WHITHER BOUND?

On hirst thought the word "Commencement" seems a curious misnomer, since the end of the academic year, the end of college life, and, as some seem to think, the end of education, is called "Commencement." The significance of the word, which we have borrowed from Cambridge University, is that on this day you of the graduating class commence to be Bachelors or Masters or Doctors. This day marks a turning point in your lives, the beginning of a new dispensation. The very word "Commencement" looks not to the past but to the future; it is a forecast and an aspiration. It is the end of nothing of real importance, least of all of education, but it should mark the beginning of new aspirations and ideals. In this spirit, on this Commencement Day, let us look forward not alone to our personal future, but to the larger future of civilization and of mankind; let us inquire whither we are bound both as individuals and as a race.

PERSONAL PROSPECTS

We move along in life from day to day without thinking much of where we are going. We sometimes say carelessly as troops under secret orders sang it sixteen years ago, "We don't know where we're going, but we're on our way." But few of us have ever achieved the degree of unconcern of an old man trudging along a road in California who was overtaken by President Wilbur of Stanford University, later Sec-

¹Address delivered by Edwin Grant Conklin, Ph.D., Sc.D., LL.D., Henry Fairfield Osborn Professor of Biology in Princeton University, at the eighteenth commencement convocation of the Rice Institute, held in the Academic Court, Monday morning, June 5, 1933, at nine o'clock.

retary of the Interior, who stopped and asked him to get in and ride, but the old man replied: "No, thank you, I'm in no hurry and I'm not going anywhere anyhow." Most of us are in a hurry, but we don't know where we're going. Let me ask you today, "Whither bound?"—On what road has college started you?

The usual conception of education is that it consists in acquiring information, and it must be admitted that the universal emphasis in colleges on required lectures, readings, and examinations lends support to this view. No one doubts that acquiring information is a necessary part of the technique of education, but it is not its chief aim. Training in methods of obtaining knowledge is more important than the knowledge gained. We older persons know that riches of information, like other forms of riches, often take wings to themselves and fly away, and no doubt younger persons also are aware of this fact. Some of you remembered what you learned long enough to pass your examinations, but much of it will have evaporated before your fifth reunion. I once heard President Gilman of Johns Hopkins University say that he would not like to try to pass a college entrance examination, and President Eliot of Harvard added that he knew he would fail.

Information is one of the minor aims in education. If only one lived and learned long enough and never forgot, he would become at best a human encyclopaedia, more usually a pedant, or bore. "Whether there be tongues they shall cease, whether there be knowledge it shall vanish away, but now abideth faith, hope, love"—in short, character and personality.

One of the chief aims of education is self-discovery and one of the most difficult things in the world is to get acquainted with oneself. College offers one many opportuni-

ties to learn his inherited capacities and limitations, his likes and dislikes, his talents and defects. Leading colleges offer about ten times as many courses as any one student can take and the principal justification for this is that it enables students to discover their aptitudes and to find themselves. Even with all these opportunities of self-discovery, many college graduates never become acquainted with themselves. Think of the tragic misfits of life due to the failure to know one's self! And think of the still greater tragedy of undiscovered genius, the "Mute, inglorious Miltons" of the world, the Beethovens, Faradays, Pasteurs, the Washingtons, Jeffersons, Lincolns who might have been, but who never discovered themselves! The motto of Socrates should be one of the first aims of all education—"Know thyself." If you have become acquainted with yourself in college, you have made one of the greatest and most important discoveries you can ever make.

Another high aim of education is the cultivation of selfcontrol, and the principal, if not the only way in which this can be done is through the formation of good habits. Indeed in a most important respect education may be said to be habit-formation. Few young persons realize the supreme importance of habits in the development of personality, and habit-formation is, to a large extent, within our control. We can establish good or bad habits of body, mind, and morals; habits of health or invalidism, of skill or bungling, of industry or laziness; habits of concentration or dawdling, of success or failure, of cheer or gloom; habits of sincerity or pretense, of unselfishness or selfishness, of truthfulness or falsehood. Such habits are, to a large extent, a matter of education and when once established they make or mar the whole life. When I see college students cultivating habits of loafing. inattention, cynicism, failure, I know that they are getting

more harm than good from college. The witticism of a former President of Princeton,

'Tis better to have come and loafed Than never to have come at all,

is, if taken seriously, positively immoral. 'Tis better to have acquired habits of industry, determination, and success, on a ranch, in a mill, or office, or business than to have learned to be a loafer, a weakling, a failure in college! The failures in college and in later life are more frequently due to bad habits than to lack of capacity or to bad heredity. Many persons never learn to work until it hurts; they fail because they do not try. To most of us, heredity has been kind, but we rarely discover the wealth of our inheritance and we seldom learn how to make the most of it.

Self-reverence, self-knowledge, self-control, These three alone lead life to sovereign power.

Finally, the highest aim of education is inspiration, outlook, purpose. Knowledge alone often leads to pessimism, especially in older persons to whom the struggles, sufferings, even the successes of life, seem to lead to no worthy end. But of late this disease of the spirit seems to have infected even the younger generation. A wave of cynicism and pessimism has been going through the student world and it coincides with a general decline in ideals, outlook, religion. The numerous suicides that have so shocked us recently have no doubt had many causes, but after all the one fundamental cause has been lack of vision and purpose. If you have acquired in college high aims and ideals you have attained the greatest good that education can offer.

If it were true that knowledge destroys faith, that reality crowds out ideality, that the greatness of the universe teaches the insignificance of man, that the reign of natural law destroys belief in human will and purpose, and that always

The native hue of resolution Is sicklied o'er by the pale cast of thought

it would indeed be true that "ignorance is bliss." If education should lead to the lame and impotent conclusion that there is no purpose in the universe or in human life, that extinction is the goal toward which as individuals and as a race we are inevitably driven, that ideals and aspirations for indefinite progress are delusions, we might well ask, "What's the use of efforts for the improvement of the individual or the race? What's the use of education, eugenics, ethics? What's the use of art, literature, or science? What's the use of anything?" Utter pessimism is the outcome of such a philosophy—a philosophy of despair and suicide rather than of hope and life. If this were the outcome of education, then education itself would be a failure and a menace.

But pessimism is not the necessary outcome of education, but rather the result of imperfect and incomplete education. To one who realizes how little we know at present and how much remains to be discovered about man and nature, there is still room for faith, indeed, there is room for little else. We are, as Sir Isaac Newton said, like children playing on the seashore, picking up here and there a smoother pebble or a more beautiful shell, while the whole ocean of truth lies undiscovered before us. One who reflects upon the inspiring fact of individual and racial progress will not yield to despair because that progress is so slow. One who reviews a billion years of past evolution will not believe that it will cease today or tomorrow, or that it must end in universal extinction. What the ultimate end may be no man can foresee, but there are grounds for high hopes and noble efforts. For the first time in the long history of life on the earth, it is

given to a single species, man, consciously to take part in his own evolution. To us the inestimable privilege is given of cooperating in this greatest work of all time. Our deepest instincts are for growth; the joy of life is service; the vision that leads us on is that of progress; and the highest aims of education must ever be purpose, vision, inspiration.

THE WORLD OUTLOOK

Let us consider now some of the present conditions and future prospects of the world in which you of the younger generation must live and labor. Whither are we bound as a nation, as a civilization, as an entire race?

Occasionally doubts are expressed as to whether the world is making any progress at all. Critics sometimes say that society and civilization travel only in circles and get nowhere. They admit that there has been great progress in our knowledge of and control over nature, but they say truly enough that all this advance in knowledge and power has had little effect on the inherited nature of man himself. If we ask whether men are becoming more healthy, more intellectual, more rational and ethical it must be admitted that there seems to be little if any improvement.

In spite of all that medicine and sanitation have done to relieve suffering and prevent disease, there is widespread physical degeneracy; in spite of all that public education has accomplished, there remains the menace of low mentality; in spite of all that ethics and religion have achieved, the foundations of society are threatened by low morality. More than half of all our drafted men in the last war suffered from some sort of physical defect. The Army Mental Tests have been decried by certain persons interested in unrestricted immigration, but no one can deny that they show an alarming amount of low mentality, and this conclusion is confirmed

by the records of our public schools, by the low type of amusements that the people want, and especially by the sensationalism, emotionalism, and irrationalism in many papers, pictures, and theatres which are the schools of the people.

Galton once said: "Our human stock is far more weakly through congenital imperfection than that of any other species of animals, whether wild or domestic." This terrible indictment applies to mental and social imperfections as well as to bodily ones. You need only recall the multitudes of inmates of hospitals, asylums, jails, and penitentiaries in civilized states to realize its truth. We have in this country more than two million defectives and delinquents in custodial institutions, while the cost of maintaining these institutions takes more than one-sixth of the public revenues of all the states. The people of the United States spend more money caring for incompetents and social parasites than is spent on the public education of normal citizens. No one knows what the direct and indirect cost of crime in this nation is, but the lowest estimate of competent students of the subject is two billion dollars annually, while others think this cost is nearer twenty billions. Here is an annually recurring crime debt of the order of magnitude of our national budget or even the entire national debt.

The amazing amount of crime in this country is not only a cause of shame but of serious alarm. The murder rate in the United States is from two to thirty-six times that of any other civilized country. The number of burglaries, kidnappings, and holdups throughout the nation indicates a swelling tide of crime. Even worse than this, because more insidious and widespread, is the growing spirit of lawlessness, and the general weakening of the bonds of society. In families, states, and nations, rights are more emphasized than duties, greed

more evident than service. A large proportion of our people are engaged in a mad rush for pleasure at any price. Personal ethics regarding sex, honesty, propriety, seems to be on the decline; we are often assured that this is due only to the greater sincerity and frankness of this generation, but at least a generation that "assumes a virtue though it has it not" pays tribute to that virtue. Man's inherited physical traits, his intellectual capacities and especially his emotions and instincts are much the same as those of his early ancestors and consequently he remains in large part "the old savage in the new civilization."

This great difference between the rate of advance of science, and that of inherited nature is due to the fact that every living being, man included, starts its life journey where its ancestors started, in the valley of the germ cells; it then climbs to the summit of maturity and finally goes down into the valley of death, but society persists through countless generations and thanks to language, printing, institutions, and education, the experiences of earlier generations are passed on to later ones. Thus knowledge and power increase from age to age, and thus science advances with giant strides from mountain top to mountain top without having to descend in every generation to its primitive beginnings.

And so it happens that the natural man remains much the same, whereas the cumulative experiences of men increase from age to age. The sum total of knowledge is ever growing but not man's capacity to know. Horsepower is multiplied but not manpower. Social units are ever growing larger and more complicated; families unite into communities and these expand into cities, states, nations, and the League of Nations, but the human units out of which this vastly complex society is built still are born with their primitive, narrow emotions and instincts. There is thus an ever widening

distance between the inherited nature of the individual human being and the vast civilization which cooperative society has built.

Life and progress depend upon the maintenance of a proper balance between many contrasting principles or opposing forces. Indeed life itself consists in maintaining equilibrium between intake and output, building up and tearing down. Development is a balance between heredity and environment, between differentiation and integration. In normal human development a proper balance must be maintained between body and mind, emotion and reason. And in the development of society there must be a balance between the individual and the group, between rights and duties, between radicalism and conservatism. Indeed life itself in all of its manifestations is balance, and death is loss of balance. Every living thing, every human society, is like a tight-rope walker over Niagara gorge.

There are two great principles upon which all progress, whether individual or social, is based. In biology these are called differentiation and integration, in society they are known as specialization and cooperation. These are the companion principles of all progress whether it be that of body, mind, or society. They are seen in the development of individuals from germ cells, in the evolution of higher animals and plants from lower forms, and in the advancement of science and culture.

The development of an individual from an egg cell is the symbol and epitome of all progress. The structures and functions of a human germ cell are relatively simple but by means of progressive differentiation and integration these structures and functions become more and more complex until finally there emerges the vastly complex body, mind, and personality of a human being. The evolution of species and

even the development of civilization depend upon these identical principles of increasing specialization and cooperation.

In all lines of progress specialization tends to outrun cooperation. The failures of individual development and death itself are caused by lack of integration rather than of differentiation. Organisms do not break down like the "Deacon's wonderful one-horse shay"

> All at once and nothing first, Just as bubbles do when they burst,

but parts fail to cooperate and disintegration results.

The extinction of the mighty saurians, titanotheres, and mastodons of past ages was not caused by lack of differentiation; indeed this went too far and integration failed to keep up. The decline and fall of former civilizations were not caused by lack of specialization but rather by failure of cooperation, and this is the great danger that threatens our civilization.

In societies of ants and bees, both specialization and cooperation are highly developed and both are the results of inherited nature and instincts. Each individual under the rule of rigid instinct lives and labors for the good of the colony. There is cooperation without compulsion. In higher animals, intelligence, which is capacity to learn by experience, and reason, which is ability to generalize, come in to interfere with the rule of rigid instinct, and the more varied the intelligence the greater the specialization but the less the cooperation. "Many men of many minds" make for individualism, but not for collectivism. Consequently when cooperation is sought appeal is made to emotions and instincts, which are more uniform and more primitive, rather than to reason, which is more variable and more recently developed. But if human actions are to rise above the level of animal emotions they must be controlled by intelligence. Wars may be entered in wild emotion but they are not won in that way. The only safety for society is in bringing mass emotions under control of collective reason.

Man is said to be a rational being, but this is probably too flattering a statement. It is probably true that man is the only creature on earth capable of reasoning, but he is only slowly and sporadically emerging from an animal condition which is basically non-rational. Sensations, emotions, and instincts, are the driving forces in our lives as well as in the lives of animals. In the higher animals these affective qualities are guided and held in check more or less by their limited intelligence, while man with his larger brain and greater intelligence is learning to control emotions and instincts by rational processes. Dr. Philip Bard has found that cats that have had both cerebral hemispheres removed may be kept alive for a long time. They have no intelligence, no ability to learn anything but their animal passions are strong, and they fly into an uncontrolled rage if their fur is stroked the wrong way. In normal cats, and especially in men, the cerebrum can act as a brake on the lower nervous centers, preventing such unreasonable explosions. In all rational living intelligence must control instincts and emotions.

There is, I think, an important lesson in this for mankind. Conflicts between individuals and classes in society, and wars between nations, generally spring from emotions rather than from reason, though we may afterward attempt to rationalize our emotional behavior. Primitive instincts, or what we properly call the "Old Adam," may cause persons, classes, and nations to disregard reason and to give way to an orgy of passion. Lawyers for the defense sometimes call this a "brain storm," but it might more truly be called a "brainless storm," for it is the sort of behavior which one

sees in decerebrate cats, or in many animals in which the lower centers of the emotions and instincts are very active but are imperfectly controlled by the higher centers of intelligence and reason.

Emotional behavior is highly infectious: a dog fight sets all the dogs in the neighborhood into a frenzy; an excited Chimpanzee will set a whole colony of apes raging; and we know only too well how the mob spirit may spread through a peaceful community, or war psychology sweep through an entire nation. The only safety for society, the only hope for advancing civilization is in learning to control these animal passions by intelligence and reason.

THE PRESENT CRISIS IN CIVILIZATION

We are facing today one of the greatest crises in the history of civilization, but we stand so near these current events and are so much a part of them that it is difficult for us to realize their portentous importance. The World War was probably the greatest man-made catastrophe in the entire history of the human race. All the leading nations of the world were engaged in a life and death struggle that lasted for four terrible years and destroyed approximately ten million human beings and one hundred billion dollars' worth of wealth. The nations were engaged in a frenzy of emotion which called forth not only the baser passions but also the noblest traits of courage, heroism, service, and sacrifice up to the last full measure of devotion. While the war lasted each side believed that it was engaged in self-defense, or in the holy work of salvaging civilization, and each claimed to have God and right on its side.

During this dreadful conflict sane men everywhere said: "This must never happen again. This is a war to end war." But now, only fifteen years after its close, it seems that the

war to end war has only ended peace. The fine spirit of national cooperation among allies has ended in national suspicion and isolation; social integration has undergone disintegration; the fires of service and sacrifice have gone out and left only the ashes of selfishness and greed.

For a time the United States held a unique position of world leadership and it looked as if our nation might be the chief factor in restoring the world to a rational peace, but we threw away this opportunity for an antiquated and impossible policy of isolation. In a world where time and space have virtually been annihilated and where all nations are neighbors, our leaders thought that they could build up walls around America so that we could prosper whatever might happen to the rest of the world. For us no League of Nations, no World Court, no foreign entanglements! But the entanglements exist and cannot be avoided, and now for four years, millions of our citizens have been learning through the bitter experience of unemployment and destitution that no longer can any one nation prosper while others suffer. The whole world is now so bound together by science and invention, by trade and finance, even by fear of war and necessity of disarmament, that nations must cooperate or perish.

In spite of the salutary influence of the League of Nations, the World Court, the Pact of Paris, and numerous peace treaties, wars are now in progress in South America and Asia, and Europe has been moving rapidly toward war. All of these conflicts are primarily struggles for territory and secondarily for economic advantage, but the emotions which motivate most of the peoples involved are economic depression and suffering, a sense of oppressive and unjust treatment, a consequent hatred of other nations and races, and exaggerated nationalism and racialism.

The wars in South America will not seriously disturb the

peace of the rest of the world. The number of combatants is relatively small, the prizes for which they are fighting are of little value, and the major opinion of the chief nations will probably put an end to these conflicts in the near future.

The conditions in Japan and China are vastly different. Japan is the most thoroughly organized and regimented nation on earth. The life of every citizen is pledged to the Divine Emperor from birth to death. Patriotism is a religion. Education is universal and from the primary schools to the universities it is planned for the service of the state. Their military spirit is unconquered, perhaps unconquerable, for it is said that every officer and most of their men would rather die than surrender. Their home territory is lacking in natural resources, is greatly overcrowded and the population is increasing very rapidly. Small families are generally disapproved and rapid multiplication is favored.

China on the other hand is perhaps the least organized and most chaotic nation on earth. Except among a few educated persons there is little or no patriotism that extends beyond the family circle. It has long been the prey of warlords and bandits. It is a land of great natural resources, and with the largest human population on earth, but so disorganized and so hostile to foreign power and progress that it has for centuries been the scene of foreign exploitation.

The recent invasion of Chinese territory by Japan has brought much of North China under control of Japanese-appointed agents. Order will probably be restored in that territory, but it is certain to create lasting antagonism with China and possibly with Russia. If Japan could regiment the man power and natural resources of China as fully as she has done this in her island territory, she could if she would not only control all Asia but also bid defiance to the entire world. Indeed she has already done the latter by rejecting

the unanimous recommendations of the League of Nations and withdrawing from that body. Here is a very real peril to the peace of the whole world. The Washington agreement, the Nine-Power Treaty, the Pact of Paris can be circumvented by a leading nation when it is convenient, unless the other nations of the world, including America, are prepared to enforce those agreements.

The latest exhibition of national emotionalism is Germany under Hitler, who for several years has been preaching anti-Semitism, militarism, and extreme nationalism, and who has now been given dictatorial powers to put these policies into effect. Germany, once the home of science and learning, of freedom to learn and to teach, has put the clock back to the dark ages in its treatment of the Jews. Many leaders in law, medicine, and science, in arts, letters, and business have been dispossessed or evicted in order that "the German stock, the most precious diadem in the crown of civilization" may thus be purified. How is it possible for university students and professors, for doctors of law and science and medicine, and even for academies of sciences to throw reason and the calm, cool spirit of science to the winds and join in such a mad dance of emotionalism?

Dr. Wilhelm Frick, Minister of the Interior, is reported to have said that although only half of the German people are of the Nordic race (Hitler himself is a southern Alpine) the great achievements of Germany, as well as those of ancient Greece, Rome, India, and Persia are "deeds of the Nordic race." According to some of these Nordic enthusiasts the greatest scientists, poets, artists, and religious leaders of all time were Nordics, including Leonardo, Galileo, Dante, Michelangelo, and even Jesus. The world had always supposed that the founder of Christianity and all his disciples were of the Jewish race, but if they were Nordics

why not also Buddha, Confucius, Moses, Mahomet, and all the great and good of every age and land?

Dr. Frick's ideas of education are also revolutionary. He is reported to have said: "The German people must learn once more to regard service in arms as the supreme duty of patriotism and the highest honor . . . The root and branch of Germany's Educational System must break wholly with its liberal past to the end that its main effort must be to produce the man political." In short, in order to combat communism, erstwhile liberal Germany must adopt the methods of Soviet Russia.

And Dr. Goebbels, Minister of Enlightenment (Heaven save the Mark!) presided at the burning of un-German books at the University of Berlin and spoke of the "symbolic significance" of the gesture. What is this symbolic significance but an attempt to destroy intellectual freedom, to substitute wild emotion for reason, and to establish a Holy German Inquisition? "Whom the Gods would destroy they first make mad." Of the burning of the books Sinclair Lewis wrote: "The noblest books produced in Germany in the last twenty years are to be burned"—some of them books for which the Nobel prize had been awarded.

If the burning of the books had produced no other response than that of Helen Keller, the blind and deaf heroine and advocate of international peace, it would be a trumpet call to frenzied patriots to return to reason and sanity. She wrote to the student body of Germany:

History has taught you nothing if you think you can kill ideas. Tyrants have tried to do that often before, and the ideas have risen up in their might and destroyed them. You can burn my books and the books of the best minds of Europe, but the ideas in them have seeped through a million channels and will continue to quicken other minds. I gave all the royalties of my books for all time to the German

soldiers blinded in the World War with no thought in my heart but love and compassion for the German people.

I acknowledge the grievous complications that have led to your intolerance; all the more do I deplore the injustice and unwisdom of passing on to unborn generations the stigma of your deeds.

The entire European situation is extremely complicated and most threatening for the peace of the world, as Frank H. Simonds has shown in a sober but thoroughly alarming article in this month's (June, 1933) Harper's Magazine. Until three weeks ago it looked as if the stage were set for another great conflict, possibly another World War, but thanks to the efforts of leading statesmen of Europe, backed by the support of President Roosevelt, that danger is less serious today. America cannot safely avoid its great responsibility in helping to maintain the peace of the world, and the time to preserve peace is before it is broken. We know from bitter experience that in any prolonged war our country cannot remain isolated and preserve its neutrality—unless it surrenders protection of its foreign shipping and trade, and even the safety of the lives of its citizens. National isolation is no longer possible for us; we must either cooperate in maintaining peace or prepare for war.

This dreadful situation, with the world drifting toward war, has stimulated certain student bodies in England and America to poll college and university students with respect to these three questions: (1) Would you refuse to take part in any future war? (2) Would you fight only against an invader? (3) Would you answer any call of your country to arms? About one-third of all college and university students of the United States voted on these questions. More than one-third of these voted that they would refuse to fight under any circumstances; one-third would fight only to repel invasion; less than one-third voted to answer any call of their country to arms. This is surely a significant indication that pacificism is making headway among intellectual people. Unfortunately some of these student demonstrations for peace, especially in New York City, have been marred by the mob spirit and by disorderly and disgraceful scenes.

By way of contrast super-heated patriotic newspapers and organizations are cultivating to the best of their ability the war-like spirit, and even the religion of the Prince of Peace is sometimes made to minister to war rather than to peace. The fact is that a large and influential part of the people of every country does not really want peace, or at least is not willing to pay its price, namely, mutual consideration, courtesy, and cooperation among nations.

Apart from these major conflicts among nations we have troubles enough of our own here at home. As a result of the great economic depression, which is wholly man-made, there is a growing sense of the injustice and the stupidity of our social system that permits millions to suffer abject poverty while a few thousands have unearned and unneeded riches. especially when these inequalities have been brought about, not by superior intelligence and industry, but by special privilege, or wholesale robbery. Clashes between labor and capital, strikes, lockouts, and boycotts, even open war between gangsters and civil authorities are of small moment compared with the well-concealed crimes against society of some great promoters, bankers, and stock manipulators. Society is in grave danger when mutual service and cooperation are ridiculed as "Sunday School Stuff," and the mottoes even of some men in prominent places are: "Let the buyer beware," "No profits-nothing doing," "Every man for himself and the devil take the hindmost." In that direction lies social disintegration and the end of civilization.

It is difficult for us to appreciate this for we are accus-

tomed to think of our nation and civilization as immortal. A patriotic song of fifty years ago began, "A thousand years my own Columbia." Probably no present governmental organization is so old. The United States is already one of the older nations of the world and yet this is only the 157th year of our independence. Peoples persist but governmental organizations and even great civilizations rise, flourish, and decay. At least eight great civilizations of the past are "one with Nineveh and Tyre"—Egypt, Assyria, Greece, Rome, Arabia, Persia, India, China—these cross the stage of history like the spirits in Macbeth. Will Christendom also join this ghostly procession?

Undoubtedly there have been many causes of the decline and fall of civilizations, just as there are many causes of the death of individuals and species, but among the mortal diseases of civilization, loss of high ideals and of social morale are easily first and foremost. Nations have fallen by foreign conquest, but civilizations decay from within.

WHAT IS THE CURE FOR THIS DISEASE OF SOCIETY?

It seems to me that the immediate treatment of our domestic disorders and our foreign responsibilities are being handled once more in a wise manner by our National Administration. But for a lasting cure of this chronic disease of society I confess that I do not know of anything better than the old standard remedies of more knowledge, better education, a higher type of ethics.

Some humanists say the cure for present social disorders is less science and more art and literature, less knowledge and more humane emotion. They say that science and industrialism have reduced men to cogs in a vast machine, and that we should go back to primitive conditions of less specialization. But science, which is knowledge, was not the cause of the decay of former civilizations, nor is it the fundamental cause of present disorders. Civilized men do not want, nor does civilized society need less specialization, but more cooperation. No sane person wishes to return to a primitive state in which each individual performs all the functions that in civilized society are distributed among many. Occasionally as a "stunt" some one goes naked and without any implements into the woods in summer to see how long or how well he can live isolated in a state of nature, but he comes back to the comforts of civilized life when food becomes scarce, mosquitoes thick, or nights cold.

Several years ago (1927) the Bishop of Ripon, at a meeting of the British Association for the Advancement of Science, proposed that science declare a moratorium for ten years in order to enable human nature to catch up with advancing knowledge. But apart from the impossibility of stopping scientific discovery, it would take not ten years but ten centuries or more for human nature and conduct to catch up with knowledge. It has always been true, and will ever continue to be true that knowledge will outrun performance. "If to do were as easy as to know what were good to do, chapels had been churches and poor men's cottages princes' palaces." Or in the language of Mark Twain, "To be good is noble, but to tell others how to be good is noble and no trouble."

It is the age-long problem with which morals, ethics, and religion have struggled, namely, how can men be induced to live up to the best they know? How can they be induced to substitute the spirit of service for selfishness, love for hate, reason for unreason?

The world is not suffering from too much knowledge, but from failure to apply that knowledge to social conditions. Millikan has well said: "All progress comes from knowledge and I am for everything that increases knowledge, whatever be the field—sociology or physics—and for acting upon that knowledge when found. But it is as unsound to talk about the danger of too much knowledge in physics as in sociology." We have at present too little knowledge of human nature and the causes of social disorders, and the extension of the methods of science into this field is bound to be the most fruitful adventure of modern times.

Diseases of society have natural causes and they can be cured only by controlling those causes. As long as bodily diseases were attributed to evil spirits or demoniacal possession no rational treatment of them was possible, and as long as poverty, crime, and war are attributed to evil spirits or original sin they also are beyond rational treatment.

The conquest of the inanimate forces of nature is a great adventure, but the scientific understanding and control of the ills of man and of society is the greatest adventure upon which any discoverer ever embarked. The growth of the spirit of scientific inquiry and its extension to man and all of his affairs is one of the most hopeful signs of this age.

Social disorders are not so much the results of bad heredity as they are of bad education. They are therefore much more easily controlled. Formal education has of late given too little attention to the intelligent control of the emotions and the will. The result is that man has learned to control the vast forces of nature better than his own spirit. Education must hereafter concern itself more with the cultivation of good social habits, and the elimination of bad ones. Instead of glorifying war it must glorify peace; instead of teaching personal and national selfishness and greed it must teach tolerance, sympathy, generosity; instead of narrow, parochial patriotisms, it must teach the universal brotherhood of man.

Good social habits can be learned, as well as good intellectual and bodily habits. Education that leads to the development of character is more important now than is the mere increase or diffusion of knowledge. The world cannot wait for the slow improvement of inherited human nature through eugenics, although that also must come in the distant future. But after all heredity determines only capacities and potentialities, and the capacities of good social development are already present in all normal men, but they must be brought out by good environment and training.

We often hear it said: "You cannot change human nature." True enough, you cannot change inherited human nature except by the method of eugenics, which is selective mating. There is no other way known at present by which heredity, or what we call human nature, can be changed. But we can change human nurture or development and this has been done again and again. The chief difference between civilized men and savages is due to environment and education. Cannibalism, human sacrifices, polygamy, the burning of heretics, torture of witnesses, the duel, and a thousand other commonplaces of daily life have been banished from civilized society by better education, not improved nature or heredity. And war can also be banished by the same means. H. G. Wells has said that the fate of civilization depends upon the race between education and degeneration; civilization will survive only if education wins.

Happily, the conditions for universal education were never so favorable as at present. The printing press, the telegraph and telephone, radio and moving pictures, rapid transport on land, on water, and in air have put information concerning man and all of his affairs within the reach of everyone. So far as rapidity of communication and fullness of information are concerned, the entire world is now no

larger than the little state of Attica in the time of Pericles. World opinion can now be formed and expressed, not years or centuries after an event, but while it is happening, and although nations may at times be so under the control of emotion that they refuse for a while to be influenced by such opinion, we may rest assured that no nation can long stand against the sober judgment of mankind. Japan and Germany are even now sensitive to world opinion, and in the end they cannot fail to be influenced by it. Today, more than ever before, there is great force in what our Declaration of Independence so finely expresses as "a decent respect to the opinions of mankind."

But important as these things are, they are not enough. President Morgan of Antioch College has just written: "Ethical character today is the controlling factor in the life or death, in the refinement or the deterioration, of our civilization. If it should receive the attention it requires its refinement and transmission would become our dominant interest." To be effective for lasting good, knowledge must rest upon ethical character. Unless the instincts of service, sympathy, love prevail; unless the ideals of altruism, justice, and morality persist, neither science nor education can save our civilization. The whole future welfare of the human race rests upon these decent instincts and social ideals of mankind. Here are the foundations upon which civilization rests and, if they decay, the superstructure, however great and glorious, will fall to ruin.

THE LONG LOOK AHEAD

The brevity of human life has unconsciously led many persons to think that the life of society and of the race itself will be relatively brief. As long as it was supposed that the

¹Antioch Notes, May 1, 1933.

creation of man, the earth, and the universe itself dated back only to 4004 years B.C. it was natural to suppose that there would be a speedy end of the world. Some religious sects supposed that they had revelations as to the exact day and hour when "the angel would stand with one foot on the sea and the other on land and proclaim that time should be no more," and accordingly they prepared their ascension robes and waited to be caught up into the skies.

How greatly science has changed all this! We now know that the earth is billions of years old, that the earliest species of man-like beings were here at least a million years ago and that there is every prospect that life will continue on this planet for millions of years to come. In all probability the human race has a long, long future before it, and the wonderful progress in the past history of mankind leads us to expect great progress in the future.

The biologist who watches the development of a tiny egg cell into a complex animal, the development of the simplest tropisms and reflexes into psychic processes, the development of the social instincts of cooperation, service, and sacrifice from the simplest beginnings in germ cells, will not doubt that there is such a thing as progress in the individual. And he who studies the evidences of progress of life through a million centuries of evolution, from the simplest one-celled organisms to the marvelous complexity and beauty and fitness of the higher animals, from the simplest reflexes to the mind and soul of man, from solitary cells to great states, nations, and the League of Nations, will not doubt that there has been racial progress. Nor can he be persuaded that a billion years of progress will end today or tomorrow. The evolutionist is an incorrigible optimist.

But while there are many hopeful signs for the future of mankind, there is also much to fear. The evolutionist knows

also that progress is not inevitable, that thousands of species have run their course and become extinct; that other thousands have reached a certain stage of development and have then degenerated, and in general that progress is won only through effort. Most of this struggle for life and development is unconscious, but it is none the less a struggle of life with death, of change with stagnation, of progress with degeneration. Only in man has this struggle risen into the field of consciousness. Man alone of all living creatures is able to take a conscious and rational part in this struggle for life and progress. Indeed to a very large extent man has become master of his own destiny. There is no good reason to think that any other order of living beings will supplant him on earth. Nor can we conceive of any higher form of life than a more perfect humanity. The most glorious visions of seers and poets are not of some wholly new order of being, but rather.

A dream of man and woman Diviner, but still human, Solving the riddle old, Shaping the age of gold.

Mankind will endure, but whether our civilization will endure depends upon whether it can be adapted to meet and overcome present disorders and new dangers as they arise. If it cannot, it also will go down as others have done, only to give birth to new civilizations better fitted to fulfill the great law of progress. Once civilization had appeared on earth it has never wholly disappeared. The torch of culture was caught from the hand of Egypt by Persia and Greece, from Greece it was passed on to Rome and from Rome to the West; and if ever it should fall from our enfeebled hands let us hope that it will be caught up by other more worthy representatives and that the march of progress will go on through the countless centuries of man's vast future.

But Commencement is no time for gloomy forecasts nor for feeble resignation. This is a day of resolution and not of surrender, a day of dedication and not of despair. It is for you who have had the advantages of a liberal education to resolve to battle against the evils that now threaten society, to labor to build up a better civilization, to devote your lives to the service of your fellow men, and thus to have a part in the triumphs of future ages and in the establishment of the Kingdom of God on Earth.

EDWIN GRANT CONKLIN.

