions are necessary in order to keep the function in regular and normal action. But, though these precautions are few and simple, they are of great importance, since a continued and persistent neglect of them is liable to be followed by serious, if not disastrous consequences; every mother should teach these precautions to her daughters before they are fifteen years of age.

And here let it be stated, once for all, that the responsibility of the parents cannot be shifted upon the teacher with reference to the management of the purse, the manners, the morals, or the health of the son or daughter; especially is this the case with reference to our colleges and professional schools. The parents have no right to deliver a rough, untamed, wilful, and vain girl, however beautiful and talented, over

to a seminary or college, and expect that, after four or five years, the school will return them their daughter, a chaste, gentle, healthy, cultivated young lady, fitted to grace, as wife and mother, any home in the land. As well might a farmer take to the grist-mill a bag of withered wheat, mixed with cockle and other seeds, and expect the miller to make from it a bag of superfine flour. It is a shame for mothers (which, in the olden sense of the term, some maintain are now obsolete in America) not to teach their daughters the nature of their organization, and the precautions which are necessary, in order to keep it in healthy action. We give below the few and simple rules which it is especially important to observe during the catamenial week: they are, indeed, but selections from the general laws of hygiene, which are taught in every academy, high school, and college. Those mothers who are prevented by ignorance, or by false, prudish modesty, from communicating such rules to their daughters, might form themselves into a hygienic tract society, and issue these rules as "Health Tract

Number One," to be distributed gratuitously to their daughters.

In the first place, it is necessary to take great care to *avoid taking cold* during the catamenial period, and for a few days previous to it; nothing is more sure to arrest or disturb the flow of the menses than a sudden chilling of the general surface of the body, especially while in perspiration either from violent exercise, from sitting in over-heated rooms, or from other causes. By this it is not meant that exposure to the weather, even though it be cold and stormy, is necessarily injurious; on the contrary, it is far better that the healthy woman should at this, as at other times, take judicious out-door exercise, whatever be the condition of the weather; but it is highly important to guard, by sufficient clothing of the right kind, judiciously distributed over the body, against taking cold during such exposure.

It is also necessary to refrain from bathing during this period.

It is necessary to refrain at this time from prolonged violent exercise of the body; and it

is highly important to keep the bowels and kidneys in normal action; neglect of this last is a fruitful source of female diseases.

But the influence of the spirit upon the body is not to be neglected in this relation. Many a dyspeptic owes half his troubles to that mysterious power of the spirit over the physical frame, whereby moodily brooding over a supposed ill, induces the evil itself. It cannot be too strongly urged that the young woman should avoid watching with ignorant and distressing anxiety the symptoms of the first approach and the subsequent recurrence of menstruation. This anxious watching of symptoms may either induce a morbid condition, or may greatly aggravate an existing tendency to such a condition.

Under this head may be mentioned the evil consequences that may follow violent excitement, or agitation of the mind, especially of the moral feelings. A violent fit of anger, great depression of spirits, continued anxiety or fear, sudden alarm, excessive joy or hilarity, may check or arrest the menses as effectually as the

catching of a violent cold. Excessive and prolonged taxation of the mental powers, especially if attended by anxiety and agitation of mind, may also prove injurious. This does not refer to ordinary, judicious study, such as is necessary for the average student to pursue successfully the curriculum of the best seminaries, colleges, and professional schools, as we explain more at length in a future chapter. If the student is driven by an impetuous, uncurbed ambition, and a foolish desire to outrank others of better mental powers or of better preliminary preparation, the result will doubtless be a derangement of this and many other, if not of all other functions of the physical system.

It will be noticed that all the above rules are merely a selection of such of the well-known hygienic laws as have a special importance in the relation of which we are treating. The only variation is that with reference to bathing. In proportion as the general health is reduced is it necessary to give a more extended application to the above rules. Where local disease exists, the patient should consult a phy-

sician, just as for inflammation of the lungs, or for any disease of any other organ. If prudish modesty on the part of the daughter, copied from the prudish modesty of the mother, prevents this, the evil results that may follow neglecting what may be an unpleasant necessity, are not chargeable to "methods of education in our schools as they are now organized."

And here we may add, in passing, that if there were an accomplished and experienced lady-physician within the reach of every young woman, whether at school or not, probably ten times the number would secure special medical aid as now do; for it does take some courage, not to use a stronger term, for a girl or a young woman to lay her troubles before a physician of the other sex.

Development of Chest.—Every lady-physician, and every woman who has served in the ladies' department of Turkish and Russian bathing establishments in our large cities, and in water-cures and other sanitariums, knows how unequal is the muscular development of Ameri-

can women. The portion of the body below the waist is generally full and strong, while the waist is slender and tapering, the muscles of the chest are weak and soft, and the arms are thin and bony. Indeed, a plump and full arm or chest is a great rarity among especially the wealthier classes of American women. The breasts sympathize in this general lack of muscular development in the upper portion of the body. They are, indeed, frequently found poorly developed, even when the chest is full and strong; but full breasts, with a poorly developed chest, are very rarely found.

Lack of Exercise.—The majority of American women lead a mode of life which gives much less action to the upper than to the lower limbs. Both the employments and the amusements of women, especially of the wealthier classes, and of the large number of women of moderate, or even meagre means, whose chief aim in life appears to be to imitate the luxurious habits of the wealthier classes, bring the lower limbs often into vigorous and long-continued activity, but generally give little or no exercise

to the arms. The giddy dance, often extended through the entire night, the promenade up and down the fashionable thoroughfare, the morning shopping, the walk to school, to church, or for making calls, the ramble in the fields in summer, and skating in winter—all give exercise to the lower, but little or none to the upper limbs. It is unfashionable to swing the arms, while walking, even when the style of making the dress permits it; the hands must be folded, or be held motionless in a muff. At home, the young lady of the present day shuns health-giving housework as she would the small-pox. To be caught sweeping and dusting the sitting-room, washing dishes after breakfast, or setting the table for dinner, at the wash-tub on Monday morning, at the ironing-table on Tuesday, or making bread on Wednesday, would be a mortal sin in the eyes of her young gentleman or young lady acquaintances in what is curiously called the "good" society of our day. But "good" society has no condemnation for the young lady who goes every night to the theatre, the opera, or the social party, gaudily

arrayed from a large wardrobe of costly silk dresses, which her father cannot afford to pay for, and which are all made by the fashionable dressmaker,—for the young lady of the period must not sew, any more than she must scrub. The little exercise to the arms and the chest that comes from the use of the needle, must be confined to embroidering a pair of slippers or the cover of a sofa-pillow.

Dress.—Woman's dress greatly circumscribes the movements of the chest and arms. The single feature of the seam over the shoulder, where the sleeve of the dress unites with the waist, has done more to check the development of the chest and breast than all the studying that women have ever done. Fickle fashion has happily changed this lately, and now the seam has risen to its proper place in woman's dress, where it has always been in man's dress. Now a woman can lift her arm to a level with her shoulder without having to run to her work-basket to repair damages. Let her make the most of this freedom, for doubtless the tyrant fashion will in a few years at longest,

again drop the shoulder-seam down some inches and again restrict the motion of the arms.

Padding.—The feature in the dress of the young woman, often of the girl who is just entering her teens, which has the strongest influence in repressing the development of the breasts is the result of those arts which are employed by the dressmaker (among Dr. Clarke's lady-acquaintances it would seem to be by the "milliner") to give even prematurely the appearance of having a full bust to "young ladies" ("girls" are extinct animals in America). This padding, through heat and pressure upon the glands of the breasts, arrests their development; it also causes their diminution by absorption if it is commenced after the glands have been fully developed.

To this must be added the constraint to the muscles of the chest that comes from compressing the waist, and also the arrangement of the dress, whereby the weight of the skirt is made to bear upon the waist and the hips, instead of upon the shoulders.

Aversion.—The effect of the diminished size of the mammary glands is naturally and necessarily to diminish the supply of milk while nursing the child. A low state of nutrition, induced by the various causes which are undermining the health of American women, will also conspire greatly to diminish, and in many cases to cut off entirely the supply of milk.

But not unfrequently, alas! the mother has a strong aversion to nursing her child. This aversion has its source almost entirely in spiritual, not, as Dr. Clarke insinuates, in physical causes. Indeed, nothing taxes and tests more severely the strength, the endurance, the patience, and even the love of the mother, than to nurse her babe. During several months she must not be away from her babe for more than three hours at a time. She must, therefore, give up, for a year or so, all attendance upon parties, operas, theatres, often indeed upon lectures, concerts, and church service; indeed she must be cut off from nearly all kinds of amusement and entertainment outside of her own home. Even in her own home, the selfish and pleasure-

seeking mother must be very restricted in her amusements. She must retrench greatly the wearing of dresses of costly fabric, with their rich trimmings; she must often leave visitors, the social game, or the dinner-table, to attend to the wants of her dependent offspring. At night she must often be awakened from "nature's sweet restorer, balmy sleep;" nor dare she prolong too late the refreshing morning nap, after a night of imperfect rest. To this must be added the breaking of rest, the care, the anxiety, the distress of mind which may attend the prolonged sickness of the helpless child. It is in all this that we find the true explanation of the aversion which some, perhaps many mothers feel to nursing their children: the aversion does not come from some curious, indescribable condition of the physical system, as our author suggests. It may be added that the aversion of the mother to taking upon herself the burdensome task of nursing her babe is not diminished by the fact that she can escape the unpleasant duty by paying a few dollars a week to a healthy Irish or German woman for

taking the entire charge of the child both day and night.

This refusal, or, indeed, where it may exist, this inability on the part of the mother to nurse the child, is a fruitful cause of those maladies with which Americans are so grievously afflicted; for after the birth of the child the flow of blood to supply the mammary glands with milk is a natural and most important counter-current for drawing off the blood which has been flowing so strongly to the uterus to support the growth of the child, and for thus permitting the uterus to contract again to its normal size. To stop this counter-current is to induce inflammation of the uterus and various other forms of permanent weakness or disease.

A lack of development, or a failure to make a natural and normal use of the mammary glands is thus frequently the *cause*, while it is comparatively rarely the result, of disease of the reproductive organs.

IV.

CONSERVATIVE SANITARY INFLUENCE OF EDUCATION.

General Principles.—It seems absurd to speak at length upon this topic, and still it is necessary to do so, since this is a very important element in the discussion of the general question of the relation of health to education. Our author never alludes to it, however, even in the most indirect manner. Indeed he seems to overlook the fact that man is a spiritual, as well as a physical being; and that both the direct and the indirect influences of the body upon the spirit, in inducing a healthy, cheerful, hopeful state of the feelings, or in clouding the mind with a morbid depression, which often leads to gloom or despair, are not more potent than the direct and indirect influences of the spirit in inducing and aggravating, or in overcoming and preventing diseases and disturbances of the

physical frame. Could we trace the intricate and complicated maze of influences which have caused the present existing summation of national health, all the conservative sanitary influence which may be justly attributed to the higher education of women in America, it would doubtless be found to far exceed all the effects that can be justly charged to existing methods of study in our schools. It may, indeed, doubtless be asserted that, where one woman has been injured by study, twenty have been saved by it from avoidable sickness and disease; and that when one child has been made sickly from the effects of early study by the mother, twenty children have been saved, through the superior health, strength and intelligence of the mother, from a premature death or from a prolonged sickly existence. In all countries the ignorant, whether nursed in the lap of luxury or exposed to the privations of extreme poverty, are, as a rule, less healthy and long-lived than the educated. How rare is an octogenarian among the Irish working people, who throng our marts of labor! The dying out

of wealthy families is proverbial in both Europe and America. What portion of those who go to Saratoga each summer to recuperate their health from the dissipation of the preceding winter, have been blessed with a liberal education?

Intellectual. — A girl, who leaves school when thirteen or fourteen years of age, cannot from the nature of the case have in after life that clearness, precision, and broad sweep of intellectual activity, which she would secure to herself by remaining under systematic instruction till she is twenty. The power of reasoning from cause to effect, and of tracing causes from the effects which they produce, must of necessity be increased by long-continued, judicious study under wise instruction. A person whose intellect is well furnished with useful knowledge, and carefully trained to exact modes of thought, must be better prepared to meet the duties of life, to detect the consequences of certain lines of action, to know how and why some things are harmful, while others are beneficial, and through all this to avoid errors and evils of every kind, than a per-

son can be, whose mind is not trained to accurate thought, and whose stock of knowledge consists at best of a limited store of disjointed facts. Every physician knows how difficult it is to get ignorant patients to understand and to follow out even very simple directions about taking medicine, and observing a certain regimen.

Esthetic.—The feminine mind inclines naturally to the pursuit of esthetic studies. A refined and cultivated taste is one of the most potent elements in inducing a healthy tone of body and mind. Artists are proverbially long-lived. The study and contemplation of the beautiful in nature and art call a person away from grovelling and debasing pursuits and pleasures. Music is often efficacious in breaking the power of an evil spell that has crept over a person whose nerves are overtaxed, and who is suffering from the labors, the cares, and the anxieties of life. Those who have studied drawing and painting, though but a little, soon learn to love the beauties of nature, and to prefer to spend an afternoon in a ramble or a ride amid picturesque scenery, in the park or in the

open country, rather than in strolling listlessly along the fashionable avenue, or in riding amid the display of toilets and carriages up and down the thronged street; at evening they choose to hie away to some choice spot from which they may enjoy the delicious sunset, rather than to deck themselves for the giddy dance. Poetry and literature offer to those, with whom these are favorite arts, pleasures pure and wholesome, which far outweigh the transitory and empty delights of display of dress and jewelry in the fashionable party.

Moral.—In all academies and colleges attention is paid to the education of the moral faculties, both by direct and critical instruction, and by illustrations drawn from daily life and from historic characters. The student is taught to discriminate between right and wrong, in their nature and their consequences. What can be a stronger safeguard, to keep a person from such courses of life as lead to disease and death, than an enlightened and sensitive conscience. Even those girls who are placed in fashionable boarding-schools,

that they may acquire a thin film of education and culture, overlaid with a vast amount of simpering manners, and artificial etiquette, are generally under less destructive moral influences than are their sisters and cousins at home, who, while even yet in their teens, are driving along impetuously in the giddy whirl of fashionable dissipation. But happily these "fashionable" seminaries and colleges form but a small fraction of the institutions of learning for young women, and they ought not to enter into the account, when the propriety of "co-education" is being discussed.

The number of cases where bad and vicious habits contaminate large numbers of students in boarding-schools, would not be diminished by having the times of study and recitation of each student modified, on the plan which Dr. C. suggests. Indeed many persons who are inclined to vicious habits would doubtless acquire them if they should not go to school, just as thousands of young persons do, who do not attend school.

Physical.—Anatomy, physiology, and hygiene are taught in all academies, seminaries, high-schools and colleges. These branches are

usually extensively illustrated by charts, diagrams, manikins, and skeletons. In many of these institutions special instruction is given to young ladies, either in a body together, in classes or by individual conversation; the preceptress or other teacher thus performing the work which belongs to the mother, but which she, through ignorance or prudishness, has left undone. Armed with this knowledge of the structure of the human frame, the laws of its action, and the means of averting and remedying abnormal action, a person is far better inclined, and is much more apt to lead a life in conformity with the laws of health, than if without this knowledge. Doubtless it would be a great improvement in the courses of instruction in all schools of higher grade, if still more attention were given to the study of hygiene and disease; but this is a question of method, and does not affect the difficulty which Dr. Clark finds with our present system of education.

Physical Exercise.—The superintendents and instructors in these upper schools are not so utterly regardless of the health of their pupils,

as Dr. Clark would lead such of his readers as are not intimately acquainted with the practical workings of these schools, to suppose. They are not utterly devoid of good sense, nor of selfishness. Both of these qualities would lead them to desire and to seek, as they generally do, to secure and preserve the health of their students by judicious physical exercise. Often costly apparatus and buildings, with skilful teachers and attendants, are provided for this purpose. Very frequently the graduating young lady is the superior in physical strength and agility to her sister, cousin, or acquaintance, who has remained at home.

Regular Habits.—The very existence of schools of all grades depends upon that very regularity and system which our author so much deplores. Where students board in the same school-buildings, they are necessarily required to retire at early hours, to take their meals at regular times, and generally to take exercise at regular intervals. Probably not an equal number of young women residing at their homes can be found in any of even our larger

cities, who keep as regular habits as the few hundred women in Vassar College, Mount Holyoke Seminary, or in either of the larger institutions where co-education is practised—as Oberlin College, Wilbraham Academy, the Hudson River Institute, Cazenovia Seminary, Genesee Seminary, or Wyoming Seminary. The beneficial effect of avoiding late hours, late suppers, and exposure to the out-door night air, after spending a long evening in heated parlors, must be very marked upon the future health of the young women who attend our higher institutions of learning. Upon the girl residing at her home and attending the academy or college, the effect of the morning walk to school, while her sister or cousin is yet yawning in bed, must be most salutary.

Vacations.—School life is not, to either boys or girls, that unbroken, uninterrupted round of mental strain, which Dr. C. would lead those of his readers to suppose who are not acquainted with the organization and the methods of higher schools of learning. No seminaries, academies, high-schools, colleges, or professional

schools have less than from ten to thirteen weeks of vacation during the year. The terms thus do not include much more than three quarters of the entire year. The student also has Saturday free from school work, in addition to the Sabbath, on which day of rest it is difficult for the housewife or the industrious daughters at home to get full relief from the continual round of household duties. During the five days of school work, even nine hours a day devoted to study would leave fifteen hours a day for sleep and recreation; the student at the boarding-school or college has few social obligations and entanglements, or other occupation to make inroads upon the time not devoted to study. These fifteen hours can easily be so arranged as to give abundant opportunity for sleep, exercise, and recreation to the girl in ordinary health. But neither young women nor young men usually devote more than seven or eight hours a day to severe taxation of the mind in study and recitation. As far as this bears upon the question of co-education, it is well known to all who have had experience in

schools where both sexes are educated together, that girls are quicker of apprehension and learn more rapidly than boys.

In boarding-seminaries, colleges, and in professional schools, students are required to be present at recitations and lectures, not more than three hours a day, and during not more than five days a week. The hours of recitation and lecture are usually not consecutive, but are distributed through the forenoon and the afternoon. There is always an intermission of five minutes between recitations, during which the students pass in and out of the recitation room. The preparation for recitation is made in general study-rooms, at their own private rooms, or at their homes. In the class-room, students are seated; no student is called upon to stand in recitation for more than five or ten minutes at a time. Few ladies stand a shorter time than this each day before a mirror to make their toilet.

We thus see that the "boys' way" is not at all one of "uninterrupted study," as Dr. Clarke asserts; but that it is one of study, interrupted by frequent and liberal intermissions and vacations;

and that all his fancied dreadful taxation of the physical system from standing in the recitation, vanish in thin air.

A priori.—When we thus consider the total summation of the conservative sanitary influences of a liberal education, we may safely assert that there is every *à priori* probability that those young women who are pursuing advanced studies in our seminaries and colleges, taken as a body, will be more healthy in after life than the general average of other young women of the same social circles, who are not pursuing a liberal education. Indeed the probability is, rather, that every case where one woman suffers from disease that may be justly attributed to study in high-schools, seminaries, or colleges, while she was between fourteen and twenty years of age, can be offset by large numbers of cases where other women have been saved from sickness and disease through influences that may be traced legitimately and directly to their school life.

Not a Hospital.—While seminaries and colleges are not reform schools for the wayward,

neither are they hospitals for the sickly. They cannot be organized with reference to the wants of those youth of either sex, who are suffering from ill health of any kind. Nor is it fair to condemn a system of education because it is too severe for those young persons of either sex who are suffering from an inherited tendency to disease or whose constitutions have, already in their youth, been undermined by excessive drains upon the vital forces during early childhood. Special schools, with sanitary appliances for counteracting special tendency to disease or for reinvigorating the depleted vital forces, and with the system of instruction so arranged that these semi-invalid students can pursue as few studies as their limited strength may make it necessary, might accomplish much good in their way; but neither these sanitary schools for the sickly, nor reform schools for the wayward, can be models for the institutions of learning that are to be attended by the youth of both sexes who are in the ordinary and normally healthy condition of body and mind.

Room for Improvement.—There are doubtless some features of many of our schools, both public and private, which might be changed with advantage to the health of the pupils. Some radical improvements in methods of instruction could also be introduced which would place our schools more nearly upon a level with the best institutions of a similar grade in Germany. It would doubtless be well to limit to four hours a day the school hours in all academies, high-schools, and other schools of all grades where large numbers of students are gathered together into a single building, and kept there till all school exercises are closed. The preparation for a portion of the lessons could then be made at home. It may be said in justification of boarding-schools, where students study at their rooms and go to the class-room only to attend recitations and lectures, that there are virtually no "school-hours," although the recitations may be distributed through many hours in the day. It would doubtless be well in all cases to have an intermission of ten minutes, instead of the present one of five at the end of each hour recitation;

and one of five, instead of three minutes, at the end of each half-hour exercise. More time might with advantage be given to systematic and judicious physical exercise, and more rigor might be employed in exacting it of the students. But these changes should be carried out with reference to both sexes alike, being as important for the good health of the one as for that of the other.

These and other limitations should also apply to the primary schools; but the argument of Dr. Clark does not touch those schools which are attended by girls who have not yet arrived at the age of puberty. Without doubt many boys and girls alike are seriously injured by rigorous exactions that are made of them in some of our primary and grammar schools. But in these lower, as well as in the higher schools, the exactions weigh equally upon both sexes, and to all appearances produce equally injurious effects upon both sexes.

In public schools of all grades, large numbers of children are often crowded together into small and poorly-ventilated rooms, in which they

are required to sit for hours every day, breathing over and over again the same foul air. Impure air in school-rooms causes more headaches, more general debility, and more nervous prostration by far than is produced by excessive or too continuous study. But here also both sexes are equally the sufferers.

Much is said about the injury to young women of going up and down stairs in school buildings. Of this we may speak more fully in the next chapter.

It is charged against boarding-schools that they are often the nurseries of dreadful private vice. To what extent this is true, of course, it is impossible to know. But under its withering blight, the color has left the cheek of many a child of promise, while the anxious parents attributed the failing health to excessive study. But this dreadful evil is not confined to boarding-schools, not to schools of any kind. Many a physician is aware of cases where it has swept like small-pox through the children, even of tender years, in an entire community. Superintendents of insane asylums and physicians in

general or in special practice, are not deceived as to the extent and the direful results of this cause, however much parents may be, who may think that their children are sinking under the strain of excessive study.

Ambition.—Not unfrequently students in schools of all grades are led by various destructive moral influences, such as an overweening ambition to accomplish an extraordinary amount in a short time, an ungenerous rivalry with fellow-students, a determination to stand at the head of the class at all hazards, and the unhealthy stimulus of prizes, merit-marks, and honors on graduation day, to exert themselves in study beyond the normal powers of endurance of the physical frame. This excessive taxation of the system in study is very frequently, if not more usually, committed by young persons of keen nervous organization, but of limited vital powers, who are, indeed, sometimes afflicted with an inherited or acquired tendency to disease. That disastrous results should follow is only what might naturally be expected. Unfortunately, examples

of this self-immolation to education, or rather to ambition, pride, or blind indiscretion, are found in nearly every school of high grade in both Europe and America; they are confined to neither sex, and to no class of schools. No exact data have been gathered to show how many young men have gone prematurely to their graves through excessive study. But all who have extensive opportunity of observing, know that the number is by no means small, while the number of those young men who have permanently injured their health by excessive study is very large. Could adequate data for a comparison be obtained, it would doubtless be found that the number of young men is proportionally as large as that of young women who have shortened their lives, or have entailed upon themselves and their children nervous and other diseases through excessive application to study, while they were between fourteen and twenty-one years of age.

"*Agenes.*"—Our author labors under an anxiety that study will not only figuratively, but literally unsex women, producing a third sexless

class of human beings, to which he gives the name of "Agenes." But really this is nothing new, according to Dr. C's previous statements; for it has been taking place through all ages; "Not as man or woman, but as a sexless being, does advanced age enter and pass the portals of what is called death" (page 36). A great deal of innocent, and sometimes a little malicious fun has been poked at the women of Boston for their inclination to intellectual pursuits and enjoyments. It has been charged that they never love save platonically; that, on marriage, the first furniture they select for a house is a library; and that they take the Edinburgh Cyclopedia with them to Newport for light reading. But it has remained for a prominent Boston physician to tell these literary Amazons that they are becoming "Agenes." No wonder that he omitted, for prudential reasons, to specify the clinical cases which he had in mind! But, seriously speaking, it is extraordinary that a scientific man should seek to brace up his argument with such a singular prognostication, and that he should attribute

this Quixotic phantom to "girls studying in boys' way." After speaking in various places of the tendency of our present system of education to produce a large number of "Agenes," our author at one place lets his pen slip into a cautious style of prophecy, when, in speaking of the change in character which accompanies the development of this new class of human beings, he says: "In these cases, which are not of frequent occurrence at present, but which *may* be evolved by our methods of education [!]" Dr. C. is altogether wrong. Those women of New England and of America, who have enjoyed the blessings of a liberal education, are as chaste, gentle, and feminine as any women in the world. As a distinguished English educator says: "Lovelier and pleasanter people than they don't exist elsewhere among the races, or in the mother country." Coarseness of features and of manners, unfeminine traits, and masculine looks and actions are not more common among women of liberal education, than among those who lack such education, whether they are rich or poor. If the new race

of "Agenes" comes upon the world, it will not be peopled from the educated classes of American woman.

Sterility.—That a prominent physician in one of the most cultured cities in America should be able to say that his "advice has been more frequently and more earnestly sought by those of our best classes who desired to know how to obtain, than by those who wished to *escape* the offices of maternity," may be no matter of wonder; but this is no premise upon which to base an intelligent opinion as to the prevalence or the increase of sterility among American women. That any woman at all should approach a respectable physician with reference to "escaping the office of maternity," is a sad comment upon the state of the public conscience upon this subject. But, alas! how many physicians are thus approached, and by women, too, who move in even the highest social circles.

The same reasons which conspire to produce an aversion to nursing the child often lead to aversion to maternity itself. This aversion to

maternity may tend to induce a physiological inability to perform the office, but its origin is in almost every case psychological, not physiological. The explanation of the immense proportion of small families in America, is to be found in the fact that parents will not, not that they cannot have large families of children. The very mention of the large families of six, eight or ten children, in the times of our parents and grandparents, or among our foreign Irish and German population, or in European countries, awakens with the average American woman no expression of admiration or approval; on the other hand, it is met by a shrug of the shoulder, or calls forth in suppressed tones such exclamations as: "How dreadful!" or, "What a burden!" Much has been written and said upon this subject, so important in its bearings upon the future of our country; but it will require something more than refraining from study five days a month, between the ages of fourteen and twenty, to bring about a reform.

V.

CAUSES OF ILL HEALTH OF AMERICAN WOMEN.

In General.—But it may be asked, if study in our schools, as they are now organized, is not a chief or prominent cause of the ill health with which American women are so afflicted, to what causes or influences is this ill health to be attributed? This question is not, however, directly pertinent to the subject under consideration. If Dr. Clarke has not proved his point, that ought to be the end of the discussion. But, lest it may seem, to the uncritical reader, that there is a dearth of these causes, or, as our author expresses it, lest there may seem to be a "large margin of disease unaccounted for," it may be well to glance rapidly at some of the most prominent causes and influences that are undermining the health of American women. It is, indeed bewildering to attempt to treat of them in the short

compass of a few pages; for their name is legion. Instead of being appalled at their disastrous results, we may well wonder, rather, that far greater numbers do not succumb under their malign influences. Our author is not unaware of their existence. He runs against them at every turn; and he skilfully diverts their force, to throw over them the appearance of fortifying his argument.

National Health.—The low state of health in America is not confined to girls and young women between fourteen and twenty years of age, who are attending school. It extends to young women of the same age who are not at school; to women of all ages, who have had, or who have not had a liberal education; to girls who have not yet entered their teens; and to infants who are yet in their mothers' (rather, in their nurses') arms. It extends equally to the other sex; to boys, to young men, and to old men in all parts of the country, and in all conditions and classes of society. The caricaturist and comedian in Europe and America awakens an approving smile at the aptness of his wit in rep-

resenting the typical Yankee as a shrewd, good-natured, thin, gaunt, dyspeptic fellow, with a slouched hat and the ever-present jack-knife. Dyspepsia, in all its forms, with all its attendant woes and consequences, is a national disease. Catarrh also and other equally formidable maladies are inherited from the mode of life of our grandfathers, who are so often held up to our admiring children, as leading model lives with reference to the hygienic influences upon themselves and their decendants. A comparison on the score of health, of the men of America with the men of Europe is not more favorable to the latter, than is a comparison of the women of America with the women of Europe. In tracing the subtle course of disease, as inherited from parents to children, the health of the father, as well as that of the mother, must be taken into the account. Many a weak and sickly girl or boy has a healthy mother, but a sickly father. Not unfrequently, while both parents seem to be quite healthy, a disease, or a tendency to a disease in either grandparent reappears in the grandchild. So great is the solidarity, we might

almost say the homogeneity of human society, that it is as erroneous to omit either sex from the account, when treating of the health, as when treating of the morals of a nation.

Food.—We are gradually emerging, in America, from the régime of salt pork and fried meats, which prevailed during the much vaunted "good old times of our grandfathers," and which has entailed so much dyspepsia upon the present generation; we are now passing through the régime of pies, doughnuts, buckwheat pancakes, and highly-seasoned food, which, in more attractive form, are aiding the ruin of the already impaired national digestion; the importance of selecting articles of food and preparing them upon hygienic principles is just beginning to be understood and appreciated. But the hygienic laws with reference to diet are broken in about equal proportion by the two sexes. Badly selected and wrongly prepared food is not all that is impairing the national digestion. Hasty eating, not followed by the necessary repose, late suppers, and other irregularities and excesses in eating and drinking, are constantly adding their

quota to the ill health of the country. The extent and degree of the injurious effects of wrong diet can neither be traced nor measured. But, that they are very great every physician and physiologist knows full well.

One of the evils in diet which affects schoolgirls most extensively and most unfavorably, is the frequent and often the excessive eating of sweetmeats and other delicacies at irregular times between meals; Europeans express astonishment at the extent to which American children are permitted and even encouraged by their parents and nurses to indulge in sweetmeats; the disturbing influences of such indulgence upon the health of the girl or young woman while at school, or during all her after life, cannot be traced or measured.

While considering the effects of diet, it may be proper also to allude to the injurious results of neglecting the three great organs of depurative elimination, the skin, the bowels, and the kidneys.

Exercise.—Europeans express great surprise that American women live so much within

doors. With us the busy housewife often passes an entire week without going out of the house, to be revived by the health-giving influences of fresh air and change of scene ; the simpering or the giddy girl of fashion rarely appears out of doors till the middle of the afternoon, when she saunters down the avenue, not for exercise, but to see and to be seen. If the weather is damp, so as to take the curl out of the feather of her hat, or soil her rich shawl, she will stay within doors until the bright weather returns, when she can again display her gaudy finery upon the street. To go out for health, or on some message of mercy, never enters her silly head. In going to the theatre or opera, if but three blocks away, she must ride in a carriage. Even women of good sense and with abundant leisure take but little exercise out of doors. To walk ten miles would not be a serious undertaking to an English woman, but it would be something appalling to an American woman ; there are probably not five women in America who could manage a horse in a fox hunt. This restriction upon out-door exercise begins in

early childhood. The little girl not yet in her teens must not run, romp, and roll her hoop; she must play with her dolls in the house: when she goes out, it must be to show her fine, spotless dress, her gaudy sash, and her dainty shoes; in her carefully gloved hand must be a delicate silk parasol; she must not let the sunlight shine upon her pale cheeks, for it will tan her face or bring out the freckles; this ornamental, delicate child, is finally sent to school, where she fades and sickens, and the school receives all the blame. Living so much within doors, away from the health-giving breezes, the bright sunlight, and the genial influence of change of scene upon those who are worn by the cares and labors of daily life, is killing American women; thus shut up in their houses, the color vanishes from the cheeks, the light of the eye grows dim, the spirits become depressed and the system is ready for the reception and development of every disease. With the vital powers thus reduced, when the cares and burdens of life and the distress and the responsibility of maternity tax the system, what wonder

if weakness, debility and disease make life a burden, or bring it to a premature end ?

We have spoken elsewhere about some of the effects of lack of development of the chest, owing to the mode of life of American women. Much might be also added that has often been told in forcible language, and with abundant illustration, concerning the injurious results of irregular and excessive exercise, and concerning the beneficial effect upon all the vital organs of regular and judicious exercise of all parts of the body. Suffice it to say that the injury to health from insufficient, injudicious, or excessive exercise is incalculable.

Going up and down Stairs.—Much has been said and written concerning the injury to the health of American women, of so much going up and down stairs. Only in a modified way is there much truth in this complaint. It is true that the mode of constructing houses in the Continent of Europe, by which all the rooms that are occupied by a family are in the same story of a large house, gives no occasion for the housewife or the servant girl to go up and down

stairs, while within doors. But, on the other hand, American women object to the general introduction of the Continental (the so-called French flat) system of houses, because "it would kill them to have to go up to the third, fourth or fifth story of a house." American women residing or travelling in Europe, complain of the weariness it gives them to climb up several flights of stairs to visit a family, it may be of distinction. But a European woman in ordinary health will visit family after family residing in these upper stories without complaint and without exhaustion. Laboring women and servant girls in Europe carry all the provisions of the family up steep, back stairs to these apartments in the third, fourth or fifth story, and do not complain of weakness of the back on account of it. In America, Bridget carries the washing from the laundry in the basement up five flights of stairs to the roof of many houses in large cities, and carries it down again when it is dried. Bridget performs daily prodigies of lifting and of carrying burdens up and down stairs, any one of which would

appall her mistress to undertake. Two hundred and fifty thousand Germans reside in tenement houses in New York City; and a hundred thousand German women, residing in these houses, go up and down lofty flights of steep stairs, and still never have to go to water cures on account of weak backs.

Here we have again an occasion for the manifestation of a weakness mistaken for the cause of that weakness. American women have, as a rule, but little stamina of constitution, and they sink under whatever taxes their strength, whether it be to walk five or ten miles, or to go up to the fifth story of a house, to go to school, or to bear children. If our women will not follow the laws of health and get physical strength, such as their grandmothers had, or as European women have, the only perfect remedy of the evil of which we are speaking will be to have all our houses built only one story high, or to have an elevator in every house. Until that is done, some practical relief may be obtained by the exercise of a little judicious caution. It is well for women and girls not to move rapidly up

and down stairs, especially if carrying a cumbersome or heavy burden. In proportion as a person is afflicted with spinal or pelvic disease or weakness, is it necessary to use more caution about going rapidly and frequently up and down long flights of stairs. The strong and healthy American woman and girl need use no more precaution, however, than does the strong and healthy German, French or English girl.

It will be observed, before closing the subject, that it is not generally complained of by women that they suffer from going up and down stairs in Stewart's dry good store, in Tiffany's jewelry store, or in theatres and opera houses.

Clothing.—About once in every ten years some reformer appears, crying: "Eureka! Eureka! I have solved the problem of woman's dress!" But fashion holds her relentless sway, and the reforms die long before the reformers do. With questions of convenience and grace in dress, we have here nothing to say. Nor can we touch upon all the features of woman's dress which are injurions to health. But among

the most prominent may be mentioned the following: the tight dressing of the waist greatly restrains the movements of the chest and the arms; it restricts the freedom of movement of the organs of respiration and digestion; it also pushes and crowds some of these organs into unnatural positions, and often causes, secondarily, pelvic displacements. The injurious effects of ligaturing the waist are increased by the attachment of abundant and heavy skirts, gathered over the pelvis; these, besides adding to the ligaturing of the waist, have the effect of heating the pelvic region, disturbing the circulation and inducing inflammatory troubles. Under the present fashions, the lower portions of the spine must be additionally heated by superimposing panniers, and all sorts of furbelows, to distort the natural outline of the "human form divine."

While this lower part of the spine and of the trunk is thus overburdened and overheated, the head also is overburdened and overheated by chignons, braids, and other additions to the natural hair, the whole conglomeration being

spiked together with an enormous array of hair-pins. As Dr. Clarke says in another relation, "Physiology leads us to expect, and experience proves" that this unnatural way of dressing the head is a fruitful cause of headache and neuralgia. The hat or bonnet, also, must be worn for hours in church, in the theatre, and at all public assemblies, however heated the room may be.

It is not our place here to suggest a reform in woman's dress, but simply to point out a few of the most prominent ways in which her dress is injurious to her health; they have been descanted on at great length, and in thousands of ways by writers and lecturers upon physiology, hygiene, and medicine, for the last fifty years. Still no essential reform has been produced. Still young women and old,—those who study and those who do not,—follow servilely the behests of fashion, regardless of the injury which they know they are inflicting upon themselves and their children. Men are equally to blame with women for the perpetuation of these evils. Husbands, lovers, fathers, and brothers look

with disapproval and ridicule upon the efforts of women to break away from the tyranny of fashion, the equal enemy of health, economy, and good taste in woman's dress.

When we thus consider the collective injurious influences of food, clothing, and exercise upon the health of American women, we find they are very great, and that they cannot be weighed and measured with precision. The wonder is rather that so many women enjoy such a degree of good health as they do after such continued infraction of hygienic laws.

Various Matters.—There are certain subjects that pertain directly to this discussion, which it may be delicate or even dangerous to treat of, except in the most general way, in a book having promiscuous circulation. But it seems necessary to touch upon some of them with more or less directness. Marriage and maternity are, in the Divine plan of our creation, essential to the healthy and normal development of woman, both physically and spiritually. The efforts and the determination of many women to "escape maternity" are all in vio-

lence to their constitutions, and are sure to be followed by injurious, and often by disastrous consequences to both their moral and their physical nature. The willing acceptance of the order of nature, in the bearing of large families of children, doubtless had not a little to do with the robust health of our great-grandmothers.

The superintendents of water-cure and other sanitary establishments, and of asylums for idiots and the insane, could tell many sad tales of the ruin that certain physical habits have brought upon persons who have inherited good physical constitutions. Many a physician could tell under what secret influence the ruddy glow is fading from the cheek of the child of promise, while the parents are attributing the declining health to many imaginary causes, not unfrequently to the severity of the school regimen.

Excitement.—But there are spiritual, as well as physical causes, which conspire to produce the existing ill health of American women. First among these may be mentioned that restless, nervous excitement, which pervades all our national and social life. Everything is done at

railroad speed. A fortune, which in Europe it would take a generation to accumulate, must here be made in five years. The doctrine of political equality—that every man is as good before the law as his neighbor—with all its beneficent results, has also in some respects worked great evils. It has led many a person in indigent or moderate circumstances to struggle beyond measure to secure affluence, that he may become the financial and social, as well as the political peer of his wealthy neighbor, while his children, especially his daughters, imitate the luxurious habits of the children of the wealthy neighbor. The pioneer often flees from his rude home and half subdued farm, as soon as the country around him becomes partially settled, and pushes further into the primitive forests, to make new and larger conquests over virgin nature. The New York merchant reads his morning paper at the breakfast-table, he catches a rapid lunch at the restaurant at noon, and he reads the evening paper at his supper. His head is full of a thousand projects which if not rash and venturesome, at least

crowd so rapidly upon his over-taxed brain as to almost stagger him. A European merchant, on going any afternoon through Broad street at the close of banking hours, would think the country in a fearful financial panic. If he should go into the Stock-Exchange, he would imagine that he had strayed into an insane asylum. The feverish excitement of American financial life is in curious and almost painful contrast with the placid content, that generally characterizes the population of European countries. That indomitable energy, which has brought under cultivation within the last one hundred years a region as large as Europe, excepting Russia, with all its splendid achievements has over-taxed the vital forces of the people, and has left the present generation wearied and debilitated, but still anxious to push on the struggle for still greater conquests.

This feverish excitement spreads to every part of our national life. Our social life is intense. Parents have little time to attend to their children, and they abdicate many of their most important functions to the nurse, the

schoolmaster, the pastor, and the physician. With the increasing age and wealth of the country, luxury has grown at a rapid rate. A mode of life which fifty years ago would have been esteemed sufficiently luxurious for the wealthiest families, would in many respects be deemed mean and penurious to day in a family in moderate circumstances. Probably there are ten thousand women in New York City to day, who have more extensive and more costly wardrobes than any lady in the land possessed, at the beginning of the present century. What wonder if this intense mode of life, coupled with so much living within-doors, and other infractions of hygienic laws should make fearful inroads upon the health of American women !

Hothouse System.—Europeans are astonished at the forcing system under which American children are brought up. At the age when the European woman enters upon her true position in social life, the American woman begins to retire from social prominence ; her daughter of fifteen years of age " receives " the company at

large parties, and is thereafter the central star of the family socially. The period of social life of the American woman extends from sixteen to thirty-five or forty years of age; after this time she is counted a bore, and she retires that her daughter may come forward and shine. Children of twelve, and even ten years of age, have their own evening parties. Not long since the papers were making merry over a "ball of the infants," in Philadelphia, at which two hundred boys and girls (or rather, in American dialect, "masters" and "misses") of between six and eight years of age, had an evening party commencing at eight and closing at twelve o'clock. They all came in carriages and were elaborately dressed.

Children are hurried at a very early age into the excitement of attending places of amusement in the evening. The city of Syracuse is probably not different from other cities in this respect. The following are a few of the cases that have come within our observation in less than a year. Several hundred pupils of the public schools attended ten lectures upon scien-

tific subjects, which were given in the Opera House, commencing at eight o'clock in the evening. Ten or twenty public exercises conducted by the students, have been held in the evening, and attended by several hundred pupils of the public schools. A number of Sunday-school exhibitions have been held (always in the evening), and never closing before ten o'clock, at each of which were present several hundred children, a large portion of whom were under ten years of age. Sociables are held in some of the churches nearly every week, at which are always present a number of young children. At Thomas Nast's lecture, we counted fifteen children not yet in their teens; at the Oratorio of the Creation we counted seventeen, one in the gallery not being yet weaned, and casting in its note occasionally to assist the solo singers; at DuChaillu's lecture, there must have been present over fifty young children; but last Sunday evening we noticed three daintily dressed little girls at church who could not be over six years old; at the Putnam School exhibition on Friday

evening, April 24th, several hundred children not yet in their teens were present. In New York City there is given each winter in the Academy of Music an evening concert, at which about a thousand children sing, most of whom are not yet in their teens. In Europe children are not allowed to attend evening entertainments, either public or private.

The following we take from one of the Syracuse dailies :

"A RECHERCHÉ SOCIAL AFFAIR."

"About one hundred young people, from seven to fourteen years of age, assembled at the Globe Hotel last evening as the guests of Master A—— D———. The apartments devoted to their pleasure were handsomely decorated, and nothing was wanting which could add to the happiness of the assemblage. The misses were finely dressed and flitted about like butterflies, while the bonnie lads appeared to be as happy as though in the garden of Eden. Very choice refreshments were served in the dining-room, which was afterwards cleared for dancing, like

that of the fairies, the music being furnished by Dresher. There were many adult spectators of the beautiful scene, made more brilliant by various accompaniments, and the glowing faces of the little people spoke of the joy and happiness which filled their hearts. The party took a prominent place among the principal social events of the season, and was in all respects a decidedly *recherché* and unique affair."

Little children are hurried into the infant's classes of Sunday-schools, before they can hardly talk plainly ; at this tender age they are made spectators and participants in all the excitements of large public assemblies. Much of the Sunday-school system is permeated with that high-pressure, rushing method which pervades many of our primary public schools. In the one, children are made to repeat an almost incredible number of verses ; in the other, they are made to drive at railroad speed through problems that never could occur in business life. In both they are prematurely hurried, while yet children in years, to a mode of thought which is only fitting to a riper age.

Morbid Moral Feelings.—The enormous circulation of fictitious literature attests the avidity with which the American youth feed upon unnatural excitement. It is rarely that the woman of liberal education gives more than a passing glance at this ephemeral literature, which depends for patronage upon young women who have but little true culture. These pore day and night over tales of love, intrigue and crime, wrought out in weird fancy, and often with startling effect. The hours that should be given to sleep are stolen to finish the last tale or novel. The next one is watched for with eager interest. Living thus in an artificial atmosphere of adventure and excitement, the duties of ordinary life seem hateful to the girl. The girl becomes a woman; she marries; she has lived in a life of excited fancy; she hates its realities; she hates domestic duties, the care of the house, and of the children. Servants are called to do the mother's work. The mother returns to her novels, if not to plotting intrigues, and she adds another to the list of invalid women.

There is no better regulator of the health than an enlightened conscience, with all the direct and indirect influences of normal moral and religious feelings. Whatever undermines these is more disastrous to the national health than all the study that has been done since the world began.

With the vital powers thus often so overtaxed by the premature excitement and the hothouse system of study of early childhood, what wonder that so many girls should sink under even the reasonable requirements of a natural and normal system of study in the academy, the high-school and the college! The courses of study in our upper schools are not more severe than those which are pursued by students in schools of similar grade in Europe. As we have shown elsewhere, the statement of Dr. Clarke, that young women are necessarily injured by studying in these schools, while between fourteen and twenty years of age, is untenable, and falls to the ground as wrong in theory and untrue in experience.

Reform Difficult.—It is easier to point out errors than to correct them. The chief means of bringing about feasible reforms will be by calling the attention of the public repeatedly and forcibly to real well-known and admitted evils. But movements towards reform will be retarded, if not paralyzed, by diverting the attention to problematic and erroneous assertions and suggestions.

VI.

THE "EUROPEAN WAY."

No "European Way" of Study.—Dr. Clarke seeks to fortify his position by a curious view which he gives under the head of the "European Way," of the method of study that is followed by girls in Europe. It is singular that a gentleman of culture and scientific attainments, who speaks of having travelled in Europe, should make such an inadequate or perverted statement with reference to methods of education in the older civilized countries.

There is not a single proposition with reference to the education of girls in Europe, while between fourteen and twenty years of age, or at any age, which is of universal, or even of general application. There is no single point of identity in the methods of educating the daughters of peasants in Armagh, Brittany, Andalusia, Sicily, Croatia, Saxony, and Finn-

land;—of merchants in Liverpool, Hamburg, Marseilles, Leghorn, and Trieste;—of professors in Edinburgh, Oxford, Paris, Salamanca, Pavia, Zürich, Heidelberg, Leipzig, and Berlin;—and of the nobility in England, Prussia, Austria, and Russia. Fully one-half of the women of Europe cannot even read. In many countries the buxom peasant girls never go to school at all. The children of many of the upper classes in all European countries receive their entire education from governesses and tutors. There is the greatest diversity in the school systems of England, France, Germany, Russia, Italy, and Spain.

Dr. Clarke speaks especially of Germany, and bases his assertions with reference to female education in that country upon *two* letters. From these two letters he deduces very meagre, inadequate, and, indeed, erroneous views of the extent and the method in which German girls and young women receive instruction in schools. After thus speaking most decidedly concerning the "German way," he adds that it "*is probably the European way* [*!*]." But

what our author describes is neither the European nor the German way. We venture the assertion that there is not in Germany, nor in Europe, nor in the world, a school for young ladies where the healthy students refrain from study during the catamenial week. We venture the assertion also that there are not ten families in Germany, in Europe, or in the world, where the healthy daughters are required to refrain from study during the catamenial week.

One of Dr. Clarke's own witnesses says :

"—— If the girls are still school-girls, they go to school, study and write as at other times, *provided the function is normally performed* [*! ! !*]." A little imagination is necessary to get much support for Dr. Clarke's theory out of this letter.

With reference to his other witness, who says :

"——As soon as a girl arrives at maturity in this respect, she is ordered to observe complete rest, not only rest of body, but rest of mind [!]. Many mothers oblige their daughters to remain in bed for three days if they are at all in delicate health, but even those who are physically very strong are obliged to remain in their rooms for

three days, and keep perfectly quiet [! ! !]——." we would simply add that the correspondent must have had in mind some cases of abnormal action of the catamenial function. For further remarks upon this subject, see Appendix.

Working Women.—It is well known to all who have but a limited acquaintance with the condition of society in Europe, that women there engage in manual labor of various kinds, to a far greater extent than do women in America. But we venture the assertion that there is not a country, a province, a city, a factory, a farm, nor a family in Germany, nor in Europe, where healthy young women are required to refrain from their usual work during the catamenial week. Laws have been passed in various countries, restricting the number of hours a day in which men, women, and children may be employed in factories of various kinds. But these restrictive laws have reference to the general health, not to any special function.

In Europe, healthy girls work as well as study in the "boys' way," and "without any regard to the rhythmical periodicity of their constitu-

tion." The catamenial function comes into ac tion naturally, and without creating agitation, disturbance or alarm. A tendency to disease, or to abnormal action, is noted early, and is treated promptly, just as any other disease would be ; and that is all that need be done in America.

Late Revelation.—It is very singular that it should have been left to Dr. Clarke to introduce, in October, 1873, into American pedagogical literature, the great secret concerning what he styles the "European way." This important radical principle in European education seems to have eluded the search of Horace Mann, of Dr. Barnard, and of hundreds of American educators, who have made the pedagogical methods of different countries the subject of extended and careful study. It would seem as though the thousands of American mothers who have, or have had their daughters in European schools, would have got some intimation of this important custom. It would seem that, among the eight millions of persons of foreign birth in America, many of whom were educated in Ger-

man normal schools and have been engaged in teaching in our public and private schools, there would have been some intimation of this European custom. It is very strange that these European families should drop this important custom, as soon as they land at Castle Garden, and should immediately adopt the "American way," of sending their daughters to school, and of attending to their ordinary work, without stopping one week in each month. We are all of European descent of no very remote date. It is singular that all knowledge of this custom should drop out of the memory of the oldest inhabitant. And still this most absurd of all Dr. Clarke's statements has received the most respectful treatment from many of his reviewers.

VII.

VARIOUS EDUCATIONAL QUESTIONS.

Co-Education.—The discussion of the particular subject of Dr. Clarke's work leads us naturally, and almost necessarily to the consideration of various questions related to education in America. Prominent among these, and the one against which Dr. Clarke directs the chief force of his argumentation, is the question of the co-education of the sexes. While the discussion is going on with reference to this subject, the question is gradually solving itself, by the adoption of the principle in many of the most important of the older and newer institutions of learning in different parts of the country. This is being done with no rashness, but with the full persuasion that the experience of the large number of seminaries, academies, and high-schools, and of the few colleges, in which co-education has been practiced for the last forty or fifty years, has demon-

strated its advantage and propriety, and that the objections which are urged against it are not well founded. Co-education will probably never be adopted by all institutions of an upper grade. It would, indeed, not be advisable that it should be universally adopted. It will serve the cause of education far better to retain a number of institutions of high grade which shall not be opened to students of both sexes. Thus will be kept before the public living examples of the practical working, and the results of the various methods of instruction, in the different classes of institutions of learning. No young lady can now complain, that opportunity is denied her to pursue the highest courses of preliminary and professional study in schools of the highest rank; at the same time those parents who desire to send their sons and daughters to institutions which are open to but one sex, are equally accommodated.

The movement for opening colleges and universities to women was inaugurated at Oberlin College in 1830; it has since extended to many other collegiate institutions west of the

Alleghanies—as to Antioch College in 1840, to the University of Wisconsin in 1849, to the Iowa State University, and the Northwestern University in 1855, to the University of Michigan in 1871, and to Alleghany College in 1872. East of the Alleghanies co-education was first adopted in Genesee College (which was afterwards merged in the Syracuse University) in 1849; in the Syracuse University at its inauguration in 1871; in Cornell University in 1872; in Wesleyan University in 1872; and in the Boston University at its inauguration in 1872. The question of the admission of women to other colleges both in the East and the West is being strongly agitated. Several of the above-mentioned universities have also professional departments, as of medicine, law, and the fine arts, to which women are admitted on equal terms with men. While some hundreds of young women are pursuing collegiate and professional studies in the above-mentioned colleges and universities, many thousands of girls and young women between fourteen and twenty years of age, are attending academies, seminaries and

high-schools, which are open also to boys and young men.

As far as the particular question which is discussed by Dr. Clarke is concerned, it really makes no difference, as he distinctly and repeatedly asserts, whether these young women should pursue their studies in the same institutions with young men, or whether they should do the same amount and kind of study in schools which are open to young women alone. He directs his objections against "girls studying in boys' way," or against the girls continuing their studies during the catamenial period.

Viewing the subject indeed in its broadest light, the question is, in no part of the country and in no class in society, one concerning the introduction, it is one concerning the continuance or the extension of co-education. Co-education is practised in all families, in Sunday-schools, in primary schools, and in most grammar and high-schools. It would seem to have required, originally, peculiar reasons why young women should be *excluded* from any grade of schools.

"*Juxta-Education.*"—Dr. Clarke vaguely suggests a curious plan, which he styles "juxta-education," as offering a practical solution of the question as to how all our colleges and universities may be opened to young women, without incurring the dangers which he finds in "girls studying in boys' way." He would have young women, who desire to gain a liberal education, recite in the same buildings and rooms, and before the same professors, as young men now do, but not at the same hours nor in the same classes—the studying and the class exercises of the young women to be in accordance with the physiological peculiarities of their constitution. Dr. C. overlooks the fact that, from financial necessity, the number of professors in college faculties is always kept down to the minimum limit; that the time of the professors is fully occupied; that many professors have to steal from sleep the little time that they catch to devote to authorship or to other literary work. In the larger universities, tutors are appointed, to do the work in instructing existing classes which the regular

professors are unable to attend to. It is absurd, therefore, to think that these professors can take charge of classes of young ladies, in addition to their present labors. We have also shown elsewhere that the peculiar views of Dr. C. would require that young women should receive *individual*, not class instruction.

Individual Proclivities.—Dr. Clarke claims that co-education is injurious, also, because it forces young women to pursue a long course of studies which do not meet the wants of the future woman, and do not accord with the nature of the feminine mind. Here again our author is chargeable with hasty generalization, or, more strictly speaking, with hasty assertion. All classes of study are pursued and enjoyed by persons of both sexes. Girls, as well as boys, are compelled to learn reading, writing, arithmetic, grammar, geography and other elementary studies, in primary or other schools; in many of these schools drawing and music are also taught. It cannot be said that either boys or girls, as a class, excel in any of these studies. In the high-schools, academies, and colleges,

girls recite as well as boys do in all the studies. Of women who are engaged in professional life, by far the largest proportion are engaged in teaching. Of the thousands of women who are imparting instruction in primary and upper schools, it cannot be said that the majority are inclined to teach in any special branch, or class of studies, or that they are, as a class, more successful in one branch than another.

Of women who are engaged in other professions than that of teaching, more are perhaps engaged in medicine than in any other profession; some women, like Miss Mitchell, have a special talent for mathematics; some, like Mrs. Stowe and Gail Hamilton, for literature; some, like Miss Hosmer and Miss Stebbins, for sculpture; some, like Mrs. Greatorex and Mrs. Murray, for painting; and some, like Miss Kellogg and Miss Carey, for music. But with women, as with men, talent or genius is a matter of personal proclivity, and is confined to neither sex.

The adoption of co-education does not signify, therefore, that all young women who go to college shall pursue the traditional classical

course, nor that all who shall pursue professional courses shall study law, medicine or theology. The time has long since passed when it was considered necessary for all young men to do so, who aimed at procuring a liberal education, or at entering upon a professional career.

It is no longer deemed necessary to force the minds of all young men into the same groove. The principle is being every year more and more extensively admitted that the natural proclivities of individual minds, and the probable pursuits of after life should largely determine the kinds and methods of preliminary and professional study. Consequently varied courses of instruction are being provided in the academies and colleges, and many more kinds of professional schools are being established, to meet these varied wants of individual minds, and of the many classes of institutions of high culture which are demanded by an advanced civilization, and the peculiar wants of modern life. During the past half century, under this movement, the natural sciences and the modern

languages have formed the basis of new courses of instruction in seminaries and colleges. Schools of mines, and of other branches of technology, are established by the side of schools of medicine, law, and theology.

Esthetic studies are also being admitted to a rank coördinate to that which is given to linguistic, mathematical, and scientific studies. A very limited and inadequate provision has been made, in some higher institutions, for giving professional instruction in the fine arts, that should be coördinate with the instruction that is given in other professional schools in America, or with the instruction that is given in the art academies of Europe.

The whole tendency in education to day is to make provision for the systematic training, and the best development of every kind of talent, both in preliminary and in professional schools. With this catholicity fully established in our educational system, there will be no reason why young women should not be admitted to any course of instruction or to any class of institutions, to which they may be inclined through

individual proclivity or by peculiar circumstances.

Partial Courses.—Many of our colleges and universities have greatly circumscribed their legitimate spheres of usefulness by limiting the attendance to those persons who have finished a certain line of preparatory study, and who have passed examinations in the entire schedule of studies of the successive years. It is beyond dispute that in Germany education is carried to a higher degree than in any other country. Yet not one-third of the students of the universities expect or attempt to finish such a course of study as shall entitle them to graduation. The larger portion of students follow such courses of lectures as they find to accord with their inclinations or their purposes in life. It would greatly increase the usefulness of our colleges and universities, if all of their exercises were open to the attendance of such students as are qualified to profit by them, without reference to whether they have completed the entire anterior portion of the curriculum. In those colleges and universities in America, in which this plan has

been adopted, it is not found to be attended by any practical evils, but, on the contrary, to work many good results. Many persons, who go to the university with the purpose of perfecting themselves in a few branches of study, are persuaded to complete the entire course requisite for graduation, and rank among the most brilliant of the alumni. Often the special student, by his personal talent and his interest in those studies for which alone he comes to the university, far excels the regular students,—who too often are performing their "duties" in a perfunctory way,—and thus they add new life to the department of study.

With this principle of admitting special students who wish to pursue single studies or portions of the usually appointed courses, adopted in our colleges and universities, one of the most prominent objections that is urged against co-education, that not many women need to complete the classical course as it now exists in our colleges, will be fully and successfully met. More young women, by far, will desire to pursue partial than complete courses. It will be found

in America, as in Europe, that very great advantage will be derived from attendance, if for but one or two years, upon the exercises of a university; this advantage is indeed so multifold and so manifest, that it seems strange that local tradition in America should array itself so long in opposition to its introduction.

Courses of Study.—In this whole discussion of the subject of co-education, as well as in that of many other educational problems, there is frequently betrayed a blind worship of "courses of study," as though they were pervaded by some talismanic charm; as though the faculties of colleges and universities had measured, by some mysterious line, the exact amount and kind of study which is requisite in order to admit a person to the rank of a scholar; as though whoever has not pursued this prescribed routine, and does not write A.B. or A.M. after his name, is not entitled to be heard upon any question connected with higher education or literary culture. There is in this a curious oblivion of the long and earnest discussions by faculties as to how the curriculums should be

arranged, some of the most able and experienced professors often favoring very great modifications of the curriculums as they are finally adopted.

The fact is also lost sight of, that the degree of A.B. does not represent the same amount of study in the different colleges of the land; that it does not represent the same amount or kind of study in different periods of the history of the same institution; that it does not represent the same amount of attainment or of talent in the students who compose any single graduating class of any college or university; and that in most colleges not a small portion of the students resort to every artifice that they may pass through their curriculums with the least amount possible of thorough study, esteeming themselves particularly fortunate if, through the illness of the professor, or any other cause, a recitation or lecture is omitted, and resorting to every expedient that will aid them to seem more proficient than they really are upon examination day, or to pass examination with as little study as possible. It is refreshing, therefore, to

witness the anxiety of these aspirants for the degree of A.B., lest the scholarship of the country should be degraded by opening the doors of colleges and universities to their sisters!

Women in Professions.—Whether women shall enter upon professional life or not, is a matter that cannot be controlled. While the majority of girls and young women turn all their thoughts, study, and preparation towards matrimony, a certain number find themselves impelled by their peculiar talents, genius, and inclination, to enter upon some branch of professional life before they are married. Circumstances will determine whether the professional career shall terminate with entering upon the marriage state. But it is impossible to foresee the changes of fortune which time may bring. The rich man to-day may be penniless to-morrow. The lady accustomed to ease and affluence may, next year, be a widow, without a home and without a dollar. It would seem that every prudent father would give his daughter such an education in her youth, that, should she in the distant future be brought to poverty,

she would not be forced to the needle or the wash-tub, to obtain a livelihood for herself and her dependent children. To accomplish this most successfully, the parents should study the peculiar talents and inclinations of the daughters, with as much earnestness as they do those of the sons. Every opportunity within reach should then be given to the daughters to develop and train their peculiar talents. The mental strength, and the information that they thus gain, will be of great value to them in all after life, even if they should not be forced by financial disaster to avail themselves of their education to obtain a livelihood. But in case of necessity, the widow of thirty, forty, or fifty years of age, will be able, by devoting a limited time to additional preparation, to secure a much larger income from her profession, than would be possible from the painful and unremunerative labor with the needle or at the wash-tub. The question is thus a very practical one, and may, in its actual bearings, come very near home to some of those who look upon it without interest, or who regard it with opposition.

Whoever opposes the opening of our colleges, universities, and professional schools to women, may thus be an unconscious agent of forcing his own daughter, now living in abundance or affluence, to eke out a painful and laborious existence in a lonely garret, and perhaps also to provide for helpless children and aged parents.

Domestic Education.—The discussion as to whether a young woman shall enter upon a course of professional study, after she is eighteen or twenty years of age, is entirely independent of the question as to whether she shall receive a domestic education during the earlier years of life. A large proportion of the women who have received a liberal education have come from families of not more than moderate circumstances. They have demonstrated in their own experience the feasibility of uniting a practical domestic education, with a liberal education in literature, science and art. It is possible for the earnest young woman to acquire a practical knowledge of housekeeping in all its branches, and also to pursue a regular course of study as laid down in our best primary,

grammar, and high-schools, and in our colleges or universities. Nearly one-quarter of every year is given to vacations. A limited portion of the fifteen, sixteen, or seventeen hours of each day during term time, which are not devoted to school duties, can be given with advantage to acquiring a practical acquaintance with household work. In many cases it may be deemed advisable that the girl or young woman should leave school for an entire year, for the special purpose of acquiring a practical knowledge of the details of housekeeping before she completes her scholastic education.

It is impossible to overestimate the value of this domestic education to the woman who in the future is to be the mistress of a home and the mother of a family of children. The physical exercise that will be secured to the young girl, by giving two or three hours a day to housework, will be fully as beneficial in developing muscular strength as that of the best system of calisthenic gymnastics.

It is not attendance upon school that is breaking up the domestic habits of American

women. It is the absurd worship of fashionable indolence, and not higher education, that is destroying the industrious habits of American women, and delivering our households over to the dominion of servants of foreign birth.

VIII.

TESTIMONIES.

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WE give below a few letters in full, and extracts from some others which have been received in reply to some questions bearing upon the subject under discussion in the foregoing pages. Much more could be added, but it would extend this book beyond the limits which we have marked out. It will be observed that the whole tenor of the letters is to show that Dr. Clarke's data are erroneous, and that his argument is faulty.

Dr. JOHN R. GRAY, the Superintendent of the State Lunatic Asylum, at Utica, N. Y., writes:

"Your letter is at hand. I have seen notices of Dr. Clarke's book, but my time has been too much occupied to allow me to read it. The proposition that the ill health of American women is due in an important degree to uninterrupted study while between fourteen and twenty years of age does not correspond with my observation or experience."

Dr. GEORGE COOK, the Superintendent of

Brigham Hall for the Insane, Canandaigua, N. Y., writes :

"—— I have a well-settled conviction that very few young persons of either sex are seriously injured by study. There are causes of ill health, which, I believe, have their origin in connection with school-life, but of this I have neither time nor space to write at this time."

Dr. J. H. CONGDON, formerly Superintendent of the Willard Asylum for the Insane, at present Superintendent of the New York State Inebriate Asylum, writes :

"I have somewhat carefully examined Dr. Clarke's views on co-education of the sexes. I much regret that he has so mixed up natural functions with bad habits and practices as to confuse the reader concerning the real causes of ill health with American women. I am fully satisfied that the normal action of all of woman's functions does not require a suspension from judicious exercise of body or mind, but that cessation from such exercise would be more a cause than a preventive of disease. I should hope that mothers, instead of being frightened by Dr. Clarke's book into taking their daughters out of school, would seek for the causes of ill health in precocious development, bad practices of dress, too little sleep, the cultivation of the passions, and in *neglect* of mental development, rather than in *overwork* of the brain."

One of the most distinguished medical authors and practitioners in America writes :

"—— I have not at hand facts upon which I could

base an opinion with reference to some of the points to which you refer. I have great reluctance to giving utterance in a public way to an opinion which is but an impression, but with reference to the essential criticisms which you make on Dr. Clarke's book, I think you are correct."

Another equally distinguished physician, of European birth, in another city, writes:

"—— I certainly cannot agree with Dr. Clarke in the statement that an important portion of the ill health of American women is owing to study in schools as now organized, while in their teens, since there is no other portion of their life available for education, any more than for that of European women, who are supposed to be exempt from the evils of bad education. Nor should I suppose it necessary or desirable for American young women to suspend both labor and study while the catamenial function is in action, since neither is done by European young women, who are presumed to be correct models in this respect.

"I think that an inquiry into the causes of ill health in American girls, will lead to the result that they are the same—*mutatis mutandis*—which deteriorate the physical, mental, and moral powers of their brothers; domestic luxury and indiscipline; the system of cramming the brain and neglecting the heart; of the innumerable agencies by which a precocious knowledge of good and evil is acquired, with all the sensual habits and thoughts, the lust of the flesh, the lust of the eye, and the pride of life, which it once was a sin for the adult to have, but which nowadays are 'rolled like a sweet morsel under the tongue' of adolescents of both sexes."

Rev. REUBEN NELSON, D.D., the senior publisher at the Publishing House of the Methodist Episcopal Church in New York, and for nearly thirty years the Principal of Wyoming Seminary, at Kingston, Pa., an institution which is attended by about four hundred students of both sexes, writes:

"You cannot state too strongly my disapproval of the reasoning and conclusions of Dr. Clarke, in his book entitled 'Sex in Education.' An extended observation of thirty years has led me long since to the decided opinion that young women who study in our schools while in their teens are as a class more healthy in after life than those who do not. The causes of poor health among American women are to be found elsewhere than in uninterrupted or excessive study while in their teens. Of this I could write very largely, but will content myself with simply stating my utter disapproval of Dr. Clarke's conclusions."

Rev. HOWARD CROSBY, D.D., Chancellor of the University of the City of New York, and pastor of the Fourth Avenue Presbyterian Church, writes:

"You ask me if I think a large portion of the existing ill health of American women of my acquaintance can be traced to study while between fourteen and twenty years of age. I unhesitatingly say, *No.* The young ladies I see about me do very little serious study at that

age. Unventilated school-rooms and other causes may injure their health, but certainly not the amount of study. I attribute much of their ill health to a pernicious diet. They buy candies by the pound, and eat them as one might eat bread and potatoes. It is to stop at a Fifth Avenue or Broadway confectionery shop and "load up." Another source of ill health is want of exercise, they *saunter* and never *walk*. A brisk walk of a couple of miles would be very unfashionable! Another cause is late hours at parties (half dressing and suppers thrown in), which give the morning headache to begin the day with. Such is the New York City girl, as I see her. They are poor stuff to make mothers of. Oh! for a reform in social customs! But will it come? The rich set the fashion and the rest follow. If girls would be *girls*, and not attempt to be *fashionable women*, we could have a splendid race of women in this favored land."

A distinguished English gentleman, who has had large experience in educational matters in England and Scotland, but who apparently knows nothing about the "European way" of which Dr. Clarke speaks so positively, writes:

"I am not worth asking nor quoting. If Dr. Clarke be in the right, I fear that in my ignorance during the past I have often inflicted evils upon the gentler sex.

"But, as an independent observer, let me say that something, and I fancy I know what it is, is wiping out the Anglo-Saxon race in this country, through its women. Lovelier and pleasanter people than they are, don't exist, either elsewhere among the races or in the mother country. But if you regard them as the instruments for

the perpetuation of the race, then we must sing Luther's hymn.

"I know an English girl in this country, who was married at nineteen, and is now thirty-one years old. She has had eight strong and healthy children, all of whom were living a year ago. She is as fresh in color, as lithe in body and plump in person as on the day she was married; and on holidays she goes on walks, with her bigger children, which average five miles there and back, and gets home fresh and cheerful.

"In England, I know a lady, closely kinned to me, who is now fifty-five years old; a few months ago she walked eight miles in the morning to see another sister, and back at night. She has had nineteen healthy children, seventeen of whom have attained adult age. This lady is now, to-day, the best dancer in the neighborhood, though her health and strength are not uncommon, and are never commented on.

"Now you cannot parallel such cases among middle-class American women of English blood. And from what I observe, I believe two more generations going on with the present ideas, will write 'finis,' on at any rate New England Anglicans."

Prof. ALEXANDER MELVILLE BELL, author of "Visible Speech," and a distinguished English educator, writes:

"My experience of ladies' schools is confined to those of Edinburgh and London. In none of them have I ever heard of such a custom as that referred to in your letter [suspending study during the catamenial period]. I have a friend here who has a life-long knowledge of similar schools in Dublin, and his experience is the same as my

own. I have shown your letter to a lady who is intimately acquainted with the management of boarding-schools in Dover, and her verdict is the same. The statement which you impugn must have been founded on exceptional cases of invalids. Healthy girls are certainly not, as a rule, made to desist from study as Dr. Clarke represents. I am sorry that I cannot obtain here at present more extensive testimony; but I think that those whom I have consulted must have known the fact, had the practice been an established one in British boarding-schools."

Prof. A. DUPONT, of the Syracuse Academy, writes:

"In reference to your questions concerning the education of young women in France, it gives me great pleasure to state that you are entirely correct in your views. with reference to educational usages in my native country.

"Certainly people of less than moderate means do not send their children to school after the age of twelve or thirteen years. As for the classes of people more favored by fortune, they send their daughters between the age of twelve and twenty years to superior schools, either convents or pensionnats, where they are taught in all the branches of a high education (the dead languages are, however, generally omitted).

"There is not a city, nor even a town where you could not find one or more of these institutions, where hundreds of young ladies are receiving sound instruction, besides good training and good breeding. I could mention to you the names of our lady authors and poets, who have received in said pensionnats, the foundation of their literary reputation.

"Les Oiseaux and St. Denis, in Paris, give every year to French society many ladies of very superior education, who make their parlors the scene of most delightful social and literary reunions. Besides these two important and famous institutions, there is all through France a kind of rivalry among the schools to have the reputation of producing the best scholars."

Mr. J. H. SCHWARZ, who was for many years a teacher in normal schools in Germany, and is well acquainted with educational methods and usages in his native land, writes:

"You ask my opinion concerning Dr. Clarke's book on Sex in Education, or more particularly concerning the chapter entitled the "European Way." This chapter is full of inconsistencies, errors, and contradictions. The title itself is absurd nonsense. Whoever has but even a most superficial acquaintance with European geography knows that Europe is divided into three great parts, Southern, Central, and Northern. Southern Europe includes Portugal, Spain, a small part of France and Switzerland, Italy, the Slavic provinces, a small part of Hungary, Turkey, and Greece. In these countries there is no regulated instruction or education, and, therefore, they cannot be taken into the account in speaking of general principles applying to all Europe. Furthermore, all of these lands differ extremely among themselves in culture, customs, and modes of life. In these countries the transition period [puberty] takes place from the eleventh to the thirteenth year. It is attended by no disturbance, except in rare cases, and causes no interruption in the mode of life or occupation.

"In Northern Europe are included Scandinavia and Russia. In the physical condition of their inhabitants, as well as in their geographical position, these countries are vastly different from the southern countries. Girls arrive at puberty from four to six years later than in Southern Europe. Here also the transition is, with very rare exceptions, unattended with disturbance, or interruption of the ordinary duties of life.

"Central Europe includes Germany, a part of Switzerland, North France, and the British Isles. The habits and customs of the people, and the condition of education and culture vary greatly in these countries. Girls usually arrive at puberty when between fourteen and sixteen years of age.

"In Central and Northern Germany female education is doubtless carried to a higher degree than in any other country. In these countries it is obligatory and universal. The approach of womanhood is attended by no especial disturbance of the system, except in rare cases, and only in these special cases is any change made in the mode of life of the young woman. As this is the age of ideal and enthusiastic hopes and fancies, wise parents and teachers seek, by judicious occupation of the body and mind, to keep the young woman from thinking much of herself. Except in marked cases of sickness, the young woman is never required to refrain from bodily or mental exercise, much less is she ever kept in bed. This is too absurd to write about. Dr. C.'s correspondent must have remembered some cases of special weakness or sickness. A more erroneous view of a national custom could not be given.

"The education of the female in Germany is as follows: The girl attends the elementary school from the sixth to the twelfth or fifteenth year of her age, according

to circumstances. In the families of the cultivated classes, the daughters attend upper schools (Höhere Töchter Schulen, in cities, or Pensions-Anstalten in the country) for two or three years after leaving the elementary schools. In these upper schools the instruction is especially adapted to the future wants of the female sex. It includes language, universal history, history of literature, natural history, political and physical geography, mathematics, drawing and painting, music, needle-work, and practical housekeeping and cooking.

"Hundreds of young women in Germany study in conservatories of music till they are twenty years old, and thousands of women receive special instruction in normal schools till they are twenty years of age and over, and thereafter devote themselves for many years, and sometimes for their lifetime, to the work of teaching in elementary schools, in boarding-schools (Pensions-Anstalten), and in Kindergärten; many also teach in schools and families in foreign countries, especially in England and Russia.

"With the working classes the girls also attend the elementary schools till they are twelve or fourteen years of age.

"Neither in studying, teaching, nor working, do young women in Germany make any interruption in their employment on account of the catamenial function, except in cases of sickness or abnormal action.

"I cannot close this without protesting also against the custom of representing unusual events as indicating the ordinary mode of life of a people. Unfortunately, in Germany, girls and women, in the country especially, are too often required to do too severe manual labor. Their work is, however, almost always of the lighter kind, and the outdoor exercise it gives adds doubtless to the pop-

ular health. Hitching a woman to a donkey on a plow, or a woman felling trees, may be seen once in an age, but it ought not to be given as representative of the customs of the German people. Such misrepresentations not only cause erroneous opinions about other peoples, they also cause bitterness of feeling in the people misrepresented."

IX.

CONCLUSION.

We find, thus, that Dr. Clarke has thrown out to a popular audience a hypothesis of his own, which has no place in physiological or medical science; that he has sought to establish his position by insufficient proofs, and to fortify them by inapt comparisons and illustrations, and by erroneous representation of European ways; that he has omitted data which are very important in the general line of the argument; and that, in short, his whole reasoning is singularly unsound.

The careful reader of "Sex in Education" cannot escape the impression that the author had already reached his views with reference to co-education, which is ostensibly the objective point of his attack, through other and altogether different lines of thought, before the peculiar argument in this book occurred to him.

The cry of "*fire!*" in a vessel at sea, even though a false alarm, will put officers and crew upon the alert to use extra cautions to avoid so

fearful a disaster as the burning of a steamship, with its precious freight of human life, a thousand miles from land.

Not the lives of a few hundred passengers for a few days are committed to the charge of educators, but, in a large degree, the health, the lives and the general well-being of the entire race. The false alarm thus created by Dr. Clarke will doubtless lead to a re-examination of the merits, defects and errors of our present system of education. In this sense alone can his book be said to "have done much good."

As far as the general subject of the higher education of woman is concerned, there can be no question but that its tendency is to promote the physical health of her sex, and consequently of the human race in its entirety.

564. COMFORT, George F. and COMFORT, Anna M.: Woman's Education and Woman's Health, Chiefly in Reply to "Sex in Education." Syracuse: Thos. W. Durston, 1874. 155pp. Original cloth. Small tears at top of spine. Rubbed along edges of spine. Title page is first leaf.

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