Bradshaw Lecture
ON THE
THEORY OF DIAGNOSIS.
Delivered before the Royal College of Physicians of London on Nov. 4th, 1926,
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Verumtamen praesentium cognitium proprium nomine
diagnosis, hoc est dignitium, appellare consuevimus.

Galen (18-24).

PART I.

MR. PRESIDENT, FELLOWS OF THE COLLEGE, LADIES
AND GENTLEMEN,—My first duty is to acknowledge
the responsibility, cast upon me by your late President,
however, not unmixed with gratification, for I succeed,
our eponymous benefactrix. This responsibility is,
versed in the subtleties of some narrow specialism ;
who have better earned the right to be called
greater recognition. But they have not been many
reward but perhaps exert less lasting influence. I am
sagacity, were gifts not often possessed in such
words of Hart, written in 1625. ancient physicians
scope is to discern the whole and sound from the like
and the sick and infirme from the whole, being unlike the
excell the other, to wit, the Therapeuticke, the which
true sciences are formed. But the separation between
inquiry into the mental processes by which we obtain
of inquiry into the mental processes by which we obtain
in every calling are the most difficult to define, and
the history of that calling, nevertheless in every
calling a time must at length arrive when such
definition is concluded, and a proper term must
The need for clear definition of the integral concepts
of medicine is, therefore, at least as imperative as
the practice of that indirect or analogical form of
observation by experiment, which to so many seems
to refer a base solid "in imperfect view", in
most of them, and by no means does direct observation
at the bedside or in the field.

It is necessary to insist upon the conceptual aspect
of medicine as a science, for—again to quote Hobson
—in modern times until recently most men of science
have been dominated by the philosophical theory
of knowledge—essentially unnecessary to scientific
method—known as physical realism. The influence
of this theory is never more prejudicial than when
unconsciously sustained by those who loudly proclaim
the freedom of medicine from philosophical thrall!

No further excuse seems needed for an attempt to
say what we have in mind when we speak about
"so noble a part of Physicke" and to give an
account of its theory—that is to say, to explain it,
and its place among the varied parts of the
parent of all things. His humanity, his wit, and his
sagacity, were gifts not often possessed in such
measure by those who obtain greater immediate
reward but perhaps exert less lasting influence. I am
grateful for the opportunity of saying how much I
owe to him.

MEDICINE AND SCIENCE.

By the terms of the Bradshaw Trust, the subject
of this lecture must be connected with medicine or
surgery; and I have chosen for my theme the Theory
of Diagnosis, believing that none other can be more
proper either to medicine or to that part thereof
of which diagnosis is the key-note, to wit, that
every diagnosis must yield pride of place, for, in the quaint
words of Hart, written in 1625, ancient physicians
"did . . . divide Physicke principally into two parts, to
what he commonly calls Diagnosticke. To
that part which we call Diagnosticke, whose most common
scope is to discern the whole and sound from the like
and the sick and infirme from the whole, being unlike the
one to the other. And this part of Physicke doth farre
excell the other, to wit, the Therapeuticke, the which
without the Diagnosticke is of small use and profit."

Formerly, the greatest masters of scientific method
—as Harvey himself—would insist on interpreting their observations in the light of those fundamental principles that make up the very matrix in which all true sciences are formed. But the separation between philosophy and natural science that marked the close of last century became so wide that, although reaction has set in, and many are now eager to discuss the general validity of scientific conclusions, medical men are still prone to assert that medicine as a science stands on a lower level, or at least a different level, from the others. Professors of anatomy, physiology, medicine, and surgery have long been known to medical men as professors of "facts". This was essentially the case of their attitude towards medical men as a science, and the word "fact" has often been dropped. Dr. Boole's "solid base of observed fact and planned experiment, in complete dissociation from all mental discipline as such. It is in sympathy with this attitude towards inquiry into the mental processes by which we obtain our "facts" that all trace of metaphysics, logic, and philosophy has disappeared from medical education since, in becoming more medical, it became less educational. What Dr. Mercier has written ten years ago, that, while the fundamental concepts in every calling are the most difficult to define, and the definition of them is not arrived at until late in
Galen and, although *dignoscere* is in Virgil, it is said not to occur in Salernitan translations or in medieval writings generally. I have not seen it in any Latin work earlier than the last part of the sixteenth century. \( \text{[Withington.]} \)

Diagnosticke we have seen as an English substantive in 1625 (Hart), but *diagnosis* does not occur till 1681, when, from a story to his disease, Willis, defines it as *dilucidation, or knowledge*. Later, the word does not appear to have been greatly used for nearly a hundred years, and then somewhat exist before periods of it, diagnosis only coming to classify diseases as if they were indeed objects or groups of objects in nature; in Sydenham's words, "to be reduc'd to certain and determinate kinds, with the same exactness as we see it done by botanic writers in their descriptions of plants." and it was undoubtedly the distinguishing signs which Nature has particularly affixed to every species." Faber has shown how Linne, fired with enthusiasm, applied to diseases his own aphorism, *Species tali sunt diversae quot diversae formae ob initio sunt creatae*, and caused a "Genera Morborum" to be compiled for the use of his own pupils. The fashion spread, and in 1771 a new era in modern medicine commenced when Hélian published his *Dictionnaire du Diagnostic* whereby a disease or plant or other object may be known for what (it) is and not another. The following *Dictionnaire du Diagnostic, ou l'art de connaitre maladies entre elles,* a definition persisting so lately within a cincture, and to-day many a student obtains his foothold, there grew up a desire to contain medicine in their treatises of plants, and possessing "certain distinctive characters and, ex hypothesi, the proper subject of diagnosis is only the identification of a disease by careful investigation of its symptoms and history, together with the opinion, formally stated, resulting from such investigation. The same dictionary gives the general, or biological meaning as "distinctive characterisation in precise terms." That it is characterisation that is of the essence rather than characterisation in terms of any particular convention is implied by Dr. Christian when, in the *Oxford Medicine,* he writes that "Diagnosis, so far as the practice of medicine, and such medical logicians as Lanza (1826), cared more to undertake medical research, as they called it, by ratiocination than to discuss so humdrum a process as diagnosis appeared to be.

**DIAGNOSIS : THE EXPLANATIONS.**

It is disappointing to the student of medicine to find during the last 150 years—a period coterminous with what Singer calls the Reign of Law—so easy an acceptance of linguistic subterfuges which, however convenient when teaching students, are yet responsible for much confusion in the minds of students grown to be teachers.

In former days the physician brought to medicine a mind trained in the theory of knowledge: like Galen and Locke, he made contributions thereto. Diagnosis was taught to the student not to be the determination of the nature of a diseased entity, but that its distinguishing signs which Nature has particularly affixed to every species." Faber has shown how Linne, fired with enthusiasm, applied to diseases his own aphorism, *Species tali sunt diversae quot diversae formae ob initio sunt creatae*, and caused a "Genera Morborum" to be compiled for the use of his own pupils. The fashion spread, and in 1771 a new era in modern medicine commenced when Hélian published his *Dictionnaire du Diagnostic* whereby a disease or plant or other object may be known for what (it) is and not another. The following *Dictionnaire du Diagnostic, ou l'art de connaitre maladies entre elles,* a definition persisting so lately within a cincture, and to-day many a student obtains his foothold, there grew up a desire to contain medicine in their treatises of plants, and possessing "certain distinctive characters and, ex hypothesi, the proper subject of diagnosis is only the identification of a disease by careful investigation of its symptoms and history, together with the opinion, formally stated, resulting from such investigation. The same dictionary gives the general, or biological meaning as "distinctive characterisation in precise terms." That it is characterisation that is of the essence rather than characterisation in terms of any particular convention is implied by Dr. Christian when, in the *Oxford Medicine,* he writes that "Diagnosis, so far as the practice of medicine, and such medical logicians as Lanza (1826), cared more to undertake medical research, as they called it, by ratiocination than to discuss so humdrum a process as diagnosis appeared to be.

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was to lay down rules whereby the student might distinguish the disease described to him in the schools. He never questioned the adequacy of the heroic attempt to resume or group all clinical phenomena in terms of diseases only, or the permanent validity of the nosological distinctions, and we receive, in some sort, the impression of a change of view about Art, ignores the efforts of Phidias and Leonardo in their regrettable lack of acquaintance with the technique of the carte-de-visite and the dry plate.

The truth is that Barclay, whose text-book long remains the popular, had an inkling of the scholastic doctrine of dicta, and in these remarks to teach us that the primary concepts of the physical sciences are subjective interpretations, justified by their convenience and the measure of common assent that they may obtain, but not as perceptions of reality. And so, again girelling medicine with her own zone, he explained diagnosis as the application to any particular case of the lessons taught by semiology and nosology; much as we might define literature as the application of the dictionary to a particular case of the patient, whilst strangely ignoring, as we do not diagnose. We appreciate that it is an attempt to resume or group all clinical phenomena in terms of diseases only, or the permanent validity of the nosological distinctions, and we receive, in some sort, the impression of a change of view about Art, ignores the efforts of Phidias and Leonardo in their regrettable lack of acquaintance with the technique of the carte-de-visite and the dry plate.

The profession of diagnosis was not more happier than the profession of medicine as a whole, and it is to this subject that Bain (1870), like others, ignored routine diagnosis and, whilst condemning realism in the scholastics, showed himself, like many philosophers, a realist in medicine, giving rules for the naming of diseases which (he said) are generally localised in separate organs or tissues. To Jevons (1877) diagnosis was the operation of discovering to which class of a system a certain case or specimen belongs, an operation performed by the serial rejection of the infinite classes with which the case does not agree. We still do nominal honour to this scholastic operation implying the reality of classes, when we speak of diagnosis by exclusion; but Jevons did not care to examine what generally happens. He set out what people would have to do in order that logicians might say they were behaving in the way they ought to do. And he ended by believing that they did so.

Jevons' question was not reopened. But, since the South African War, many books have been written professedly devoted to diagnosis as the most important part of medicine. These books give excellent schemes for the physical examination of the patient, whilst leaving, almost completely, the psychological. The materials are arranged semio logically or topographically rather than nosographically, and all allusion to therapeutics is foregone. He set out what people would have to do in order that logicians might say they were behaving in the way they ought to do. And he ended by believing that they did so.

Thus considered, diagnosis ceases to be an esoteric matter for the medical student. It is true that the art of diagnosis is taught at all times or of a whole case, it is difficult to see how diagnosis can be reduced to an induction or an inference from known particulars to an unknown general. There is a better logical case for speaking of diagnosis as deductive for frequently, though quite wrongly, some diagnosticians persist in inference from an assumed diagnosis to a disease. Still less is it reduced to a 27th proposition in the "Oxford Medicine," says rightly that by bygone days there was, as now, recognition by only a few that groupings of signs of illness are conceptual and to be explained, not by logic but by association. The ghostly presence of the Victorian realists and logicians as we turn Dr. Barker's many informative pages and trace the steps we are told we take, or ought to take, when we tread the path of diagnosis.

Jevons tells us that, like logic, it is a matter for psychologists rather than for the logicians who have so dismally failed us at our own business. This being so, we come to regard diagnosis as a kind of reflex process rather than for the logicians who have the matter. We do not confute it with any particular diagnostic convention, or assume that they who do not diagnose as we do not diagnose. We appreciate that it is not governed by strict rules or comparable to the identification of a postage stamp by reference to a collector's catalogue. Finally, we proceed to investigate diagnosis by the methods of psychology, recognising that, like logic, it is a matter for psychologists rather than for the logicians who have the matter. This being so, we come to regard diagnosis as a kind of reflex process which, regarded subjectively, resolves into three components, the psychology of the patient, another association or interpretative, and the third efferent or symbolising. Thus every response to injury becomes at once a reflex and a diagnosis;
The illness of each patient and some rationalised type of diagnosis must establish correspondence between the direct or concrete, from their ideas concerning disease. In terms of demons as in terms of diseases, yet a spirit or a demon. Clearly we have here a hint, that is comparable to natural religion, there should be a demon or a disease be held responsible for the symptoms, while there is a closer affinity than may be thought between those who believe in specific demons and those who talk about the specific clinical entities that “attack the human race.” It is certainly remarkable that, at the stage of human progress when, as Bordeu said, a natural medicine is practised, the duty should be to affix the proper label to a disease nominated. Herein Mr. Shaw ranged himself definitely with the Vitalists—best represented for us by his colleague as definitely set himself amongst the Organisers of Catholic spiritual home of all who manifest exact nosological proclivities and diagnose diseases rather than patients.

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The elder practitioner who, remote from laboratories but near to Nature, is hesitant when asked for verbal diagnosis in terms of recent convention, yet clear in action, is in like fashion opposed to his more formal colleague who, diligently making a diagnosis in strict accordance with differential tables and tests, searches his text-books in confusion for the treatment appropriate to the disease he suspects. Wherein lies the fundamental difference between these two diagnostic attitudes?

All men, when about to interpret what is presented in some consciousness, proceed in different ways. Some interpret the present by reference to images of past experience stored simply as memories, or as composites of like memories. Others compare present perceptions with mental constructs, made up of memories of like past experiences, but colligated (in Whewell’s phrase) by something predicated, abstracted, or imagined which, linking them together, converts mere aggregates or composites into organised units that we call ideals, general terms, or universals—just as a colligating staff or composites into organised units that we call ideals, general terms, or universals—just as a colligating staff transforms a thousand men into a battalion. Herein is the difference between the two types of diagnostician—a difference that carries with it many correlations and from laboratories but near to Nature, is hesitant when asked for verbal diagnosis in terms of recent convention, yet clear in action, is in like fashion opposed to his more formal colleague who, diligently making a diagnosis in strict accordance with differential tables and tests, searches his text-books in confusion for the treatment appropriate to the disease he suspects. Wherein lies the fundamental difference between these two diagnostic attitudes?

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