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SCIENTIFIC METHOD IN GOVERNMENT

THE Riddell Memorial Lectures entitled "The Unknown State"*[†], delivered before the University of Durham by Lord Eustace Percy, represent a noteworthy plea for the study of government. They are indeed partly addressed to the scientific worker, and were delivered in the belief that a revival of the neglected study of government is the most urgent need of the present day, and that universities have a special responsibility to make it a learned study. Whether that responsibility can rightly be placed upon the universities is a matter of opinion; but no one who has considered Sir Ernest Barker's views on this problem of government, or J. T. MacCurdy's suggestive chapters in "The Structure of Morale" or has noted the difficulties into which the administration is being continually led from the Cabinet level downwards for lack of attention to the fundamental machinery of government, can doubt the need for critical inquiry if not independent research in this field, or that such inquiry should be entrusted to an institution of the independent and academic type. The problem appears to lie outside the field of the National Institute for Social and Economic Research, and there is no obvious independent body to which its study could be entrusted.

At the outset of his first lecture, "The Decay of Political Thought", Lord Eustace Percy challenges the indifference of men of science to this problem. He insists that by neglecting it they imperil that freedom of movement, of entrance, and of experiment which they vigorously claim. Having won freedom, man cannot discard philosophy and remain free. His freedom depends upon the constant re-interpretation, in response to changing circumstances, of three fundamental affirmations: that there exists in any human society an authority entitled to over-ride the will of its individual members; that its individual members have, nevertheless, rights which this authority is not entitled to over-ride; and that both authority and individual have positive duties by the punctual performance of which alone the balance of their respective rights can be preserved. The most characteristic symptom of our intellectual failure during the last twenty-five years in Europe and in America to face the implications of freedom has, Lord Eustace suggests, been our attempt to escape from the study of government into the study of some vaguer entity called 'society'. The assumption that human society is either a self-evident entity like the human body, or has been ascertained to be an entity by investigations of its structure as thorough as those of the astronomer or the physicist, is false. Every science which is concerned with the study of individual man is a social science, in the sense that man is a gregarious animal; but in any other sense, Lord Eustace Percy claims that there is only one social science—political science; he regards 'social' medicine, 'social'

* The Unknown State: a Plea for the Study of Government. By Lord Eustace Percy. (University of Durham: Riddell Memorial Lectures.) Pp. 48. (London: Oxford University Press, 1944.) 2s. 6d. net.

biology, for example, as merely those aspects of medicine or biology of immediate concern to governments.

Political science is the study of human beings living in a particular kind of association, called a State, whereby they regulate some part of their conduct in obedience to rules enforced upon them by persons selected for that purpose, in accordance with procedures laid down beforehand. The distinguishing mark of the citizen is that he is the object of regulated compulsion to social behaviour, while the free citizen is distinguished not only by the acceptance of such compulsion but also by sharing, in greater or less degree, in its exercise. Moreover, while the historian must always remember that manhood and womanhood are more wonderful than citizenship, and that men are greater than their institutions, he must not turn truth into falsehood by supposing that they are more social than their institutions.

Lord Eustace Percy then points out that in studying the State we must face the implications of the moral contrast, because the human law of the State does not coincide with the divine law of love. The difference between Christian and civic duty is one of consistent temper rather than of occasional practice. The central assumption of English-speaking democracy is that the citizen must not only be ready to resist general social disorder; he also must think instinctively, even of offences against himself, not as personal injuries, but as threats to the safety of his neighbours. He is not entitled to forgive; and where this civic temper fails, free government breaks down.

Lord Eustace Percy's analysis up to this point shows clearly how easy is the transition from freedom to anarchy; incessant vigilance, clear thinking and a real attempt to grapple with the philosophical aspects will be imperative in addressing ourselves to the tasks of social reconstruction. The divorce of compulsion from responsibility may yet prove the factor to wreck a social security scheme or a full employment policy. Reformers, as he wisely says, can dispense with a philosophy of government only so long as the citizen feels that he is being reformed by his own consent. Once our old catchword of 'government by consent' ceases to describe the citizen's real feelings, he will turn by instinct and tradition from those who govern him to those who offer to govern him on intelligible principles for definable purposes. These principles and purposes must be religious, based upon a coherent view of what man is, of what constitutes for him a 'good life', and of the means by which it can be attained; and in this second lecture, Lord Eustace Percy outlines a Christian philosophy of government. What matters primarily is the spirit of a government and of its citizens; and the practical difficulties are considered of preserving this spirit in a reforming democracy which is also a great international Power.

The statesman, it is pointed out, must work in the medium of social circumstance. Remembering that his fundamental aim is moral improvement, he must judge the probable moral effect upon his citizens, both of law itself and of the processes by which law is made and enforced, given the character of his citizens, the texture of their social system and

the machinery of government at his command. In governing backward peoples, he must be careful not to distort, by novel constraints, the human nature which he can compel, but cannot suddenly change. Compromise is to the statesman what the scientific method is to the man of science; but in politics this scientific attitude has proved unstable.

Christian positivism, Lord Eustace Percy suggests, needs the thought and teaching of universities; their social surveys at present are providing material for the administrator, not for the statesman, and reflect the contemporary preoccupation with urgent administrative projects, from which emerges no outline of settled law. In his final lecture, he attempts to outline the practical application of his Christian positivism. Here he suggests that under modern conditions of publicity, the tendency of law to create superstitions, and, in its turn, to be itself progressively influenced by such superstitions, has become an imminent danger to the whole system of parliamentary democracy. We need, particularly now, to submit our inherited laws of personal relationships to a criticism as keen, and as closely related to the actual facts, as that which Bentham brought to bear on the inherited legal systems of his day, remembering that virtue is a more important fact than vice. The art of government lies, not in continual accretions to law as circumstances or fashions of thought seem to demand, but in those transformations of essence by which the body of the law is kept sound and is made serviceable to the good citizen.

Lord Eustace Percy refers to the point that the only interest which the law recognizes in the shareholder is that of current profit, and in passing to the problem of fitting policy to the facts, he is equally forthright in his challenge to political invention. He emphasizes the danger which lies in the identification of government with the social services, a belief in the efficacy of taxation, and in the efficiency of pure State administration. After the War, a social service policy must, at least, be one of the priorities, such as housing, and careful selection. But we must remember that a legislative minimum tends to become a social maximum, and Lord Eustace Percy hopes for the recognition of the family rather than the individual, as the unit of social reform, though it involves a reconsideration of law, a reconstruction of administration, and a regeneration of the spirit of State policy.

In conclusion, Lord Eustace Percy refers to the necessity of overcoming that disabling weakness in the local administration of Britain—the growing inability to combine State and voluntary social services. The most urgent duty of government at this time is that of mobilizing all citizens in the tasks of reconstruction. We have, moreover, to find a way of carrying out social reconstruction without turning every general election and every parliamentary debate into a competitive appeal to majority self-interest. The future task of all law and all statesmanship is to convince men of the inevitability of social change and of its inevitable effect on all lives; to draw from them, in that conviction, the 'free-will

offerings' which alone can bring us safely through such change; and to adapt law and administration fearlessly to such change. Government, like marriage, is a great adventure; but, like marriage, an adventure in the normal architecture of a common life whose temper and whose end is peace, and to both of which the temper of crisis is fatal.

It is remarkable how similar is this philosophical approach in some of its conclusions to those reached by Prof. H. J. Laski from an entirely different angle in his pamphlet, "Will Planning Restrict Freedom?"* Prof. Laski argues that planning will be required not merely to renovate the tragedies of war but also to inaugurate that era of scientific research on the threshold of which we stand; and that to give effective expression to the public context in housing and health and nutrition and education, society must plan the use of its resources in peace not less than in war. He examines the argument that in a planned society the citizens must lose that chance to experiment with themselves which is the essence of freedom. Planning, he points out, is simply the exercise of that foresight which adapts the means to the end; but planning evades the dangers of bureaucracy only when the decisions taken by the professional planners are built upon an alert and interested public opinion. A planned society requires from its citizens a higher degree of knowledge, and a far greater continuity of interest than are required in a State where *laissez-faire* obtains, and Prof. Laski quotes the experience of the Tennessee Valley Authority which D. E. Lilienthal brought out so strongly in his recent book.

Prof. Laski is thus on common ground with Lord Eustace Percy in urging that decentralization, participation, and a high level of social understanding are the essential safeguards against the danger that a planned society may degenerate into bureaucracy. Decentralization prevents the impress of uniformity in a world where variety is essential for the realization of any scheme of values; participation enables ordinary men and women to play their part in the civic process, instead of leaving their experience to be inferred by leaders. A high level of social understanding is important, first as preventing the division of any society into a small number of persons who rule and a vast multitude over whom they rule, and, secondly, because those who lack a map of the universe in which they dwell are liable to lose their way.

Our task, as Prof. Laski sees it, is to discover the institutions through which decentralization, participation, and a high level of social understanding are made generally available to ordinary men and women: and he points to three types of experience of which our historic freedom has been the outcome, and which are closely connected with these safeguards against bureaucracy: our emphasis on local self-government; our long experience of ecclesiastical self-government; and, in the last century, our experience in the trade unions and the consumers' co-operative movement. All these point to the existence of a considerable reserve of unused talent, and

it may well be that the joint industrial councils and production committees will provide a potent means of expression in the future which will facilitate that closer integration of industry with the community which is one vital aspect of our problem.

Prof. Laski's approach is more pragmatic than Lord Eustace Percy's; but the trend of thought is strikingly parallel. Prof. Laski emphasizes the necessity, in developing a system of government, of delineating clearly the responsibility for decisions and of avoiding building institutions which provide ministers and officials alike with an excuse for not taking action. Again, he insists on the need for a massive publicity over the whole field of social action, and on the danger in the assumption by a vast majority of the citizens that political responsibility is not a task in which they ought to share: they must be brought to realize that it is, on the contrary, an integral part of their civic function to shape the character of the political process into which they are born. Once again we find the recognition that, important as is high ability in politics, it is only likely to achieve its appointed aim when linked with integrity and courage.

The central issue in planning is that of eliciting the maximum possible participation of the body of citizens in the processes of politics, and reviewing measures and changes required in the transformation to a planned society. A planned society involves the acceptance of a common body of purposes by its members, and an equal response to equal demands. In saying this, Prof. Laski comes closer to Sir Ernest Barker's postulates for democratic government; and to the extent that the totalitarian State represents the spirit and temper of intransigence rather than the spirit of accommodation, Prof. Laski might dispute its claims to be a planned society. But there can be no question that in war-time the most successful administrators have been those who most fully took their subordinates into their confidence and sought both to elicit and to use the experience of those subordinates. Firms which had a tradition of good relations with the trade unions have almost invariably a better record of production than firms with a tradition of bad relations. That experience is highly relevant to the future organization of industry; for in industry as in other fields, it remains true that nothing is so important in a society which seeks to remain democratic as the ability to maintain a high interest in its problems among the body of its citizens; and nothing so promotes that high general interest as the pursuit by the community of great purposes which call for the participation of the common man.

Prof. Laski may be rather too facile in his argument, but his pamphlet stresses the essentials clearly enough, though he does not throw down the same challenge to creative thought as Lord Eustace Percy. Without such creative thought, however, we are unlikely to evolve the machinery necessary to serve the needs and purposes of a society determined to achieve the Four Freedoms, and it can at least be said that this pamphlet, like others in the same series,

* Will Planning Restrict Freedom? By Prof. Harold J. Laski. (The Planning Bogies Series.) Pp. 40. (Cheam: Architectural Press, Ltd., 1944.) 6s.

is a contribution to constructive and unprejudiced thinking about the real issues. The argument, though not the philosophy of Lord Eustace Percy's lectures, has been stated fairly enough often before. It was well put in J. MacMurray's "Constructive Democracy", for example, where not only the necessity of government in a true democracy being under effective control was urged, but also the necessity of achieving industrial democracy in order that political democracy may survive. It may be true that, as MacMurray urges, the exclusion of the economic life from the competence of the political authority does not belong to the essence of democracy. Freedom of culture is, however, of the essence of democracy, and while conferences such as those recently held by the British Association and the Association of Scientific Workers show how men of science have awakened to the social implications of their work and are increasingly ready to recognize their responsibilities as citizens, the challenge to fundamental thought about the institutions of government, untrammelled by party inhibitions or tradition, thrown down directly and by implication in these papers is one which they, no less than others, have yet to meet.

THE FRAGMENTATION OF SCIENCE

Mitosis

The Movements of Chromosomes in Cell Division. By Prof. Franz Schrader. Pp. x+110. (New York: Columbia University Press; London: Oxford University Press, 1944.). 13s. 6d. net.

TWENTY years have passed since the appearance of Wilson's "Cell", that is of the third and all-embracing 1,200-page edition of this work. We may indeed take 1925 as the end of an epoch, the epoch of comprehensive description; always painstaking, usually thorough, and sometimes otiose, description. In the end this method collapsed of its own weight and broke into pieces. Since 1925 we have been busy putting the pieces together. There are many ways of doing this, most of them unprofitable, but some of them have given new structures of a kind not previously known in biology. Such, for example, is the geography based on the union of breeding analysis, X-ray breakage and salivary gland mapping. On the purely cytological side there is also the speculative structure based on a few simple observations of meiosis in polyploid plants, a structure on which we have been able to rest all our knowledge of genetic crossing-over as well as a large part of our knowledge of chromosome mechanics at meiosis and mitosis. Other special theoretical structures are arising, or will arise, from the new experimental methods of ultra-centrifuging, X-ray breakage, ultra-violet absorption spectroscopy, micro-incineration, specific enzyme treatments, and so on.

Such are the circumstances in which Prof. Schrader, Wilson's successor, takes up his pen to continue the work. Prof. Schrader, like his predecessor, is technically equipped for his task by a long and careful study of mitosis in certain Hemiptera. Theoretically he is equipped by his understanding of the change that has come over this field of research. He values highly the power of concentration in attack which the achievements of the last twenty years have

demonstrated. His theme is mitosis, the division of the cell and the nucleus. In treating it he has taken great pains in limiting his objective and avoiding side issues. He has relegated the resting, prophase and telophase nuclei to a chapter of notes at the end of the book. He has likewise excluded the peculiarities of meiosis from his argument; and the evidence from sex-chromosome behaviour, which he himself summarized in 1928, and which a less self-denying critic might have been tempted to consider, is now grown too bulky or too awkward to take into account. The abnormalities of mitosis produced by cancer and by colchicine and X-ray treatments are sacrificed to the same economy. The uniformity of plants and the diversity of Protozoa (and here we may perhaps cavil) find no place. Genetics, chemistry and internal structure are all locked out or, one should say, thrown away, for they surely contain something of value for the study of mitosis.

After this generous clearance there is little left to distract us from the residue. This is simply the mitotic spindle and the centromere by which the chromosome is attached to this body, both of them stripped of their most significant variations. How does Prof. Schrader deal with this residue? Old-fashioned writers, like Wilson, have faced the same problem. They have first said what happened in mitosis, how it varied in Nature and could be changed in experiment, and have then drawn the conclusions and expounded the theories that seemed to combine or clarify these conditions. Schrader's method, however, is a new one. Having established the 'reality' of the spindle fibres as a basic assumption in two pages, he goes straight to general theories. The inevitably *a priori* theories of forty, fifty and sixty years ago occupy most of his attention, but the young ones also get their turn until liquid crystals and tactoids are reached. Throughout the discussion, observations and experiments appear only as the casual commentators, supporters or objectors, called in apparently to rectify the balance where some theory seems to be showing too badly or too well. For Prof. Schrader is utterly impartial. If one theory is obviously useless it is admitted to have helped in its time, and if another theory is obviously sound it is degraded to a truism or a mere exaggerated fact.

With such a tale the end would be foreseen, even if the author had not stated it on the first as well as on the last page. It is that his inquiry after the perfect and ultimate theory has failed. Mitosis is still too complicated, and the assault still too diffuse, for success. He feels "confusion", "humility", "disillusion" and a "despair" tempered only by hope that still further concentration in the attack (or, should he say, fragmentation in the objective?) may yet yield "definite promise of a final solution".

Prof. Schrader's book may seem depressing, and especially to those who know the merit of his purely descriptive work. But it is not entirely without value. It contains the lesson that while specialization in technique and material is necessary and profitable, specialization in theory, an arbitrary restriction of data, is a contradiction in itself. It is like mountain-eering in manacles. That is why this book, on an immense subject, peters out into notes and trifles after seventy-five pages. In describing the past, and planning the future, of scientific theories we must consider all things before we choose to adopt or reject any of them; and in order to make that choice we must have a point of view, and perhaps even a theory, of our own. C. D. DARLINGTON.