

Ami Noll.

**BIOLOGISTS
IN SEARCH OF MATERIAL**

*An Interim Report
on the Work of*
**THE PIONEER HEALTH CENTRE
PECKHAM**

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*24 Russell Square
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*An Interim Report on the Work of
The Pioneer Health Centre,
Peckham*

Health and fitness are very much in the public mind just now. The appearance of this report, therefore, is particularly appropriate since it presents us with the results of a unique enquiry into the maintenance and development of health. It is a sequel to *The Case for Action*, which described a remarkable experiment in applied biology.

Here the experiment is carried a stage further and we see the results of the first eighteen months' work in the Pioneer Health Centre at Peckham.

Every year millions of pounds are wasted through illness. Millions more are spent on research into treatment and diagnosis. This knowledge, so expensively acquired, is then distributed among the sick, who are already past any real chance of rehabilitation.

The argument emerging from this Report is that such prodigal expenditure could be checked by regular overhaul and health supervision and the work at the Pioneer Health Centre is the first step to providing such a service throughout the country.

The authors of this report, Dr. Scott-Williamson and Dr. Innes Pearse and their assistants, are primarily concerned with biological research; and their findings provide material of the utmost significance for the medical profession and the general public alike.

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To
The late SIR HALLEY STEWART

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INTRODUCTION

BIOLOGISTS IN SEARCH OF MATERIAL

Many critics—and thus friends—have visited us during the last two years. The visit invariably results in a question to clear up the puzzle presented by a socio-medical institution throbbing with movement and gaiety. ‘What is it that you are after? Why are you doing this?’

Our answers to these questions will not be very apparent in the body of the report. Indeed the substance of the report may give a false impression of what we are trying to do. So an introduction is necessary.

Our first report, *The Case for Action*, was of a very general nature, describing as it did the first phase in an experiment which was to determine if a second phase, on a larger scale, were justifiable and if so what shape and form it should take. From that report it has been assumed that we were recommending a particular type of new social service institute. That is not so. We were and still are pursuing an inquiry, conducting an experiment, seeking facts in a new field—that of applied biology.

The proper title for this interim report then is ‘Biologists in Search of Material’, for that in fact is the primary purpose of the Centre.

What then is biology? We define biology as the study of the physiologically balanced organism with its environment. It is as much a study of the environment as of the animal; indeed to the biologist the two are inseparable. Thus neither the physiological field nor the pathological field is the area of exploration for the biologist, though the principles of both sciences are his only equipment.

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Pathology is characterized in its processes by the physical or chemical demarcation of the site of injury from the general body—the creation of a zone of reaction. Similarly any want of balance in the physiology of the organism, or of the environment, leads to the appearance of this demarcation—zone of reaction—between the organism and the environment. Pathology could be described as the study of the mechanism of re-action in the organism *escaping* its experience—assuming the defensive, as it is called.

To the physiologist this tendency to reaction is the experimenter's bugbear, for in all his experiments he has to devise controls or conditions that do not induce reactions to injury. The physiologist is studying some specific effect; one has only to realize the immensity of the effort needed to control, condition, regulate or exclude the general effects of the environment in a physiological experiment, to appreciate the distinction between physiology and biology. A surviving organ like the heart beating in a bottle or the pithed frog is the physiologist's material of election for experiment. Clearly this means that the interpretation of any physiological discovery in the relatively isolated organ or organism will always demand a further study of its application to the organism living its life.

The translation of physiological *action* into biological *function* is not a process the logic of which is yet disclosed. Presented with a basket of threads—every colour guaranteed by the physiologist steadfast and reproducible—we are still a long way from the Persian carpet with its inevitable logic.

On the face of it that might suggest that biology is merely the study of applied physiology. But that is too limited a view, for to apply physiological discovery means conditioning the environment to secure a specific effect, treating the environment as a sort of predetermined storehouse of experience which is there for the organism to draw upon. The consequent emasculation of the organism—i.e. reducing it to the level of a pithed frog or bottled heart—will hardly lead us to the unfolding of the processes of living. The environment must be as free to shape and form itself as the organism it enfolds.

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The organism actively embracing the non-conditioned environment, i.e. the organism in health, is thus the biologist's material. It would appear therefore that biology is the antithesis of pathology and that biological science will have physiology and not pathology as the keystone of that bridge to knowledge.

While pathology is the study of the organism on the defensive, or more correctly in escape, running away from *living* so as to ensure *survival*, the biologist's material is the organism actively embracing the environment, i.e. in health.

As an example: the man who wanders in the summer pastures, stirring up and inhaling the cloud of pollen dust, is not missing the effect of pollen on his physiology. He must be looked upon as being in *actional* relation to these salutary substances.

He with hay-fever is in the other category—is in the *re-actional* relation to the pollen. The obviousness of all re-actional states, i.e. of pathological manifestations, has blinded us to the biological significance of most of the actional relations. They tend to be taken for granted.

A further contrast is that the pathological approach to any problem leads only to therapeutics; the end is so clear and obvious that the lure of cure is wellnigh irresistible—in spite of the fact that you cannot make silk purses out of sows' ears or put new wine into old bottles!

The biologist's approach to any problem leads directly to cultivation. This is as yet recognized only in the vegetable and to a lesser extent in the animal fields of experiment, and it is only in recent years that in those fields research workers have thrown off the yoke of the pathological approach. Human biology, whether physical, mental, social or economic, is still exclusively approached from pathological experience—from reaction—through and by cure. That must serve until scientists have explored the biological field.

As biologists then we are engaged in a quest for Health. So far the search has not been productive. Nevertheless, our two years' work has produced something which from the purely scientific point of view may be of value—that is a hypothetical definition of health. Our definition of health reads: 'the physiological condition of an organism living in

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mutual synthesis with its environment'. Our attention is thus now focussed on the study of synthesis in the material and physical field. That seems to us a step forward, leading us to development of a new technique for observation, measurement and experiment.

From what is called the practical point of view, this result would hardly seem to justify the outlay of time and money involved. But, having failed to find material ready to hand, we naturally had to turn aside from our main issue, health, and attempt the re-conditioning of the only material available. Thus this report is largely concerned not with our main purpose but with the incidentals to that endeavour—with the sick and their rehabilitation. We believe that this has led to many technical and factual advances of more general value and application.

Thus, as in so many other scientific investigations, it is the incidentals that may prove of the more immediate practical value and more especially perhaps the incidentals of the new technique evolved. Technological advances are so often the first results of any scientific inquiry. It is because of that that science is too often praised or blamed for advances that are merely technological, and the technologist credited with the scientific spirit, so that scientific truth tends to become buried in material values. Our age is talked of as a scientific age, for example, when it is in fact a technological age. Not that there is no virtue in technology, for the true technologist worships efficiency and never rests content until he gets out all he puts into his machine.

The technologist's field up to now has covered only the physical and the material. He cannot go far in human affairs until the scientist has again given him, as well as the technology of the machine itself, knowledge of what to put into the machine and of what to expect out of the machine.

Man's vaunted 'conquest of nature' is the expression of a power complex—vain humbug. Nature is that which we *obey*. The scientist is deciphering the rules we have to obey. Every rule disclosed has had within it its own power to ensure obedience. This might stand for a description of progress or evolution. We must strengthen our humility to hasten the era of a *greater* obedience; for nature keeps no secrets—only we have the blindness of our own complacency.

FOREWORD

A LAYMAN'S COMMENTARY

The scientist is quite happy collecting facts, or what he thinks are facts, and drawing theoretical conclusions from them, which he then enjoys testing by collecting more facts and matching the actual outcome against the theoretical forecast. He is quite unconcerned with whether his findings are used, misused, or neglected. (It is the layman through the scientist, not the scientist through the layman, who has developed the horrors of modern scientific warfare.) The layman's interest, therefore, in this report will not be in its ultimate sublime truth, but in just how much can be got out of it now for him and for society, either on a long view or on a short view. If the doctors had discovered that caviare and old brandy formed the only really suitable diet for the growing child, it would have been a discovery to them of the greatest scientific interest. To the layman it would be simply irrelevant, as, under any economic system you like to postulate, the supplies of caviare and old brandy could never be sufficient to cover the whole population of growing children.

The scientist is also limited by the fact that he feels that he can only act on scientific information. The layman is not so limited. In this report the doctors are most careful to state that the conclusions can only be valid in respect of the small sample of the population actually dealt with, and that the numbers are too small for statistical generalization. But the layman must realize that the findings have a very wide *probable* reference, with certain allowances for different conditions, to the rest of the country.