

L. Susan Stebbing

Philosophy and the Physicists

Preview

GogLiB ebooks

ISBN: 9788897527466

First Edition: December 2018 (A)

Copyright © *GogLiB*, December 2018

www.goglib.com

Contents

FOREWORD FROM THE EDITOR

Note to the 2018 electronic edition

PHILOSOPHY AND THE PHYSICISTS

Original Title Page

PREFACE

NOTE

PART I - THE ALARMING ASTRONOMERS

Chapter I - The Common Reader and the Popularizing Scientist

Chapter II - THE ESCAPE OF SIR JAMES JEANS

PART II - THE PHYSICIST AND THE WORLD

Chapter III - 'FURNITURE OF THE EARTH'

Chapter IV - 'THE SYMBOLIC WORLD OF PHYSICS'

Chapter V - THE DESCENT TO THE INSCRUTABLE

Chapter VI - CONSEQUENCES OF SCRUTINIZING THE INSCRUTABLE

PART III - CAUSALITY AND HUMAN FREEDOM

Chapter VII - THE NINETEENTH-CENTURY NIGHTMARE

Chapter VIII - THE REJECTION OF PHYSICAL DETERMINISM

Chapter IX - REACTIONS AND CONSEQUENCES

Chapter X - HUMAN FREEDOM AND RESPONSIBILITY

PART IV - THE CHANGED OUTLOOK

Chapter XI - ENTROPY AND BECOMING

Chapter XII - INTERPRETATIONS

BIBLIOGRAPHY

INDEX

BACK COVER

Susan Stebbing

Foreword from the Editor

In 1937 Susan Stebbing published *Philosophy and the Physicists*, an intense and difficult essay, in reaction to reading the works written for the general public by two physicists then at the center of attention in England and the world, James Jeans (1877-1946) and Arthur Eddington (1882-1944). The latter, as is known, in 1919 had announced to the Royal Society the astronomical observations that were then considered experimental confirmations of the general relativity of Einstein, and who by that episode had managed to trigger the transformation of general relativity into a component of the mass and non-mass imaginary of the twentieth century.

In this essay, however, Stebbing does not deal with Einstein's relativity: what is at stake is the verification of the general philosophical conclusions, that Jeans and Eddington drew from the new quantum physics, and especially from Heisenberg's uncertainty principle. This principle is familiar to us today also with the name of principle of indeterminacy: but reading *Philosophy and the Physicists* we learn that it was Eddington who changed the name of Heisenberg's original assumption, changing its meaning, and attributing to it values well beyond its specific field of application, becoming guilty, according to Stebbing, of very important arbitrary choices and inconsistencies, which we will discover by reading the book.

The essay has not the intention to judge the scientific work of Eddington and Jeans—from the beginning the author declares incompetent for this (although this precaution is not always respected)—but it is written to recall without clemency the two scientists to the responsibility for what they write when they leave the specialists' field. Then Stebbing's judgment becomes implacable. Already in the first chapter we read that "... both these writers approach their task through an emotional fog; they present their views with an amount of personification and metaphor that reduces them to the level of revivalist preachers." And from here on, after this unflattering comparison with the "revivalist preachers", the analysis always leads to openly polemical conclusions and judgments without any diplomatic mediation. Still in the introductory pages of the first chapter we read:

Yet we common readers surely have a right to expect that a scientist setting out to discuss for our benefit philosophical problems arising from his special studies will do so in a scientific spirit. He would seem to be under a special obligation to avoid cheap emotionalism and specious appeals, and to write as clearly as the difficult nature of the subject-matter permits. Of this obligation Sir James Jeans seems to be totally unaware, whilst Sir Arthur Eddington, in his desire to be entertaining, befools the reader into a state of serious mental confusion.

We must keep in mind, reading this book, that writing in the '30s, Stebbing seems to be still in a state of innocence with respect to the character of mass culture, and unaware of all the reflection on mass culture that was then being elaborated. Stebbing perceives that the writing of the two scientists is popular literature, and knows that as such it is a vehicle of falsehood and ideology according to specific rhetorical modalities of the mass culture of her and our present, but she studies the phenomenon according to the categories of her logical and analytical philosophical education, without knowing that if she had wished she could find some companions in philosophical traditions far from her own: Adorno or Benjamin do not exist in the world of Stebbing. She feels that mass culture of the present represents a radical break with the past, of which it borrows expressive modes that have by now become irremediably inadequate, but she is not able to face the phenomenon if not naively. Here is how she deals with the kitsch transfiguration of metaphors traditionally conveyed by the image of the greatness of the sky that she recognizes in the prose of her authors:

The value which Jeans so evidently attaches to greatness in size is used both to reduce the reader to a humble frame of mind and to terrify him. In my opinion such a sense of values is perverted. The awe which Kant felt when he contemplated 'the starry heavens above' is strikingly different. Such awe is due to an immediate awareness of the beauty of the night and is wholly independent of any knowledge of stellar magnitudes. Such awe may well have been felt by the Babylonian shepherds of old; it may be felt by an ignorant shepherd to-day. To be capable of such admiring contemplation; to be moved by pity and love; to have knowledge of the constitution of the stars might well seem more valuable than to be very big. Evidently Jeans thinks otherwise. He is content to deduce the insignificance of human beings from the smallness of the earth in comparison with the stars.

An ancient metaphor, that of the vastness of the starry sky, has a completely changed sense, perverted, in the context of our present. Everyone should know that the use of it is no longer permitted, and what the two physicists make of it is “falsely emotional”, just as their indulgence towards recurring anthropomorphisms is illicit, and they use it to give themselves “the air of explaining the inexplicable”, to the point of falling into the sickening bad taste, as in the exemplary case of this personification by Eddington: ‘Heisenberg now makes it appear as Nature abhors accuracy and precision above all things.’ But the word that comes to mind by itself to qualify this kind of illicit borrowing from tradition, *kitsch*, is absent from the lexicon as the conceptual repertoire of Stebbing: and this fact on the one hand puts the book at the margin of critical literature on mass culture. However, *Philosophy and the Physicists* has a unique merit that makes it fundamental as a contribution to cultural studies: it is written with a rare and considerable level of scientific competence, by an author who has mastery of classical physics and who understood exactly the scope of quantum experiments on the hydrogen atom of the early 1920s, enough to give the reader a much more satisfactory account than what we receive from Eddington or other popular literature. This is why Stebbing’s essay deserves to be read and weighted page by page even by today’s readers. In general, the contamination of scientific literature with the expressive modes of twentieth-century mass culture is a phenomenon that is not analyzed and has received very little attention, despite the great evidence of its traces: the popular junk that has been proposed to us by the media for decades is always a conspicuous plebeian contamination of the baroque wonder made mechanically in great series, and the attentive observer easily realizes that the enormous offer of stupefying pre-packaged results is accompanied with very little scruple for the clarification of the processes that allow us to know those results. And indeed, today the ambition to know fully and understand the logical and physical principles is being reduced to nothing, while the consumption of the astonishing results has become ordinary. However, the critical study of the phenomena of mass culture has always kept the products of scientific divulgation at a distance, and the reason is obvious: scientific competence is rare and scarce, and is mostly not owned by those who would have the means to talk about the style and expression of specialist and popular scientific literature with

respect to the overall cultural context of our present. In a 1991 article (“Literary Theory and Intellectual Kitsch”) Denis Dutton acutely described the process for which superficially assimilated anti-classical scientific notions became privileged metaphors for post-structuralist culture, and how there is a “kitsch borrowing chain” that goes from science to the living room of the obtuse bourgeois, passing through the hands of the postmodern philosophers and the artistic pedantry of the imitations of the avant-gardes that are produced today with so much soporific monotony. But Dutton said that “at the top of the chain are physicist, innocently going about their work in subatomic physics and making incidental statements about the limits of what can be known about elementary particles”. Instead, had he read Stebbing’s book, Dutton would not be so sure of the innocence of physicists in general, and he would certainly doubt the innocence of the two scientists whose work is discussed in *Philosophy and the Physicists*.

This attention to the metaphorical implications of scientific prose, having more or less popular intention, by Jeans and Eddington is underlying the whole book: on this basis Stebbing builds chapter by chapter a collection of analytical essays very rich in content, each of which could be expanded in a volume to itself, which capture the heart of the philosophical and cultural implications of the new physics of the twentieth century: not in the sense of physics being a world of independent and absolute certainties from which originate spurious metaphorical implications concerning the other spheres of human existence, but in the opposite sense, that science participates in the life of its time, and shares errors and illusions with it. So are reviewed the ideas of the two physicists about the machine-picture of the Universe and about the role of mathematics in the construction of empirical science, a problem concerning which both show quite contradictory and indeterminate ideas, about the concept of reality, about the status of abstract constructions of science, to arrive in the eighth chapter to the analysis of the Heisenberg uncertainty principle (also said indetermination principle according to Eddington, as we have seen). The development is very clear: the problem is explained in its exact scientific terms, and the methodological problem is consequently set out with corresponding precision. Here in addition Stebbing gives us a very important contribution in methodological analysis, on which we should still reflect, even more so as to date there are no satisfactory theories of

probability and of the trivial problem for which in a large number of throws of a penny, heads and tails tend to turn up equally probably. Stebbing prepares the ground through the consideration that it makes no sense to attribute to physical reality in itself the character of being primarily determined or primarily statistical: we reach the knowledge to which we manage to arrive, in the elaboration of the data of experience, applying rigidly deterministic or statistical schemes implying the notion of chance and hazard, adapting to the conditions that experience puts us, and without it ever makes sense to believe that we have arrived to absolute terms. But after having led us to a more relativistic methodological attitude than what was of Eddington and which is current today, for which the character of being essentially and primarily undetermined is attributed to the subatomic phenomena, Stebbing amazes us with a step backwards, an opening to the priority of the deterministic scheme, because she asks us: how can we define a primitive “casualness” of things, without reference to a distribution that follows a precise function? “It is not easy to see what could be meant by a ‘random’ distribution in a lawless world.” To assert that a given distribution is statistical, we need to know what would be the ideal distribution, calculated according to a function, and with respect to which the empirical data show a more or less relevant approximation. But without the ideal reference distribution, what can “casualness” ever be? It is impossible to define it, because having removed the ideal function under whose point of view we consider it, the manifold of experience will leave us nothing but a shapeless aggregate of perceptual data. And so, after giving us a lesson in agnosticism and having suggested that perhaps it is impossible to decide absolutely between determinism and indeterminism, Stebbing opens up the possibility of finding a stringent logical need to assert the primary character of determinism.

Overall, therefore, *Philosophy and the Physicists* is a collection of epistemological essays treated monographically, but as a whole it composes a unitary cultural study about the position of natural science in the context of the twentieth century. The main issue of determinism is discussed from an epistemological point of view, but the arrival point is the search for an answer to the question: why do either determinism or the rejection of determinism interest us and involve us emotionally? The two

themes cannot be separated, so the problem in chapter IX is formulated in this way:

(1) Is there any sense in which it is true to say that science has been based upon determinism?; (2) what is the connexion between determinism, prediction, and rationality?; (3) why should there be so much glee or so much gloom at the rejection of determinism? Perhaps it does not seem obvious that these questions are closely connected, but I think it will be found by no means easy to disentangle them in the discussions of the scientists with whom we are mainly concerned.

When the book arrives to the discussion of the third of these questions, that of 'glee or gloom', the extrascientific character of the problem appears to us in full evidence. It is a matter of taste, it is the history of the formation of our personalities, which leads us to prefer one or the other of the possible choices concerning determinism.

From the nineteenth century onwards, science presents us the double spectacle of the materialism of biologists and of the idealism of physicists, which are both philosophical extrascientific attitudes, yet understandable: biologists start from idealized notions (life, spirit) and gradually discover their natural and chemical substratum, which gives rise to their inclination for philosophical materialism, while physicists start from notions believed natural and simple (mass, movement) and gradually learn how much of structural, abstract, conventional and complex is therein. Hence comes idealism, the prevalence of structure and form, in the mentality of physicists. But in both cases, that of biologists and that of physicists, the philosophical conclusion has no logical necessity: science thus flows into the realm of what we believe to make existence bearable. Thus science enters an area of indistinction with respect to the world of the metaphors to which we adhere without criticism of their non-objective character. But for Stebbing this must be reacted. Therefore the conclusion of the book makes explicit the central theme that has been the background to the whole analysis: the moral value of clear and unambiguous logical distinctions.

Alberto Palazzi, 2018

Note to the 2018 electronic edition

This e-book has been composed on the basis of the 1944 printed editions

in the Pelican Books series (Penguin Books). The scanned text was carefully controlled, in order to make available to the public a good quality electronic version of Stebbing's work. The page numbers of the 1944 edition have been preserved in [square brackets].

To facilitate the reading of this electronic edition, the footnotes containing remarks that add contents to the main discourse have been marked with an asterisk '*'. Therefore the remaining notes should be consulted only by those who have an interest in identifying the author's sources.

Philosophy and the Physicists

Original Title Page

PHILOSOPHY AND THE PHYSICIST PUBLISHED
by L. Susan Stebbing

PENGUIN BOOKS
HARMONDSWORTH MIDDLESEX ENGLAND
245 FIFTH AVENUE NEW YORK U.S.A.

MADE AND PRINTED IN GREAT BRITAIN FOR PENGUIN BOOKS
LTD. BY HAZELL, WATSON AND VINEY, LTD., LONDON AND
AYLESBURY.

First published in 1937
Published in the Pelican series 1944

TO MARGARET WILLIS

PREFACE

[5] This book is written by a philosopher for other philosophers and for that section of the reading public who buy in large quantities and, no doubt, devour with great earnestness the popular books written by scientists for their enlightenment. We common readers, to adapt a phrase from Samuel Johnson, are fitted neither to criticize physical theories nor to decide what precisely are their philosophical implications. We are dependent upon the scientists for an exposition of those developments which—so we find them proclaiming—have important and far-reaching consequences for philosophy. Unfortunately, however, our popular expositors do not always serve us very well. The two who are most widely read in this country are Sir Arthur Eddington and Sir James Jeans. They are not always reliable guides. Their influence has been considerable upon the reading public, upon theologians, and upon preachers; they have even misled philosophers who should have known better. Accordingly, it has seemed to me to be worth while to examine in some detail the philosophical views that they have put forth and to criticize the grounds upon which these views are based.

Sir Arthur Eddington stands in no need of commendation by me. Indeed, for me to praise him is almost an impertinence. But so much in this book is adversely critical of his philosophical views that I wish to record how great is my admiration for his scientific work. Although my understanding of his *Mathematical Theory of Relativity* and his *Relativity Theory of Protons and Electrons* is very defective, I have derived from studying them a profound delight. They seem to me to have a form and completeness which is, perhaps unavoidably, absent from most first-rate contributions to physical science published to-day. The rapidity of development in physics—which makes a theory out of date almost as soon as it is published—no doubt makes it difficult, and in many cases impossible, to give to works on physical science that completeness and beauty of form which is found in such great works as Galileo's *Dialogues concerning the Two Great Systems of the World* and Newton's *Principia*. But this beauty of form I, at least, find in Eddington's two [6] great books. He has, I think, pre-eminently what has been called 'the synoptic mind'. Accordingly, his writings are naturally attractive to a philosopher of my generation.

The difficulty presented to the common reader by Sir Arthur Eddington's philosophical writings is due to the fact that he is not only a great scientist but has also wide and deep interests beyond the bounds of science, whilst his strong philosophical bent makes him anxious to connect his philosophy of science with his philosophy of life at all costs. The cost is greater than he seems to have realized. He is so great a scientist that it may seem a mere absurdity for a rather incompetent philosopher to criticize him. But his greatness as a scientist is to be judged not by the books I have discussed but by his strictly scientific works that stand in as much need of being interpreted for the benefit of the common reader as do the works of any other scientist. In the books with which I have mainly been concerned, Eddington has set forth for the benefit of the common reader an interpretation of recent developments in physics, including his own contributions in this domain. His interpretation, however, suffers from very serious omissions and from an altogether misleading emphasis. One of the most striking omissions is his failure to give the common reader any indication as to the way in which physical measurements are in fact obtained. This omission enables him to produce the paradox that physics is solely concerned with pointer-readings. His very skilful, and frequently amusing, mode of presentation has enabled him to throw the emphasis upon just those elements which are most essential for the development of his metaphysical views. His lack of philosophical training (which I deduce from his writings, not from any private information as to his reading list) has made it possible for him to slip into pitfalls that he might otherwise have learnt to avoid.

The belief that the 'new physics' is favourable to some form of philosophical idealism has caused much alarm to Lenin and other leaders of Russian Communism. As long ago as 1908, Lenin wrote: 'On the side of materialism there is the large majority of scientists in general, as well as in that special field, namely, of physics. The minority of modern physicists, however, under the influence of the crisis in the old theories (due to the great discoveries of recent years), and under the influence of the crisis in the new physics (which clearly revealed the relativity of our knowledge), because of their ignorance of dialectics fell [7] from relativism into idealism. Idealistic physics, which is in vogue just now, is just as reactionary and transitory as the fashionable idealistic physiology of the

recent past.’¹* But it is not by knowledge of ‘dialectics’ that we shall be saved from idealism, whether ‘reactionary’ or not. Lenin and other dialectical materialists have as much an axe to grind as any Gifford Lecturer. The ‘materialists’—to give them the name which they so ardently admire—seek at all costs to establish some form of metaphysical materialism. Scientific results must somehow or other be forced into an interpretation which will yield the special philosophical views upon which their political philosophy is professedly based. There is as much bad metaphysics and immature philosophizing among the upholders of dialectical materialism (so far as my acquaintance with their writings goes) as among those who support the philosophical idealism of the pulpits. It has not, however, lain within the scope of this book to discuss these ardent philosophers. I would merely guard against a possible misunderstanding. If I have succeeded in showing that the present state of physical theories does not warrant any form of idealism, it must not thereby be concluded that I suppose it to warrant any form of materialism.

I have in this book used the term ‘physicist’ something too loosely. I might defend myself by appealing to the meaning given by Aristotle to φυσικός, but it may suffice to point out that I use ‘physicist’ to designate any scientist who is concerned in promoting the development of the physical sciences. I make no doubt that Eddington’s mathematical colleagues regard him as a physicist whilst the experimental physicists may be inclined to relegate him to the company of mathematicians. No sharp line can be drawn—in which fact the instructed reader may possibly find a clue to the understanding of some recent theories of Nature.

My obligations are many but, for the most part, so indeterminate that I can hardly place them on record. I have been helped considerably, both by way of instruction and provocation, by many of the books I have read and have mentioned in the [8] bibliography. Foremost I would place Professor

¹ *Materialism and Empirio-Criticism*, p. 310. The idealists of whom Lenin was primarily thinking were the disciples of Mach, whom he calls Machians. I am inclined to think that he hardly understood Mach’s own view. An interesting article bearing on this topic, entitled ‘The Mechanical versus the Mathematical Conception of Nature’, has recently been published by Prof. P. Frank in *Philosophy of Science*, January, 1937.

E. A. Burt's *The Metaphysical Foundations of Modern Physical Science*, which I read with great profit some years ago and to which I am more indebted than my scanty reference in the text would suggest. I have been privileged to read in typescript the first draft of Professor Herbert Dingle's forthcoming Lowell Lectures, and have further benefited by some discussions with him. My deepest obligation is to my colleague at Bedford College, Professor William Wilson, F.R.S. He read Chapters VIII and IX in manuscript and made many helpful criticisms. He is not, of course, responsible for the errors that remain. Further, he allowed me to read his paper on 'The Nature of Wave-Mechanics', which is to be published in *Science Progress* in October of this year. The common reader would be well-advised to study it. I am indebted to Professor M. Evelyn Clarke for reading the proofs and for making some valuable criticisms. All these I wish to thank, and others also, too numerous to be named, who have taught me much in conversation, especially my friend Miss Margaret Willis, who asked me difficult questions, some of which I have tried to answer in this book in a manner worthy of her honesty of mind.

LONDON, July 30, 1937

NOTE

For personal reasons I was prevented from attending at once to the revision of the page proofs and from compiling the index. I am greatly indebted to Dr. Joan W. Reeves who kindly undertook this task in the first place. In the final revision of the proofs I have been much helped by my friend Miss V. S. Shepherd, and in the final compilation of the index by Miss Lilian Chasanovitch. Without the help of these three friends the delay in publication would have been greater. I desire to express to them my grateful thanks.

L. S. S.

September 28, 1937

ABBREVIATIONS

N.Ph.W. The Nature of the Physical World

N.P.Sc. New Pathways in Science

S.U.W. Science and the Unseen World

M.U. The Mysterious Universe

PART I - THE ALARMING ASTRONOMERS

*'I, a stranger and afraid
In a world I never made.'*

A. E. HOUSMAN

Chapter I - The Common Reader and the Popularizing Scientist

Man is but a reed, the most feeble thing in nature; but he is a thinking reed. The entire universe need not arm itself to crush him. A vapour, a drop of water suffices to kill him. But if the universe were to crush him, man would still be nobler than that which killed him, because he knows that he dies and the advantage that the universe has over him; of this the universe knows nothing.

PASCAL.

[11] The age in which we are living is pre-eminently an age of scientific discovery. The advance of the sciences is not only rapid but also spectacular. A 'new discovery' in this, that, or the other, branch of science is not only 'News', it is even 'Headline News'. The physical sciences, scarcely more than three centuries old, have in the last half-century so rapidly developed that the researches of the physicist and the chemist have profoundly altered for good or for ill the life of nearly every human being. Knowledge gives power; knowledge of natural occurrences has already given, increasing knowledge will continue to give, men power to alter and to control their environment in ways which, but a short time ago, would have seemed godlike or devilish. The boundaries between the natural sciences have to some extent broken down. The crystallographer, the biochemist, the physiologist, may pool their knowledge to give men health or to devise means of exterminating each other in a new and deadly warfare. There is no need to expatiate upon the changes brought into our lives by machines; these are sufficiently well known and inescapable. Nor is it necessary to emphasize 'the shrinkage of the world' due to more rapid means of communication by air travel and by wireless. Napoleon Bonaparte would no doubt be less bewildered fighting in the

(... end of preview ...)

Back Cover

In 1937 Susan Stebbing published *Philosophy and the Physicists*, an in-depth analysis of the works written for the general public by two physicists then at the center of attention in England and the world, James Jeans (1877-1946) and Arthur Eddington (1882-1944). The latter, as is known, in 1919 had announced to the Royal Society the astronomical observations that were then considered experimental confirmations of the general relativity of Einstein, and who by that episode had managed to trigger the transformation of general relativity into a component of the mass and non-mass imaginary of the twentieth century.

In this essay, what is at stake is the verification of the general philosophical conclusions, that Jeans and Eddington drew from the new quantum physics, and especially from Heisenberg's uncertainty principle. The essay has not the intention to judge the scientific work of Eddington and Jeans—from the beginning the author declares incompetent for this (although this precaution is not always respected)—but it is written to recall without clemency the two scientists to the responsibility for what they write when they leave the specialists' field. Then Stebbing's judgment becomes implacable. Already in the first chapter we read that "... both these writers approach their task through an emotional fog; they present their views with an amount of personification and metaphor that reduces them to the level of revivalist preachers." And from here on, after this unflattering comparison with the "revivalist preachers", the analysis always leads to openly polemical conclusions and judgments without any diplomatic mediation.

Philosophy and the Physicists has a unique merit that makes it fundamental as a contribution to cultural studies: it is written with a rare and considerable level of scientific competence, by an author who has mastery of classical physics and who understood exactly the scope of quantum experiments on the hydrogen atom of the early 1920s, enough to give the reader a much more satisfactory account than what we receive from Eddington or other popular literature. In general, the contamination of scientific literature with the expressive modes of twentieth-century mass culture is a phenomenon that is not analyzed and has received very little attention, despite the great evidence of its traces: the popular junk that has

been proposed to us by the media for decades is always a conspicuous plebeian contamination of the baroque wonder made mechanically in great series, and the attentive observer easily realizes that the enormous offer of stupefying pre-packaged results is accompanied with very little scruple for the clarification of the processes that allow us to know those results. And indeed, today the ambition to know fully and understand the logical and physical principles is being reduced to nothing, while the consumption of the astonishing results has become ordinary. However, the critical study of the phenomena of mass culture has always kept the products of scientific divulgation at a distance, and the reason is obvious: scientific competence is rare and scarce, and is mostly not owned by those who would have the means to talk about the style and expression of specialist and popular scientific literature with respect to the overall cultural context of our present.

Overall, therefore, *Philosophy and the Physicists* is a collection of epistemological essays treated monographically, but as a whole it composes a unitary cultural study about the position of natural science in the context of the twentieth century. Through ill-thought philosophical conclusions, science enters an area of indistinction with respect to the world of the metaphors we build to make our existence justified. But for Stebbing this must be reacted. Therefore the background to the whole analysis is the assertion of the moral value of clear and unambiguous logical distinctions.

Susan Stebbing

L. Susan Stebbing was educated at Girton College, Cambridge, where she was for some time a Fellow. At one time Director of Moral Science Studies at Girton and Newnham Colleges. From 1933 Professor of Philosophy in the University of London. Lectured in Symbolic Logic at Columbia University in New York in 1931-2. Was President of the Aristotelian Society, and also of the Mind Association. Was interested in philosophical problems from childhood—almost before she knew the meaning of the word ‘philosophy.’ Her special interests were mathematical logic, the philosophy of science, the theory of language, and the problems of society. Professor Stebbing died in 1943.

Besides *Philosophy and the Physicists*, she was author of *Pragmatism and French Voluntarism*, *A Modern Introduction to Logic*, *Logic in Practice*, *Positivism and Logical Analysis*, *Thinking to Some Purpose*, *Ideals and Illusions*, and *Men and Moral Principles*.