CONWAY MEMORIAL LECTURE

RATIONALISM AND HUMANISM

BY

JOHN A. HOBSON

Delivered at Conway Hall on October 18, 1933

LONDON:
WATTS & CO.,
5 & 6 JOHNSON'S COURT, FLEET STREET, E.C.4

ONE SHILLING NET

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JOHN A. HOBSON

(G. P. Gooch, D.Litt., F.B.A., in the Chair)

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FOREWORD

It is a pleasure and a privilege to take the Chair for my old and valued friend Mr. Hobson. I began reading his books over forty years ago, and I have followed his distinguished career with affectionate admiration ever since. As an economist, a sociologist, and a publicist, he has long stood in the front rank; for he combines expert knowledge with exceptional originality and complete independence of mind. He is never rattled by the fleeting fashions of the day, and party labels make no appeal to his honest and balanced mind. What he gives us is his very own—the harvesting of a long life of study, reflection, and service. Like Leonard Hobhouse, Graham Wallas, and Lowes Dickinson, whose loss we continue to mourn, he is a representative of the Elder Statesmen of the Republic of Thought. A nation may consider itself fortunate to possess counsellors so disinterested and so wise.

In discussing the relations of Rationalism and Humanism, which he has chosen as the theme of his lecture to-night, Mr. Hobson finds himself on familiar and congenial ground. Rationalism, as we all know, is an attitude rather than a creed—a refusal to accept beliefs, conventions, and institutions merely because we find them in possession of the field. The progress of mankind is mainly due to the eager, inquiring, critical, inventive spirit, ceaselessly feeling its way towards a richer and more intelligent life. The crude ideas against which the older generation of Rationalists waged war having almost disappeared, Mr. Hobson invites their successors to follow the example of Moncure Conway in recognizing that reason is, above all, the servant of humanity.

The field of social ethics cries aloud for the application of reason both in its critical and its creative aspects, in economics and politics, national and international. It is the great builder even more than the great destroyer, advancing as it does on lines parallel to the enlargement of our ethical vision. The arch enemy both of reason and ethics, as Mr. Hobson reminds us, is the spirit of force, whose recent ravages are written in the history

of the War, the peace settlement, and the tragic confusion of the post-War world. The anti-intellectualism preached by certain philosophers, and proclaimed as a political principle by upstart dictators, is a false track. There is no short cut to the millennium along the lines of instinct and direct action. The problems of our distracted world are so manifold, so complex, and so interlocked that they require patient analysis as the basis of wise and durable construction. Our surest guide, in the future as in the past, is reason in the service of humanity. Such is the message of Mr. Hobson's illuminating discourse, and such, I believe, will be the verdict of his audience and his readers.

G. P. GOOCH.

RATIONALISM AND HUMANISM

THE mind of the ordinary man is, I think, always a little shy when encountering the verbal termination "ism." It takes him away from real things and the particular happenings that confront him in actual life. Reason as an instrument of the mind, and its adjective rational, he accepts ; but why rationalism? Human beings, even generalized as humanity, he recognizes, but what is this humanism? Such distrust is perhaps instinctive. But if the ordinary man went into the history of these "isms" he might find his distrust amply justified. For "isms," when detached from concrete facts, tend to run wild, to take divergent paths of meaning, narrowing or broadening according to the needs and proclivities of their professors. Rationalism, for example, as defined by the Rationalist Press Association, is "the mental attitude

which unreservedly accepts the supremacy of reason and aims at establishing a system of philosophy and ethics verifiable by experience and independent of all arbitrary assumptions or authority." But the Rationalist Movement in this country has virtually confined its work to debunking the religion of the Churches, and to advocacy of liberal views on divorce and birth control. This economy of effort may be amply justified, though it does not carry us very far along the difficult path of "establishing a system of philosophy and ethics." The wide significance of rationalism surely demands a reasonable explanation of every course of human thought and conduct, especially in that great area, or arena, of political, social, and economic reconstruction which confronts every reasonable man or woman as essential to the salvation of a civilized world.

It is quite true that this extension of rationalism into social ethics, and especially into economic conduct, might disclose dissensions in the ranks of Rationalists continuing their activities in their chosen narrower field. But

I would ask those for whom this consideration appears conclusive to reflect upon recent events of history, which disclose the devastating part that political, racial, social, and financial superstitions and fallacious reasoning are playing in our perilous world. Do convinced Rationalists doubt the value of the services that they could render by a fearless application to these backward areas of human thought and conduct of that unfettered reason which has made such victorious progress in the demolition of theology?

I, therefore, issue an earnest invitation to Rationalists to count themselves as Humanists, and to regard Ethics as the mediating principle. But in order to effect this alliance it is necessary to clear up some of the ambiguity of the term "humanism." The connection of humanism with humanity seems obvious, but unfortunately that word has not been content to employ its two appropriate adjectives human and humane, but must elongate these into humanitarian, which again has taken on an "ism" of its own. I have had within my personal experience a curious illustration of the

tendency of these long words to stray far from their origins. Invited in the middle of the Great War to address the Humanitarian Society, I made a well-meant plea in favour of an early negotiated peace which might have saved millions of human lives, and found to my consternation that man's inhumanity to man struck no chord of sympathy in many members of my audience, who apparently confined their humanitarianism to a guarded condemnation of blood-sports and an advocacy of bird sanctuaries.

But humanism has other associations, which may at first sight repel the more rigid Rationalist. On the cultural side it has throughout its history leaned overmuch to literature and the fine arts, and its philosophy has taken on too emotional a complexion to satisfy the demands of the scientific mind. The divorce between the natural sciences and the *Litteræ Humaniores* is still maintained in the University of Oxford, and it may fairly be said that only within the last generation has the teaching of any science apart from mathematics come to figure as an essential to the culture of our

educated classes. The barrier between scientific rationalism and humanist culture was gradually broken down under the pressure of what were grudgingly accounted the moral sciences. As soon as the mind of man, his thought, feelings, and conduct of life, as individual and as member of a society, were admitted as objects of scientific study, subject to "laws" analogous to those of chemistry, physics, and biology, the merger of rationalism and humanism became a certainty of the near future.

In what may be called the final struggle towards union we reach a clear understanding of the hostility displayed by both rationalism and humanism against their common enemy Supernaturalism and the authority of the Churches. For among the physical sciences biology, among the mental sciences psychology, were confronted by the rooted antagonism of a theology which regarded man as separate in kind from all other organisms even in his physical origin, while his soul belonged to a spiritual order which it was impious to scrutinize. It is seldom realized to-day how

fiercely the battle was waged even sixty years ago for the exclusion of man's body and soul from the determinist evolutionism which audacious biologists were extending into every department of human life. In the ranks of intellectual society the victory of humanism and rationalism has been won, though, as we shall presently discover, with certain dangerous concessions to the enemy.

The man to whose honoured memory this discourse is addressed, Moncure Conway, was in the thick of this fight. He entered it as a champion of humanism. It was his intense devotion to vital causes of humanity which led him to perceive that the appeal to reason was the path of attainment. He became rationalist because he recognized that reason was the servant of humanity. With his honoured example before us we may disembarrass ourselves of the stilted appendages of "isms" and "ations," in order to confront the real purport of my address. That purport is concerned with the question, "How far and in what sense is man a rational or reasonable animal?" I put the question in this form

because it appears to me self-evident that we must look to the status of man in the animal world for any satisfactory account of the part reason plays in his life. The philosopher, as a pure devotee of reason, is not in a position to give a disinterested judgment in the case. And yet it is to philosophers that we turn to find the sternest repudiation of the rule of reason. It was Hobbes who declared that "reason is and must be the servant of the passions"; while Herbert Spencer, in the triumphal march of nineteenth-century rationalism, stated that "a man is a bundle of passions which severally use his reason to seek their gratification, and the result at all times and places depends on what passions are dominant."[1]

Now it is manifestly true that a man does employ his reason in the service of those urges, impulses, desires which are here called passions. This employment of his reason we call reasoning. Even the higher vertebrates below the human level use some reasoning to deal with new situations, and learn from ex-

[1] Life, p. 450.

perience. Man's earliest reasoning was applied to a better understanding of his environment so as to get food, shelter, security in the pursuit of the biological urges to personal survival for the maintenance and evolution of the species. Reasoning was thus put to purely practical uses, and in these uses were laid the foundations of what are later on termed the sciences. It is sometimes claimed that an intellectual urge or craving called "curiosity" must rank as a separate item in the instinctive outfit. Two of my most valued friends, L. T. Hobhouse and Graham Wallas, made this claim for a disinterested love of truth or knowledge. But this has always seemed to me a needless hypothesis. The explanatory and experimental processes employed by men and other animals for the satisfaction of their instinctive desires appear to me as belonging to the several urges, fumbling after better satisfaction of each desire by way of trial and error.

But in thus attaching reason to the vital animal needs I do not mean to admit that it remains the servant of the passions in the

Hobbes or Spencer sense. For in a true sense reason is the rightful ruler, not the servant, of the passions, or the separate interests. But here it is evident that reason is not identical with reasoning. When we speak of a reasonable man, or of a man behaving reasonably, we do not simply mean right reasoning. Self-control is one of the first conditions we should claim for reasonable behaviour, and by self-control we certainly signify the correlation and control of those very passions which are said to use reason for their servant. A reasonable man then appears to have reversed the earlier position, and to have adopted reason as the governor of his passions. Even if this signifies that reason serves certain of the higher passions, more social or altruistic in their objects, further-sighted in the conduct they inspire, this choice on the part of reason implies a regulating principle.

Now this rule of reason must be accredited with human significance. A reasonable man is not merely or mainly one who reasons rightly in following out his several aims and interests, but one who seeks to co-ordinate and

harmonize these aims and interests in some ideal of personality and society. This rule of reason is no mystical affair ; it is the slow production of human evolution. The savage, like the child, is literally the slave of some dominant passion of the moment, which may destroy him if unchecked by consideration for other further-reaching interests. Reason, then, first asserts itself as the guardian of the whole group of passions and interests against the dangerous dominance of one. The sex instinct, pugnacity, the thirst for power, may drive a human being into some destructive folly. The very survival of man calls for some check on this precipitous behaviour. That check is the first function of reason. Its ethical or human import is seen in what is called "the moral struggle." The crude animal urges and passions are rapid and violent in their claims for satisfaction ; self-control in the reasonable sense is first exercised, not in combating them but in calling for delay, a breathing space which will enable the heavier and slower-moving interests to come into play. Even when the battle is thus joined between some wild primi-

tive passion and the "better feelings," the former may win. For there can be no security that reason will always prevail in a personality or a society, even when it has full opportunity for deploying its forces.

Indeed, we are living in an age when both personality and society seem to be subjected to new forces of dissolution. Half a century ago it seemed to the rising generation that the reign of reason, if not fully established, was at least formally accepted in every field of thought and conduct. Causation on lines of strict determinism was recognized in all the physical sciences, and was winning general recognition in the new sciences of biology, psychology, and sociology. Evolution along determinist lines in the direction of growing complexity of structure, conduct, thought, and feeling was applied to the new social sciences, so as to conform with the vigorous optimism of an age of progress, when man's reason would prevail even in those fields of politics and economics where no conscious orderly government was yet discernible or even recognized as desirable. For the invisible trend

of impersonal Evolution had taken the place of the Deity in the larger ordering of events. To the mind of a Cobden or a Mill this solidarity of human interests within each nation would be secured by the completion of popular self-government; while the growth of trade and other communications between nations would give to the sentiment of humanity a solid foundation of material co-operation. Given personal liberty and political equality, fraternity would be assured.

That same power of reason which brought the diverse and sometimes conflicting passions of the individual into an ordered personality, seeking its welfare as an organic and progressive whole, would perform the same service for humanity by bringing its individual members and its nations, or other groups, into finding their common good, their community, in orderly and mutually beneficial intercourse. Distinctions of race, colour, language, would be subordinated to a rising sense of humanity, while environmental differences of soil, climate, situation, would be utilized for especial forms of work and wealth which would by regular

processes of free commerce be apportioned for the benefit of the whole world.

Mid-Victorianism floated complacently on this tide of enlightened self-interest in a world of material, intellectual, and moral optimism. A generation later doubts began to show themselves in the practical spheres of politics and economics. Group solidarity within each nation was everywhere menaced by conflicts of interests between capital and labour, which pressed from the field of economic organization into politics, each party striving to use the instruments of Government for its own ends.

This economic struggle was crossed in nearly every country by a rising conflict between producer and consumer, in which the superior organization of the former was exhibited in the development of protective tariffs. But the greatest obstacle to the growth of world community was the competitive economic imperialism which sprang up during the later decades of the nineteenth century, seizing the reins of national policy in each great nation, and stimulating that insane race

of armaments which issued in the Great War and the Bad Peace.

Reason in the guise of enlightened self-interest thus appears to stand condemned as a reliable guide to human welfare. It is not true, either in the field of industry or in any other field of conduct, that the good of the whole can be secured by each seeking his own separate gain or good. The added goods of each do not figure out as the greatest good of all. This is the separatist fallacy, so plausible and yet so false, which has done so much to weaken the contribution of liberalism to social and economic progress. Its plausibility has chiefly lain in two false assumptions. The first is that all men are so nearly identical in wants, desires, and interests that the best which each can do for himself will be his best contribution to humanity. The second is that in the last resort there is no community, no humanity, but only a number of separate persons, and that all right or reasonable conduct should be devoted to and measured by the benefit of these separate persons.

This last consideration brings us to a crucial

question—viz., the relation of personality to humanity. It is sometimes argued that, whereas primitive man, like other organisms, was motived by instincts and desires making for the preservation and enlargement of the species, tribe, or other group, his superior brain in mastery of his environment afforded a continually increasing surplus of time, energy, and other resources for his individual development and enjoyment. Human progress, it is contended, is measured by, and consists entirely of, this enlargement and improvement of the separate personality. Community in the sense of citizenship, nationality, humanity, is in the last resort resolvable into enriched personality. It is not, I think, a sufficient reply to say that among the instincts and desires are those which impel individuals to associate and sympathize with their fellow men, so that personality has a social aspect, which will itself be enriched by the various forms of personal intercourse that civilized society brings into action. The herd instinct with its organic interplay, when raised into finer modes of community, means more

than this. An orchestra has its value, its meaning, in its harmonious co-operation of separate instruments. Community singing is something more than and different from the aggregate of individual voices. So in any group life, of a city, a nation, mankind, the gain or pleasure or achievement of the whole is not absorbed in the larger, better, or happier life of the individual members. "Joys that are in widest commonalty spread" are something super-personal—they form a genuine fund of commonwealth.

This consideration is closely relevant to our main topic—reason and humanity. For if it be admitted that individual personality and social personality (community) are closely linked, both in their biological origin and in their evolution, that reason whose function is to serve the natural purpose of man must have a social as well as an individual utility. It does not exist to inform and guide only the individual in his instinctive and conscious conduct, but also the society of which he is a member. Here it figures as "common sense," urging associated men to follow lines of conduct that

make for the security and development of the group, the enrichment of its humanity, and even in emergencies to sacrifice their personal life to this wider purpose.

When men claim, as many do to-day, that democracy is not a reasonable method of government, stressing the fact that most men do not think out clearly matters of public policy and seem incapable of doing so, they disparage or ignore the significance of what I here term "common sense." This sense is not a substitute for reasoning; it is a sort of feeling for the human value of different forms of government and lines of conduct, largely no doubt conservative, but also recognizing that there are times when security demands advance. The history of modern democracy in England is unintelligible without the recognition of some such instinctive general urge. The various stages by which popular self-government has been achieved seem quite unrelated. They were at any rate not the conscious fulfilment of a clearly conceived ideal. And yet they were persistent movements in the same direction. They represented

a common-sense determination to overthrow the power of monarchs, oligarchies, class rule, as obstructive to the common welfare, and to fashion rough modes of popular self-government to put in their place. When, therefore, we are told that the folly of democracy has been exposed, and that groups of skilled self-appointed rulers who understand what the people ought to want (what is really good for them) are destined to take the place of popularly chosen rulers, we should be slow to accept such arrogant assertions. We should maintain that the common sense which supports democracy is a form of wisdom which as a guide to conduct has a natural value, as apart from the clear logic of individual reasoning. I do not, of course, claim for this common sense that it can dispense with informed thinking in the arts of government. It is evident that expert knowledge and judgment must play an increasing part amid the growing complexity of modern government in every field of conduct. The real problem that underlies the recent disablement and repudiation of democracy is the deter-

mination of the right relations between common sense and expertism.

This important issue is, of course, by no means confined to the sphere of public conduct. Common sense is not merely the operation of group-feeling or reasoning. It is also that personal sense for what is safe and right which helps to guide individuals who are brought up against some unforeseen situation or emergency. They must make a choice; they have not the knowledge to choose a line for themselves. They must consult some expert, some physician or lawyer or accountant. But common sense puts limits on their confidence in the expert; they will not leave themselves entirely in his hands—they may doubt, even reject, his advice, though they have nothing they can call reason for doing so.

To some of you I may seem to be preaching obscurantism. But what I am after all the time is the reconcilement of rationalism and humanism (returning to our linguistic tags). For in this common sense I find that faculty which, raised to a higher plane, is recognized

as wisdom. In his great work *Adventures in Ideas* Professor Whitehead distinguishes among the guiding forces of humanity three grades—instinct, intelligence, and wisdom. Now this wisdom is a more reflective, a more informed sort of common sense, using the reasoning powers for the attainment of objects endowed with human values. Here once more we are brought into conflict with the cruder rationalism which would overstress dry reasoning in the disinterested pursuit of something called truth. Now, if we turn back our minds to the picture of the animal man, using his inherited equipment of instincts and desires to the bettering of his position on this earth, we shall see that the pursuit of truth can never be "disinterested." Even the sciences which study the inorganic world are directed by and suffused with human interests. They are not, indeed, so directly utilitarian in their conduct as they were in the hands of primitive man, who studied botany to get food, astronomy to find his way, and geometry to measure his bits of land. Scientists even distinguish pure from applied science ; and the

former assumes a superior air of disinterestedness. The surplus time and energy of civilized man, after his necessary wants are satisfied, leave scope for the free employment of his mind and body—in short, for play. Civilized man puts his body to play in sports, travel, and physical adventure, his mind into the finer arts and the purer sciences. But the notion that in these higher uses of leisure and surplus energy man can cut himself entirely loose from biological utility, seeking goodness, beauty, and truth for what is termed their own sakes—i.e., as absolute values irrespective of human interests—is quite without justification. Man's play of body or of mind, as indeed the play of all animals, is infused in and inspired by survival utility, and the achievements of science and art which he affects to value on their own account are lures to induce him to cultivate these finer modes of human energy.

Science knows no hard facts, absolute laws, or dry reasoning. Everywhere human selection and arrangement come in. What questions to put to the outside world that comes to us through perception in phenomena or events,

how to question new evidence so as to generalize it into laws, the choice of hypotheses, the formation of judgments—the reasoning processes employed by the sciences can never escape from human valuations. I have spoken here of the inorganic sciences. If we survey in similar fashion the sciences of organic and conscious life—biology, psychology, philosophy, ethics, sociology, and history—the impossibility of dry, disinterested reasoning is too evident to need display. All these sciences are arts, and the artist everywhere is man with his emotions, instincts, desires, aspirations. But because reason is the tool of humanity for the achievement of man's purposes we need not disparage the importance of keeping the tool clean and sharp and using it with precision and skill. It is staggering to think how little attention is given in the ordinary processes of education to training and practising the art of reasoning, even where instruction is given in the sciences in which its use is best illustrated.

I should be sorry to think that, at a time when clear, exact thinking is more necessary for

the safety and future advancement of humanity than ever before in the course of human history, I should even appear to be disparaging that reasoning process, or to be suggesting that some unenlightened feeling, figuring as common sense, can rightly take its place. But if we are to work towards a world more rational in thought and in conduct it is well to recognize the nature of the obstacles in our way. I have so far chiefly dwelt upon one—viz., the human emotions, interests, and valuations, which everywhere enter in and often dominate the reasoning processes.

It would be idle to ignore the deplorable set-back to the rule of reason in the practical affairs of life represented by and resulting from the Great War. Reason has two arch-enemies. One is force, the other chance. They are more closely associated than at first appears. For when force, either in the hands of an individual or of a nation, expels reason and settles a conflict of interests by the assertion of a superior will to power, that settlement has no agreed acceptance and no security. Events are no longer the products of a reasonable order

but of a mixture of force and chance. War is sometimes called a science because its practitioners make use of the physical sciences and of some usually obsolete strategy. In fact, its conduct and its results are riddled with elements of chance, the incalculable and the unexpected. Even the generals to whom the conduct of war is entrusted are infected by the risks and uncertainties of every step they take, and often become the prey of superstitious hopes and forebodings. To the ordinary soldier war is a vast game of chance, in which he stakes his life, and in which all reasonable precautions for safety lie outside his control. No wonder the Great War left as an aftermath a mental disorder, expressing itself in a great revival of magic, wizardry, soothsaying, amulets, necromancy, and other forms of unreason. The speculative hazards of the business world to-day are, of course, in large part the direct results of the application of force instead of reason in the terms of the peace. The wild orgies of economic nationalism, the belief that it is good to sell to but not to buy from foreigners, to lend but not to borrow, to save

but not to spend, the setting up of barriers to stop the mutually beneficial commerce between nations—all these follies flow directly from the pride of isolated, hostile nationalism.

The same evil consortium of force and chance is exhibited in the private conduct of business. Monopoly in price-fixing puts upon a force basis the relations of producer and consumer, while the settlement of conflicts between capital and labour is compassed by privately organized force or by political pressure. The union of force and chance is most powerfully represented in the loaded dice of the stock and share markets, while the gambling spirit stretches from the sacred regions of high finance to the betting mania which corrupts every sport and every circle of society in this country. These practices of force and chance can only signify a weakening of the sense of right and the rule of reason in some of the main departments of human conduct.

But we cannot ignore the grave assaults recently made by scientists and philosophers upon the validity of the hitherto accepted rule of reason in its application both to inorganic

happenings and to human conduct. Half a century ago causality and determinism were accepted principles in both fields; laws of nature had absolute validity in the physical world, and, though attempts were made in the supposed interests of morality to maintain a "freedom of the will" in the field of human conduct, the growing knowledge of heredity and of the interdependence of body and mind was rapidly reducing to amiable insignificance the older doctrine of personal responsibility. Now that biology has brought to light the determinant part played by glandular secretions in the formation of character and the direction of conduct, it might seem that the triumph of rational determinism would be complete.

But no. The rationalist interpretation of nature and of man appears to stir a popular feeling of repugnance which seeks and finds a quasi-intellectual support among the scientists and philosophers of our time. This is an exceedingly interesting phenomenon, deserving a far closer study than I can give it here. In his searching analysis of English character,

Dibelius speaks of "the deep-rooted irrational instincts of the English mind,"[1] citing our dread of close orderly planning and logical arrangements as illustrated in our loose unwritten Constitution, our uncodified legal system, our consistently disorderly and opportunist attitude in education, politics, religion. But is this way of going on so "irrational" as it seems to foreign critics? I have already put in a plea for "common sense" as a sort of rough "reason." But we have reached a point in our discussion where the issue must be more closely faced. For the repudiation of determinism and causality by some of our intellectual leaders is a staggering use of reason in the cause of unreason. At first it was represented as an intellectual economy which scientific men were entitled to employ. The laws of science, it was suggested, are purely provisional generalizations from a body of observed facts; there is nothing binding in them in the sense of causal determination. Or, at any rate, science will work independently of

[1] *England*, p. 501.

any such principle of causality. But a second phase, represented in the scientific world by such men as Eddington and Jeans, extends into the field of inorganic science a wild doctrine of irrationalism. Hitherto the idea of rigid determinism, though regarded as unnecessary for scientific specialists, was generally accepted as the basic principle of natural phenomena. Effects followed causes, and were commensurate with them. If you knew the causes you could infallibly predict the effects. Are we to scrap this determinism alike in the world of matter and the world of mind, substituting what?

"Progress of time," writes Eddington,[1] "introduces more and more of the random element into the constitution of the world. There is less of chance about the physical universe to-day than there will be to-morrow." Jeans tells us that electrons jump from one orbit to another by hazard. These elements of "chance," "hazard," and "random" are even dignified as a principle of "indeterminism."

[1] *The Nature of the Physical World*, p. 77.

But when it is sought to stampede the minds of ordinary men and women into the acceptance of such a doctrine by the scientific eminence of its propounders, we do right to question the authority of scientific specialists to pronounce upon a basic principle of rationalism. That chance or hazard plays a large part in the ordinary life of all of us is undeniable. But that chance always means that we do not, or perhaps cannot, know all the determinants of the chance occurrence. It does not mean that the occurrence is undetermined. Jeans seems to hold that when a pack of cards has been shuffled the position of the ace of hearts in that pack is a matter of chance. It is no such thing. If I could know all the relevant facts—the prior position of the ace, the exact play of the shuffler's hands, and the amount and mode of shuffling—I should know exactly where to find that ace. It is my insufficient knowledge, not any indeterminism in the situation, that makes my attempt to draw the ace a matter of chance. So with the jumping of the electrons or any other incalculable occurrence. It is incalculable not from

any indeterminism in the order of nature, but because some of the determinants are not fully known.

The same analysis is applicable to the operation of the will in human conduct. It is, indeed, likely that part of the acceptability of this indeterminism in nature is due to a half-conscious desire to furnish a sort of buttress for the doctrine of a free will in human conduct. But, if so, it is a poor performance ; for chance or hazard is no adequate basis for the freedom of will which the moralists require. What they need is liberty to make a choice of conduct with the fullest knowledge of all relevant considerations. Some element of chance or risk remains ; but the choice is as much determined by the strength and quality of the interests in their appeal to the will as is the action which issues as the result of the choice. The introduction of hazard or chance into such conduct would be as destructive of the sort of "freedom" required as would the pressure of external force. The "freedom" required for an act of choice demands a recognition and valuation of all the interests which affect the mind, and

of the results which follow from the several possible choices. This is a reasonable will, not conforming in the least to any principle of indeterminism. Let me put the issue in its plainest garb by saying that if we knew the hereditary equipment of any man—the facts of his education and environment, and the particulars of the problem of conduct which confronted him—we could predict with certainty his choice. The necessity of this determinism imposes itself on our mind with the same rigour as the laws of arithmetic. To tell me that on some particular occasion the same causes will not be followed by the same results is as offensive to my reason as to say that sometimes twice two may be five or three. To clinch the issue I will quote the famous physicist and philosopher Max Planck[1]: "Just as at each and every moment the motion of a material body results necessarily from the combined action of many forces, so human conduct results with the same necessity from the interplay of mutually reinforced or con-

[1] *Where is Science Going?*, p. 153.

tradictory motives, which, partly in the conscious and partly in the unconscious sphere, work their way forward towards the result." The tendency of many educated persons to jib at this determinism is due to the belief that it impairs the moral dignity of man by destroying his sense of responsibility and converting him into an automaton. Now it is certainly true that the acceptance of determinism affects our emotional attitude towards good and evil conduct. But it does not numb our feelings. We still feel a glow of admiration for noble conduct, a loathing or contempt for what is vile and mean. Determinism will not drive us to emotional indifference in valuing human conduct; but it will involve an alteration in our sentiments of praise and blame. Indeed, as a more rational psychology is gaining ground in education, criminology, and the treatment of defectives, a real change is already taking place. The barbaric sense of the exceeding sinfulness of sin, with the moral hatred it carried, is giving way to a more natural attitude. Vice offends more from its ugliness than its sinfulness. Goodness has its appeal

in moral beauty rather than in virtue. Not that there is any danger of the deeper-rooted sentiments of hate and love disappearing from our estimates; but rational determinism softens and humanizes these sentiments. It also prescribes a treatment for moral defectives which is more humane and more remedial than that which the crude brutality of law and religious dogma enjoined. These changes of attitude and conduct are, be it remembered, themselves determined by the clearer light which science throws on human nature.

But, it may be said, if complete determinism is the ripe fruit of rationalism, does it not lead to an ideal of perfect order and exact understanding that will sap the human interest in life? If we continually reduce the area of the unknown in nature and in man, and become more and more accurate in forecasting the future and in furnishing complete security, will life seem worth living? It is not enough to reply that history shows that "rationalism" has a very long way to go before it makes man rational enough to establish foundations of peace, security, and co-operative progress.

Nature herself furnishes a far more adequate provision against the inhumanity of a completely regulated world. For history never repeats itself—the novel, the unforeseen, the unforeseeable, are continually creeping in. This is true even of natural history. The seed of a plant will not grow up into a plant identical with its parent in shape, size, colour, and other qualities; for the very soil is continually changing on which it feeds; the weather and other environmental conditions will be different. In human history, whether of the individual or the group, novelty is always asserting itself in two important ways. The very fact that a situation involving an act of choice has once occurred prevents the same situation from recurring, because the fact and the memory of that past choice are new factors in a situation otherwise the same. This is of crucial importance in reconciling the doctrine of determinism with the sense of personal freedom when a choice of conduct is required of me. I have become a different person by virtue of what happened before, and my new experience will

liberate my choice from the trammels of my past.

But the influence of the past in making a different present is only one and not the most significant aspect of what is termed creative evolution. The passing of the present into the future, the perception, absorption, and assimilation of new knowledge, new ideas, new forms of art, new values and modes of conduct, coming in from a vaguely apprehended outside or beyond, is the true key to the enrichment of human interests and values. The exposition of this thesis by my friend and colleague, Dr. Delisle Burns, in a book just published under the title *The Horizon of Experience*, will prove, I trust, a veritable "Consolation of Philosophy." In every field of knowledge or of practice, in philosophy, the physical and moral sciences, literature and the fine arts, in politics, industry, and social intercourse, this generation is experiencing the swift invasion of new ingredients of thought and feeling which are transforming, at what to some appears a dangerous pace, the older established ways of thought and life. It

may truly be said that such a process of change is not new. History shows many periods of reformation and reconstruction by the inroad of new discoveries. But this openness of innumerable minds, the conscious reaching out beyond the horizon for new ideas, the willingness, the eagerness to try new experiments in organic change, give a new importance to this "sense of the horizon." "On this horizon," writes Dr. Burns, "appear the new truths which supplement and sometimes undermine the old, and the new beauty to which we are unaccustomed. To allow for the horizon of experience, therefore, is not a mere confusion of the limits of our knowledge —it is an attempt to 'place' the factor of growth or development in its relation to what has been already acquired. Not the unknown, but the partially known; not the factors entirely outside our experience, but some that only just enter in—these are on the horizon."

The order of the universe is indeed determinate, but that very order makes "new planets float into our ken," and brings new

miracles of taste and beauty for our minds to feed upon. This creative work is continually going on. It is not merely that new experience is added to the past; it transforms that past, makes organic changes in all departments of life—material, intellectual, social—and, what is so important for our present theme, no knowledge of the past, however accurate and full, could have enabled us to forecast these transformations. Those who talk so glibly of the standardization of the mind that must come from spreading over the entire earth the products of machine economy, with the common habits of thought and conduct that this economy would impose, fail to take into account the illimitable fields of curiosity and enterprise placed at our free disposal by this moving picture of the universe continually putting on the screen new scenes to engage our feelings, new problems to tempt our reason. Here is no mysticism, no intuitive philosophy to displace Rationalism, but the constant provision of new challenges to our understanding, accompanied by that passionate human interest

rooted in the animal life of primitive man and finding its food and growth in the higher struggles for the mastery of the finer arts of life for the individual and the community.