SCIENCE

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THE DEPLORABLE CONTRAST BETWEEN INTRANATIONAL AND INTERNATIONAL ETHICS AND THE MISSION OF MEDICAL SCIENCE AND MEDICAL MEN[1]

THE chief aim of my remarks is to point out the unique position which medical sciences and medical men occupy in the horrible war which is going on between civilized nations. International morality may possibly derive some permanent benefit from a conscious knowledge of this position. However, in order to make my point clear, I shall introduce it by a discussion of some aspects of ethics.

Moral philosophy assumes for granted that ethical relations of civilized men are safely established; it concerns itself merely with the question regarding the nature of the origin of ethical precepts. In general, it may be admitted that the vast majority of civilized men indeed do not question the correctness of ethical demands. But writers on moral philosophy fail to distinguish between *intra*national and *inter*national ethics. Hence, we find frequently that international occurrences are discussed from the point of view of intranational principles; international occurrences are brought before the forum of a supreme court of the world for judgment, but the merits and demerits of the cases are argued from the point of view of ethics which obtain in intranational moral relations. But the truth is that there is an abyss between the two domains of morality.

Let us first look at the status of intranational morality. The ethical relations

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among civilized fellow men, united by bonds of race, nation or country, are firmly established. Justice and duty are deeply rooted conceptions, the compelling force of which is spontaneously recognized by all normal members of the individual community; the small fraction of dissenters consists of defectives and criminals. Sympathy, kindness, altruism and self-sacrifice are not enforceable human virtues, but are nevertheless profoundly appreciated and admired by the individuals of all civilized nations. Honesty is an indispensable virtue. In parenthesis I may, however, say here that to my knowledge "honor" is not among the general precepts of ethics. It is an artifact; it is mostly an artificial virtue of a class which considers itself as being above the simple requirements of justice and duty. It is not an unusual occurrence that in the name of honor a man may slay with relative impunity a fellowman whose home life he has dishonored.

From Sokrates to our day students of moral philosophy offered various theories concerning the nature of the principles underlying the "science of conduct." I shall not discuss the merits of the theories of Hedonism or Utilitarianism, the Law of God or the Categorical Imperative; they do not concern us here. But I have to refer to one theory which was not received with great favor and which had only a short life of popular existence. In the latter half of the last century, under the powerful influence of Darwin's theory of natural selection in the domain of biology, a systematic attempt was made by some philosophers (Herbert Spencer and others) to look upon ethics as a purely biological phenomenon. Family ties of lower animals, it was thought, developed into the ethics of civilized nations. Whether on account of the feverish social and altruistic activities which have been going on in the last decade or two and for which a biologic theory of ethics could hardly have served as a sufficient stimulus; or whether on account of the general decadence in popular enthusiasm for the theory of natural selection in general, the fact is that the theory of biologic origin of ethics seems to have been generally abandoned in recent years. But whatever we may think philosophically regarding the nature of fundamental origin of ethics, we can practically not deny that *morality is subject to evolutionary influences;* it has undergone and is continually undergoing development. Morality manifests a continuous growth. The development of savage races into cultured, ethical nations is a matter of historical record. In fact, the progessive widening which conceptions like justice or duty are continually undergoing within the confines of a nation is practically a matter of direct observation during an individual's lifetime.

I shall dwell here especially on two elements which are operative in this process. The foremost factor in the evolutionary progress of intranational morals is to be found undoubtedly in the intellectual activities peculiar to man. The growth and development of the sciences, of arts, music, poetry, literature and religion, from their rudimentary phases into their present high states, elevated the specific human character and favored the widening and deepening of morality of any individual nation or rather the morality of the individuals of which these nations are composed. The human intellect may or may not be the primary cause of morality; but the unfolding of human intelligence and the growth of intellectual activities specifically human, are undoubtedly important elements in the growth and development of specific human morality. This connection between intelligence and morality is practically a matter of direct observation.

On this basis the further assumption is justified, that even the conscious primitive morality of primitive man did not make its appearance abruptly. It developed very slowly, parallel, to a certain degree, with the development of man in the animal stage into man with rudimentary intelligence.

I presume, then, that conscious morality did not begin abruptly, but developed very slowly, parallel with and assisted by the development and growth of human intelligence. However, important as the human intelligence may be, evidently it is not the only controlling factor of morality. We see animals acting towards their fellow creatures in a manner which, if seen in human beings, we would consider as highly ethical. We all know how animals care for their offspring. We see dogs licking the wounds of their fellow dogs—an act resembling a samaritan service. We see altruistic activities in the communities of the bees and the ants. We designate these animal activities as instincts and we have indeed no evidence that a conscious morality is at the bottom of these phenomena. We have, however, to keep in mind that the harmonious relations between animals are observed only among individuals of the same species or race, or the same drove or swarm, whether they are presided over by a bell-wether, a queen or any other single leader, or have a democratic form of government with several contending leaders. Animals belonging to different species, races or strains get frequently into ferocious fights as soon as they meet, or as soon as there is a collision of interests and instincts. There are therefore sufficient reasons for assuming that the purely animal, instinctive element is involved to a considerable degree in the moral relations between individuals of the same group of human beings which have some efficient bond in common.

Now let us look at the moral aspects which international relations present. The history of nations, civilized or uncivilized, consists chiefly of a tale of more or less ferocious wars interrupted by periods of peace. War is nothing but wholesale murder; but the men of one tribe or nation who are murdering men of another tribe or nation have no idea that they are committing crimes; on the contrary, the more civilized individuals among the fighters are honestly possessed by the conviction that they are performing a moral duty. It is true that in times of peace citizens of one country enjoy in another country most of the privileges enjoyed by the citizens of that country. This is guaranteed by treaties. There are also international laws which even presume to prescribe the mode of warfare among the signatory powers. In time of peace a sincere friendly intercourse frequently prevails between the individuals of various nations. There are numerous international reunions for the purpose of furthering human knowledge and general human interests in all lines of human endeavor. All these facts may give us the right to speak of international morality. Nevertheless, even peace, especially peace in modern times and among civilized people, is practically nothing more than a *truce* during which nations are feverishly active in preparing for the next war, preparing to slaughter their apparent friends of to-day and to lead or to drive their own men to be slaughtered. During peace the leaders of nations are engaged in their military quarters or in their chancelleries in spying upon and intriguing against the nations with whom they exchange international amenities.

In international dealings cunning and deceit are essential factors in success; it is diplomacy. Honesty has hardly a place in these dealings. Only honor is the big

word which is loudly used by those who speak for nations as units, that sham virtue in the name of which crimes are committed by the privileged classes within each nation and in the name of which hundreds of thousands of honest and innocent citizens of various nations are murdered or crippled for life in the groundless and senseless strife of nations, brought about by the ambitions of unprincipled leaders. Furthermore, international relations in time of peace, which have an ethical appearance, are held together by flimsy ties. International peace conferences, international law, and peace treaties are merely scraps of paper which are torn to shreds at first sight of a bone of contention between nations.

In a previous section I insisted, and I believe rightly, that intellectual growth and activity are most important factors in the development and growth of intranational morals. What is the value and influence of intellectual growth and activity in international morals? Highly intellectual, civilized nations fight one another with a rage, a ferocity and with an intent to kill as probably did their animal ancestors of different strains or races, hundreds of thousands of years ago. But different species of another type of animals, let us say dogs and cats, are probably fighting to-day as their ancestors fought thousands of years ago, that is, tooth and nail, the only weapons at their disposal; their physical agility, their promptly acting reflexes, the finer developed senses and their remarkable instincts did not help them in developing new weapons or new ways of fighting; they had no human intellect. But the human race? We need not go back thousands of years. It suffices to compare warfares separated only by a hundred years. I need not enter upon a comparison of the rage, brutality and barbarity with which the wars are conducted; in this regard the present war is surely not behind its predecessors, and none of the cultured belligerent nations are ahead of or behind the others. Perhaps atrocities are at present not so much a question of barbarity as of success and efficiency—the idols of all walks of modern life. But as to destructiveness of human life, that cardinal aim in the war of nations, the progress made in this comparatively short span of human history is immense; it reads like a fairy tale. From high in the air a human bird directs you to turn a micrometer screw one millimeter or two and a huge shell annihilates hundreds or thousands of your enemy. A small group of human fishes bubble up in the vicinity of a huge leviathan, a dreadnought, and in less than ten minutes hundreds of men and millions of dollars are forever at the bottom of the sea. In a stretch of hundreds of miles, hundreds of thousands of soldiers are moved rapidly without a hitch from one place to another where they are needed most. The success is wonderful. In barely eight months millions of people were killed or crippled, perhaps as many more were made homeless and driven into starvation and billions of dollars borrowed and wasted. And that astounding result was not accomplished as in olden times, merely by extraordinary physical force or endurance or by that virtue in which wild beasts greatly excel men, the virtue of physical courage; it was accomplished by specific human ingenuity. Mathematics, physics, chemistry and other theoretical and practical sciences have made these awful results possible. In fact, practically every kind of intellectual activity took and takes a profound part in the bitter struggle which now goes on among highly civilized nations. Historians, philosophers, literary men and others are busy contrib-

uting offensive and venomous literature about their fellow men of nations with whom their country is at war, whose friends they were and whose honors they enjoyed. Poets sing the song of profound hatred and musicians write the melody to it, or compose war marches and songs. Religion offers an extraordinarily sad spectacle. Nations having the same religion and believing in the same God, pray to Him that He may help them destroy their enemy. Think of the robber and murderer who on his most godless errand prays to God for aid and guidance!

But here I must call your attention to a paradoxical but remarkable fact. Beastly as international morality is, when nations are at war, war nevertheless unquestionably elevates the *intra*national morality. The majority of citizens in every country are not idealists; in time of peace they comply with the laws of their country and fulfill their simple duties, not more and not less. But when their country is at war, a new spirit comes over them; they become altruists, they are ready to bring sacrifices, to lose their life or to become cripples for life. Whether a country is right or wrong with regard to the merits of a particular war in the eyes of an outsider, a neutral, this has no bearing upon the moral status of the man inside his country. That status is unquestionably elevated during war, and even after the war his relations to his countrymen remain on a higher moral plane. But this applies to civilized countries only, and of these only to such countries whose civilized citizens fight its battles.

Now let me recapitulate briefly. Human morality, whatever the nature of its origin may be, was and is subject to evolutionary influences. It began in the presavage state of men. Its development has been and is a very slow process. In its present state we must sharply distinguish between intranational and international ethics; there is an abyss between them. Intranational morals attained a high state. Intellectual activities of all kinds were and are most important factors in its growth. The morality in international relations, on the other hand, is generally low, and is frightfully bad when these relations are interrupted by war. War is an animal method of settling differences between two contending vicious species, and human intellectual activities greatly intensified the deadliness of the procedure. The efforts to create international laws for the purpose of restraining the ferocity of international struggles proved of little avail. We have cultured, civilized Germans, Frenchmen, Englishmen, and so on, but the world is not yet inhabited by cultured civilized men.

Apparently biological processes are operative in these horrible differences between the intranational and international states of morality. Intellectual activity is capable of efficiently assisting in the development of morality among individuals which are allied by some organic and social bonds; thus little or no resistance is offered to the beneficent intellectual influence. But individuals of different strains, with natural divergences and antagonisms, sustained by differences in education, customs, forms of law, etc., offer great resistance to the unifying influences of intellectual activity.

Accordingly, biological traits common to all animals, while some of them may exert a favorable influence upon the evolution, rate of growth and the direction of human morality, are surely not the main factors of its creation and development. On the contrary, in interracial and international relations many biological traits are profoundly inimical to a development

of proper moral ideals. Struggle for existence, uncontrolled physical strength and dexterity, love of fight, hate, rage, bravery, etc., are traits which the human race has in common with wild beasts, and an uncontrolled cultivation of these traits may often prove disastrous to all human morality. On the other hand, intelligence and intellectual activities are traits which distinguish man from beast. Their intense cultivation by civilized men has been the main cause of the high state of morality which prevails and is visibly progressing within the confines of civilized countries—the *intra*national ethics.

But now let us turn again to international ethics. We have seen that there is an abyss between international and intranational morality. We have seen further that war between civilized countries brings in modern times incomparably more frightful results than in previous ages, which is undoubtedly due to the astounding discoveries and inventions brought to light by the intense intellectual activities in the various cultured countries. Are discoveries and inventions, are even apparently sound intellectual activities, dangerous to international morality? Is this morality rather regressive instead of being progressive? And what can we do to make it progressive or to accelerate the imperceptible progress? The last question is the more important one, since it presents a practical and not merely an academic problem. In the following I intend to discuss some factors which may contribute in some modest way to its solution. I am fully aware, as all of you are, of the immensity of the problem, and I am aware, more than you, of the microscopical dimensions, metaphorically speaking, of your guest of the evening. But I shall act now as I always acted, upon the principle that it is neither good nor wise to possess less courage or more modesty than that drop of water which innocently and cheerfully undertakes to drill a hole in a rock.

As one who swore allegiance to the medical tribe, I shall begin by saying that the case of international morals is very bad indeed, but it is by no means hopeless; that only hopeful men are capable of attaining desirable results; that a remedy which promises to bring some help, be it ever so small, is not to be despised, and that a sum of such remedies may save even a bad case.

It seems to me quite probable that interracial and international morals are also subject to evolutionary influences and are undergoing a developmental process; but the progress is extremely slow because it has to struggle too much against the beastly nature of man. Even the development of international morality is a slow process; it must have taken many thousands of years before it reached its present stage. The present condition of international ethics would perhaps appear to us even quite high, if we had the means to compare it with its status of hundreds of thousands of years ago. This recognition, namely, that interracial and international morals are undergoing a progressive development, but that their progress is necessarily very slow, seems to me to be a very useful one. In the first place, because it encourages us to try to accelerate this progress, be the rate of the possible increase in the acceleration ever so small and be the means at our disposal for accomplishing it ever so meager. In the second place, it suggests to us to avoid looking for means of acceleration which are far out of proportion with the rate of the evolutionary progress; it is bound to fail and even to bring a temporary reaction, as history taught us over and over again.

I do not consider it as my province to try to discuss here all sorts of means which possibly may serve to increase progress in international morality. My chief purpose is, as stated at the beginning, to bring forward the value of medical sciences and medical men as efficient factors in furthering the progress of international morality. However, before coming to it, I wish to call attention briefly to a point or two to which reference has been made before. I believe, in the first place, that it is of prime educational importance to point impressively to the fact that there is a gulf between national morality, on the one hand, and interracial and international morality, on the other hand. A confusion between the two sets of ethics may harm the former and retard the possible progress of the latter. Citizens in neutral countries at all times, and citizens of all countries in times of peace, should know, should feel it deeply in their hearts, that war has not the slightest feature of morality, that it is simply a mode of settling differences between two or more strains of the human race in the fashion of wild beasts, increased in deadliness and ugliness by the activities of human intelligence. Here is an incontestable fact which gives pain and distress to the moral man; humanity, as a whole, shows that its moral conduct is not above that of vicious animals of various species. The discussion of the question as to who began the war and who prevents its conclusion is far from the mark; it is purely academic and is borrowed from the point of view of intranational morals. Justice and law had little to do with the beginning of the war and will have very little to say with its settlement. War is carried on by brute force and is settled by it with the aid of exhaustion and starvation. The many circumstances which lead to the numerous wars are mere incidents, but not the real cause of them. There is only one cause for all the wars and that is the possession by human beings of ferocious qualities peculiar to wild beasts, often entirely unrestrained and sometimes even directly cultivated to a higher degree.

In teaching intranational morality it ought to be made clear that physical strength, courage, dexterity and efficiency, useful and desirable as they are for the success in the life of the individuals and the nation they compose, are not moral principles. On the contrary, they may greatly magnify the evil results when used for unethical principles. Bravery and efficiency, which are most highly valued qualities in war, are qualities which are most destructive to your so-called enemy of to-day and perhaps your friend of yesterday and, moreover, perhaps of your friend of a day after to-morrow.

I now come to the chief point I wish to discuss. Short as the discussion will be, it is nevertheless the chief object of my entire discourse. I have stated above that the striking feature of this war, the great destructiveness of human life, owes its success to the employment of scientific results in carrying on the war. All sciences which may contain some practical element are contributing in some way or another to the wholesale destruction of human life. And not only the scientific results, but the scientists themselves are active at the front in laboratories improvised in large automobiles to search for new inventions and discoveries which may be of some immediate practical use or to predict the nature of the weather to be expected at different points, etc. And those who can not assist in such a direct way try to contribute to the spirit of war by spreading enthusiasm, by abusing the enemy, and by implanting hatred against it.

But there is one most inspiring exception

to this sorrowful rule. It is the utilization of the medical sciences and the behavior of medical men in the war. The results of medical investigations of the last few decades and the activities of medical men are of immense practical importance to modern warfare. In some of the former wars perhaps as many soldiers were wiped out in consequence of disease as were killed by the bullet or bayonet. The combined modern studies in pathology, bacteriology, hygiene, surgery, medicine, pharmacology, preparation of antiseptics, etc., have immensely reduced the ravages of war as far as sickness and injuries are concerned. Medical sciences and medical men are part and parcel of wars. But what is their ethical status with reference to strife of nations in comparison with other sciences, with other men of science, men of culture and education? Here is the answer.

None of the numerous important discoveries made in the medical sciences was ever used for the destruction of life or harming the enemy in modern civilized warfare.

Any discovery or invention made in the sciences or the practise of medicine, made in one of the warring countries, is freely given to the medical fraternity of a belligerent country—unless it involves a business relation over which medical men have no power. It is illuminating to read a review in an English medical journal of medical reports made at a German medical meeting held on a battlefield.

On the battlefield, on the firing line, perhaps in the midst of a hail of bullets and fragments of shrapnel, *physicians and surgeons, some of them volunteers, pick up wounded soldiers without regard to nationality, and treat friend and foe alike. It is practically of no moment to the sick and wounded soldier to which of the hospitals of the civilized belligerent nations he will be taken for treatment.* The physician, as a physician, knows no difference between races and nations, between friend and foe.

And withal physicians in every one of the warring countries are as good patriots, and are as ready to sacrifice their lives in their country's struggle, as any other patriotic citizen of his beloved country, with the only difference that he, *the physician, is merely ready to die, or to be crippled for life, in the service for his country, but he is not engaged in killing or harming any one belonging to another nation or country.*

There might be a few exceptions—it would be miraculous indeed if there would be none; any large group has its exceptions. But such few exceptions can not be held up against this wonderful picture which medical men present in war. And wonderful indeed this picture is. We have seen how low international morals are at all times; we see how infamously bad it is at the time of war and especially at the present ferocious war of cultured nations. And in the midst of this inferno we perceive a group of sciences which are in intimate contact with life and with war, and which nevertheless never contribute to the degradation of interracial and international morality. We perceive, furthermore, in every belligerent nation among the combatants a group of patriotic men, brave and ready for every self-sacrifice, who do nothing but render help to those who need it, who render it as members of their particular country, but render it to foe and friend alike. Here are representatives of humanity, as a whole, here is a most encouraging example of an elevated international morality.

This wonderful fact is not my discovery; it is a fact well established, and well

known to everybody, at least ought to be known by everybody. But *the calling of this fact to full consciousness of the members of our profession may render a great service to the progress of international morality.*

In the dawn of history, the medical man was also the treasurer of philosophy and morals. In the middle ages when knowledge became specialized, medical men more and more devoted their activity exclusively to medical practise. On account of the inefficiency of medicine at that time, medicine lost its prestige. However, in the recent decades medicine became a science and one marvelous discovery follows another, and the efficiency of medical practise increases rapidly. Medicine makes accessible to man uninhabitable parts of the world. It prevents disease, and with increased efficiency it learns to cure it. Medical sciences and medical men rose in the estimate of discriminating civilized mankind. *Could they (medical sciences and medical men) not become again bearers of the flag of morals, especially of international morals?* In the furious struggle which is going on at present amongst civilized nations international morals lost its friends; religion, sciences and the brotherhood of mankind proclaimed by the followers of socialism failed it; medicine alone did not desert it. In times of peace and for the purpose of furthering useful knowledge medical sciences and medical practises are working in separate groups, according to their specific aims. But all medical men of various shades and groupings ought to unite for this one high aim, *ought to establish a Medical Brotherhood for the Purpose of Upholding and Accelerating the Progress of International Morality.*

Every one of the scientific and practical men in medicine in our large country ought to join with enthusiasm such a missionary enterprise. The initiative ought to be taken by our large neutral country, but we may appeal to our neutral brethren in other neutral countries to join our crusade. However, we must not approach our medical confreres in the belligerent nations as long as the war lasts, lest it may be interpreted as an attempt to weaken their patriotism and their enthusiasm for the cause of the particular countries of which they are an integral part.

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CYRUS FOGG BRACKETT

BY the death of Professor Cyrus Fogg Brackett, which occurred on January 29, another link connecting the present with the past in the history of physics in this country was broken. Professor Brackett belonged to that group of physicists whose influence is now felt through their pupils in most of our universities. In the early days of his service at Princeton he was associated with Joseph Henry, who was a trustee of the college, and who took an active interest in the development of the department of physics under Professor Brackett's direction. His early studies came before the French influences had been superseded by the German, and his thinking always showed traces of that early training.

Professor Brackett, after graduation at Bowdoin College in 1859, studied medicine at the Harvard Medical School, and was graduated as Doctor of Medicine in 1863. He then returned to Bowdoin as a member of the faculty, and soon became professor of chemistry and physics. In 1873, on the advice of Professor Henry, he was called to Princeton as professor of physics. His coming to Princeton coincided with the foundation of the John Green School of