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THE MODERN TENDENCY OF THE MEDICAL ART.

In regard to the manner of conducting a thorough diagnosis of an impaired human constitution, Dr. Willard Parker, of this city used, in his lectures to the students of the College of Physicians and Surgeons, to make an appropriate comparison, likening the process to hunting up a thief known to be hidden somewhere in a large house. In place of running about, without system or plan, and looking carelessly about, the proper course is to submit each apartment of the house to a thorough and exhausting search, looking in all closets and recesses; and when sure that the thief is not in any particular room, the apartment should be closed, and the search commenced in another. So, in making a medical diagnosis, the first thing would be, for instance, to inquire into and examine the circulation of the blood, count the pulse, listen to the beating of the heart; then the respirations may be counted, the lungs sounded by percussion and auscultation, etc. All these may be normal, and then the digestion may be investigated; then the various organs of secretion, especially the liver; and if these are all found to be in working order, they may be considered as disposed of, and another section taken up, say, for instance, the nervous system: beginning with the brain, then the spine, the sympathetic nerves, etc. In proceeding in this or a similarly systematic manner, the skillful and acute physician is sure to find the disease, if it is not an imaginary one; even if the latter be the case, it is a disease of the mind, and has to be treated accordingly, sometimes merely with advice for the mind, sometimes with medicine for the body, each being adapted to the character of the patient.

This way of searching for a disease is eminently practical; but it must not be considered to be based on the old idea that a disease is like a thief or an enemy, trying to take possession of certain organs, and who must be driven out by drugs. In ancient times, many human ailments were actually attributed to personified evil beings, who could be driven out by incantations or ceremonies, and we find this belief still prevailing among certain races of savages; and we regret to say, even among certain classes of our civilized and enlightened peoples, there are some who believe in charms, and in magnetic and mesmeric manipulations. But, thanks to the light shed by recent thorough investigations in two important branches of biology, namely, physiology and pathology, more correct views now prevail among all educated physicians; and they now know that diseases are mere phenomena, proceeding from the constant and intimate relations of man with surrounding Nature; and in place of attempting to suppress such symptoms by the use of dangerous prescriptions, the properly qualified physician, knowing that every disease and symptom has a certain cause and must run a certain course, watches carefully, and, recognizing the all-powerful *vis medicatrix naturæ*, in place of interfering with Nature, he assists her efforts to save the sufferer. This is the true basis of modern enlightened medical treatment.

This rational way of considering a case shows also how absurd are the claims put forth on behalf of so-called specific remedies and the danger of treating with such nostrums the mere exterior symptoms, which may proceed from one of many different causes; and conversely, the same cause, acting on variously constituted individuals, will produce widely different symptoms. Thus, for instance, when a regiment of soldiers happens to become exposed to excessive cold and wet, a certain number will be laid up in hospital, but they will be afflicted with a variety of ailments. Those who are troubled with weak lungs will exhibit such diseases as bronchitis, cough, pleurisy, pneumonia, etc.; others will have merely colds in their heads, others rheumatism or even gout, according to their previous manner of living; in others the digestive organs will be affected, producing diarrhœa, etc. In most of these cases, drugs cannot possibly be of as much benefit as rest and careful, good nursing.

In considering the statistics of diseases and mortality in olden times, so far as such figures can be obtained, it is encouraging to find that, at the present day, the mortality of large cities, such as London and Paris, has enormously decreased, and many diseases which were once very fatal are no longer so. The decreased mortality is due to modern progress in hygienic science, which has led to sanitary measures being adopted in such cities, where formerly people lived under the constant influence of an atmosphere full of effete exhalations, due to imperfect drainage and the absence of cleanliness, a real hotbed of contagion. These sanitary improvements have resulted in the total disappearance of many diseases, such as the plague and scurvy, which used to be always present, more or less, in many communities, and frequently spread and traveled to others. Small pox, of which the ravages were such that at present it is difficult to form any idea of its former malignity and universality, has, thanks to Jenner's discovery, become comparatively rare; while other diseases, such as spotted fever, dysentery, fever and ague, etc., from which many persons formerly died, have lost their fatal virulence, and now are seldom the cause of death.

Medical science is now upon a new, unselfish, and noble career, and is aiding the introduction of sanitary measures by enlightening public authorities as to the best means of preserving the health of communities by anticipating and preventing disease; and it cannot be denied that society in general has been largely benefited by the progress of medical research, and by the labors of investigators in pathology and its kindred sciences, who have given the world the benefit of their continually increasing knowledge and insight into the nature of the ailments to which human nature is subject.

IDEATION IN UTERO.

It is admitted by all physiologists that the mother exerts a general formative control over the fœtus *in utero*. Hitherto the belief has been that this influence is altogether structural, even where it is manifested, not merely in physical resemblance, but also in active tendencies, disposition, and modes of thought and action. But there are manifestations of maternal influence which this hypothesis does not easily cover: for example, those strange, yet well authenticated, cases in which children have described or recognized places which they have never seen before, but with which the mother is familiar. Still more unaccountable has been the common and perplexing feeling which poets and speculative thinkers have held to constitute subjective evidence of previous existence—the feeling that a particular occurrence or locality witnessed or visited for the first time has been seen before—or the sensation that some particular act in the drama of life is but the repetition of something witnessed or performed in some unremembered state or period in the past. In many cases these sensations are, no doubt, vague reminiscences of dreams or equally unreal creations of the waking imagination: still, after this allowance is made, there remain instances which cannot be so accounted for. For these the most satisfactory explanation yet offered is furnished by a suggestion made in the *Lancet*, the other day, by Dr. Mortimer Granville.

It is well known that, for several weeks before birth, the vital organs are all in more or less full operation; also that portions of the brain are so active as to produce concerted muscular contractions and automatic movements; and there is no reason to suppose that the intimately related cerebrum is not likewise, to some extent, capable of action previous to birth. At any rate Dr. Granville contends, and with a good show of evidence, that, during at least six weeks or two months of the ordinary period of human life *in utero*, the brain is susceptible of passive ideation, or the reception of impressed ideas derived from the mother's mind.

There is abundant evidence that a lively though fleeting impression made on the mind of the pregnant mother, or a prolonged dominant thought or emotion, can so modify the nutrition of the child's brain as to fix on it a permanent shadow, so to speak, of that impression or mental state. Thus a child will in after years exhibit tokens of special dislike or dread of a particular animal by which the mother has been frightened during the later months of pregnancy, or will have an otherwise unaccountable antipathy to a particular person or article of food, or will unconsciously mimic through life the mother's moods or prevailing states of mind or temper during that critical period. In like manner, it is suggested that scenes or occurrences, deeply engraved or repeatedly forced upon the mind of the mother, may become fixed as images in the fœtal brain, while it is yet incapable of thinking; and in later years, when they are vaguely recalled by something similar, an undefinable sense of repetition is felt. Memory, like education, thus has its beginning back of birth; and as the mother's structural and emotional characteristics are echoed in the child, so sometimes her special thoughts and ideas may be. The suggestion is a fertile one, and furnishes a clue to more than one of the mysteries of heredity.

INEBRIETY AS A DISEASE.

Ethically, there is but one view to take of inebriety; and that necessarily involves unsparing condemnation of the practice, and earnest endeavors on the part of society to reclaim those addicted to it. But Science, on the other hand, draws a broad distinction between drunkenness as a vice and drunkenness as a disease. The man who drinks for pleasure, it holds, may look for benefit in the counsels of others or in his own strength of will; but he who drinks because he cannot help it, being led by an irresistible impulse, is a sick man, and needs not a temperance pledge but a physician. It is in this last aspect that we propose to consider the assertion, quoted from a daily journal, that "intemperance is a growing vice, bearing constantly heavier upon the rising generation," and incidentally the subject of inebriety generally in this country.

Dr. George M. Beard, of this city, not long since delivered, before the American Association for the Cure of Inebriates, an address on the "causes of the recent increase of inebriety in America," in which he embodies many of the conclusions which medical men have reached relative to the disease superinduced by alcohol. Inebriety he holds to be a functional disease of the nervous system, and should be treated on the same principle as other nervous diseases. It becomes classed, therefore, with dyspepsia and neuralgia; and like neurosis, it possesses periodicity, and—the fact is a startling one—is hereditary. When hereditary, it is all the harder to combat; in conformity with the laws of inheritance, it may take the place of other disorders, or may, in turn, lead to them; and it often conduces to various forms of insanity. The periodicity of the desire for liquor, the feeling which impels the drunkard who has abstained for a certain period to enter upon a "prolonged spree," is too well known to need more than mere reference.

It is a curious and somewhat paradoxical circumstance that, while drunkenness as a vice—public opinion to the contrary notwithstanding—is actually decreasing, the disease of inebriety is on the increase. "There never was a time," says Dr. Beard, "in the history of our race, when in proportion to the population there was so little intemperance and so little drinking among the higher classes as to-day." The nervous systems of Americans are now such that we cannot bear alcohol

as our fathers could; and there is no doubt but that the efforts of reformers and the general progress of culture has exercised a potent effect toward temperance. Cases of drunkenness were rare among the thousands who visited the Centennial. But on the other hand that very heightened nervous sensitiveness, which prevents our indulging in alcohol for pleasure, equally heightens the susceptibility to nervous diseases; and of these, inebriety not being considered, it is well known the increase of late years has been marked.

It is not necessary here to repeat the facts, which every observer of American habits has noted over and over again, in order to prove that we live too rapidly. For the pursuit of wealth, we concentrate an enormous quantity and intense quality of work; we carry the seriousness of labor into our amusements; we crave the sensational and the fever of constant excitement; and under the terrible tax put upon it, the nervous force necessarily weakens. Thus, in accordance with all analogies, nervous diseases increase with the progress of modern civilization; and hence the greater prevalence of the nervous disease known as inebriety during the present time.

Dr. Beard further supports his views by inductive reason based upon extended examination. By comparing the higher and lower classes, he shows that, among the latter, such functional nervous diseases as sick headache, neuralgia, and hay fever are wanting: while the vice of drunkenness abounds in its most revolting aspects. Comparing the prevalence of functional nervous maladies now with the same half a century ago, he points out various diseases, such as hay fever, now common but then unknown. He also suggests various refinements in nervous troubles, which are peculiar to the present, but not to an earlier, period. Going back still further for purposes of comparison, he shows that "not only were many of the nervous maladies, so prevalent now quite unknown three centuries ago, but those which are common to those eras and ours are far less abundant than now." Lastly he points to the multiform nervous disorders now found among women.

There is no specific for inebriety. It is a constitutional ailment, to be treated constitutionally. It is not necessarily due to alcoholism. Chloral and opium inebriety are already becoming dangerously common; and there are hundreds of other stimulants and narcotics to which resort may be had. The only remedial course is to place the inebriate where alcohol or the provoking cause of his ailment cannot be had; for the sight of it, or the smell of it, will excite all the desire for it. To this treatment, sedatives, tonics, and nutritious food to build up the system may be added. To persons having any tendency to inebriety, the only safe course is absolute abstinence during early life. As regards the human race, the disease finds its remedy in itself; for degeneracy in any direction cannot go on indefinitely; and after any qualities, good or bad, attain a certain stage of growth, they cease to reproduce themselves. The excessively feeble and nervous stocks must perish, and the fight for existence be maintained between the less feeble and less nervous and the well balanced and strong; and thus, by a process of successive eliminations, a race may be developed that shall be every way adapted to the complex conditions of a high civilization.

A NEW HUNTING GROUND.

With the rapid extinction of the large game of our Great West, and the scarcely less rapid disappearance of the once numerous herds of South Africa, there remains but one country with virgin attractions for the modern Nimrod. That is also the highest, and in many respects the least known, region on the globe—the lofty plains of Thibet.

The first scientific traveler to penetrate that country, so zealously guarded from European invasion by both man and Nature, is the Russian officer, Colonel Prejevalsky, who, in the triple capacity of explorer, zoologist, and sportsman, spent three years in the hitherto unexplored wastes of Mongolia and Northern Thibet, crossing the desert of Gobi twice and traveling in all upward of 7,000 miles. Of the additions thus made to our knowledge of the geography of those strange regions, it is not our purpose here to speak, nor especially of the rich collections of plants and animals which he brought home—a large portion of them new to Science—though 5,000 specimens of plants, including a hundred new species, 37 large and 90 small mammals, 1,000 birds, embracing 300 species, 80 specimens of fish and reptiles, and 3,500 insects furnish a record of scientific work well worthy of minute description. Our present purpose is rather to notice the claims of this new land to the attention of the adventurous huntsman in search of large game.

Chief among the wild beasts of Northern Thibet is the wild yak, which Colonel Prejevalsky describes as an animal of extraordinary beauty. When full grown, the male yak measures eleven feet in length, exclusive of his bushy tail, which is three feet long. He stands six feet high at the shoulder hump, and weighs from ten to sixteen hundred weight. His head is adorned with ponderous horns, from two to three feet long, and sixteen inches in circumference at the root. The body is covered with thick black hair, a deep black fringe hanging from the flanks almost to the ground. The females are smaller and less hairy, with shorter and lighter horns. The yak is enormously strong, but has a small brain and comparatively little intelligence. His sense of smell is very keen, but his sight and hearing are defective. The females, young bulls, and calves assemble in vast herds, like our American bison, to protect the young from wolves. The herds make long journeys for pasturage; and when in danger they form a phalanx with the calves in the center, some of the full grown males advancing to reconnoitre. The old bulls do not journey with the herds, but have their fixed abiding places, always selecting the coldest spots they can find for resting, and preferring to sleep on snow in the shadow of some cliff. At breeding time they fight savagely with each other, all the old bulls killed by Colonel Prejevalsky bearing numerous wounds received in these fierce combats.

Wild yak shooting is exciting and dangerous sport, as the bulls charge when wounded, and are very hard to kill. Fortunately for the hunter, their courage exceeds their decision in attack, giving the marksman ample opportunity to aim. On one occasion Colonel Prejevalsky, supported by a Russian companion and a Cossack servant, fired volley after volley at an old bull, who stood his ground until it was too dark for the hunters to continue the fight. The next morning he was found dead with thirteen balls in his body and three in his head. The flesh of the cows and young bulls is excellent eating; but that of the old bulls is "indescribably tough." The wild yak is peculiarly characteristic of the highlands of Thibet, where he must be seen to be appreciated. There, on the vast plains, 1,500 feet above the sea, swept by violent storms and seamed with rocky ridges, as wild and barren as the surrounding desert, these animals swarm in such numbers that it is a marvel how or where they find subsistence. They also wander to the confines of Siberia, and are said to haunt the mountain ranges of Kan-su.

Another characteristic animal of the highlands of Asia is the argali, or mountain sheep. Colonel Prejevalsky often asked himself which was the finer beast, this or the yak; and the best answer he could give was that each was perfect in its way. The mighty size of the yak, his ponderous horns, long fringe, bushy tail, and jet black color, make him a magnificent specimen of the brute creation. On the other hand, the gracefulness of the argali, his great curving horns, snowy breast, and proud bearing, entitle him to rank among the noblest creatures of the desert.

The white-breasted argali (*ovis Poli*) is found only in Northern Thibet. It frequents the more elevated plateaus, avoiding steep and rugged mountains, and may often be seen feeding with the wild asses and antelopes in the ravines. It is an exceedingly wary animal, though scarcely ever hunted, the matchlocks of the natives being altogether useless for this purpose. The more common mountain sheep of the highlands of Central Asia (*ovis argali*), ordinarily prefer the most rocky places, only descending to the valleys in early spring to graze on the young grass. Their senses are keen, but they lack the wariness of their Thibetan rival. The poorly armed Mongols and Chinese are unable to kill them from sheer lack of skill, so let them alone. They are easily stalked; and when one is killed the rest remain with it, regardless of the approach of the hunter. They will jump from considerable heights, always alighting on their feet. The stories about their throwing themselves down steep precipices, and alighting on their massive horns, Colonel Prejevalsky pronounces pure fiction.

A far more attractive game for the sport-loving naturalist is the wild camel which abounds in Northwestern Tsaidam, where the country is so barren and so destitute of water that the camels have to go seventy miles to drink. Reports of these rare creatures have reached the outer world time and again, but European naturalists have always doubted their truth; and though Colonel Prejevalsky was unable to penetrate their country, owing to want of money, the accounts he received of them were so direct and convincing that there remains little, if any, doubt that they are a distinct variety which has never been brought under the subjection of man. They are hunted in the desert of Tsaidam for their delicate flesh and fine wool, and are described as smaller and more slender than the domestic camel, with smaller humps and more pointed noses. They are long-sighted and keen scented, but are unable to see well at short range. That they are not the descendants of camels escaped from domestication seems altogether probable from the circumstance that the latter are unable to procreate without assistance; besides, the new-born domestic camel is the most helpless creature imaginable, and has to be lifted by hand and placed under the mother's teats.

In the same region (Western Tsaidam) troops of wild horses are occasionally seen, but are more numerous in the vicinity of Lob-nor. They generally go in large herds, are very shy, and when frightened continue their flight for days, and do not return to the same place for a year or two. They are never hunted by the Mongols and Chinese, owing to the difficulties of the chase. Their color is uniformly bay, with black tails and long manes hanging down to the ground.

Another interesting animal of this quarter is the kulan, or wild ass, which ranges over Northern Thibet and Tsaidam, but is most abundant on the steppes of Koko-nor. In size and external appearance, the kulan resembles the mule. They keep mostly in troops of ten to fifty, though larger herds, sometimes several hundred in number, are occasionally seen about Koko-nor. Each lot of mares is led by a stallion, whose following depends on his age, strength, and courage. Their sight and hearing are excellent, and they are very hard to kill on level ground. The best time to stalk them is while they are drinking. They are hunted for their flesh, which is considered a great delicacy.

The antelopes of Mongolia and Thibet are small, but numerous and attractive. Specially characteristic of the eastern part of the desert of Gobi is the swift-footed dzeren (*a. gutturosa*), which was seen also in Western Mongolia and around Lake Koko-nor. The dzeren are most frequently seen in small herds; but where the pasturage is good, they collect in droves of a thousand or more. Like the Mongols, they migrate in search of food, traveling great distances, especially in summer, when the drought drives them to the rich pasture lands of Northern Mongolia. They belong exclusively to the plains, avoid hilly country, and shun thickets and high grass, except in May, when the does seek the covert to conceal their young They are about the size of goats; they have great intelligence and keen senses, and are marvellously swift. They are hard to hunt, being wary, and extremely tenacious of life. Even with a broken leg, they can run faster than a horse can gallop.

Another species (*a. subgutturosa*), called by the Mongols the kara-sulta or black tailed, inhabits Ordos and the desert of Gobi as far north as the 45th parallel of latitude, and as far south as Kan-su and the saline marshy plains of Tsaidam. Unlike the dzeren, it avoids rich pasturage, and selects for its habitation the wildest and most barren parts of the desert, or small oases in the midst of sand drifts. The explorer often marvelled to find them in places where no water could be found for sixty or seventy miles. They generally go in couples or in small detachments: in winter sometimes fifteen or twenty may be seen together. Their color is so like that of the sand and yellow clay that they can scarcely be distinguished, except when in motion or when standing on the summit of a hill. They are more shy than the dzeren, and harder to kill.

In the Thibetan highlands, two remarkably beautiful antelopes were found; one, called the orongo (*a. Hodgsoni*), being about as large as the dzeren; the other (*a. picticanda*) one of the smallest antelopes known, standing only 2 feet 4 inches high and weighing no more than 36 lbs. The orongo has a beautiful body, set on long slender legs, and elegant black horns standing vertically above the head. It loves the valleys and rolling plains, where water abounds; and where pasturage is abundant, they were seen in troops of several hundred. When trotting, the legs of these swift and graceful animals move so quickly that at a little distance they are invisible. In their flight, the males follow the herd, while with the dzeren and kara-sultas the males take the lead. They are quite fearless, and are easily approached, though, like all antelopes, they are hard to kill, and will run a long way after receiving a wound. The orongo is held sacred by the Mongols and Tanjutans, and the horns are much prized by pilgrims and conjurors. Colonel Prejevalsky mentions as a prevalent superstition the belief that sometimes the orongo is a veritable unicorn, with a single horn growing vertically from the center of the head. It is quite possible, however, that single horned orongos may not be infrequent, as these pretty creatures are very pugnacious, and may occasionally lose a horn in their fierce battles.

The smaller antelope is the swiftest and most graceful of the antelopes of High Asia. It frequents the elevated plains, but prefers mountain valleys where water is plentiful. It goes in small herds and is exceedingly wary. Its swiftness is amazing; it bounds along like a rubber ball, and when startled seems absolutely to fly. Both this and the orongo are swift runners over smooth ice.

Among the mountains of In-shan, Colonel Prejevalsky had some fine sport hunting a little mountain antelope which inhabits the wildest and most inaccessible crags of the alpine zones. Its favorite and almost exclusive grazing places are the alpine meadows and small grassy spots between the rocks. It is extremely timid and wary, and, when startled, seeks safety in rapid flight, scaling the crags with chamois-like skill and speed. Colonel Prejevalsky declares that one, which he had startled, suddenly sprang from a rock a hundred feet high and got away apparently unharmed. The thick fine coats of their winter skins are much prized for clothing.

Second Bridge Between New York and Brooklyn.

The projectors of this proposed bridge over the East River, between New York and Brooklyn at 77th street, by way of Blackwell's Island, have, in response to the invitation sent out, received ten separate designs and estimates from as many engineers. Ground will be broken as soon as a plan shall be decided upon. The preliminary specifications call for an approach on the New York side of 4,580 feet, 1,000 feet of which is to be in form of a tunnel extending from Fourth to Lexington avenues. From the end of the tunnel, an iron superstructure, curving to the center of the blocks between 76th and 77th streets, and thence direct, leads to the river. From the pier on the brink of the river, Blackwell's Island will be reached by a single span of 734 feet. An iron structure 700 feet long will then lead over Blackwell's Island, and the channel between the island and the Long Island shore will be spanned by a single arch of 618 feet. The shore approach on the Long Island side will be 3,900 feet in length. This will give in all a total length of 10,532 feet, or nearly two miles. A single track tramway will run across the bridge. There will be, in addition to the main approaches, two auxiliary ones, one from Avenue A on the New York side and the other from Vernon avenue, Long Island city. The spans are to be 135 feet above mean tide water. Double passenger elevators are to be placed at the piers on each side.

In order that a wedge key or collar may be safe against slipping out of its seat, its angle of obliquity ought not to exceed the angle of repose of metal, upon metal which, to provide for the contingency of the surfaces being greasy, may be taken at about 4°.—*Rankine.*