Fundamental Principles of Health

By ALBERT S. GRAY, M. D.

EUGENICS.

Lester Ward declares that aversion in the relations between man and woman means that their union will result in some defect or imperfection in the offspring. And our knowledge of the laws of heredity and of environment prove this must be true.

Environment counts for fully 90 per cent in the development of the individual, and a family distraught by bickering, misunderstanding, and the lack of mutual consideration and forbearance, cannot well be considered favorable environment in which to develop normal children.

Sex selection and the survival of the fittest appears to have been responsible for the course of human evolution up to the time of the ancient Greeks, and if the fragments of that early civilization indicate anything, obviously they indicate a plane of pure and logical thought we have yet to attain.

Sex selection means the choice of superior mates, and therefore the production of superior qualities in posterity. Free, natural selection has been the uplifting power that has developed and conserved the race. The primitive selection inspired by natural instinct and maintained by strong arms and a stone club undoubtedly bred men and women relatively superior to many of today, and vastly superior to those certain to result from a like number of generations with choice largely governed by the power of property accumulated through more or less devious methods.

What is there in all recorded history that we can point to in evidence of our ability to improve on the forces that brought us from the primal cell to Thales, Anaximander, Hippocrates and Euclid, intellects that still actuate the minds of men after more than twenty centuries?

Granting that beings vary among themselves generation after generation, granting only the fit survive, granting the survivors tend to transmit their qualities, then it follows that evolution is now going on and that we are either ascending or descending. We know it to be within our power to go in either direction, and therefore that we can develop a vastly superior and a happier race in a few generations if we will to do so. But what rational steps are being taken to this end? We laugh at the childish efforts to stay natural forces by imperial or legislative edict recorded in earlier ages; but are recent legislative enactments in the name of eugenics any more logical or do they promise to be any more effective than Emperor Caligula's command that the tide cease to rise?

The simple and disagreeable truth is that modern business has destroyed the fundamental principle of natural selection. Making women economically dependent on men eliminates the lifting power of woman's choice—and there can be no choice without freedom and no freedom except it be grounded in economic independence.

Because of woman's dependence and humanity's mental, sympathetic and social refinements, the fundamental principles of natural selection and the "survival of the fittest" through the struggle for existence have been forced into the background, creating an artificial condition certain to be corrected by self-destruction. Hence this cry for eugenics.

Eugenics cannot become a vital power in any nation until a sufficient body of the people become imbued with the true principles, and this is a condition impossible to attain through legislation, and is only to be achieved by individual effort and mental and physical development. No sane parents will knowingly deliberately condemn their children or their children's children to poverty, the insane asylum or worse; and the means of prevention lie in knowledge.

If every child were given a practical working knowledge of physics, chemistry and biology, studies that furnish material for true thought and fundamental understanding, the present unhealthy condition would automatically correct itself, and there would be no more talk of eugenics.

HEREDITY.

Irving Fisher in United States senate document No. 419, "National Vitality, Its Wastes and Conservation," says: "Human vitality depends upon two primary conditions: heredity and hygiene, or conditions during life." And Metchnikoff points out that part of the supposed inheritance of longevity may not be inheritance, but similarity of environment.

Nature's movements are on so vast a scale and contain so many complex and never to be understood forces that balance and counteract each other, that it now seems incredible that the world for so long should have accepted the authority of the past in a matter as vital to human happiness as the old idea of heredity. Fortunately we have finally evolved into the understanding that the final court of appeal is observation and experiment, and not authority, however eminent it may have been in its day and generation. The old axiom, "Like produces like," is now known to be incorrect. No two things can be produced exactly alike, and we know that ability to change is the evidence of life.

A farmer selects as a fine ear of seed corn one in which each kernel conforms in general type to a desirable ancestor, and from this ear he takes the seed for a new crop. Three factors enter into the results from the planting of this seed—heredity, climate, soil. Granting the first two factors to be ideal, there are ten elements required in the soil to produce a development equal in type and vitality to the parent seed. Oxygen, hydrogen, nitrogen, carbon, phosphorus, calcium, sulphur, potassium, iron and magnesium are the necessary elements, and the absence of one of these ten chemicals in necessary amount will determine whether there shall be a partial or even a total crop failure. Corn can be fed and bred up or starved and run down. One community will average ten bushels per acre and another will average 100 bushels per acre. By the intelligent adjustment of all the factors, 239 bushels per acre have been produced.

The same principles and factors apply to the animal kingdom, including man. Heredity determines the type, but environment governs what the individual shall be. In common with the corn of the field and with all other forms of life mankind reacts to the universal laws of change and modification; and this is the hope of humanity. There being no spontaneous generation of the human species, it follows that all are of equally ancient lineage, and investigation will show only a little way back a material taint in the line of the best, judged by present day standards. This is proof that in all life there is an inherent tendency to adapt and advance.

The fundamental problem of man is to stay here on earth—"We don't know where we are going, but we're on the way," and we might as well be comfortable about it. An intelligent application of the laws of heredity as laid down by Mendel, coupled with a rational adjustment of the individual to environment, could make a new race in two generations. We may be ascendent or decadent just as we see fit.

Type is a matter of heredity and counts for about 5 per cent of the individual—environment covers the remaining 95 per cent. A phonograph record disk may be large or small, depending on the type of mold selected to make it. Its capacity is determined by the mold, but whether it shall receive and give out a meaningless jangle of discord, a masterpiece of harmony, or a soul stirring call to human achievement, depends on the impression received after its creation. Whether it be used with intelligent purpose or marred, cracked and scratched by indifferent handling depends on unknown factors. And man, too, is the product of the sum of the impressions received in his experience.

Like the corn plant, man too is the product of three factors covered by the term anthropological, telluric, social, and granting the first two to be ideal, the third involves a complex mass easily accounting for most break-downs. The human body is made up of 14 elements—oxygen, hydrogen, carbon, nitrogen, phosphorus, calcium, sulphur, chlorine, sodium, iron, potassium, magnesium, silica and fluorine, and to attain perfect development must be supplied with all these elements in suitable quantity.

The now prevailing standard of food values which measures the heat units produced from food and completely ignores all other elements and factors, is not only woefully inadequate in the light of modern science, but constitutes a grave menace to the health, to the morals, to the sanity, and to the life of any people.

Dainty Dish.

She was a young missionary to China, not yet quite proficient in the language of the country, and was giving a little dinner to some friends. During the course of the meal, she asked the servant to bring in some fruit—at least she thought she did.

He objected; she insisted; he refused; she grew angry. At last he left the room.

Presently he returned, carrying a large platter, which he placed before her with an air of supreme contempt. On it, carefully arranged, were her husband's every-day trousers!—Youth's Companion.

BIG CAT DROPS IN FOR HIS DINNER

Also Monkeys and Other Lords of the Venezuelan Jungles Are Visitors.

ARE NOT MOLESTED

When They Invade Explorers' Camp in Venezuela There Is None to Challenge Them—Natives Spend Very Little on Clothes.

Minneapolis, Minn.—Members of the senior class in geology at the University of Minnesota listened to an impromptu lecture recently in which they heard one of their former classmates tell how it felt to have panthers, tigers, monkeys and other lords of the Venezuelan jungles drop into camp for lunch without notice, to be greeted by people who beat the high cost of living by cutting out clothes and are armed to the teeth with rifles and revolvers when going out to see the country. The talk was given by J. W. Lewis, graduate of the school of mines in the class of 1912, who was asked by Dr. W. H. Emmons, head of the geology department, to talk to the class about his South American experience.

"I hadn't been in the country more than half an hour," said Mr. Lewis, "when I was forced to the unpleasant expedient of dodging bullets. We had just landed and I was opening my trunk in the custom house when I heard shots in the hall and saw two men busily shooting each other up.

"I didn't know whether to jump into my trunk or out of a window at first. But the trunk didn't look bullet-proof, and the window I couldn't reach, so I resorted to the leeward side of a post. Luckily a troop of native police arrived on the scene in time to save the lives of all concerned."

Mr. Lewis said he is in the employ of an American company that is exploring the country to locate the areas where oil may be produced on a commercial scale. Some oil wells have already been dug, he said, but no oil has been produced for shipment yet. Indications are, he said, that the country will in a short time be one of the great oil-producing areas of the world.

"The people," said Mr. Lewis, "are a mixture of Spanish, negro and Indian. In the part of the country where we were the natives had never seen white men. They were amused at our appearance, which, no doubt, seemed crude to them, but treated us with the kindest consideration. When we went out into the jungles we were always armed with rifles and revolvers to protect ourselves from the cannibals and the wild animals that frequent those places.

"Panthers, tigers, lions, monkeys and other jungle dwellers are plentiful. I remember one night a panther broke into our camp and carried away

Got His Dinner.

a half-dozen chickens we were counting on for a feast. I heard the noise, but I didn't bother to question Mr. Panther's right to anything we had in stock."

Mr. Lewis said the natives don't run very strong toward style shows. As a matter of fact, one of the ingenious methods they made use of to cut down the high cost of living is to cut out the clothes. A hat and a breechcloth is all they need.

Mr. Lewis said the aigrette which is prized so highly by the women in civilized countries is common there. He said he shot many of the birds. During his travels through the country Mr. Lewis said he saw the oldest church on the American continent. It was built in 1540 at Coro, Venezulea, and is in an excellent state of preservation.

Mr. Lewis told his colleagues he is enthusiastic about the country and that he likes the life there. He has been to visit his parents, who formerly lived in Minneapolis, but who are now at Los Angeles. After a few days in Minneapolis he will leave for New York, thence he will sail for Venezuela.

CONCEALS OPIUM IN SHOES

Chinese in Frisco Trapped With Drug by Pharmacy Inspectors of the State.

San Francisco.—Two inspectors of the state board of pharmacy while passing through Chinatown observed that a well dressed Chinese had a way of taking his shoes off whenever he stopped to speak to an acquaintance. The inspectors knew a lot about Chinese customs, but the shoe business was new to them. They accosted the Chinese and waited for him to bare his foot. He did not, whereupon the inspectors seized him and took off his shoes themselves. In the footgear they found steel plates concealing dozens of opium pellets.

WHAT FLAG DAY REALLY MEANS

PHOTOS BY FRANK FOURNIER

CELEBRATING FLAG DAY

GLORY'S BANNER, FREEDOM'S FRESHEST FLOWER

BATTLE SCARRED FLAGS

IT IS now 138 years since the United States of America was composed of 13 states, the greater number of which had a population of little more than that of the average city of today. Those 13 states have grown and multiplied until there are now 48 states, with a population of nearly 100,000,000 of the most virile and strongest race of men on earth. It has been demonstrated many times in the past century that the struggles of the patriots of 1776 were not in vain. The words "United States of America" are an inspiration and a help to the oppressed of all lands. The Union gleams out through the world as a gigantic monument of freedom, and the lowly and persecuted of all nations have their eyes turned toward America with the hope that some day they may reach the promised land.

The American flag is the oldest flag among the nations of today. It antedates even the present emblems of the ancient empires of China and Japan. The Star-Spangled Banner has a history unlike the flag of any other people. It is older than the present flag of Great Britain, which dates from 1801; it is older than the German empire standard of 1870; older than that of France—1794—or that of Spain—1785.

The first legislative action of which there is any record concerning the design and adoption of a national flag was taken in a resolution of congress at Philadelphia on June 14, 1775, but it was not until October or November of that year that a committee of three—Benjamin Franklin, John Adams and Roger Sherman—met in the old city of Cambridge and entered upon their duties. After long deliberation, this committee adopted a design consisting of the king's colors—the crosses of St. George and St. Andrew—with 13 parallel horizontal stripes, alternate red and white. A most strange and unfortunate selection it would seem.

The flag was unfurled for the first time over the camp of the Continental army at Cambridge, on the 2nd day of January, 1776. When the ensign was first displayed at Cambridge, the British regulars assumed it was intended as an indication of submission by the 13 states to the king, whose speech had just been sent to the Americans. The comment of the British Register of 1776 on the new standard is interesting: "The rebels burned the king's speech and changed the flag from a plain banner to one bearing 13 stripes, as a symbol of the number and union of colonies."

Isabelle Worrell Ball is the woman who made the American flag her life's study. She is the daughter of a veteran of the Revolutionary war and the founder of Flag day, which is now observed all over the country. Her father was Capt. James P. Worrell, who served through the Civil war, and she numbers among her relatives many of the heroes of both wars. Many years ago Mrs. Ball became convinced that the real history of our flag was unknown. She determined to unravel the tangled skein, and give to posterity the true history and evolution of the American flag.

"It was suggested by early writers that George Washington's coat of arms was the model for our flag of today," said Mrs. Ball. "These statements are supported only by tradition and legend, as all my search has proved that Washington was not egotistical enough to present his coat of arms to the nation as a model for its flag. I have delved into history as far as it is possible to go. I have examined many manuscripts, and have separated tradition and legend from facts, and it is my belief that Washington never thought of his coat of arms as a model for the flag. In fact, there is grave doubt that Washington had anything to do with the designing of the flag at all.

"A sentence from one of Washington's own letters seems to me to clinch this statement. Sir Isaac Heard, an eminent writer of the early days, wrote to Washington concerning his coat of arms, which appears upon the doorway and mantels of the old Washington manor house in England. To this inquiry Washington replied on May 2, 1792:

"'This is a subject to which I confess I have paid very little attention. The arms inclosed in your letter are the same that are used by the family here.' As will be seen, this was a letter written a decade after the close of the Revolutionary war, and nearly two decades after the adoption of the Stars and Stripes by the congress of the United States. If Washington, at that late date, had paid little attention to his coat of arms, he certainly paid less in his younger days, and especially at a time when he was surrounded by enemies, malignantly persecuted by them, and was naturally deeply engrossed in the army and the preservation of the new-born nation. I do not find in all of Washington's writings a single allusion by him of any of his contemporaries that his coat of arms was used as a model for the flag.

"The evolution of the flag was gradual and undoubtedly grew out of the desire of the people who had come to this country to get away from the tyranny of Old World monarchs. Of course, the first flag in this country was the red and yellow flag of old Spain, brought over by Columbus. The Cabots, with other discoverers of England, planted the cross of St. George up around Newfoundland. Pedro Reinal, for the Portuguese, planted the five-spotted blue flag of that then great maritime nation. Henry Hudson, coming here for the Dutch, brought the yellow, white and blue flag, under which he sailed up the Hudson river. This flag was the flag of the Dutch East India company. These may be considered the four discovery flags.

"England dominated the country, and the English colors were really the last as well as among the first to dominate the destinies of the evolving nation. The cross of St. George, with the added cross of St. Andrew, and later on with the cross of St. Patrick, was the very last flag to be supplanted by the Stars and Stripes.

"The people of America, with growing contempt for Old World flags, fabricated many of their own. Some of these were very odd, and without exception, all of them were very ugly. This was true until 1620, when the Mayflower carried the St. George's cross, but those stern old Puritans protested against the use of the cross upon the flag, believing it to be sacrilegious, and in every way they could, used other devices and designs, only to bring down upon themselves the wrath of the king's officers in the colonies. The first evidence of this was when a Mr. Endicott, mutinying against the cross, concluded to cut off one end of it. Roger Williams, for some reason, probably just to get a whack at one whom he disliked, complained of this. The king's officers took it up, and after a long discussion, decided that Mr. Endicott had been guilty of lese majeste, although that term was not known in those days. He was deposed from office and a penalty imposed that he should not hold office again for one year, thus putting an end to the flying of any flag other than that bearing the St. George cross.

"For a long time a plain red flag was carried by an organization called the Sons of Liberty. Following this was a blue flag with three crescents, another with two, and still another with one. Washington himself in 1775 suggested a white flag with a pine tree, and this is only another proof that the story of Washington's coat of arms was false. About 1775 a striped green and yellow flag was carried by one of the militia companies. In January, 1775, the first red and white-striped flag was adopted. This was known as the Cambridge flag, and consisted of 13 alternate red and white stripes, with the king's colors then consisting of St. Andrew's and St. George's crosses on a blue field.

"Later a Colonel Gadsen proposed to congress our first naval flag. This was a great big yellow flag, with a snake coiled up in the center. It hung over the head of the speaker for some years and then went out of existence. Following this came flags of red and blue stripes, and red and white stripes, each without a field, and each with snakes in them. There were pine tree flags galore. There were flags with badgers, flags with anchors; in fact, any old thing except a St. George's cross seemed acceptable to the colonists struggling for light in the darkness. In 1776 the Rhode Island colony adopted a flag of 12 white stars on a blue field. This is the very first time stars appeared in the flag.

"From the date of the Declaration of Independence and for a year or more afterward the colonies used almost everything that flies in the heavens or swims in the water or grows on land as a symbol for their flag. Finally, one bright day in June, with no father and no mother, Old Glory was born. There is not a word or record of any kind to show who designed the flag, who presented the resolution, or how it ever got into the congress of the United States. The fact is simply recorded as follows:

"'Resolved, That the flag of the 13 United States be 13 stripes, alternate red and white; that the Union be 13 stars, white in a blue field, representing a new constellation.'

"So far as the vote is recorded in congress it was unanimous, and that is how the flag was born.

"About this time the great seal of the United States came into existence. On July 4, 1776, Benjamin Franklin, John Adams and Thomas Jefferson were appointed a committee to prepare devices for a great seal of the nation. This committee reported on August 10 of the same year and recommended a design to consist of a rose of red and white for England, a thistle for Scotland, a heart for Ireland, a fleur-de-lis for France, an imperial eagle in black for Germany, and a Belgian lion for Holland, the idea being to commemorate the countries from which the states had been peopled. In addition, it was intended to have three escutcheons linked together by a chain, and each of these chains was to bear the initial of each of the 13 independent states. Then there was to be a Goddess of Liberty in corselet and armor, with spear and cap and a shield of the states, with a goddess of justice bearing a sword in her right hand and in her left a balance. In the corner provision was made for the eagle of Providence in a triangle, with the motto, 'E Pluribus Unum.' On the other side of this unique seal was Pharaoh in an open chariot, with a cross and sword, passing through the divided waters of the Red sea in pursuit of the Israelites. Moses was there, and the pillar of fire, with the motto, 'Rebellion to tyrants is obedience to God.' This design was not adopted.

"In March, 1779, another committee was appointed, and the report they made for a great seal was worse than the first. On June 13, 1782, however, a William Barty of Philadelphia proposed practically the present coat of arms, which was finally adopted after being modified by another committee."

The story of John Paul Jones is intimately associated with the story of our first flag. The same congress that created the first flag appointed John Paul Jones to command the Continental ship of war Ranger at the same time. When the flag was prepared and the Ranger was about to go forth on her lonely adventure the naval committee made the commander the first official present of the flag of the United States.

The achievements of the Ranger are a matter of the most stirring events of our history. All the world knows how, in 1777, Jones made such gallant use of the Ranger and kept the shores of England and Scotland in constant terror.

The first military incident connected with the new flag occurred on August 2, 1777, when Lieutenants Bird and Grant invested Fort Stanwix. The garrison was without a flag when the enemy appeared, but the patriots soon supplied one very much on the pattern just adopted by the Continental congress. Shirts were cut up to form white stripes, bits of scarlet cloth were joined for the red, and the blue ground for the stars was composed of a cloth cloak belonging to Capt. Abraham Swartout, who was then in the fort. Before sunset this curious mosaic standard, as precious to the beleaguered garrison as the most beautiful wrought flag of silk and needlework, was floating over one of the bastions. The siege was raised on August 23, but it is not known what became of the improvised flag.

In his statement to Governor Trumbull, August 21, 1777, of the occurrences at Fort Stanwix, Colonel Willett mentions as one of the results of his sally from the fort that he captured and brought off five of the enemy's colors, the whole of which, on his return to the fort, were displayed on the flagstaff under the impromptu Continental flag.

An Overcrowding.

Apropos of the pitiful overcrowding of the slums, J. G. Phelps Stokes, the millionaire social worker, said in a recent address in New York:

"Let me illustrate our overcrowding with a story.

"Three pretty girls of fourteen or fifteen talked as they sat making artificial flowers about what they'd do if they each had a million dollars.

"'I'd buy a house at Coney and live there all the year round,' said the first girl.

"'I'd buy automobiles and diamonds and live in Europe,' said the second.

"The third little girl girl, heaving a sigh of divine content at the thought, said:

"'I'd sleep alone.'"

Night Aeroplane Scouting.

Night scouting by aeroplane which has never yet been attempted, and is not likely to be effectively carried out before 1915, is one of the possibilities of the early future, writes Brigadier-General Stene in the professional journal of the Royal Artillery. Most of the prize flights in 1913 (he recalls) have had to be competed for between sunrise and sunset, a very necessary limitation; but in Germany this restriction was withdrawn last year, and its withdrawal resulted in a good deal of night flying, and also in many accidents. The present year will see many interesting night flying competitions, which will doubtless furnish useful data for regularizing night flying for military purposes. Apart from the necessity for knowing what one's enemy is doing during the hours of darkness, there is one very important point to remember about night scouting, and that is that the scout can come very much nearer to the ground without being seen.

Unsatisfactory Ingredients.

Twamly—Hello, Gadsby, back so soon; you didn't stay long at the Springs. Are you cured already?

Gadsby—No, I sent some of the water to my physician for analysis and here is his report: Mud, 33 per cent; crawfish, 47 per cent; tadpoles, 10 per cent; leaves, 5 per cent; scum, 3 per cent; foam, 1¾ per cent; medicinal properties, ¼ per cent.

NO DANGER FROM WIRELESS

Investigation Shows That There Is No Chance of Its Igniting Rigging of Ships.

In April, 1913, at the instance of a firm of shipowners, the Marconi company carried out exhaustive experiments with the view of ascertaining whether there was any actual danger in the presence on board of ships of sparks arising out of the use of the wireless plant, says Wireless World. A quantity of naphtha was placed in a saucer and lodged as near as possible to a heavy spark, and a piece of waste saturated with naphtha was placed close to the spark electrodes, but in neither case was the vapor ignited by the spark. A similar test was applied to the small sparks which obtain at minor parts of the apparatus, but it was not until a continuous spark was allowed for a very long period that the naphtha was eventually ignited.

The tests, which were all the more important, as naphtha is one of the most inflammable cargoes carried, convinced the officials who carried them out—the superintending engineer of the shipping company and a representative of the Marconi company—that fumes of naphtha would never be sufficiently dense inside the wireless cabin to permit of ignition. Outside in the rigging this would be even more obvious.

Debt is a paradox. The faster we run in, the more we get behind.

By the Wholesale.

Silas—What an enormous appetite that man Jebkins must have.

Hez—What's the proof?

Silas—He says he always eats at a restaurant where they serve meals a la carte.

A Date Eater.

Bacon—Ever see a goat eat prunes?

Egbert—I don't think so, but I saw one eating dates, today.

"Where did the goat get the dates?"

"He was eating a calendar."