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Scientific Methods and the Advance of Social Conditions

Life and Leisure in London*

THE last volume of the great "New Survey of London Life and Labour" has now appeared. We noticed the first in *NATURE* of March 21, 1931, p. 430, and have now to add a word of hearty congratulation to Sir Hubert Llewellyn Smith and his staff on having brought their ship into port. It is a fine piece of work, and both the thoroughness of the execution and the general hopefulness of the conclusions will bring happiness to Mr. Charles Booth in the shades and to all his friends who remember the devotion and the insight with which he initiated and carried through the earlier survey forty years ago. That was a scientific expression of the humanitarian spirit, parallel to, and no doubt largely inspired by, the same ideas which had just founded Toynbee Hall, as the practical expression. Both movements have been followed by hundreds of successors in all parts of the world. It is one of the most interesting features of this new survey that its director, Sir Hubert Llewellyn Smith, had a hand in both the earlier experiments in the 'eighties and 'nineties of the last century.

The present survey was undertaken in 1928 by the London School of Economics, and has been supported by the funds of more research foundations and charities' trustees than we can find the space to enumerate. The money has been well spent, for the results, established with the utmost impartiality and marshalled with skill, are a permanent record of the contemporary state of the largest aggregation of human beings on the earth. It is formally limited to an area lying somewhere between the County of London and the

Greater London which comes under the Metropolitan Police. It deals with a population of about five and a half million, though its results would be in the main applicable to a much larger area and are broadly typical of most great urban centres at the present time. Hence its high scientific importance as a sociological document.

This ninth, and last, volume of the work, dealing with life and leisure, will probably attract more general attention than any of the others, because of the multitudes involved in all the main activities which it describes. We all go at some time to the 'pictures'; the wireless is as popular a pastime with the well-to-do as with the poor. Indeed it might be said that this levelling up, or levelling down, of the whole population by the aid of mechanism, is the most outstanding feature of the whole report. When one sees the sort of personal activities by which the more vigorous individuals strive to win spiritually above the mass, it is clear how very similar are the tastes and efforts of all classes in the nation. They all take to a garden when they can. They all, in similar proportions, run their rowing, football and cricket clubs. They all, though in a still smaller proportion, endeavour to follow some form of serious study. Everyone therefore will feel that there is something to his own account in what purports to be an inquiry into the conditions of the 'working classes'.

One ought perhaps to make two partial exceptions to this wide conclusion, both mainly connected with difference of income. Drunkenness has markedly gone out, we are told; and gambling has very much increased. The former is certainly true equally of all classes. What the report relates, in this matter, of the working classes in

* The New Survey of London Life and Labour. Vol. 9: Life and Leisure. Pp. xiv+446. (London: P. S. King and Son, Ltd., 1935.) 17s. 6d. net.

the last forty years, is only the social extension downwards of what had been going on among the well-to-do for more than a century. It may encourage us to hope for a similar diffusion of better tastes and wider interests in other matters. Cycling is another example of the same sort. But the vast increase in gambling seems exceptionally to belong to the wage-earning class. The chapter on this subject gives interesting and intimate accounts of how the betting business is actually carried on, and the fun which often arises from it in the family circle. As throughout the volume, the tendency is to look rather on the harmless and cheerful side, and, on the whole, it is both morally right and scientifically sound to do so. Clearly the life of the multitudes in the great urban centres is not generally degraded or unhappy, and the standard has risen very greatly in the period under review, both in comfort and in the pleasurable and harmless use of the increased leisure and material means which have accrued. This is the main point, and the surveyors take care to stress it, perhaps with a slight tendency to over-satisfaction. Those reading what they say will often reflect on the other side of the picture and sigh for the what might be. This rage for gambling, and the huge crowds which frequent the football matches, are one of the chief points which suggest such thought. The State is obviously justified in taking what measures it wisely can, to restrain the passion, when, as in the case of greyhound racing, a large new industry arises, consuming millions of money, in which practically the sole motive is stimulating gambling, already appealed to on many other fields.

The other most noticeable difference in the use of leisure, due mainly to difference in education and income, is the overwhelming preference for the cinema over the living drama or music. There are roughly three times as many cinemas as theatres and music-halls together, in the County of London, and no doubt the proportionate attendance in the former as compared with the latter would be greater still. When we consider that this includes the principal theatre area in the whole country, and that a majority of the towns in England have no theatre at all, worthy of the name, one must ask whether the State is justified in staying its hand, as it does, and treating all forms of amusement as equal before the law.

While holding firmly to the main principle that it is far better for people to do things for themselves than have them done by a State, however

benevolent, one must recognise at the same time the duty, sometimes the necessity, for the authorities, who, after all, represent the deliberately constituted will of all, to intervene on occasions, to prevent a gross evil, to assist a better cause, to give, in fact, guidance rather than command. We do it rather too much in the schools, where the effort to inculcate a love and knowledge of the national classics—Shakespeare and Scott and others—has often the opposite effect to that desired. But, after the school-age, we go to the other extreme and tend to remain nationally indifferent, leaving to private enterprise the foundation of a national theatre, the encouragement of music, the employment of leisure. The more enterprising and intelligent of the public librarians endeavour to educate the taste of their readers; but such a policy of selection, though it seems to be having some effect in the quality of the books read, is by no means popular, and is actually disputed in theory by some quite serious people. "We pay the rates", it is said. "Why should we not have what we prefer to read?"

But the better opinion will surely be that there is room and full justification for further action, carefully devised and experimental, but not to be set aside on the vague denunciation of State socialism. The British Broadcasting Corporation, though tending rather to popularity in its programmes, is on the whole a successful move in the right direction. Where its resources have been used to maintain good concerts, open in the ordinary way to the public, it has been proved that there is a large and still unsatisfied taste for good music. The field here, with free and open-air concerts, is almost limitless.

On another—still wider—point, one is inclined to go beyond the terms of reference of these surveyors of London. One cannot look with complacency on the vast extensions of urban residence in connexion with our great cities, and especially with London; however much we may rejoice that the conditions of life are as much improved as the surveyors demonstrate. While tens of thousands of fresh residents are poured out each week to the suburbs of London, especially to the south, it has taken fifteen years of persistent and difficult contrivance to build up a community of a little more than ten thousand at a garden city (Welwyn) which is really in the country and offers advantages of a healthy, pleasant and natural life far beyond those of the best ordered urban area. Is there no scope here for further

strong and deliberate State efforts to mitigate the urbanisation of England and have a larger proportion of the people in country surroundings? It is a commonplace that the country is the natural home for childhood, and yet every decade for more than a century we have allowed a smaller proportion of our children to enjoy it.

Scientifically then, this "Survey" is invaluable, as confirming, by minute inquiry into a large typical area, the general conclusion which M. René Sand submitted to us recently in his magnificent "Economie humaine par la médecine sociale". That is, that a marked and demonstrable improvement has taken place in social conditions generally throughout the world, as a result of applying scientific methods deliberately to social needs. Both René Sand and this "Survey" fully admit the black spots, and the "Survey" studies these (for example, sex-delinquency and crime, in this volume) with the utmost care and sympathetic insight. But both authorities agree as to the main conclusion, and also that we may reasonably

expect a further advance by pursuing the same methods, if possible with greater vigour.

Morally and politically, the "Survey" suggests some other large questions at which we have hinted above. Mechanism and the increase of leisure have given us a far larger population of tolerably well-off and semi-educated people, living in great and growing masses in urban areas in all industrialised countries. The supreme problem now faces us of how so to act that the highest human ideal may be opened to all, according to their capacity. This involves doubtless much well-directed collective effort. Still more it points to the cultivation by all sensitive and capable persons of a divine discontent with a falling off from the best, either in themselves or in those who share the common civilisation which we have inherited from the past. To keep this alive, and make it operative in ever-widening circles, must appear the highest moral and intellectual obligation on all with means of action; and every man has a certain field of action in himself. F. S. M.

Flow as a Property of Matter

First Report on Viscosity and Plasticity
Prepared by the Committee for the Study of Viscosity of the Academy of Sciences at Amsterdam. (Verhandelingen der Koninklijke Akademie van Wetenschappen te Amsterdam, Afdeling Natuurkunde, (Sectie 1), Deel 15, No. 3.) Pp. viii + 256. (Amsterdam: N. V. Noord-Hollandsche Uitgevers-Maatschappij, 1935.) 10 guilders.

THE problem of flow has diverse aspects. We have the flow of gases, the mechanism of which is tolerably well understood, so that in the case of certain simple gases the viscosity, and its variations with temperature, can be calculated. We have liquids, of which the viscosity is precisely defined by a constant and can be accurately measured: the mechanism of the flow is imperfectly understood, but it is certainly quite different from that of gases, as the contrasting effect of temperature in the two cases abundantly demonstrates. When we come to the movement of solids under stress, where even the definition of constants which shall describe the experimental facts presents grave difficulty, we are confronted with a still more complex problem. In general, a finite stress is needed to produce permanent set, but this appears to be about the only common factor of

the behaviour of such different classes of bodies as polycrystalline metals, metal single crystals, doughs, clays, glasses, gels, rubber and living protoplasm, and in certain cases matters are made still worse by the phenomenon known as thixotropy, a term applied to the marked decrease of viscosity caused by shaking or similarly disturbing certain colloidal substances. The evident complexity of the problems long kept investigators from this field, but, within the last twenty-five years or so, serious attempts have been made to systematise our knowledge. Imperfect as our general theories still are, the time is definitely ripe for a collected and critical account of the present state of the subject, and all workers in the wide field will welcome the enterprise and applaud the courage of our Amsterdam colleagues in issuing the "Report" under notice.

The report deals with the measurement and physical significance of the different types of slow flow observed for liquids and solids, and excludes vortex motion. It opens with a general review of the field; a brief summary of the properties of the simple liquid is followed by an elegant description of Maxwell's theory of a relaxation time, which covers both true liquids and substances which definitely creep on loading and unloading,