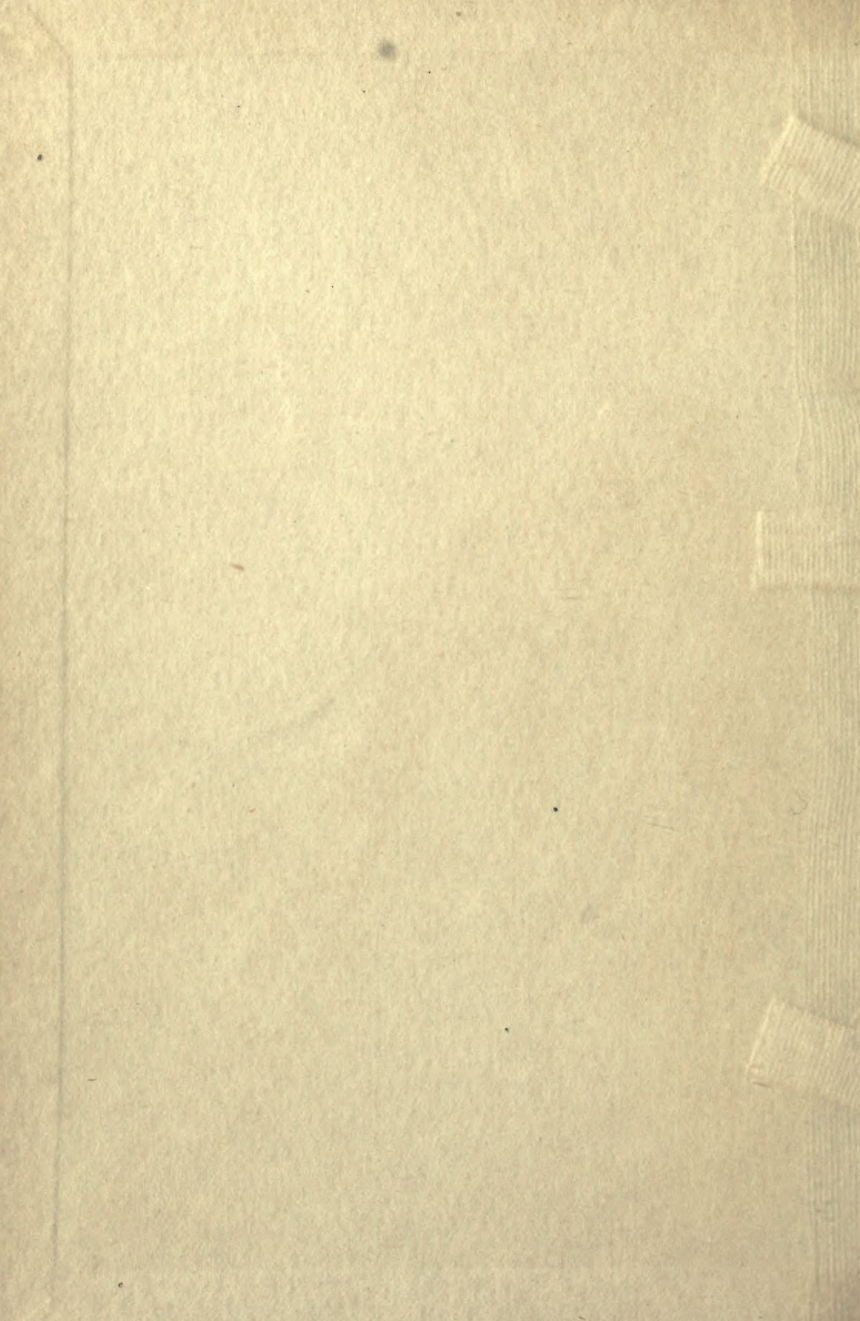


NEW  
CAMBRIDGE CURRICULUM  
IN ECONOMICS

ALFRED MARSHALL

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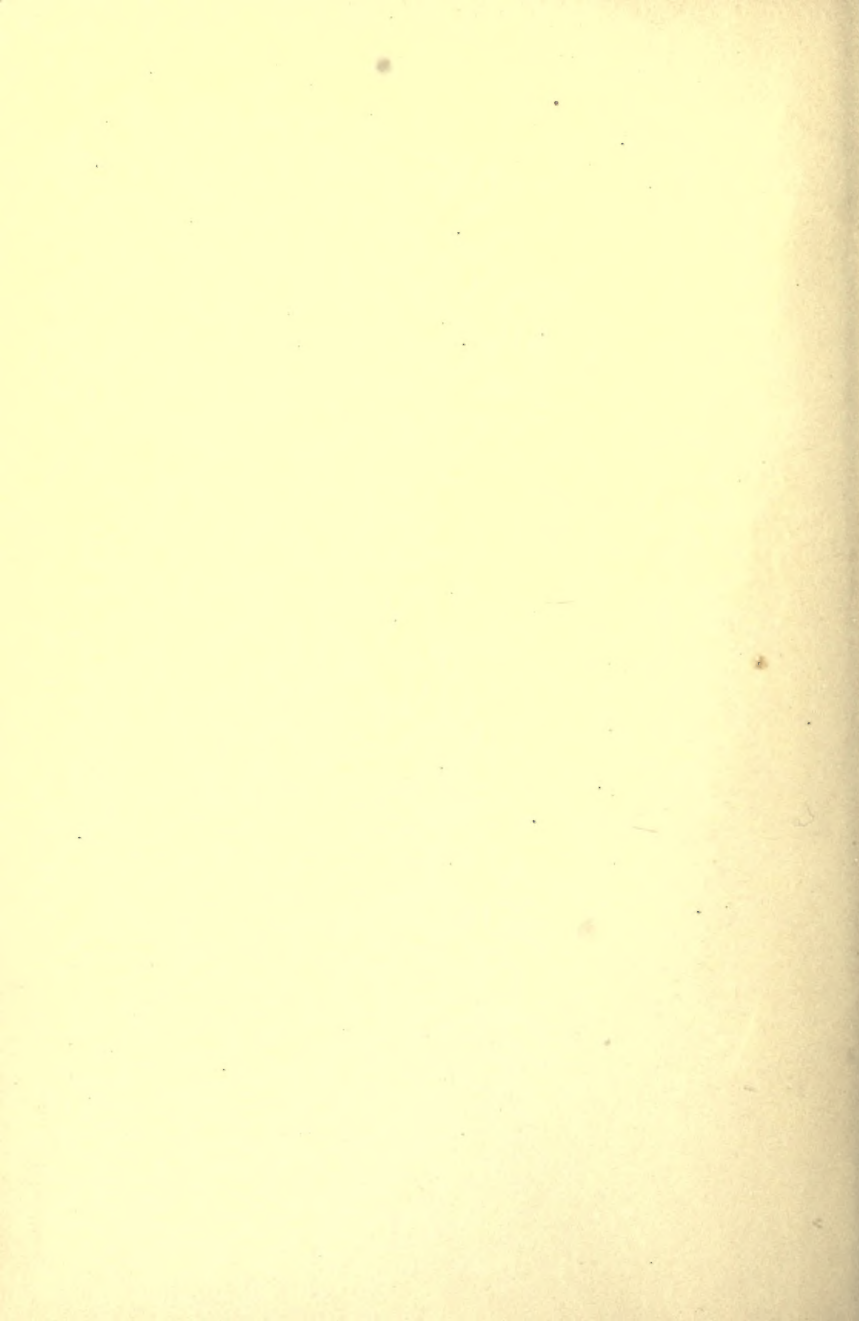






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THE NEW  
CAMBRIDGE CURRICULUM  
IN  
ECONOMICS





THE NEW  
CAMBRIDGE CURRICULUM  
IN  
ECONOMICS

AND ASSOCIATED BRANCHES OF POLITICAL  
SCIENCE;

ITS PURPOSE AND PLAN

BY

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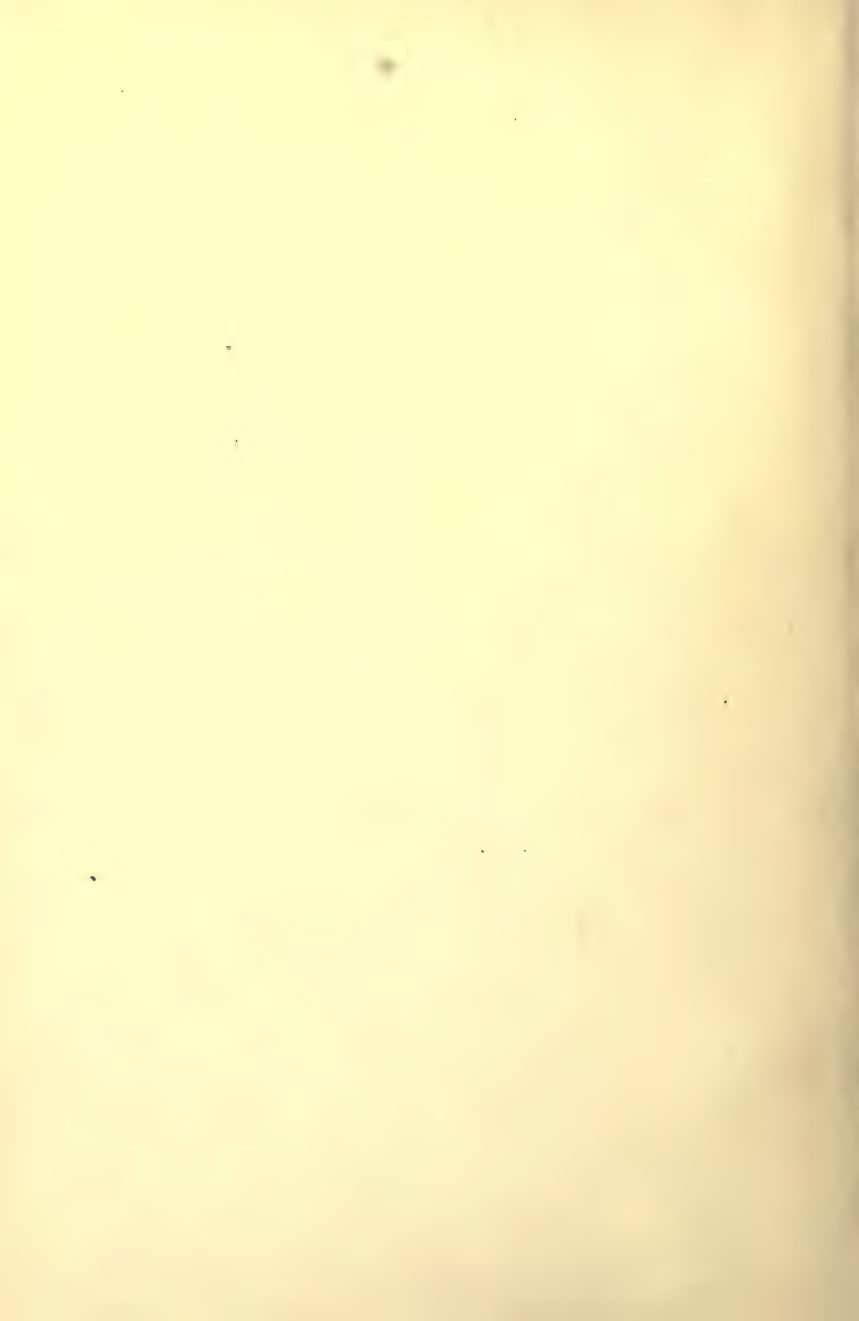
## CONTENTS.

### PART I. PURPOSE OF THE CURRICULUM.

	PAGE
1. Introductory . . . . .	1
2. The National Interest in the Supply of Trained Economists . . . . .	5
3. The Curriculum will afford a Liberal Education . . . . .	9
4. The Curriculum will afford a preparation for Business and Public Service . . . . .	14

### PART II. PLAN OF THE CURRICULUM.

5. The grouping of the various subjects in the Curriculum, and the order of their study . . . . .	22
6. A copy of the Official Schedule, and of Regulations for the New Tripos . . . . .	30



## PART I.

### PURPOSE OF THE CURRICULUM.

#### 1. *Introductory.*

ON June 6, 1903, a new curriculum was instituted by the University of Cambridge on the report of a "Syndicate" (i.e. a special committee of the Senate), appointed to inquire into the best means of enlarging the opportunities for the study in Cambridge of Economics and associated branches of Political Science. The Syndicate say:—

"The increasing importance and complexity of economic issues, and their close connexion with political problems, will be generally admitted. Nor will it be denied that the successful handling of such issues must be dependent on the concurrent development of economic science; and that in such development Universities are called upon to take an important part. Hitherto, however, the responsibilities of Universities in this respect have been more fully recognised abroad than in this country. In the United States of America, in particular, and in Germany, the subjects of Economics and Political Science are commonly represented by a strong and numerous staff, and afford the main route by which large numbers of students

obtain University Honours....England on the other hand, which long held the undisputed leadership in Economics, has suffered in recent years from the lack of adequate provision for the study of that subject at the Universities, and from the consequent scarcity of students who have been able to give it that undivided attention which is demanded by its growing breadth and difficulty."

Accordingly they propose that the University should offer opportunities for study which, they believe, "would be welcomed by many men irrespectively of the career for which they may be preparing. But in particular the Syndicate have had in view two classes of students; firstly those who are proposing to devote their lives to the professional study of Economics, and secondly those who are looking forward to a career in the higher branches of business, or in public life. That it is a proper function of the University to provide for the former class will hardly be disputed; and the Syndicate think that it ought also to provide for the latter. There is, moreover, they have reason to believe, a general and growing desire for such provision. They have had before them a number of letters from leading men of affairs, and also a resolution passed unanimously by the London Chamber of Commerce, expressing warm approval of the project of establishing a curriculum in Economics and Political Science at Cambridge\*. By these and other indications of opinion they are convinced that the organisation of such a curriculum would be welcomed by the general public and, in particular, by business men, who, while anxious to secure for their sons the advantages of residence at one of the older Universities, yet often hesitate because there is not

\* See below, p. 14.

among the existing Honours Examinations one which already during their student days will concentrate their main intellectual activity upon the field of their future labours. What is desired is not technical instruction, but an education of a high type, which shall have the additional advantage of preparing the student to take, without unreasonable delay, a responsible place in business or in public life. For such students, the Syndicate believe, it is both possible and desirable to provide by constructing a curriculum in Economics and associated branches of Political Science, which shall have as high an educational value as that of any other School, and shall also meet the needs of those who propose to devote themselves entirely to the study of Economics and Political Science."

Thus the keynote of the new movement is that a more thorough study of Economics is needed, in order that practical action may be more influenced by study, and that study may be in closer touch with reality. As Professor Foxwell, a member of the Syndicate, said, when addressing the Senate on May 7th: "Nothing is more evident, and I can give many examples of it from the history of legislation and from personal knowledge, than that the power of applying principles to actual affairs is extremely rare, and can only be developed in economists by making their study more realistic. Men of undoubted ability constantly show themselves unable to handle principles which, in the abstract, they evidently understand, because they are not trained to observe the details, distinctions, and complex relations of the historical situation to which the theory has to be applied. I would venture to urge that merely from the standpoint of mental training (the consideration which must outweigh all others

at a University) we are bound to extend the present range of economic study. Under present conditions, we are not able to carry it far enough, to make it sufficiently thorough, or to bring it close enough to reality, either to give the best training, or to interest the practical man." And Dr A. W. Ward, Master of Peterhouse, another member of the Syndicate, speaking on the same occasion, put the matter more broadly, saying:—"We speak of a particular historical movement as the Renaissance, and we trace to that epoch, when the Universities showed themselves alive to the change passing over the national life, and claimed their share in that revival, much of their subsequent vigour, prosperity, and usefulness. Beyond a doubt the most attractive feature in that movement was the awakening of a new interest in the *humanities*, studies so known chiefly because of their relation to *man*, from whom they took their name, and who had been left rather in a corner in the old scholastic discipline. The new Renaissance (to which the Physicists have had much to say, and in which the time has come for the students of Economics and Political Science to play what must be a leading part) means the awakening of a new interest in the *world*, no part of which we must any longer think of as alien to another or to ourselves."

The Renaissance derived much of its inspiration from Greek life, where thought and action were welded together. But English action has been largely separated from English thought. This did, indeed, relatively little harm while English action was chiefly given to bringing into subjection uncivilised races beyond the oceans, and to developing industries which were strong, but insular and crude. But it is doing untold harm now that the



Western world is in effect one, now that some other nations are in certain respects marching quicker and are more alert than we, and now that social and economical problems are becoming every day more urgent, partly because our growing wealth and knowledge are every day increasing our responsibilities. The new curriculum will do something towards a fusion of thought and social action in modern temper, but in due subordination to the great Greek doctrine that the ideal is that which is most truly real\*.

## 2. *The National Interest in the Supply of Trained Economists.*

The Legislature, the Executive, and even the Diplomatic Corps of all countries of the modern world are often occupied with economic issues half their time. None of these issues are quite like those of old days. Many of them are entirely new. And, in spite of the great advance of historical knowledge, the present age has to solve its own economic problems for itself, with less aid from the experience of the past than has been available for any other age. The causes which have made practical economic problems occupy so large a part of the attention of thoughtful men of all classes are mainly the same as those which have moved those problems away from the experience of earlier times. Among the most prominent of them is the rapid extension of international relations.

\* Throughout this pamphlet large use is made of some papers issued for private circulation by the present writer in connection with the movement which has culminated in the creation of the new curriculum.

The increase of wealth and the quickening and cheapening of means of communication has made every country more sensitive to the economic movements of its neighbours; and the term "neighbours" is ever obtaining a wider significance, partly as a result of expansion of empires across the ocean until their frontiers march together in all quarters of the globe. Peace and war have long been governed mainly by the prevailing opinions, true or false, as to national interests and international rivalries in distant fields of commerce, actual and potential. But it is only recently that dependence on distant sources of supply for food and raw produce has made England's continued existence depend on her keeping pace with the forward economic movement of nations against whom she may need to measure her force. In fact England is not, and probably never again will be, completely mistress in her own house. She is not free to weigh the true benefits of a higher culture or a more leisurely life against the material gains of increased economic vigour, without reference to the rate at which the sinews of war are growing elsewhere.

In the seventeenth century Dutch writers boasted that ten of their countrymen in a Dutch vessel would work as much trade as twenty of any other nation. In the first half of the nineteenth century we could boast that ten of our countrymen could do as much in almost any branch of industry as twenty foreigners, because they were better fed, and equipped with better appliances. But as the century wore on, the shackles of political despotism were loosened on the Continent; and when 1871 had seen the close of the wars in Western Europe, there grew up a generation of workers, who turned their increasing com-

mand over nature to account in providing the two sources of energy—better food and better education. A great part of our working population was already fairly well fed; and we turned our growing wealth to less good account. Our education has improved very slowly; and our physical energy, though perhaps on the whole as great as ever, is certainly less relatively to that of other northern nations than it was even half a century ago, while there has perhaps been some decline in our willingness to exert ourselves. We are no longer at the high premium at which we were for those operations in iron works etc. which require exceptional powers of endurance; and in manual skill we have been nearly overtaken by several nations.

Our great store of wealth, which has throughout given us an advantage, is increasing as fast as ever. But, after deducting land, it is even now less than ten years' income: and we should quickly be passed by rivals still some way behind us, if their productive energy were a little greater than our own, and their mode of living a little more sparing. Some of these rivals have more room for expansion at home than we have; their wealth is growing faster and their population much faster than ours. And though our Empire is vast, yet this very vastness is a source of danger as well as of strength. For our possessions are the object of some envy. They contain less than one white inhabitant for each of their eleven million square miles; and even when the population of the mother country is counted in, there is but one white family to defend each square mile.

The philosopher rightly urges that leisure, well earned and well used, may be more worth having than an increase of wealth. But national security may have a higher

claim than even cultured leisure : and while the sinews of war of some of our possible rivals are growing fast, it is not the part of the true philosopher to neglect the study of the causes which govern the material basis of political independence. Still less is it his part to ignore the influences which an increase of material income may exert on the quality of life of those who are not well-to-do.

The motto of Sidgwick's *Political Economy* is : " Things are in the saddle and ride mankind." What had made men become economists, in three cases out of four, was the belief that in spite of our growing command over nature it is still things that are in the saddle, still the great mass of mankind that is oppressed—oppressed by things. The desire to put mankind into the saddle is the mainspring of most economic study.

Mere pain and poverty may perhaps be endured without much loss of the higher life. But the absence of fresh air, of repose, and of healthy play for children lowers the tone of life ; and all the more when work is long and food scarce. Wealth which is now almost wasted may be used so as to secure the benefits of *rus in urbe, urbs in rure* ; with full opportunity for wholesome energetic life, physical, mental and moral.

The present age is indeed a very critical one, full of hope but also of anxiety. Economic and social forces capable of being turned to good account were never so strong as now ; but they have seldom been so uncertain in their operation. Especially is this true of the rapid growth of the power and inclination of the working class to use political and semi-political machinery for the regulation of industry. The well-to-do may say wise things effectively ; but they are not strong enough to

do wise things that are difficult unless they can first get the working class on their side.

This new power may be a great good if well guided. But it may work grave injury to the working class, and to the nation, if guided by unscrupulous and ambitious men, or even by unselfish enthusiasts with narrow range of vision. Such persons have the field too much to themselves. There is need for a larger number of sympathetic students, who have studied working class problems in a scientific spirit; and who, in later years, when their knowledge of life is deeper, and their sense of proportion is more disciplined, will be qualified to go to the root of the urgent social issues of their day, and to lay bare the ultimate as well as the immediate results of plausible proposals for social reform. But the work is not easy: it is really all the more difficult because some of it presents a false outward appearance of ease; and it were better ignored altogether, than attempted in haste.

### 3. *The Curriculum will afford a Liberal Education.*

Every study exercises, in various degrees, the three inseparable faculties, perception, imagination, and reason: the use of these three is the centre of the intellectual life of every University. Perception must be trained in childhood; the springs of imagination belong to early youth; clear reasoning in complex problems comes only as youth passes into manhood. Imagination is the greatest of the three: it makes the great soldier as well as the great artist, the great business man, and the student who extends the boundaries of science.

The economist requires all three; and especially he

needs imagination, to put him on the track of those causes of visible events which are remote or lie below the surface, and of those effects of visible causes which are remote or lie below the surface.

The natural sciences and especially the physical group of them have this great advantage as a discipline over all studies of man's action, that in them the investigator is called on for exact conclusions which can be verified by subsequent observation or experiment. His fault is soon detected if he contents himself with such causes and such effects as lie on the surface; or again if he ignores the mutual interaction of the forces of nature, wherein every movement modifies and is modified by all that surround it. Nor does the thorough student of physics rest satisfied with a mere general analysis; he is ever striving to make it quantitative; and to assign its proper proportion to each element in his problem.

In sciences that relate to man exactness is less attainable. The path of least resistance is sometimes the only one open: it is always alluring; and though it is also always treacherous, the temptation is great to follow it even when a more thorough way can be fought out by resolute work. The scientific student of history is hampered by his inability to experiment and even more by the absence of any objective standard to which his estimates of relative proportion can be referred. Such estimates are latent in almost every stage of his argument: he cannot conclude that one cause or group of causes has been overridden by another without making some implicit estimate of their relative weights. And yet it is only by a great effort that he perceives how dependent he is on his own subjective impressions.

The economist also is hampered by this difficulty, but in a less degree than other students of man's action. For indeed he has some share in those advantages which give precision and objectivity to the work of the physicist. So long, at all events, as he is concerned with current and recent events, many of his facts group themselves under definite classes; many of them can be approximately measured and expressed statistically. He has less excuse for unscientific handling of the relations of cause and effect than have most of his brother-workers in the science of human action; and if he reasons in slovenly fashion, his fault is more likely to become manifest.

Thus then economics is a stringent discipline in seeking for causes and for results which lie below the surface, and are not easily seen: in analysing complex conditions into their elements and in reconstructing a whole out of many elements.

In smaller matters, indeed, simple experience will suggest the unseen. It will, for instance, put people in the way of looking for the harm to strength of character and to family life that comes from ill-considered aid to the thriftless; even though what is seen on the surface is almost sheer gain.

But greater effort, a larger range of view, a more powerful exercise of the imagination are needed in tracking the true results of, for instance, many plausible schemes for increasing steadiness of employment. For that purpose it is necessary to have learnt how closely connected are changes in credit, in domestic trade, in foreign trade competition, in harvests, in prices; and how all of these affect steadiness of employment for good and for evil. It is necessary to watch how almost every considerable economic change in any part of the Western world affects

employment in some trades at least in almost every other part. If we deal only with those causes of unemployment which are near at hand, we are likely to make no good cure of the evils we see; and we are likely to cause evils, that we do not see. And if we are to look for those which are far off and weigh them in the balance, then the work before us is a high discipline for the mind.

Again, when by a "standard rule" or any other device wages are kept specially high in any trade, imagination set agoing will try to track the lives of those who are prevented by the standard rule from doing work, of which they are capable, at a price that people are willing to pay for it. Are they pushed up, or are they pushed down? If some are pushed up and some pushed down, as commonly happens, is it the many that are pushed up and the few that are pushed down, or the other way about? If we look at surface results, we may suppose that it is the many who are pushed up. But if, by the scientific use of the imagination, we think out all the ways in which prohibitions, whether on Trade Union authority or any other, prevent people from doing their best and earning their best, we shall often conclude that it is the many who have been pushed down, and the few who have been pushed up. Partly under English influence, some Australasian colonies are making bold ventures, which hold out specious promise of greater immediate comfort and ease to the workers. Australasia has indeed a great reserve of borrowing power in her vast landed property: and should the proposed short cuts issue in some industrial decadence, the fall may be slight and temporary. But it is already being urged that England should move on similar lines: and a fall for her would be more serious. What is needed, and what we may hope is coming in the



near future, is a larger study of such schemes of the same kind and by the same order of minds as are applied to judging a new design for a battleship with reference to her stability in bad weather.

In such problems as this it is the purely intellectual, and sometimes even the critical faculties, which are most in demand. But economic studies call for and develop the faculty of sympathy, and especially that rare sympathy which enables people to put themselves in the place, not only of their comrades, but also of other classes. This class sympathy is, for instance, strongly developed by inquiries, which are becoming every day more urgent, of the reciprocal influences which character and earnings, methods of employment and habits of expenditure exert on one another; of the ways in which the efficiency of a nation is strengthened by and strengthens the confidences and affections which hold together the members of each economic group—the family, employers and employees in the same business, citizens of the same country; of the good and evil that are mingled in the individual unselfishness and the class selfishness of professional etiquette and of trade union customs; and of movements by which our growing wealth and opportunities may best be turned to account for the true wellbeing of the present and coming generations.

Economics and associated studies may then claim to afford a liberal education, which has well been defined by Sir Richard Jebb as one which “trains the intelligence, gives elasticity to the faculties of the mind, humanizes the character; and forms, not merely an expert, but an efficient man\*.”

\* In an address at Bangor, reported in the *Times* of June 20, 1903.

4. *The Curriculum will afford a Preparation for Business and Public Service.*

Reference has already been made to some letters written in acknowledgement of a *Plea* for a curriculum of the kind which has now been created: and this matter may fitly be opened by two or three extracts from them.

Mr Gibb of the North-Eastern Railway writes: "Two distinct tendencies amongst business men are, I think, observable at the present time. There is a growing desire on the one hand, that young men who enter business with the hope of reaching the higher posts of management, shall come with faculties trained by thorough education and by studies of University rank. But this desire is balanced and seriously checked by a conviction, which seems to me to become more intense and more definite, that the courses of study at the Universities need considerable revision to render them suitable for students who intend to enter public life. If the right kind of training is provided there will be an ample rush of students to take advantage of it, and employers will quickly apply their business instincts to the matter and detect in the finished University product an item of value for business purposes.

"I have no hesitation in saying that if I were choosing between two candidates for railway employment, of equal capacity, one of whom had gone through the ordinary curriculum, and the other had taken his degree through some such curriculum as is suggested in the *Plea*, I would give the preference to the latter. I should consider that he had obtained a mental training practically as good as the other for the needs of a business career, and, besides

that, something more of special value for his individual work."

Sir Clinton E. Dawkins, K.C.B., writes: "I am glad to find myself in general and hearty agreement with you in your main contention. This I can say with the more pleasure because certain schemes for business training that I have seen put forward went far in the direction of technical preparation, and ignored the advantages of that general education of mind and character afforded at the old Universities.

"I do not believe that you will get men with a broad outlook or what I may call a free play of mind who have started early on technical preparation for business. But I equally believe that those who have passed into a University, and are subjected to its influences, should have the opportunity of a training in economics of the same character as the training given to intending lawyers or physicists."

Mr Charles Booth writes: "It is already generally recognised that a University training is desirable for any whose lot it is to inherit commercial positions of even moderate importance (my three junior partners are all University men), and this although no pains has been taken to make the higher training offered applicable to their future.

"That a curriculum such as you suggest would be an attraction to young men of this class is certain, and in my view it is no less sure that it would be of great and solid value both in business and for any form of work involving public responsibility.

"I hope too that the widening of training in these subjects might lead men of other antecedents to appre-

ciate the depth of the interests that really underlie the life of a business man."

Sir T. H. Elliott, K.C.B., writes: "My own point of view is of course mainly that of the Civil Service, in which I have lived and worked for more than thirty years, and of Local Authorities of all grades, with the Members and Officers of which I have been continuously brought in contact. In both cases the advantages of training in Economics and the associated branches of Political Science can scarcely be overestimated, in the interests alike of the individuals themselves and of those they serve. It is not too much to say that from the very outset, the prospects of a man who has received such training are superior to those of others who have not. There is a constant demand for the services of men who have been taught and have accustomed themselves to grapple with intricate social and financial problems, and such men obtain early opportunities of commending themselves to the approval of those upon whose esteem and goodwill advancement necessarily depends. I am sure that an intending Civil Servant could not be better equipped for his work by means of any other scheme of study than one on the lines you propose."

These letters are representative of opinions that have frequently been expressed by able business men. For their survey must be very broad; and it has been well said that States have never been under better rule than when governed by enlightened business men. The Cologne Chamber of Commerce, which is promoting an excellent Handels-hochschule, recently declared that "the great merchant ought to accomplish the totality of intellectual work necessary to survey, study, and comprehend

the most diverse relations in all parts of the world. His view ought to embrace the civilization of the world. And indeed he ought to follow industrial and commercial legislation in all countries, to know their economic history, their future, and therein forecast the progress of industry and of science."

They recognize that in the modern age, while there is a tendency towards increased specialization in the work of subordinates there is a no less marked tendency towards greater breadth and diminished specialization in the work of heads of business, of directors of companies, and of the higher public officials. They know that tradition counts for less and less—trade secrets, which are old, are seldom of much use; and that alertness of mind and character and a broad outlook are of ever greater importance. They recognize that other institutions can give a technical training, suitable for the lower ranks of business more easily, and with less harm to themselves than Oxford or Cambridge can.

Again they recognize that life at the older Universities develops strength and sincerity of character; and that it draws out the faculties which are needed in the social relations of those who have to deal with large bodies of men and large public interests. They see how, on the river and in the football field, the student learns to bear and to forbear, to obey and to command; and how constant discussion with his friends sharpens his wits, makes him ready and resourceful, helps him to enter into the points of view of others, and to explain his own; and how it trains his sense of proportion as regards things and movements and persons, and especially as regards himself.

But they complain that these advantages are purchased

at the cost of a certain diversion of interest from the active affairs of life; and that this reacts on the mental energies of their sons. Studies which must be forgotten in the press of business life, are very likely to be pursued but listlessly by many who are capable of better things. If study is to be an effective rival to amusement in the case of such men it must bear on subjects in which they will be actively interested in later years.

The shafts and galleries of a mine are a scientific museum and laboratory to a colliery manager who has made a thorough study of geology: his mind grows with his work, and he may increase the world's wealth of knowledge. But if the same man had neglected geology, and pursued here other studies, his B.A. degree would not improbably have been the end, instead of the starting-point, of the chief intellectual work and interests of his life. As geology is related to mining, so is economics to general business. A Grote or a Lubbock may harvest rich fields of thought remote from his business; and a Siemens may work in the field of physics with both hands. But yet there remain many business men, whose experiences in later life are likely to be turned to much higher account for themselves and for the world by an early study of economics than by any other training.

There is another way in which the new curriculum may be of service to the future employer of labour. For he will find that his material as well as his personal success depends largely on his understanding the real life of the people. His primary relations with his workmen lie indeed in the exchange of pay for labour. But he is likely to fall short even as profit-winner, and he certainly cannot be a good citizen, unless he has thought

and cared much about those sides of his work-people's life and character which are, at most, indirectly reflected in the wages bargain. To learn this from personal contact is ever more difficult for the large employer: he is separated from the mass of the workers by too many strata of subordinates. He lives among his own class; and this association is apt to make him look at labour questions from the employers' point of view. But undergraduate sympathy tends always towards what is, or appears to be, the weaker side. Any bias which an undergraduate brings to these questions is apt to be on the side of the employees; and his economic studies at a University are pretty sure to enable him to enter into their point of view, and to admit the full force of those of their contentions which are valid. This bias does no harm: for it is sure to be quickly corrected. He will not take long to learn the full force of the employers' side of the case. Thus trained, he is often able, as both English and American experience show, to read the minds of the employees more readily than can be done by an employer, even if much older than himself, who has not had that training. He interprets between the two sides: and thus that broad sympathy grows which enables different social classes to put themselves in one another's points of view and welds the nation into one.

If an alert mind, combined with force of character, are indispensable foundations of success even to those who confine their energies to a single business, they are certainly not less serviceable to those who carry high responsibilities in different businesses, public and private, as is now frequently done. Directors of joint-stock companies, and members of executive committees of County

and City Councils, are called on to decide questions of broad policy in relation to business affairs of which they have had little or no specific experience, even if they happen to be established in business on their own account. They may indeed leave even the larger details to salaried officials. But it will be their part to bring to bear broad strong well-balanced judgments, insight into character, tact in managing men, and fine intuition as to when to take risks and when not.

And nearly the same thing may be said with regard to those who as public officials, as ministers of religion, as the owners of land or cottage property, or in any other private capacity will be largely concerned with "the condition of the people question," with public and private charity, with co-operation and other methods of self-help, with harmonies and discords between different industrial classes, and with the problems of conciliation and arbitration in industrial conflicts which are ever assuming larger proportions. Those who are nearest to these conflicts can seldom be perfectly impartial arbitrators: and there is here a special call for men who have received a sound training in economics and in political science, and can bring to bear that elasticity of mind and that quickness of sympathy with aspirations and ideals that are not their own, which it is the privilege of a residential University to foster.

Thus then the needs which it is the purpose of the curriculum to meet are mainly two. First, there is a growing need for a thorough analytic, and therefore realistic, study of economics, of the same order as that which is given to physics and physiology. This need is pressing because economic issues are growing in urgency



and in intricacy, and economic causes exert an ever increasing control on the quality of human life; while such a study offers abundant scope for the training and the exercise of those mental faculties and energies which it is the special province of a University to develop. Secondly, there is a growing need for better provision for students who are looking forward to a business career or to public life, and who desire to obtain a good intellectual training and opportunities for distinction in subjects that will bear on their thoughts and actions in after years, without foregoing those social advantages and that education of character which come with life at a residential University.

This then is the purpose of the curriculum: let us now look at its plan.

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## PART II.

### PLAN OF THE CURRICULUM.

#### 5. *The Grouping of the Subjects in the Curriculum.*

THE general plan of the curriculum is thus described in the Report of the Syndicate:—"It may be objected that provision cannot easily be made in a single curriculum for the needs of both the classes of students referred to above\*. If it were proposed to combine the training of Economists with the preparation of men for the routine work of subordinate positions in business the difficulty might be insuperable. But this is not what the Syndicate propose. The men, other than pure students, whom they have in view are those destined to take part in public affairs, or to fill the higher and more responsible positions in industrial and commercial life. And though no doubt these two classes may differ in mental aptitude and temper, and in the distribution of their interests, yet such differences are not likely to be greater than may obtain between different members of either class. The Syndicate have thus found less difficulty than might have been anticipated in devising a curriculum which appears to

\* See p. 3.

them suitable to both kinds of men. They propose that all candidates shall give two years to the General Principles of Economics, in association with Economic and General History, chiefly of recent times, and with some study of existing political institutions; provision being made for a combination of analysis with the concrete study of facts in nearly equal proportions. Not till the third year is any form of specialization necessary. Scope must then be allowed for some optional study of the higher theoretical difficulties of Economics, and of other matters which may be of little interest to those preparing for active life. But the main specialization needed is in subject-matter; and the Syndicate accordingly propose to allow students to follow their particular bents and give special attention to industrial questions on their human or their technical side; to banking; to trade; to modern developments of political theory and practice; or to the bearing of law on economic questions."

We may go into some detail, which will be the more easily followed, if a glance is sometimes thrown at the Schedule of Subjects and the Regulations which are printed in the Appendix.

In framing the curriculum it was necessary to omit much that would have been desirable if there had been more time at the disposal of the student. But like other Cambridge curricula it is arranged mainly for those who can give only three years to the University. Even those few who can give more, are often well advised to pursue their studies after their third year without direct reference to an examination: for by the age of twenty-two examinations have done a man nearly all the good they can do him, but not nearly all the harm.

Of course study should be broad as well as thorough : but three years are too short for a thorough study over a very wide area. It is well that precedence should sometimes be given to breadth, and only so much thoroughness as can be combined with great breadth. But Cambridge is one of those Universities which have chosen what is perhaps the better part, of urging those students who are capable of thoroughness to attain it at all costs, and to combine it with as much breadth as they can. For if a man has not learnt to be thorough before he is twenty-two, he will never learn it. If the legacy of his youth to his manhood is thoroughness in thought, combined with some width of knowledge and much breadth of interest ; his manhood will put this capital stock out to usury and acquire large intellectual riches. An ideal curriculum from this point of view is therefore one which fills three years with studies which all bear on some centre of intense intellectual activity. For then a considerable breadth may be obtained in the very process of developing thoroughness. The central group in this case is of course economic.

Part I. is to be taken generally in the second year : but candidates who have obtained honours in any other Tripos, may take it in the third or fourth year. Part II. is to be taken in the third or fourth year.

All the papers in Part I. are compulsory. In Part II. every one must take the three papers on General Economics, and the Essay, together with not less than two nor more than five others selected at his choice.

A knowledge of French or German is expected of all candidates ; and those who are acquainted with both languages will be at some advantage.

What remains to be said as to the plan of the curriculum relates chiefly to the order of study of the different subjects; and especially as to, firstly, the relation between analysis and the concrete study of facts; secondly, the attitude of the economist towards the history of recent times; thirdly, the provision for the study of earlier economic history; and lastly, the places of Political Science and Law in the curriculum.

Firstly, as to the relative order of analysis and the concrete study of facts:—It is clear that analysis can seldom be profitable until the mind is fairly well stored with facts on which it can work. But in this respect economics has an advantage over most physical sciences. For the student starts with a considerable knowledge of the facts on which economics rests. He is acquainted with the main springs of action in the ordinary affairs of life; and he can follow simple illustrations drawn from the more familiar forms of work and trade.

He should turn this advantage to account. He should begin to disentangle the interwoven effects of complex causes. He should learn how things, which seem alike and are called by the same name, are often really dissimilar; and how those, which seem dissimilar and are called by different names, are often fundamentally alike. He should seek for the Many in the One, and the One in the Many:—a task in which skill is seldom to be acquired save by long practice: unless indeed the student has rare natural genius, or has mastered some branch of physical science.

From the first he must give a great part of his time to a realistic study of the structure and conditions of industry and trade: and, as time goes on, and the preliminary

difficulties of analysis are overcome, this study will become more and more absorbing. It is essential to good work.

He will make some study of general scientific method, with special reference to statistics; and he will obtain a broad knowledge of the principles of economic geography. He will not load his mind with detailed facts relating to commerce; but he will study the principles of "physical geography in relation to recent economic development": he will consider the influences on life and work which are exerted by climate, by the configuration of land and water, and by the geographical distribution of the resources of agriculture, mining, manufactures and transport.

All these matters are relatively simple, and properly belong to Part I. But strictly scientific questions are inextricably interwoven with political and ethical considerations in all discussions relating to the Economic Functions of Government and to Fiscal Policy: and therefore the main study of these subjects is deferred to Part II.; where a prominent place is allotted to them in the three compulsory papers on General Economics. These papers are partly revision papers: but in them, as indeed throughout Part II., the international element is to be emphasized.

The list of economic papers ends with four on "Advanced Economics," which are optional: and here some little complexity has been introduced by the necessity for meeting the wants of different classes of students. In the third and fourth of these, place is to be found for such analytical subtleties as interest the professed student more than the man of affairs: while the first two deal with the more difficult of those realistic discussions which interest both classes alike. It will, however, seldom be

possible for a student to cover the whole of this ground properly in his three years: and therefore it is arranged, that whatever be the branch of economics in which he is most interested—whether because it bears most directly on his future career, or for any other reason—he will obtain full credit for thorough work at it\*.

Secondly, to consider the attitude of the economist to history. If time sufficed he should know all history, from pre-historic times to the present. But in a three years' course, in which some room has to be found for political science and perhaps for law, he cannot afford to give the equivalent of more than one year to history, and in a single year he cannot acquire more than a very superficial knowledge, if it is to be spread out over many centuries. Those who desire to make a special study of economic history will be considered later on. The student of economics is invited to give his main attention to recent history, that is chiefly the history of the nineteenth century, with some reference to earlier times. The aim of the two papers on history in Part I. is to lead him to continue and develop the study of general history which he has made at school by tracing the action of modern influences, and especially of those which enable anything important said anywhere to be heard within twenty-four hours over the whole civilized world. He is to be led to see how they have at once enlarged the area over which national sentiment is keen and strong, because it is based on intimate knowledge; and at the same time have woven the whole western world into a single nation for many purposes.

\* For details see Subsidiary Regulation 3, below, pp. 32—34.

This historical study leads up to Part II., and through Part II. to the work of life. For in Part II., while mainly occupied with a realistic study of those economic conditions in which he is specially interested, the student is expected to trace their roots as deep into the soil of the past as may be necessary. For instance, the study of foreign trade would naturally run back over several centuries, while that of some labour problems would scarcely get behind the nineteenth.

Within this range he will find opportunities for developing his sense of historical evolution, in a way different from but perhaps not on the whole inferior to that which he would have got by ranging over more centuries in greater haste and with less opportunity for international comparisons.

Thirdly, we may look to the needs of those students who desire to give the greater part of their three years to economic history, and especially that of England, in association of course with general history. It will be found that a perfect provision is made for their needs by the Regulations which permit them to combine a Part of the History Tripos with a Part of the Economics Tripos.

Fourthly, as to the places of Political Science and of Law in the curriculum:—The study of recent history is closely allied to that of the existing Organization and Administration of the British Empire, with reference to Imperial, Central, and Local matters, one paper on which is to be compulsory in Part I.; and to that of Recent Political Theories, which is an optional subject in Part II.

Lastly, in Part II. the principles of those branches of law, the policy of which is mainly governed by economic



considerations, is an optional subject with two papers. In combination with the papers on International Law, it may induce some students and especially Candidates for the Diplomatic and Consular services to combine a Part of the Law Tripos with a Part of the Economics Tripos.

It appears then that the plan of the curriculum presents a central group of subjects, with others arranged round it; that these are sufficiently diverse to call forth a great variety of mental activities, and yet are so closely bound up with the central group, that all work at them will stimulate and be stimulated by work at that group. Together they will exercise the higher and scientific imagination as thorough and concentrated work alone can.

It is hoped that after a while a choice of Special Subjects will tempt lecturers and their pupils to fields of knowledge that have not yet been brought fully under cultivation. But at present, it must be confessed, some branches of Advanced Economics must be left without systematic courses of instruction: nothing more than a general supervision of reading in them will be possible until some additions are made to the very small teaching staff which exists now. A scarcity of teachers has not been an uncommon incident in the opening of a new curriculum. But there has never been a more urgent need for additional endowments. A good salary is attached to my own chair; but scarcely any other teacher of economics in Cambridge receives any considerable salary from public sources.

### 6. *The Schedule of Subjects.*

It remains to add the Schedule of Subjects, together with those Regulations which are explanatory of it. The substance of the chief administrative Regulations which directly affect the student has been already given.

## SCHEDULE OF SUBJECTS.

### PART I.

1. Subjects for an Essay. 1 paper.
2. The existing British constitution. 1 paper.
3. Recent Economic and General History. 2 papers.
4. General Principles of Economics. 3 papers.

### PART II.

1. Subjects for an Essay. 1 paper.
2. General Economics. 3 papers.
3. Advanced Economics, mainly realistic. 2 papers.
4. Advanced Economics, mainly analytic. 2 papers.
5. Modern Political Theories. 1 paper.
6. International Law with reference to existing political conditions. 1 paper.
7. International Law with reference to existing economic conditions. 1 paper.
8. Principles of Law as applied to economic questions. 2 papers.
9. Special subject or subjects. 1 paper each.

I. In Part I. every candidate shall take all the papers.

II. In Part II. every candidate shall take the Essay and the three papers on General Economics, and not less than two nor more than five of the remaining papers.

III. In Part II. no candidate shall take one of the two papers allotted to each of the subjects 3, 4, 8, unless he also takes the other paper.

IV. The lists published by the Board shall include French and German books; and the Examination shall include a considerable number of questions which assume a knowledge of those languages on the part of the candidates.

V. No candidate shall be allowed credit for work in any paper which does not satisfy the Examiners.

VI. No candidate shall be refused a place in the First Class or in either division of the Second Class of Part II. on the ground that he has taken up only six papers.

VII. The Examiners shall have regard to the style and method of the candidate's answers, and shall give credit for excellence in these respects.

## SUBSIDIARY REGULATIONS.

### PART I.

1. The paper on the Existing British Constitution shall deal with the main outlines of the existing political and administrative organisation (central and local) of the United Kingdom, and with the government of colonies and dependencies, comparatively treated.

2. The questions on Recent Economic History shall deal chiefly with the United Kingdom and with the Nineteenth Century. They shall also take special account of other English-speaking peoples, and of France and Germany, during that period. Some knowledge of physical geography in relation to recent economic development shall be required.

3. The questions on Recent General History shall deal with the British Empire, Continental Europe, and the United States, and chiefly with the Nineteenth Century. They shall not include military or literary history. Some knowledge of political geography shall be required.

4. In at least one of the papers set in each of the subjects (3) and (4) some of the questions (not all of which shall be optional) shall include quotations from French and German writers.

## PART II.

1. Throughout Part II. international comparisons shall be introduced where practicable.

2. In the papers on General Economics special attention shall be paid to Public Finance and the Economic Functions of Government, local as well as central. The papers shall also include questions on the ethical aspects of economic problems.

3. Each of the four papers on Advanced Economics shall contain some general questions. But the majority of the questions in each paper shall be divided in about

equal proportions among the four groups A, B, C, D, defined below. Two of these four papers shall be realistic, and adapted to the needs of those preparing for public or private business, as well as to those of professional economists. The remaining two papers shall be of a more exclusively analytic character, and shall make provision (*a*) for some of the more obscure problems of value, such as those connected with the shifting and ultimate incidence of the burden of taxes; (*b*) for the history of economic doctrines; and (*c*) for mathematical problems in Economics and Statistics. No one shall answer more than one-half of the questions in any of these papers.

A. STRUCTURE AND PROBLEMS OF MODERN INDUSTRY. Modern methods of production, transport, and marketing; and their influences on prices and on industrial and social life. Industrial Combinations. The recent development of joint stock companies. Combinations and monopolies. Railway and shipping organisation and rates.

B. WAGES AND CONDITIONS OF EMPLOYMENT. Causes and results of recent changes in the wages and salaries of different classes of workers, in profits, and in rents. Relations between employers and employees. Trade Unions. Employers' Associations. Conciliation and Arbitration. Profit sharing.

C. MONEY, CREDIT AND PRICES. National and international systems of currency. Banks, and banking systems. Stock Exchanges. Foreign Exchanges. National and international money and investment markets. Credit fluctuations. Causes and measurement of changes in particular prices and in the purchasing power of money.

D. INTERNATIONAL TRADE AND ITS POLICY. The courses of trade as affected by and affecting the character and organisation of national industries, trade combinations, etc. International levels of prices. International aspects of credit and currency. Foreign Exchanges. Tariffs, protective and for revenue. Bounties and transport facilities in relation to foreign trade.

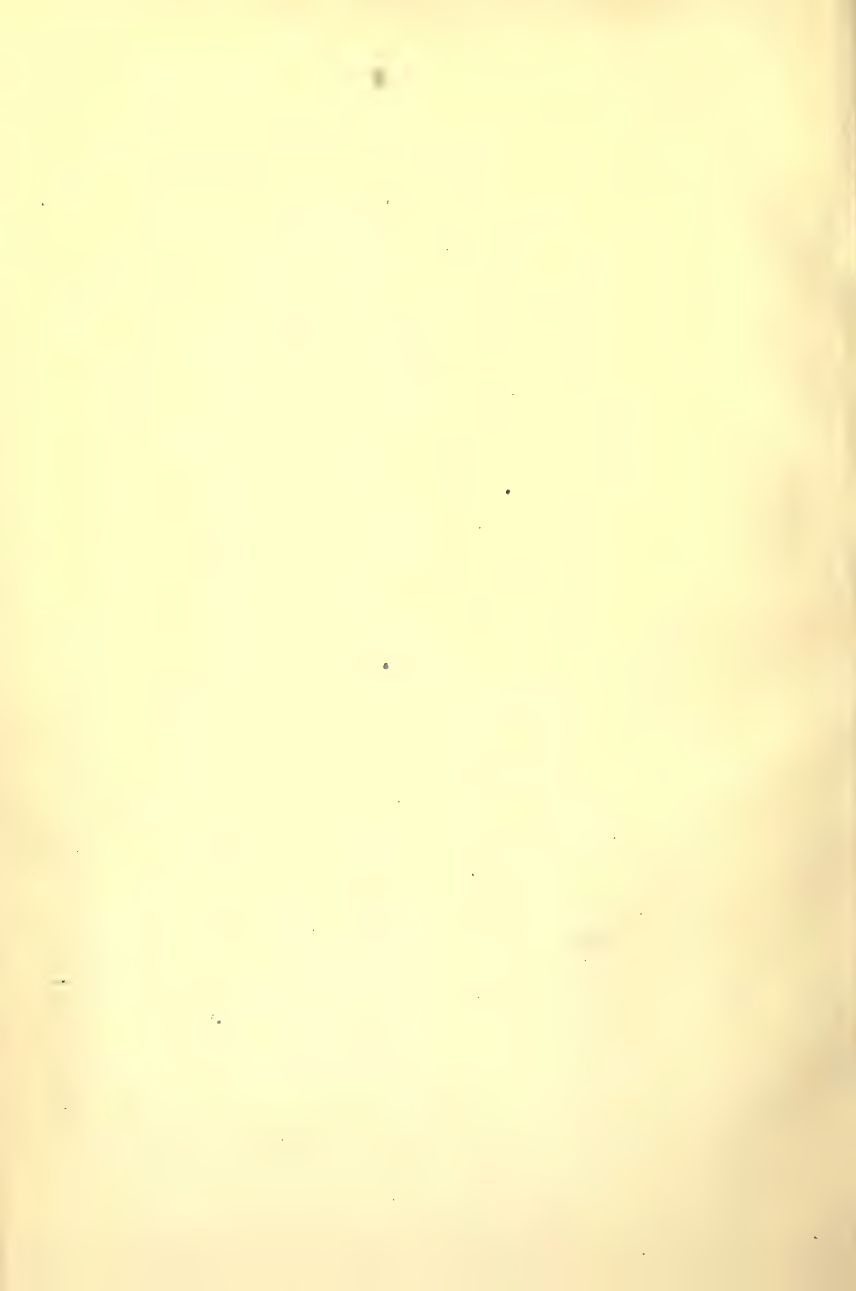
4. The paper on Modern Political Theories shall deal chiefly with the latter half of the Eighteenth and with the Nineteenth Century.

5. The scope of the papers on the Principles of Law in their application to economic questions will be defined and limited from time to time by the Board.

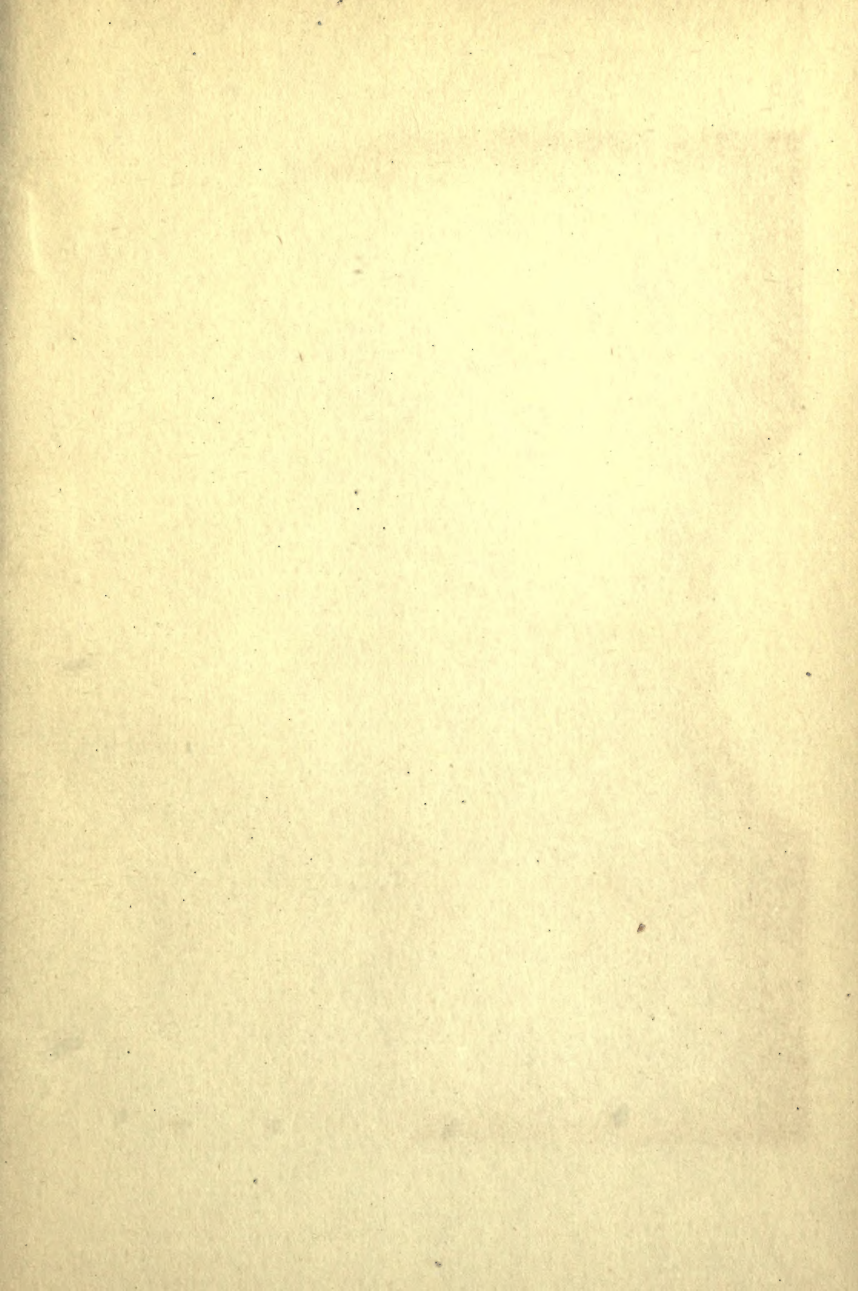
6. The Special Subject or Subjects will be selected by the Special Board from time to time, and will deal either with the recent economic and general history, or with the existing political and administrative organisation, of some foreign country, or of India, or of some other dependency or colony of the United Kingdom. One paper shall be set in each such subject.

7. In at least one of the papers in each of the subjects 2, 3, 4, 5, 6, 7, 8, some of the questions (not all of which shall be optional) shall include quotations from French or German writers.











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