is found that the drum becomes bulged, a free incision into the posterior half should be made, carrying the knife well through so as to cut the periosteum lining the middle ear. This later point I believe to be important, as it tends to prevent mastoid complications.

If the mastoid does become involved, the measure instituted must be most prompt, energetic and persistent. If the ice-bag be applied, it should be kept on continuously for hours, the object being to drive the blood from the part, and it is much better to keep it out than to have on interval of reaccumulation, as will occur, if the nurse be slow in refilling the bag. If hot fomentations are preferred and are more grateful to the patient, and the same energy be displayed by the nurse so that the blood-vessels remain contracted, we can feel sure that we are carrying out rational methods, and using the proper means to avoid an external operation.

Personal experience teaches that in many of those cases of acute mastoid trouble, where there is no previous history of chronic suppuration of the middle ear, though there may be evidence of pus in the mastoid cells, if pain is relieved and they can be carefully watched for brain complications, we are quite safe in relying on the continuous and persistent applications of cold to promote a recovery.

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DYNAMICS OF SCHOOL PUBERTY.*

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Dynamics, according to Webster, are "the moral as well as the physical forces, and the laws which relate to them," hence dynamic puberty in city children, for of country children I know but little. My whole life has been a city life; my practice largely with city children, and I have come to know only too well some of the penalties which they pay for their urban existence, especially about the time of puberty; so much so that I have come to dread the time of their blossoming into manhood or womanhood under our present school system. It should be, for the child's highest possibilities a time of sunshine, singing birds and spiritual bloom.

What is the actual condition of the average city child especially the girl, at this time. Haven't most of us in mind more than one case where one year ago the girl had the normal appetite, the bright eyes, the verve and go of the typical American child? Since then she has entered the high school, and day by day has been losing ground. Her appetite, except for pickles and coffee, has gone. She was once a tomboy, and now complains that it tires her to comb her hair. Her rosy cheeks have disappeared; her lips are anemic, her ear-tips translucent; menstruation is scanty; the pulse intermittent, and you may find an anemic bruit on auscultation.

But why should I enumerate her symptoms? You know them as well as I. This is what I wish to ask: Is it necessary that this girl's blossoming should be purchased at such a price as this? Topsy in the southern cotton field knows nothing of these penalties, even though she performs hard labor when in the "dark of the moon." What makes the difference? It is not far to seek: Topsy "just grows," while the Chicago girl is educated according to the edicts of a board of education selected by an elective mayor; need I say more?

At present the alternative for the city girl seems to

lie between culture, with the ills of abnormal menstruation, or to be cultureless and in joyful ignorance of menstrual pangs and her Latin parts.

In physiologic dynamics we have learned that every mental effort produces a characteristic fatigue curve on a recording drum; crowd effort still further, and it passes into a fatigue irritability with characteristic and unmistakable record on the recording drum.

"In the stupid old times," says Charles Kingsley, "children were taught to know a few things and know them well, but in these enlightened times they are taught to know a little about everything and to know it all ill, which is a great deal easier and pleasanter, and therefore quite right"—or to put it in electric nomenclature, our children are human dynamos with certain potential voltage for each one, which voltage can not be increased by multiplying the switches, or attaching more incandescent lamps. Every additional study is an attempt to attach another lamp on the child's intellectual circuit. Small wonder that a girl's dynamo, which always runs at a higher rate of speed than her brother's, begins to splutter somewhere along the line. *Propter uterum est mulier*, hence sexual irritability, religious vagaries and the sexual perversities of overcivilization.

Who is to blame for these things? Chiefly we as physicians, unless we at every convenient opportunity, and at some inconvenient ones as well, have taken occasion to make known that the time of sexual awakening is one of peculiar temptations and stress for the modern girl. We lay heavier burdens on her shoulders than she can safely bear, and then complain because she came out a morbid and bad-tempered apology for a sound, normal woman.

The boy does not generally fare so badly physically, for the wires on his circuit are usually of coarser make, and his studies are usually more of a burden to his teacher than to himself. He suffers chiefly from bad air of the school room, the cigarette and the moral atmosphere by which he finds himself surrounded. As a rule he has plenty and more than plenty of good food, but he matures in an unhealthy atmosphere, chemically and morally, since in every great city there is a cumulative increase of refuse in the air, in the street, even in the home. A saving grace of athletics may counteract for the boy some of these forces, but as President Elliott of Harvard truthfully says, it is absolutely impossible to preserve in health any family that resides uninterruptedly for two generations in a great city.

Now add to this subnormal condition of physical health, the stupidity of our ordinary public school teachers in selecting the educational burdens which they hope to bind on the shoulders of all the students in their "grade," and you have a condition of affairs which cries to Heaven for remedy—not in vain, I believe, if the members of this Section in season and out of season protest vigorously against what Mrs. General Lew Wallace rightly calls the "Slaughter of the Innocents." Perhaps the physical side of the question needs no more repetition to this Section, but just a word as to its psychology—a subject sadly neglected in all our medical colleges.

On this head let me quote from my master, Professor George A. Coe, to whom here I wish to make grateful acknowledgement for original work along this line: "Who of us," says he, "stops to think that puberty is the time of intellectual and religious flowering no less than physical?" "The years from 14 to 17 are especially those of hesitating, introspective conscience and intellectual thirst for the absolute"—facts to which little or no heed is given in our present system of education. These are

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the years of the establishment and regulation of puberty as well, and I am profoundly convinced that either process of development, the mental or the physical, and still more both, since they occur conjointly, require the most careful regulation of the youth's life at that time."

Has it ever dawned on the average city school teacher that such pupils are liable to serious physical and spiritual injuries arising from the mental and spiritual vagaries incident to the sexual adjustment of their lives? The average grade-teacher of our progressive city schools concerns herself with little that lies not in her grade. The one essential fact that is daily impressed on her pupils is that at any cost they must "pass" on final examinations, or be everlastingly disgraced. It may be, and generally is, true that these examinations consist of memorized repetitions of facts that are of no possible use in the future life of the child. There has been no intelligent effort on the part of the teacher to teach the child to think; to educate, to draw out and develop its budding powers. The process in the average public school is not education, but *farcement*, to borrow an old English word—a stuffing of undigested facts into unhealthy children, after the fashion of the geese of Strasburg. What I wish to insist on in this paper is that the modern method of public school education during the establishment of puberty is most hurtful to the future sexual and psychic health of the child. To quote again from Prof. Coe: "It is folly and worse than folly to assume maturity where maturity does not and can not yet exist. The result is over-taxation, worry, despondency, morbid conscience, bad temper and heightened liability to sexual temptation." All these things we know and have seen, and yet we keep silence because it is the fashion to bear them."

But all this, perhaps you say, is destructive criticism, which is vastly easier than to offer a better way. Granted! But, on the other hand, we shall never seek improvement until we grow dissatisfied with present methods; and if we can formulate just reasons for dissatisfaction our time has not been misspent.

Here then is our charge in the case of Puberty vs. the City Public School System, viz., The maturing child, for its perfection, needs active exercise, pure air and sufficient food. The present public school requires that pupils, irrespective of their physical condition, maintain an unnatural condition of quiet, in an unphysiologic posture for many hours each day. Add to this poor ventilation, oftener none or worse, and it is small wonder that the child grows listless, loses its appetite and gives proof of nerve tire on the proper physiologic testing. Moreover, many of these pupils, especially girls, attempt to take instruction in music at this time. Some time, I presume, the physiologists will explain to us why the study of music, especially in its earlier monotonous exercises, is so exhaustive of nerve force. But whether we understand or not the why and wherefore, the fact remains that a large percentage of menstrual irregularities occur in young girls endeavoring to become musicians in addition to their regular school work. The humble potato will sprout and send up long waxy stems, and attempt to blossom in a sickly, ineffectual way even in a cellar. Such is the menstrual life of the city girl, if she strive for place or position, and music is a brick—if you care to carry the comparison further—laid on the flower of menstruation. Hence, from the standpoint of one who loves his race, I dread the city music teacher, and hate the musical college if its work is taken in addition to forced school work.

Fellow judges, on the bench assembled, if it be true

that our city school takes from its pupils the air, appetite and vital force necessary to properly establish the functions on which the perpetuation of the race depends, then our city inhabitants are making a costly exchange, in spite of the gain in wider culture and information.

Culture, let us remember, originally meant the preparation of the earth for crops, hence Bacon speaks of the "culture and manurement of minds in youth." Manurement, certainly, our boys get in our public schools, but what of the crop? It has come to pass that in these latter days we build and endow agricultural colleges in order that our farmers may better know what sort of manure to use in their wheat fields, but any crude normal school graduate may, unquestioned, "spread her compost on the weeds of our children's minds to make them ranker." Herein is folly. A sound, well child is the best crop of the state. No price is too high, no care too great which insures such results. Are you satisfied with the harvest that is being garnered from our present public school methods? Is the average high school girl a pleasing commentary on the nineteenth century civilization? Our city boys and girls have disappeared, and in their stead we have raised a crop of self-conscious, short-sighted, round-shouldered, stunted, disagreeable prigs, who despise their parents and betters, and think that knowledge shall die with them. I am heart-sick for the old-fashioned, dirty, idle, vital girl and boy who knew intimately the joys of sunshine, field, flower, brook and bird, and—thank God—nothing of Miss Harrison's esoteric significance of bread and molasses.

In behalf of the state I call for an injunction against the present boards of education, which are sacrificing our children to our alleged civilization. It makes modern culture no less a Moloch to spell it with a large C and deck it with the flowers of our eloquence. The old brazen idol did its work quickly with the children laid in its arms, while the priests drowned their cries with timbrels and shoutings. We call our modern Moloch "Culture," and it shrivels and dwarfs the souls and bodies of our children while we shout to them the names of their cerebral convolutions, and cut ourselves with the knives of our self-conceit. The Assyrian Moloch had the head of an ox; the American Moloch has the head of that humbler animal which in the fable of Esop was carried by the old man and his two sons as a result of their super-civilization.

FURTHER OBSERVATIONS ON THE THERAPEUTICS OF THE CHLORID OF GOLD AND SODIUM.*

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One year ago Dr. Brower¹ read a paper before this Section, on the "Therapy of the Chlorid of Gold and Sodium," in the course of which he recommended it as an alterative and tonic, claiming for it, in properly selected cases, the power of increasing the percentage of hemoglobin and the number of red blood-corpuscles and renal elimination, and advising its use in secondary anemia, chronic interstitial inflammations, and in syph-

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¹ JOURNAL, Oct. 1, 1898, p. 754.