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6

SYLLABUS
OF
THE COURSE OF LECTURES
ON
MEDICAL LOGIC,

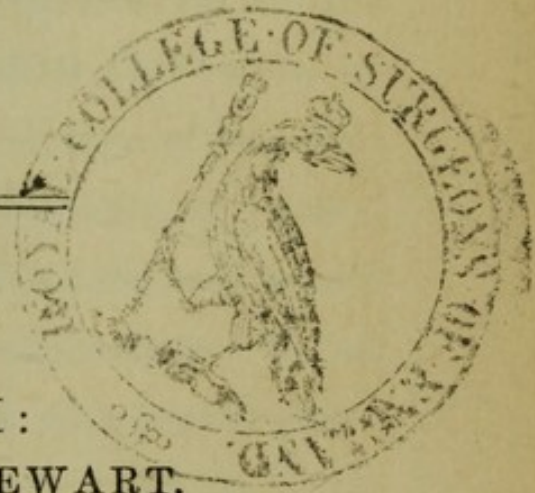
DELIVERED IN

Marischal College and University, Aberdeen,

BY

FRANCIS OGSTON, M.D.

Professor of Medical Logic and Medical Jurisprudence.



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MACLACHLAN & STEWART.
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MDCCCLVIII.

P R E F A C E.

THE following Syllabus may require a few words of explanation.

The Author, in proceeding to prepare a Course of Lectures on Medical Logic, found some difficulty in adopting such a plan for his prelections on this important subject, as would at once meet the views of the Founder of the new Chair in Marischal College, and justify to the Profession the addition of another branch of study to the Medical Curriculum, already sufficiently extended. The only treatise, of any note, available as a Text-book, being that of Cæsterlin, he resolved for the sake of the Pupil to observe the general arrangement of this author, as in most respects unobjectionable. He had not gone far, however, before perceiving that beyond such a general adherence to that arrangement, he could not, in the farther prosecution of his subject, allow himself to be restricted to the limits of this Author's treatise. Accordingly, in the details of his subject, he has availed himself, not only of the works of the earlier writers on pure Logic, together with such

of our best Medical authors as have touched incidentally on this Science, but also to a large extent of the labours of contemporary Logicians, amongst whom the very highest place is to be assigned to John Stuart Mill, whose doctrines, the Author has followed CEstherlin, in endeavouring to apply to the particular questions and objects of Medical Science.

MARISCHAL COLLEGE,

October, 1858.

SYLLABUS OF LECTURES
ON
MEDICAL LOGIC.

Lecture I.

Introduction of the subject of Logic into Medical Tuition.

Reasons assigned for the establishment of the Chair of Medical Logic in Marischal College.

Reasonableness of such an addition to the Curriculum of Medical study.

Lecture II.

Logic, as an independent study.

Ambiguous derivation of the original term.

Correct limitation to be assigned to the subject.

Early period at which it assumed its distinct and formal character.

Claims set up for India as the birth-place of the Science.

Points of correspondence betwixt Indian and Grecian Logic.

The Aristotelian Logic.

Its extended sway and early completion.

Comparison of the Aristotelian, with the Baconian Logic.

These respective systems rather different than opposite. The merits and defects of each, now correctly appreciated. Aristotle, to what extent the representative of the Deductive, and Bacon of the Inductive methods?

The former, to a great extent, the representative of pure or formal, and the latter of mixed or applied Logic.

Proper limits of the so-termed pure Logic.

Pure Logic excludes the use of the Science as a practical instrument.

Occasional realization of the idea of such a Science.

The aim of the pure Logician a justifiable one, however generally unpopular and partially carried out.

Logic and practical Science most widely severed at the time of the appearance of Bacon's writings.

The essential unity of Science contended for by Bacon.

Direction of men's minds turned by this writer from the speculative, to the practical Sciences.

Balance of gain and loss from this change, impartially estimated.

Reaction against the previous supremacy of Logic, carried to an extent injurious to the other Sciences.

Jealousy of the pure Logician of any alliance betwixt his own and other Sciences, how far justifiable.

A closer alliance betwixt Logic and Medicine, to what extent desirable.

Reasonable expectations of unmixed gain from such an alliance.

Example in this direction set us by the cultivators of certain of the Sciences in the like position with our own.

Lecture III.

Medical Logic, as a distinct study ; and the points it has been made to embrace respectively by Blane and Cæsterlin.

Objections to its claims to separate consideration obviated.

Methods of research chiefly prevalent in Medicine from the earliest times to the present.

State of Medical Science prior to the time of Bacon.

Merits and defects of early Medical Science.

Mode in which Medicine was chiefly cultivated prior to the time of Bacon.

Medicine prior to the dawn of Science.

Medicine in the hands of the Egyptian and Grecian Priesthoods.

True sources of its utility.

Modern parallel.

Value of the earliest recorded observations.

Medicine in the hands of Esculapius, Pythagoras, and others.

Medicine in the hands of Hippocrates.

Medicine from the time of Hippocrates, till that of its introduction into Rome.

First formal appearance of Empiricism in Medicine. Plato and Aristotle.

The Alexandrian School.

State of Medicine from the time of its introduction into Rome, up to that of the appearance of Galen's writings.

Medicine in the hands of the Roman priesthood.

Asclepiades of Bithynia :—

A prototype of the modern Charlatan.

Rise of the Methodic sect.

First dawn of Solidism.

Pneumatics and Eclectics.

Medicine in the hands of Celsus.

Medicine as pursued by Galen and his successors.

State of Medicine from the 8th to the 12th century of our era.

State of Medicine from the 12th to the 15th century.

Medicine in the hands of the Monks.

Medicine mixed up with magic and astrology.

First formal appearance of the Alchemists.

Foreign influences modifying medical opinion and practice.

Works of the Arabian Physicians.

Revival of Greek learning.

Appearance of treatises on special subjects.

The crude experiments of the Alchemists.
 Writings of the Chemical Physicians.
 Cultivation of Human Anatomy.

State of Medicine in the 16th and beginning of
 the 17th centuries.

Summary of ancient medical epochs.

Lecture IV.

State of Science in general, immediately before the
 time of Bacon.

Weakening of the influence of Aristotle, and the
 Schoolmen.

Revival of Platonism.

Reforms in Physics.

Reforms in Metaphysics.

Simultaneous Reforms, originating with Bacon and
 Descartes.

The methods of both essentially analytic :

In other respects divergent.

The tendency of Bacon's method towards sensa-
 tionalism.

That of Descartes towards idealism.

Results towards which both have contributed.

Preponderating influence of Bacon's method in
 Medicine.

The Inductive method as propounded by Bacon.

Collection, arrangement, and generalisation of facts.

Merits of the so-called Baconian method.

Its obvious defects.

Its comparative worthlessness as an instrument for the
 discovery of truth.

Original genius undervalued by Bacon.

Too much stress laid by him on the mere arrangement
 of facts.

His entire exclusion of Hypotheses.

Indiscriminate condemnation of the 'Philosophy of Final Causes.'

The total neglect of 'Deduction' its main defect.

Defective in the practical wisdom resulting from a long acquaintanceship with Philosophical processes.

Impartial estimate of Bacon's labours :

Their influence on the progress of modern Science :

Their influence on modern Medicine.

The predominance of exclusive sects and systems no longer possible.

The stimulus given by them to the departments of Medical Science in which observation and experiment are most available.

Advance less perceptible in the departments in which these are least available.

Respective limits of Theory and Experience, in Medicine, more correctly appreciated.

Induction, in the hands of Locke and his school.

Lecture V.

Impress left by the past, on the present state of Medicine.

Neglect of abstract studies in general, and of logical studies in particular, on the part of the profession.

Causes of this.

Superiority formerly claimed for Logic above all other subjects.

The abstract nature of the subject itself.

Undue extension given to it by many logicians

Mistaken views of its legitimate province.

The initiatory difficulties of the subject.

Consequences resulting to Medical Science from this neglect.

Careless exposition, and loose generalization of its facts.

Circumstances in Medicine unfavourable to the ready ascertainment of facts, and their more accurate generalization.

Laxity in the adoption and employment of technical terms.
Maintenance of illogical distinctions in ordinary Medical language.

The so-called 'theoretical' and 'practical' Physicians.

Absurd distrust of theory, properly so called.

The merest routine practitioner a bold speculator, and imperfect observer of facts.

How far such an one agrees, and how far he differs, from the charlatan.

Limits of pure observation in Medicine soon reached.

Union of observation and speculation indispensable to successful practice.

Relative claims of each, on the scientific practitioner.

Want of definite ideas, and distinctive aims, in practical medicine.

Substitutes for these, frequently relied on:—

The mere union of common sense and acute observation.

Natural tact, and readiness in the use of ordinary means.

How far these can be expected to carry the practitioner.

Extremes of credulity and scepticism, sometimes to be encountered in medicine.

Causes to which these are justly attributable.

Amount of logical acumen required on the part of the scientific practitioner.

Lecture VI.

Preliminary observations.

What the Physician has to investigate.

Objects of the Science.

How far these are common to all the Sciences.

Science and Art contrasted.

The Physical Sciences.

Place of Medicine amongst the Sciences.

The Union of Science and Art in Medicine.

Certainty and uncertainty in Science.

Sources of uncertainty in Medicine.

Illustrations.

Credulity and scepticism equally unreasonable in Medicine.

Equal or greater uncertainty in other Sciences.

The Physical Sciences not free from it.

The Social and Political Sciences the most uncertain of all.

Its occasional uncertainty, no sufficient grounds for abandoning the defence of legitimate Medicine.

Amount of certainty in Medicine, in earlier and later times.

Lecture VII.

Principles on which the Sciences are attempted to be classified.

Proposed arrangement of these, as theoretical and practical, and rational and experimental Sciences.

Impracticability of successfully carrying out such arrangements.

Arrangement of the Sciences according to their subject-matter.

Places of the leading Sciences in this scheme.

Threefold form under which science has been attempted to be taught.

The Historical department of Medicine too much neglected in modern works.

Descartes' principle of classifying Sciences, as they ascend from the more simple to the more complex.

Place of Medicine under this scheme.

Its subject-matter Man, in certain of his psychical and somatic relations.

Enumeration of these relations.

Dualism in nature.

Life and organization.

Essential unity of the two.

This idea of unity pressed too closely.

Life not to be merged in organisation.

Where the two approximate in the body.

Separate bodily organs acted on by appropriate stimuli.

Uniformity of the laws of health and of disease, taken for granted.

Difficulties in the way of the verification of this assumption.

Varied problems thus demanding solution in Medicine.

Provisional character of our leading explanations of these.

Detailed illustration.

True science not to be safely based on these.

Respective spheres of Induction and Deduction.

Lecture VIII.

THE INDUCTIVE, OR ANALYTIC METHOD, GENERALLY.

Induction as now practised.

Induction as applied to the study of the varied phenomena of nature.

Induction as applied to the study of vital phenomena.

Induction essentially the same in Medicine, as in Physics, and Natural Science generally.

Facilities presented by the latter for its application.

Special difficulties in its application to Medicine :

Paralleled in other Sciences.

Occult causes not to be hastily assumed in Medicine.

Opposite error of the Anti-vitalists.

Obstacles to Medical Observation and inquiry :

How these are to be met and overcome.

Respective spheres of Observation, Comparison, and Generalisation in Medicine.

Causal connections of phenomena, often unapproachable in Medicine.

Stable theories in Medicine, how arrived at.

Causes of the instability of ancient Medical theories :

Their defects no justification of the contempt sometimes extended to modern theories.

Succession of so-called theories in early and mediæval Medical history.

Frequent traces of these in our current language, opinions, and practices.

Examples of loose speculation in our own day.

Ancient and modern Medical theories contrasted.

The latter suggested by truer Analogies; and closer Inductions from verified facts.

Lecture IX.

Ancient and modern methods in Medicine farther contrasted.

Use and abuse in each of the *à priori* method, and the argument from Analogy.

Errors into which the ancients were led from the imperfect Science of their time.

The obstacles to correct observation and research undervalued by them.

Errors of modern Medical research.

Loose apprehension of phenomena, and common-sense notions, in Medicine.

How to avoid the fallacies frequently involved in these.

Observation.

Legitimate sphere of observation.

Its limits not to be overstepped :

More restricted in Medicine, than in some of the other Sciences.

Material aids to observation, in Medicine.

Mental or subjective view of observation, and its results in Medicine.

Analysis of complex phenomena :—

Distinguishing Antecedents and Consequents :

Fixing the order of their succession :

Qualities of mind required for this :

Extent to which this operation requires to be carried.

Baconian rule of 'varying the circumstances.'

Experiment, how far different from, and superior to, Simple Observation.

Earlier and later experiments in Medicine.

Occasions in which Observation is more applicable than Experiment.

Inherent defect of Induction not based on Experimentation.

Unhappy consequences of overlooking this, illustrated.

Combination of both desirable, when obtainable.

Limits to the application of the Baconian rule in Medicine.

This rule capable of greater extension than it has yet received.

Illustrations from comparative Anatomy and Physiology.

Partial results from it in Pathology and Therapeutics.

'Method of exclusion.'

Lecture X.

Comparison—Analogy.

- Loose Analogies of the ancients.
- Traces left by them in modern Medicine.
- Legitimate use of Analogies.
- Occasional over-estimation of these in our own day.
- Example from a recent work.
- Nature of Analogical reasoning.
- Analogical reasoning reducible to a formula.
- Analogical reasoning falling short of a complete Induction.
- Example from Newton's writings.
- Example from modern Astronomy.
- Analogical reasoning amounting to a valid Induction.
- Its verification necessary even here.
- Hence such reasoning may be of the highest value short of absolute proof.
- Use of Analogies in suggesting experimental proof.
- Conspicuous position always held by Analogies in Medicine.
- Analogies betwixt Physiological, and Pathological actions.
- Analogies betwixt the fertilization of Plants, and reproduction in Animals.
- Homologies of the vertebrated Skeleton.
- Aristotle and Newton's anticipations of modern discoveries in this direction.
- Similar correspondencies in the Vegetable kingdom.
- Homologous compounds in Chemistry.
- Analogies betwixt Fermentation, and the so-called Zymotic diseases.
- Analogies betwixt cell-development in the Animal, and Vegetable kingdoms.
- Analogies between Eremacausis, and Respiration.
- Analogies between the proximate principles of plants and animals.

Loose analogies sometimes admitted in modern Medicine.

Dubious resemblances betwixt certain natural processes, and diseases.

Dubious resemblances assumed as the bases of our classifications of diseases, drugs, and poisons.

Recent overstrained Analogies.

Illustration from modern Chemistry.

Illustration from modern Medicine.

Legitimate use of the imagination, in suggesting Analogies.

Use of extended Science, in the same way.

The study of Medical History a safeguard against the ready adoption of false Analogies.

Lecture XI.

The Numerical method.

Modern origin of the term Statistics.

Urgent call for their application to Medicine.

What they are fitted to accomplish.

Their important place in certain of the Sciences.

Drawbacks from their value even in these.

Chemistry, as a Science of quantity.

Limited applicability of Statistics to other Sciences.

Exemplified in Physiology, and the Social Science.

Extreme views regarding them in Medicine, and the allied branches of knowledge.

Unphilosophical character of these.

The true place of numbers in Science.

Value of Vital Statistics.

Defects of these.

The points to be embraced in the application of the Numerical method.

Large numbers to be compared.

Events or Cases, to be of the same kind.

Neglect of this in Medical Statistics.

'Fortuitous occurrences' to be taken into account.

'Chance' and its elimination.

Number of so-called fortuitous occurrences in Medicine :

A fertile source of its failure in our hands :

Future remedy for this :

The 'calculation of probabilities' not excluded in Medicine.

What has been accomplished in Vital Statistics.

What they have yet to accomplish.

Special adaptations of them to public Hygiène, to Obstetrical and Surgical practice, to Forensic Medicine, and to the valuation of certain curative agencies :

Their limited value in Clinical Medicine, and in purely Physiological phenomena.

Lecture XII.

Induction, in the more restricted sense of the word.

Legitimate sphere of its operations.

Excludes Deductive and Syllogistic reasoning.

What its conclusion embraces.

Does not meddle with Ontological speculations.

Inference, and its scope.

Intuitive truths not ignored by it.

Two-fold method of Induction.

Juxtaposition of facts ; and

Search for points of agreement amongst these.

The two methods applicable respectively to the infancy, and the maturity of Science.

Reversal of this order in Medicine.

Recent return to it in certain departments.

Imperfect or incomplete Inductions, how reached.

More of imperfect, than of false Inductions.

Hence the necessity of their constant verification.
Principles on which their verification should rest.

Assumption of fictitious principles, and supposed facts,
in Medicine.

Instances from its various departments.

General statements based on a limited number, or partial estimate of facts.

Instances in point.

Stretching of facts or principles too far.

Instances in point.

Natural tendency of the mind towards imperfect Inductions :

Especially observable in our own Science.

Limited character of our generalizations.

How far limited generalizations useful.

Danger of undue reliance on them.

Chaotic appearance of phenomena, as first encountered in nature.

Their orderly character observable on a closer study.

'Prerogative instances' of Bacon, and how far fitted to guide us in our Inductions.

Their value, in this respect, more apparent than real.

Natural proneness to undue reliance on them.

Errors in Medicine from this cause.

Instances best fitted to lead to valid Inductions.

Narrowness of our choice of these in Medicine, and the other Sciences.

The discovery of them often accidental.

Illustrations from different departments of Medicine.

Lecture XIII.

General results of the application of the Inductive method to Medical Science.

Medicine, as it presents itself to the scientific, and to the mere empirical practitioner.

Medicine presents no mysteries, or depths, to the uninitiated.

Undue confidence in his own acquirements, on the part of the mere routine practitioner.

The deficiencies of Medicine only come out with advance in scientific acquirements.

Real character of the problems for solution in Medicine.

Circumstances under which these have to be dealt with.

Limits reached by us in Observation, Experiment, Analogy, and Numeration.

The penetralia of the Science not yet reached.

Proofs of this.

Restricted range of our Prognoses, Etiology, and Therapeutics.

Physiological and Pathological anomalies.

Illogical inferences from these.

Inutility of isolated inquiries in Medicine.

Futility of the search for exclusive, or infallible remedies for diseases.

Folly of any restricted range of curative means.

Influence of varying circumstances over the results of disease :—

Explanatory of apparently fortuitous events, and results of treatment.

True light in which to regard these.

Varying type of Epidemic, and other diseases.

Illustration.

Nature of the principles hitherto established in Medicine.

Individual experience not to be safely relied on in Medicine.

Lecture XIV.

THE DEDUCTIVE OR SYNTHETIC METHOD.

Aim of the Synthetic method.

The Deductive, contrasted with the Inductive method.

Order of procedure in the latter.

Order of procedure in the former.

The Deductive method in Mathematics.

The Deductive method in the Schools of Chemistry, Anatomy, and Histology.

Desirableness of its extension, in the teaching of other branches of Medicine.

Causes of its former failures in Medicine.

Promise of higher results from it, in our hands.

Amount of medical acquirement in this direction.

Deduction in the hands of the Neurologist, the Comparative Anatomist, the Organic Chemist, the Physiologist, and the Pathologist.

Generalizations of the modern Chemical School examined, and their value impartially estimated.

Other late generalizations in Physiology, and Pathology.

Change of the method of the Sciences by Bacon, from the Deductive to the Experimental.

Reverse of this now taking place in the Sciences.

Deduction in the hands of Bacon's predecessors :— and main causes of their failures.

Their neglect of Induction.

Slavish adherence to the dogmas of Aristotle.

Neglect of the study of nature.

Induction the prevalent method in modern Medicine.

Obstacles to the adoption of Deduction in Medicine.

The union of Induction and Deduction desirable.

Laws of highest generality only thus attainable.

The hesitation and uncertainty of our Science, traceable to the want of such laws.

Illustration.

Lecture XV.

First stage of the Deductive process—Induction or Analysis.

This step easy, in the case of the simple or elementary laws.

Difficulty of thus dealing with the complex laws of Vital phenomena :—

Most conspicuous in Physiology :

Pathological facts, sometimes almost equivalent to experimental Analyses.

When, and how, these admit of being successfully studied.

Such facts occasionally producible artificially.

Value of experiments, of this sort, on healthy living animals.

Inductive resources for ascertaining the 'laws of causes,' very limited.

The results of Observation rarely to be explained or predicted.

The empirical laws of phenomena fortunately of easier attainment.

Difficulties attaching even to these.

Medicine contrasting unfavourably with Mathematics and Chemistry in this respect.

These Sciences, however, not free from similar difficulties.

Our most valuable Inductions founded on 'simple instances.'

Twofold aspect in which phenomena appear to us :

Phenomena whose succession can be traced :

Phenomena apparently synchronous or co-existent.

The Antecedent and Consequent, as synonymous with the Cause and the Effect.

The succession of these, but rarely to be satisfactorily traced.

The co-existence of two or more Antecedents usually appear necessary to produce the Consequent.

Obstacles thus presented to the successful study of Morbid operations.

Arbitrary distinction betwixt Causes and Conditions in Medicine.

Illustration.

Unscientific character of the terms predisposing and exciting Causes.

Cause of death often loosely assumed.

The so-termed immediate Cause, frequently the least influential of the phenomena which have preceded death.

Illustration.

The latest phenomenon often arbitrarily singled out as the Cause of the disease.

The more obtrusive phenomena elevated to this dignity.

Priority of appearance a better claim to distinction, were such loose selections admissible.

The sum of the conditions preceding the effect, to be regarded as the real Cause.

Concurrence of phenomena essential, even in the simplest instances.

Order of succession not always essential in our Analyses and Syntheses.

‘Composition of Causes’ :—

This principle admitted by the Schoolmen :

Only applicable to certain departments of Science.

Exceptions to it in Chemistry and in Medicine.

Illustrations from Toxicology, Materia Medica, and Physiology.

Extent of its operation, when not in some way counteracted.

The ‘Interference of Causes’ :—

Hostile to the application of the Deductive method.

The same laws presumably alike operative in ‘simple,’ and in ‘complex instances.’

Lecture XVI.

The principle of the so-termed 'Composition of Causes,' deserving of the close study of the Practitioner.

Vital phenomena formerly too much studied in their aggregates.

The Reduction of these called for.

Modern error in the opposite direction.

Instances in point.

Injurious effects of this error on our preventive and curative measures.

'Simple instances,' though rare, occasionally encountered in Medicine.

Illustrations from Toxicology and Materia Medica.

Applications of the principles of the 'Interference,' and the 'Composition of Causes' to such cases.

Instances of less simplicity in Etiology and Pathology.

Such instances, the best starting points for our Deductions.

Direction in which they may be sought for.

'Complex instances' to be broken up into groups, in the failure of 'simple instances.'

This process exemplified in the 'compound radicals' in Organic Chemistry.

The application of the process in Medicine.

Artificial character of most of our groups:

Consequent inutility of these to the student of our Nosological systems; and the

Disappointment which they give rise to.

Urgent call for the reconstruction of our groups.

Examples of faulty grouping of diseases.

Recent defence of such groups:

Futility of such defence.

Genera and Species confounded in our groups:

Instanced in the position of a well-known disease:

Instanced in the position of an important drug.

The investigation of comparatively simple and accessible instances, our next best resource.

Sub-groups, established in modern Medicine.
 Their hypothetical character.
 The so-called 'Diatheses' of Pathologists.
 Scientific value of these recently over-estimated.
 Estimate of their true worth.

Lecture XVII.

Second stage of the Deductive process— Ratiocination.

Extent of the subject ; and

Meaning of the term.

Ratiocination, as distinguishable from Induction in the limited extent of the term.

Ratiocination, in order to its validity, need not assume the Syllogistic form.

Pre-requisites to correct Ratiocination :

Thorough acquaintanceship with the import of words, propositions, 'concepts,' and 'terms.'

Distinct conceptions of the limits of knowledge, or of the true relations of things.

Predicates—genus, species, differentia, proprium, and accidens.

Categories.

Tests of the truth and falsehood of Propositions : and the

Means of distinguishing real, from mere verbal Propositions.

Third stage of the Deductive process—Verification by specific experience.

Limits to the application of this test of our Deductions in the Medical Sciences.

Deductions only available when thus tested.

Our Deductions should embrace our Empirical laws.

The futility of the *à priori* method, prior to experience, insisted on by Bacon.

Return of his successors to Deduction, on an Inductive basis.

Erroneous Deductions of the earlier Medical writers.

Similar Deductions encountered in our later authors.

Means of avoiding these in future.

Lecture XVIII.

Resumé of the leading points advanced in the preceding lectures, on the subjects of Induction and Deduction.

Best course to be followed in the prosecution, respectively, of the Inductive and Deductive methods.

Mutually complementary character of Induction and Deduction.

What we aim at, in our inquiries into Causes.

What goes to constitute a Cause in any case.

Limits to our knowledge of Causes.

Obscure character of Causes in general.

Elementary or isolated facts, difficultly reached in our Deductions :—

This difficulty often necessitates our setting out from complex and partially known instances.

Erroneous principles of Synthesis in Metaphysical writers.

Similar erroneous principles in Medical writers.

Premature arrangements of the order and efficiency of our Causes.

Too great simplicity assigned to nature's operations, both in former and in later times :

Ancient errors traceable to this source.

Traces left by them in modern Medicine.

Modern Charlatans uphold this stronghold of error.

Rules to be followed in the study of the Causes of Morbid phenomena.

What has been gained, in modern Medicine, by improved methods of study.

Existing deficiencies—to what causes owing :

Our true position not sufficiently understood.

Futile expedients for remedying Professional disabilities.

Call for united exertion, and for the sub-division of labour.

Energy at present wasted on detached points and unconnected inquiries.

Defects, in the character of our current Medical Journalism.

Neglects and defects of our Medical Corporations :

Suggestions for their improvement.

Opinions of literary men on the state of Medical Science.

Shallowness of 'common sense' judgments on these subjects.

Lecture XIX.

DETAILED CONSIDERATION OF THE VARIOUS PROCESSES
SUBSIDIARY TO INDUCTION.

Simple Observation in Medicine.

Resumé of points previously discussed.

Further illustrations.

Reasons for the conflicting statements of different Observers.

Difference betwixt skilled, and unskilled Observers.

Illustrations.

Influence of mental bias on the Perceptive powers.

Illustrations.

Extended Observation difficult, from the extent of the field of Medical Science.

Advantages of the Specialist in this respect.

Careless Observers originate erroneous statements ;
and *vice versa*.

Evil of partial and distorted Observations.

Illustration.

The Objective and Subjective elements readily mingled in our Perceptions.

Difficulty in Observation of limiting attention to what is before us.

Difficulty of keeping apart the present object, and our previously acquired knowledge of it :

Increase of this, with enlarging experience of disease.

Cautions which this suggests.

Value of Observations, in Medicine, lessened by the limitation of their extent.

Observations often faulty, alike from want of Extensiveness and of Intensiveness.

Illustration.

Failures of earlier Observers, chiefly in the latter direction :

Excusable from their limited Scientific acquirements.

What is being done at present ; and

What may be expected in future, from more extended Observations in different departments of Medicine.

Instances of recent progress in this direction.

Establishment of the 'London Society of Observation.'

Their treatise, 'What to observe,' &c. recommended.

Closer, as well as more extended Observations, desirable in Medicine.

Recent improvement in this respect.

The Physician of the present day, how far thus superior to his immediate predecessor.

Existing deficiencies of Observations in closeness.

Importance of following, and not leading, our Observations.

The latter, the grand mistake of ancient speculators in Medicine.

Illustrations from Medical History.

Modern tendencies in the same direction.

Lecture XX.

Experiment in the Medical Sciences.

Resumé of previous remarks.

Superiority of Experiment, where practicable, over simple Observation.

Our position in this respect, in comparison with that of the cultivators of the so-called Experimental Sciences.

No Science purely Experimental.

Medicine somewhat more than a Science of pure Observation.

Illustrations of these two points.

Limits of Experiment in Chemistry.

Experiments in Pathology, Physiology, Materia Medica, and Toxicology.

How far our artificial processes are entitled to the appellation of Experiments.

Lax use of the term Experiment, by both the public and the profession.

Cautions, alike applicable to the results of Observation and of Experiment :

Reasons for these.

Illustration from Chemical Science.

Conditions capable of modifying Experimental results, not to be overlooked.

The mingling of the Subjective with the Objective in Experiment.

Complexity of phenomena, the main obstacle to the employment, and proper estimation of Experimental trials in Medicine.

Illustration from the history of discoveries in Physiology :—

Numerous Experiments here called for.

Varied forms which they require to take.

Limited value of the results obtained.

Number of points left unsettled by them.

Further illustration.

The worth of our Experimental processes impartially estimated.

Main source of their superiority to simple Observation :

Allow of the detention, isolation, reproduction, and re-arrangement of transient and complex phenomena.

- Multiplication of the chances of mistake, from the extension of our means of research afforded by Experiment:—
- Temptations to overhasty conclusions.
 - Contradictory results obtained by different Experimentalists.
 - General insufficiency of single or limited Series of Experiments.
 - Reasons for this.
 - Exceptional instances.
 - Examples in Medical Science.
 - Rigid scrutiny required in instances of this sort.
 - Illustrations.
- Artificial generation of morbid processes in Animals:—
- Limited extent of these.
 - Difficulties in the way of their extension.
 - Futility of the methods usually employed for that purpose.
 - Reason of this.
 - Blame in such cases not always attributable to the Practitioner.
 - Comparative rarity of Experiments in Therapeutics.
- Experiment, strictly so-called, a resource unknown to the ancients.
- Defects of the earlier Experiments.
- Experiments of Paracelsus, and of the Iatro-mathematical sect.
- Bacon's claim to the title of 'the father of Experimental Philosophy.'
- Bacon not himself a successful Experimentalist.
- Recentness of the introduction into Medicine of well planned, and properly conducted, Experiments.

Lecture XXI.

Methods of Experimental Inquiry.

Methods of agreement, and of difference, pointed out by Bacon.

Objects which these methods, respectively, are calculated to fulfil.

‘The method of agreement,’ and its results generally.

The extent of its applicability to Medical Science.

Illustrations.

‘The method of Difference,’ and its results.

Illustration.

Conditions of its successful application to Medicine.

Illustrations.

Comparison of, and contrasts between, the two methods.

‘Joint-method of Agreement and Difference.’

‘Method of Residues.’

‘Method of Concomitant Variations.’

The application to Medicine of the modern methods of research recommended.

Our urgent need of more varied exposition of facts, and more searching and better planned Experiments.

Inherent worthlessness of our Hospital returns.

Defects of our Naval and Military Reports.

Fundamental error pervading these.

Lecture XXII.

Hypotheses in Medicine.

Abuse of Hypotheses, prior to Bacon’s time.

Consequent undue distrust of these.

Their legitimate use again recognised.

Natural bent of the uneducated mind towards them.

General prevalence of Hypotheses in ancient Medicine.

Some exceptions known.

Abuse of Hypotheses in later times.

Illustration.

Loose Hypotheses under the garb of Modern Science.

True character of real Hypotheses.

Use of Hypotheses as a temporary expedient.

Their merely provisional character, frequently lost sight of in Medicine.

Important part played by Hypotheses, in the purer Sciences, in Medicine, and in common Life.

Hypotheses, as a step towards Deductions from Experimental Truths.

Undue tenacity of Hypotheses, unverified, and opposed to facts.

Surprising vitality of Pseudo-theories, and Pseudo-sciences :

Modern instances without, and within the Profession.

Highest legitimate use of Hypotheses.

Subsidiary uses of them.

Extended sway of Probabilities in Medicine.

Theories, correctly speaking, rarely attainable in Medicine.

Worthlessness of purely arbitrary Hypotheses.

Instances of Hypotheses of this sort, from different periods of Medical History.

Utility of rational conjectures based upon observed facts.

Praiseworthy activity of modern Practitioners in this direction :—

Too desultory in its character.

Lecture XXIII.

Analogies in Medicine.

Resumé of points previously discussed.

Analogies objected to, on like grounds with Hypotheses :

Both alike impossible to be dispensed with.

Much of our ordinary and of our scientific language, based on Analogies.

Genera and Species of diseases, founded on these.

Analogy as auxiliary to Induction.

Analogies to be judged of, on the same principles as Hypotheses.

Object of Comparison in Medicine :

Often our sole guide in practice.

Superior adaptation of Analogies for daily use.

Practical Medicine essentially a nice balancing of probabilities.

The Scientific Physician not necessarily the best Practitioner.

Combination of Science and Art in British Medicine.

Separation of the two in other countries.

The Numerical method in Medicine.

Statistics charged with authorising opposite conclusions in Political Science.

The same objection urged against Statistics in Medicine.

How far this charge admissible in either Science.

Caution called for in the application of Figures to the support of general conclusions.

Circumstances calling for Numerical precision.

Memory not to be trusted, where numbers are concerned.

Figures, the ultimate appeal in many disputed cases.

Figures, as standards of Comparison, and data for Reasoning.

Proper, and improper applications of them, to Medical Science.

Reasonable and unreasonable expectations from their employment.

Aggregates, only to be thus successfully elicited.

Circumstances which may destroy the value of Aggregates.

Method, all important, in the collection, and in the selection of the facts in Statistics.

Correct Averages not deducible from limited numbers.

Mutual support yielded by Averages, and 'Extreme Ratios.'

Extreme values, as the test of Numerical Theories.

Illustrations from Forensic Medicine.

Lecture XXIV.

Language, Terminology, Definition, Description.

Language as the embodiment of ideas, and the instrument of our higher mental operations.

Language essential to Education.

Language as the means of fixing thought, and serving for its diffusion.

Language as the groundwork of all our Logical operations.

Words, by turns, our servants and masters.

Medicine fortunate in the language of its Founders.

Like favourable position of our Teutonic neighbours, in regard to their own language.

What Philology has done for Ethnography :—

Light thrown by it on the early History of Medicine.

Illustrations from Toxicology, and Materia Medica.

Abiding influence of the language of ancient Medicine.

Unsuccessful attempts to modernize our existing Nomenclature.

Extensive prevalence of Greek and Latin terms in Modern Medical writings :

Illustrations from a recent work.

How far attributable to the pliability of these Languages :—

How far, to the superiority of the Ancients as correct observers.

Comparatively slight traces of the Modern Languages in Medicine.

Occasional unhappy choice of Modern terms in Medicine.

Ancient terms often unaffected by hostile criticism.

Illustration.

Difficulty of engrafting new ideas on old names :

Signal failures of such attempts instanced.

Perversion of original meanings in certain Modern Medical Adaptations.

Illustration.

Desirableness of new names for the embodiment of new ideas.

Positive names, in a negative form ; and *vice versa*.

Purely negative names in Medicine.

Illustrations.

Names derived from long-abandoned Theories.

Limits to the assimilative power of Classical words in Medicine.

Etymological Obscurity of many Modern Adaptations :—

Increased by their assumption of the Vernacular form.

Arbitrary and Metaphorical characters of many of our names.

Terms in Medicine, which have lost their original significance.

Light thrown on the state of the Profession by the study of words.

Lecture XXV.

Recapitulation.

Mastery of Language essential to the successful pursuit of knowledge.

Language, to be useful, must fulfil certain obvious requirements.

Failures, in this respect, of our Technical Language.

Injurious influence of its imperfect and figurative characters :

A reflection of the imperfections of our Science.

Correspondence of obscurity of terms, and of ideas.

Reform in the Science must precede the reform of our Nomenclature.

Failures of competent Scholars in this direction.

Illustrations from British, French, and German Nosologists.

The retention of ancient Classical terms, how far advisable in Medicine.

Advantage of such terms being accompanied with apt English Synonyms :

Illustrations.

The want of such terms obstructive of the popularity of Medicine :—and

Injurious to the Profession.

The capabilities of our Saxon roots, in this respect, undervalued.

What our Scientific Language ought to accomplish.

Necessity of carefully defining our terms :—

Rules to be observed in defining words.

Neglect of these in Medical writings.

Paralleled in other Sciences.

Description, as a substitute for Definition.

Descriptions often as faulty as Definitions.

Faults less excusable here.

Correct Description often our only resource : and

The best safeguard against the perversion of our views.

Illustrations.

Wider scope of Description than of Definition.

Requisites of fitting Descriptions.

Faulty Descriptions in Medical writings.

Description, unless otherwise implied, should be limited to the results of the writer's own Observations and Inferences :

The want of this limitation a prevalent characteristic of our Periodical Literature.

The success of Monographs, by eminent writers of the day, traceable to the absence of this defect :

Its prevalence, in Systematic works, a reason for their being seldom studied.

Eminent ancient writers entitled to notice, from the closeness of their purely personal Observations.

Necessity of many-sidedness in describing, and in following, the descriptions of others.

Instances in point.

Lecture XXVI.

Classification.

The basis of certain Sciences.

Loose sense of the term.

The object of Scientific Classification.

Extensive acquaintanceship with the subject-matter, a requisite for successful Classification.

The defects in this respect of the earlier Classifications in the Sciences.

Character of the early Classifications in Medicine.

Character of our existing Classifications.

Slight recent improvement perceptible in these.

Failure of our attempts at a Natural Classification in Medicine.

Inherent defect of any merely Natural system in Medicine.

Inelastic character of our existing Nosologies :

Obstructive of advance in Medicine.

Arbitrary character of our existing Species of diseases.

The undue multiplication of Sub-species, necessitated.

Appearance of simplicity, gained at the expense of perspicuity.

Inadequacy of the existing Classification, for the purposes of the Registrar-General :

His arrangement of diseases partly arbitrary.

An arbitrary arrangement best, in the present state of our Science : and

Calculated to lead, ultimately, to a Natural one.

Illustrations.

Such an arrangement not obstructive of advance in the interim.

Causes of the present divergence of our Natural and Artificial Systems.

A Physiological System unattainable at present.

Advantage of aiming at Natural groups of diseases.

Obvious benefit of well-defined Species.

Such Species only encountered fully in some of the other Sciences.

'Typical forms,' occasionally recognisable in Pathology.

Diatheses, an insufficient basis for extended Generalizations in Medicine.

Recent Scheme for the Natural grouping of diseases.

Open to obvious objections.

Desiderata to be supplied, prior to the attainment of a strictly Scientific Classification in Medicine.

Lecture XXVII.

FALLACIES.

Preliminary remarks.

History of error, a subject of vast extent.

Leading sources of fallacy, in the pursuit of knowledge.

Fallacies, mainly negative in their character.

Error, as the more negative of truth.

Extent of its prevalence in this form.

Various obstacles to the establishment of truth :—

Indifference.

Mental prepossessions.

Half-reasonings :

Common in Medicine :

Effect of these on the position of the Profession in public estimation.

Remote, though real, causes of error.

Positive Fallacies.

A priori Fallacies.

Mistaking Subjective for Objective facts :

Examples from the History of Medicine.

Sources and supports of such mistakes :

Superstition.

Credulity.

False Theories.

Authority.

Imperfect Observation.

Mistaking the comprehensible, for the true ; and *vice versa.*

The former principle the stronghold of Charlatanry among the educated classes.

The latter, obstructive of beneficial changes in Medical opinion and practice.

Mistake of ascribing Objective existence to pure Abstractions.

Earlier and later tendencies towards Spiritualizing Natural operations :

Not yet extinct in Medicine.

Medical Realism :

Popular with non-professional persons.

Its effect on our current language.

Injurious effects of it in Medicine.

Prejudice in favour of a single cause for every effect.

The existence of a great First Cause not denied.

Unity of plan, and

Universal adaptation of means to ends, observable in Nature :

Consistent with the belief of a sequence of Secondary Causes.

Mistakes of Bacon and his followers on this subject.
 Futility of the search for 'efficient' Causes.
 'Teleology' in Medicine, and in the Natural Sciences
 generally:

The truth of its principles, forced on the Scientific
 Practitioner, and Naturalist.

Prejudice, that the conditions of a phenomenon
 must resemble the phenomenon itself.

Lecture XXVIII.

General remarks on *à priori* Fallacies.

Value of the portion of Bacon's writings devoted to
 this subject.

'Idols,' both obstructive to, and destructive of, truth.
 Bacon's classes of 'Idols.'

Close resemblance betwixt the various *à priori*
 Fallacies.

Indestructible vitality possessed by these.

Modern Personifications of Vital Phenomena.

General employment of certain terms bordering on this
 error.

Objectionable use of these by Physiologists.

Terms so used, without counterpart in Nature.

Prejudice of the resemblance betwixt the conditions
 and the results of phenomena, farther considered.

Parallel instances, in ancient and modern Medicine.

Effects, mistaken for '*veræ causæ*.'

Parallel instances, in ancient and modern Medicine.

Bacon's fundamental error regarding single causes,
 farther elucidated:

Unsupported by experience.

Prevalent, in Philosophy, Science, and common Life.

Its commanding sway in Medicine at various periods.

Earlier instances.

Later instances.

Cases adduced in its favour.

The protective power of Vaccination.

Specifics for disease.

Such exceptions, more apparent than real.

General failure of single Causes in Medicine.

Lecture XXIX.

Fallacies of Observation.

Fallacies of this sort may be either positive or negative.

Negative Fallacies.

‘Non-observation of instances.’

Extent of their prevalence in Pseudo-Medicine.

Bearings of these on the position of the regular Practitioner.

Their existence, in quarters little suspected.

Unscientific character of much of our Sanitary Literature.

‘Non-observation,’ originating in preconceived opinion :

Extensive prevalence of this fallacy.

Its usual mode of operation.

Is not unknown in Pure Physics.

Frequency of it in Medicine.

Illustrations.

‘Non-observation of circumstances :’

Illustrations from Chemical Science.

Illustrations from earlier and later Medicine.

This error occasionally traceable to self-deception or imposture :

Recent instances.

Sometimes originating in Superstition :

Occasionally, in wilful ignorance or design :

Instances in point.

Occasionally owing to inexperience.

Such errors not harmless.

Common source of such Fallacies.

‘Mal-observation.’

Originating Causes of Fallacies of this class :

Defective Mental Training :—

Instances.

Erroneous impressions on the Senses :

Neglect of the verification of these impressions :—

Neglect of the due Education of the Senses :—

Inattention to what is before the Observer :—

Deceptions of the Senses :—

Hallucinations of the Insane.

Defect of Analytic power.

Direct bearing of this on Medical Observation.

Lecture XXX.

Fallacies of Generalization.

Character common to all these.

Error of assuming, that certain results can never occur.

Limitation of our insight into the operations of Nature.
Unexpected character of some recent discoveries in Science.

Conditions of Disease and of Health, but partially known :

The admission of occasional variations in these, called for.

Disappearance of Diseases, formerly prevalent.

Appearance of new Diseases :

Illustrations of the former occurrence.

Instances of the latter.

Premature removal of restrictions to the spread of disease.

Rash conclusions of the Anti-contagionists.

Fallacy of combining various Causes into one.

Examples in Physics, Metaphysics, and Physiology.

Futility of such attempts.

Their unscientific character.

Fallacy of '*post hoc ergo propter hoc*' conclusions :

Exemplified in the grosser forms of Quackery.

This fallacy to be guarded against by the young Practitioner.

Various errors into which it may lead.

Ancient and modern instances.

Fallacies of false Analogies.

Extensive prevalence of such Analogies in Science :

Common source of their origin.

Powerful minds not always free from their sway.

Reason and Imagination mutually corrective, in well balanced minds.

False Analogies, favoured by the Language of Science.

Instances in Medicine.

Fallacies originating in our faulty Classifications.

Illustrations from Toxicology, Materia Medica, and Nosology.

Lecture XXXI.

Fallacies of Ratiocination.

Use of the Syllogism in the detection of these Fallacies.

Facility of detecting them in ordinary chains of Reasoning.

Distinction betwixt Ratiocination and mere disputation.

Temptations to indulgence in the latter in the discussion of Medical questions.

Injurious effects of the frequency of such discussions on the character of the Profession.

Illustrations.

Fallacy of 'incomplete enumeration.'

Various Fallacies in the 'conversion of propositions.'

Forms assumed by these in the hands of several parties.

Fundamental error in each instance.

The support they have been made to yield to Pseudo-theories at various periods of Medical history.

Fallacy of confounding the contrary, with the contradictory of a Proposition.

Instanced in Medicine.

Fallacy of assuming a Proposition, and supporting it by illustrations, in lieu of proofs.

Various forms of this Fallacy in authors.

Radiest means for its detection.

Practical illustration from Legal Medicine.

Fallacy of changing the premises in an argument.

Fallacies from the misapplication of abstract truths.

Temptations to these in Medicine and in some of the other Sciences.

Lecture XXXII.

Fallacies, from ambiguity in the use of terms :

Instances in Medicine.

Injurious consequences of these.

Error of confounding sameness and similarity :

General, amongst Non-medical, and inexperienced persons.

Error of forgetting, that though individual arguments may not authorise a conclusion, the collective ones may do so :

The converse of this not necessarily true.

Fallacy of 'Begging the question.'

'Reasoning in a circle :'

Ancient and Modern instances in Medicine.

Fallacy of 'Irrelevant conclusion.'

Various illustrations.

Errors arising from Confusion of Language.

Illustrations from recent Medical works.

Conclusion of the course.

Remarks apologetic and explanatory.