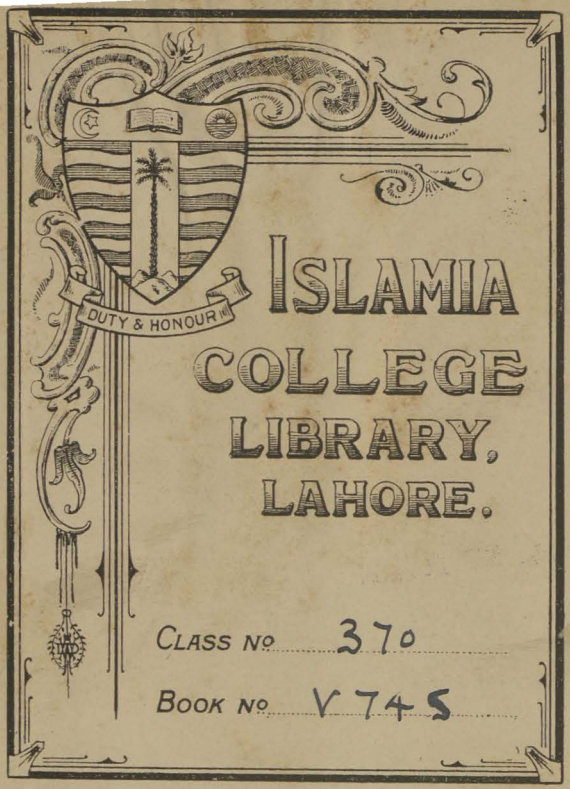

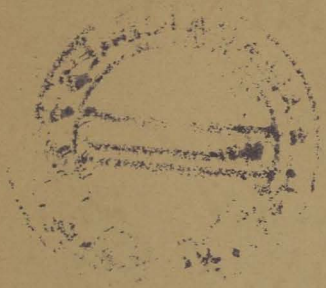

THE SOCIAL MIND

AND

EDUCATION

BY

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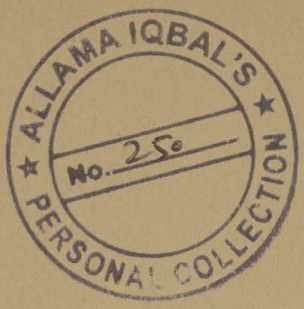
New York
THE MACMILLAN COMPANY
LONDON: MACMILLAN & CO., LTD.
1897



CONTENTS.

INTRODUCTION.

THE task which this essay undertakes is one of organization, rather than of investigation, the putting together in relations of interdependence, or mutual reinforcement, of ideas which have been worked out in connection with several more or less isolated pursuits.

In terms of a proposition to be presented in Chapter I., the attempt belongs to that synthetic movement which is one of the factors in the progress of both the social and the individual mind. An effort is made to bring conceptions from social philosophy to bear upon the problem of education, with the hope that there may result both clarification of ideas and greater definiteness of purpose.

The thought of social philosophy which sees in the development of society the growth of a vast psychic organism, to which individuals are intrinsically related, in which alone they find self-realization, is of the highest significance for the teacher, to whom it suggests both aim and method.

While this undertaking is, in general, synthetic, its scope is so vast that emphasis will be laid chiefly, if not exclusively, upon the cognitive function of society and of the individual. Such one-sidedness of treatment is adopted deliberately, and not from any failure to recognize the organic unity of the mind. A complete view of the subject would include all the intimately interdependent aspects of both social and individual consciousness. Again, the view is confined to social life, as the sphere of man's activity, and as affording the immediate material of his

science and philosophy. The widest treatment would comprehend a cosmic philosophy; but for obvious reasons it is necessary to limit an inquiry already covering an immense field. This primary synthesis must itself be further combined in the broader conception of the universe.

The argument of this essay, in its main outlines, is as follows:

In the process of social evolution men's ideas, judgments, and desires have been combined into products which, transmitted from generation to generation, react upon individuals, and are in turn modified by them. These "capitalizations of experience" and their unceasing reactions form what may be described as the social mind.[1]

The social tradition, in the course of its development, has been enriched by the successive separation or analysis of the world of phenomena and the generalization and recombination of them in explanations or theories. Gradually out of empiricism and "common sense" have been evolved more and more methodic examination and purposeful explanation, *i. e.*, science and philosophy. Although differing chiefly in range and exactness of explanation, science and philosophy are therefore in a broad sense complementary processes of the social mind, which seeks not only knowledge of details, but a conception of the whole. Philosophy, in one of its functions at least, is a "science of the sciences."

The race, confronted from the beginning by a complex of physical, vital, mental, and social phenomena, has analyzed and combined these facts, has slowly formed nuclei of phenomena related by obvious causes, and, struggling always for unity, has filled up the gaps between

[1] For purposes of brief exposition here this concept is personified in a manner which might be misleading, but for the fuller explanation of the term to be given in Chapter I.

such groups by explanations, more or less anthropomorphic.

In the lapse of time these gaps have grown smaller and smaller, until with the marvelous growth of the nature groups, which in many cases have quite touched borders, the explanations have become more and more definitely and immediately causal. A group of social theories has always been present in the collective tradition, but in comparative isolation and vague consciousness. The modern tendency has brought this group into close relation with the others, which are now seen to be subordinate to it. So that the science of society (in a broad sense, not Sociology as a special discipline) is being recognized as the *scientia scientiarum*, a true philosophy. Modern social philosophy is the latest conscious synthesis of the social mind.

The sciences, or groups of knowledge, which have been reflectively organized out of the experiences of the race, are all related to social life, which is their point of departure and the common centre to which they return. Social philosophy comprehends society by organizing into a unity these elements of analysis.

The parallel between the development of the individual and that of the race, asserted by poets, scientists, and philosophers, has of late been subjected to criticism. It has been pointed out that there are "short-cuts" by which in individual evolution whole stages of the race's growth may be omitted. Educationally, the theory of parallel development is fruitful in suggestions, but it may easily be made the basis of artificial schemes, such as certain *doctrinaire* forms of the "Culture Epoch theory," which assume that the products of different stages of social development, rather than life itself, must appeal to the child at corresponding periods of his development.

The real parallel is in the process, the progress from analysis to synthesis, and in the gradual development of fully self-conscious effort out of vaguely conscious activity.

Education sets before itself the task of relating the individual intrinsically to the social tradition so that he may become an organic part of society. It aims to effect "short-cuts" in the evolution of the individual mind, but it must not violate the general laws of that development. All current plans for the concentration, correlation, or coördination of studies deal with the early or unconscious period of growth, during which it is quite as important to direct and systematize the process of analysis, *i. e.*, to aid the pupil in taking apart the vague unity of his life experiences, as to maintain relations between these parts or studies.

The problems of the earlier stages in education are being attacked vigorously, but the analogy of race development suggests also the necessity of a conscious synthesis in the higher education. The stress there is now laid upon analysis, upon the study of subjects, and separate disciplines, while the complementary process of combination, or integration, is, for the most part, left to chance, to the gradual and comparatively planless effort of the maturing individual to arrange his scattered knowledge into a coherent theory of the phenomena which his daily life presents. It should be, therefore, a definite aim of the higher education to direct the student in a purposeful integration of his various pursuits, a putting back of these abstractions into a concrete conception of life.

No study, in itself, can be a core for such integration. Social life and the student in relation to it form the real centre. The various social sciences, conceived broadly, may be made to serve the purpose; literature, regarded as a social product, may render important aid. But in so far

as these instruments are useful they are really approximations to a social philosophy, which aims to recombine into a more significant organic unity all the kinds of knowledge which have been analyzed and abstracted out of the life of men.

Obviously, such a preliminary philosophy will not form a stable equilibrium in the student's mind. His increasingly complex experiences, varying interests, and maturing observation will compel continued analysis and synthesis. But this consciously directed integration will effect a "short-cut" in his mental development, and will help to secure, with economy of effort, his incorporation with the social mind. It will all the more quickly fit him for his social activities and will the sooner enable him to contribute something to the progressive organization of the social tradition.

THE SOCIAL MIND AND EDUCATION.

CHAPTER I.

THE SOCIAL MIND AND ITS DEVELOPMENT.

THE modern conception of the social or general mind is the result of a conscious effort to discriminate and explain the phenomena which have their origin in the influence of individual minds upon each other in society, and the action and reaction between individuals and the accumulated psychical resources which are transmitted from generation to generation. The unconscious or empirical recognition of these phenomena has long found expression in such phrases as "public opinion," "popular will," "the spirit of the people," the "zeitgeist," the "âme des peuples," and is vaguely implied in the adjective "unanimous."

It is to be expected that thus early in the attempt to mark off and organize the phenomena of social psychology there should be decided differences of opinion both as to their nature and as to the concepts by which they may be most satisfactorily expounded. Without attempting to discuss or reconcile these conflicting views, we shall try to describe the generally established facts of the social mind.

At the outset we must guard against the dangers which lurk in the use of analogies. There can be no facts of collective consciousness outside of and apart from individual consciousness. James has insisted upon this in his delightfully concrete way: "Take a dozen words," he says, "and take twelve men and tell to each one word.

Then stand the men in a row or jam them in a bunch, and let each think of his word as intently as he will ; nowhere will there be a consciousness of the whole sentence. . . The private minds do not agglomerate into a higher compound mind."[1] If, however, each of these men communicate his word to the others, and by dint of mutual suggestion the sentence be united in the consciousness of each, the group may be regarded as of one mind, and the sentence, a result of coöperation, is a social product. If it be symbolized in written language, it takes on no new or really objective nature but is simply a potentiality, and has no actual existence as thought until it gets itself translated again into individual consciousness.[2]

From the earliest beginnings of society men have been coöperating by conflict, discussion, the exercise of authority, and the imitation of leaders, to produce social ideas, *i. e.*, states of consciousness common to whole groups.[3] These products, symbolized in speech or written language[4] and embodied in ceremonials, customs, and laws, have been transmitted from age to age, undergoing constant modification and reorganization.[5]

Simple and obvious as the above statement seems there is a fallacy in its very simplicity. There is a mechanical

[1] James: *Psychology*, Vol. I., p. 160.

Fouillée, in attacking the mystical conceptions of the German Folk-psychologists, is strenuous upon this point: "Ce qu'on appelle la conscience nationale est le résultat et la consonance des millions de pensées individuelles." He denies emphatically that there is "fusion de toutes les consciences individuelles en une seule."—*La science sociale contemporaine*, pp. 192-193.

[2] F. H. Giddings: *Principles of Sociology*, p. 146.

[3] "Un chaos d'idées et d'intérêts en lutte entre individus distincts et rapprochés; voila le premier groupe social; et il s'agit avec cela de former le faisceau le plus fort et le plus volumineux de croyances qui se confirment ou ne se contredisent pas, de désirs qui s'entraident ou ne se contrarient pas."—G. Tarde: *La logique sociale*, p. 96.

[4] A. E. Fr. Schäffle: *Bau und Leben des socialen Körpers*, I. Auf., Bd. I., S. 94.

[5] W. H. Payne describes the experiences of the race as "capitalized and transmitted" from generation to generation. *Educational Review*, Vol. X., p. 137.

or chemical analogy in the conception of ideas being combined into products, which is likely to mislead unless its use be carefully guarded. Every modification of social thought must be effected in the mind of some one man, must result from a unified state of individual consciousness.[1] Otherwise a social "mind-stuff" theory[2] or an Herbartian metaphysic would be needed to explain the phenomenon. It is only when looked at in a general way and over considerable periods that this movement of the social mind seems to assume an independent and somewhat super-psychical character. There is a distinct advantage in taking this social and objective point of view, if only the really individual nature of the elaboration be kept in thought. The stream of social consciousness has no other channels through which to flow than those of individual minds. It may be frozen into symbolic forms, but melts into mobility again only in the consciousness of man.

Yet it would be a serious mistake to reduce the phenomena of the social mind to those of individual psychology merely.

"The spirit of the people [declares Falckenberg] is not a phrase, an empty name, but a real force, not a sum of the individuals belonging to the people, but an encompassing and controlling power which brings forth in the whole body processes (*e. g.*, language) which could not occur in individuals as such. It is only as a member of society that any one becomes truly man. The community is the subject of the higher life of spirit."[3]

There is an idealism about such a paragraph which is suggestive but at the same time somewhat vague. Lewes speaks more definitely: "A solitary man would think and feel and will; but he would no more fashion his feelings,

[1] Lewes has pointed this out in these words: "Nor can experience be likened to any complex of parts; it is no mosaic of elements; it is a living, developing, manifold unity."—*Problems of Life and Mind; The Study of Psychology*, p. 180.

[2] James: *loc. cit.*, Vol. I., pp. 158–162.

[3] *History of Modern Philosophy* (tr. by Armstrong), p. 623.

thoughts, and volitions into conceptions which are the formulæ of knowledge than he would articulate them in words."[1] Even the forms of thought, elaborated through a long period of social development, are transferred[2] to the individual. The contents of his mind are in large measure social products. Through symbols of many kinds the thoughts of others past and present reproduce themselves in his consciousness. Durkheim sees in the reaction of social products upon the individual a veritable compulsion, the domination of an independent entity over subjects powerless to resist.[3]

This is an extreme statement of the relation, yet it contains much truth. The conceptions which have been formulated during the development of society become "necessities of thought" to the individual.[4] The accumulated and organized observations and explanations of the race are communicated to him and either constitute his own view of reality or form a basis for further advance and modification.[5]

[1] *Loc. cit.*, p. 161.

[2] This does not imply a mechanical superposition *ab extra*, but a hastening and guiding of individual development through education.

[3] "Non seulement ces types de conduite ou de pensée sont extérieurs à l'individu, mais ils sont doués d'une puissance impérative et coercitive en vertu de laquelle ils s'imposent à lui, qu'il le veuille ou non."—E. Durkheim: *Les regles de la methode sociologique*, p. 6.

[4] Lewes, *loc. cit.*, p. 169.

In connection with this thought attention should be called to Tarde's ingenious theory of social categories. Just as certain forms of thought are necessary to classify, organize, and unify perceptions in individual consciousness, so society can be formed only by the aid of similar collective reconciling agencies or categories. "Il y a donc, en tout, pour l'esprit individuel, les catégories suivantes, logiques et téléologiques: la Matière-Force, l'Espace-Temps, le Plaisir et la Douleur: et pour l'esprit social; la Divinité, la Langue, le Bien et le Mal."—*La logique sociale*, p. 92.

[5] The formation and reaction of the general mind have been admirably described by Lewes: "Further, the experiences of each individual come and go. They correct, enlarge, destroy one another, leaving behind them a certain residual store which, condensed in intuitions and formulated in principles, direct

The social mind may be regarded either as in process of change or as in temporary equilibrium, as being formed or as a product. Such a discrimination is of course purely arbitrary. Yet it is a useful devise for examination and study. At any given moment the traditions of a society, economic, legal, religious, scientific, artistic, and political, may be thought of as social products forming in the aggregate the "social memory."[1] Yet these products vary greatly in definiteness and coherence. A part are organized and unified but a large proportion are either discrete and isolated or in actual antagonism. As to form, they are for the most part symbolized in written or printed language, in works of art, in technical appliances, yet, as has been shown, they really exist only in individual minds. Every scientific book is, on the one hand, the product of coöperation by many individuals, but, on the other, it represents in its final form the unified consciousness of one man which may be reproduced in the minds of many others for whom the symbols have a definite meaning.[2]

Again, the classes of products are not common to the whole society but are apportioned among many groups, or

and modify all future experiences. The sum of these is designated as the individual mind. A similar process evolves the general mind—the residual store of experiences, common to all. By means of language, the individual shares in the general fund which thus becomes for him an impersonal objective influence. To each it appeals. We all assimilate some of its material and help to increase its store. Not only do we find ourselves confronting nature to whose order we must conform, but confronting society whose law we must obey."—*Problems of Life and Mind*, p. 161.

1 G. De Greef: *Le transformisme social*, p. 9.

"L'imitation se trouve ainsi correspondre exactement à la mémoire; elle est en effet la mémoire sociale, aussi essentielle à tous les actes, aussi nécessaire à tous les instants de la vie de société, que la mémoire est constamment et essentiellement en fonction dans le cerveau."—Tarde: *loc. cit.*, p. 123. Tarde greatly extends the term "imitation." Traditions that are widely accepted are "imitated." Means of communication are "facilités d'imitation."

2 A compilation or "undigested" mass of many individual ideas is a purely mechanical social product without real unity, which is secured only by the fusion of the materials in one mind.

at most these traditions are present in different minds in widely varying degrees of definiteness and clearness. The legal tradition enters the minds of the vast majority of citizens in a vague way at best. It is clearly conscious in the thought of a special class only, which, however, may be regarded as the social organ of that particular function of the collective mind.[1] In a like manner all the traditions of society are not merely symbolized but are in actual existence, forming in large measure the memories of individuals. Thus at any time they may be called into active consciousness to assimilate the new elements which are constantly received by the general mind.[2] A discovery need not remain an isolated phenomenon until libraries have been ransacked to consult the social memory. The sifted experiences and conclusions of the race are active in the consciousness of many individuals who quickly combine in the unity of their own thoughts the new with the old and thus enrich the tradition and modify the collective memory.

Insensibly our thought has been carried over from the static to the dynamic point of view. The very difficulty of isolating the forms of treatment is significant of the reality. As human consciousness is a ceaselessly changing stream[3] so the social mind undergoes constant modification. Individual thoughts and feelings are, on the one hand, largely social products, yet, on the other, they offer new elements which are gathered up and integrated with the various traditions of the social mind.

This process may be temporary, as in the case of mobs

1 De Greef: *loc. cit.*, p. 5.
L. F. Ward: *The Psychic Factors of Civilization*, pp. 297-298.

2 "Each novel impression has to be assimilated by the existing mass of residual impressions; each new conclusion has to be affiliated on the old, dovetailed into the rest."—Lewes: *loc. cit.*, p. 166.

3 James: *loc. cit.*, Vol. I., pp. 237-239.

or crowds,[1] or it may take on a more orderly, definite, and permanent character. Since this essay is to deal chiefly with the cognitive function of both the individual and the social mind, attention will be directed to those phenomena which display more or less systematic processes of organization.[2]

The social mind, made possible by devices for the symbolizing and communicating of thought, attains coördination and power in direct proportion to the organization of this mechanism. That society in which individuals are careful observers, accurate reporters, and in which the means exist for gathering up these observations, organizing them with the traditions of the past, and distributing the results widely, will, other things being equal, develop its collective knowledge to a high degree of efficiency. This is in general the process which is going on constantly in society. The absolutely essential importance of organized communication is obvious. Division of intellectual labor is as dependent upon communication as the specialization of industry upon a system of transportation.[3]

A broad assertion like the above may mislead by its systematic form. Falckenberg has wisely observed: "... If we may judge from the experience of the past, too much caution cannot be exercised in setting up formal laws for the development of thought."[4] Equal care should be observed in making general and simplified statements about complex phenomena. The social mind is not modi-

[1] Le Bon: *Psychologie des foules*, pp. 12-16.

[2] It is very important to realize how greatly this restriction of the discussion narrows the field of inquiry. Social standards of taste and conduct, the phenomena of imitation and authority, the question of the collective will, etc., must be almost wholly neglected.

[3] The invention of printing was, in this view, the setting up of a communicating apparatus by means of which the area of social consciousness might be greatly increased and made the basis for the later emergence of social self-consciousness.

[4] Falckenberg: *loc. cit.*, p. 6.

fied in so methodic, orderly, and mechanical a manner as this description would seem to imply. The process is one of gradual growth. Conflicting feelings and theories coexist and struggle for mastery. The integration is never complete. To quote once more from Lewes: "In the great total of collective experience, as in that of the individual, absurd perversions and wild fancies take their place beside exact correspondences of feeling and fact, and truths that are unshakable; it is a shifting mass of truth and error forever becoming more and more sifted and organized into permanent structures of germinating fertility or of fossilized barrenness."[1] Yet beneath these surface phenomena of conflict and confusion, it is possible to discover broad general tendencies of a more orderly nature. We have already seen that the social tradition is not transmitted in a single, compact, coherent body, but divides rather into a large number of minor traditions, each of which finds clear expression in the consciousness of a more or less restricted group of men. This is not to say that much of the tradition does not in a vague way enter the minds of large numbers in society, or to deny that in rare cases the whole stream of social consciousness, in a generalized form of course, may flow through single minds. This splitting up of the social memory suggests the question as to how far and in what sense society may attain self-consciousness. If the accumulations of experience are divided among social groups, must not consciousness and self-consciousness, which depend upon memory, be equally fragmentary?

A distinction must be made at the outset between individual and social consciousness. Each member of society may be conscious of his own thoughts and feelings, but it is only when these thoughts and feelings are common

1 *Loc. cit.*, p. 166.

to a whole group that social consciousness appears. Social consciousness is directly dependent upon the communicating structure and upon the intrinsic nature of the thought to be communicated, *i. e.*, a fact will penetrate the social consciousness with a promptness proportioned to the facilities for transmission and to a degree dependent upon the generality of the interest to which it appeals.[1]

Again, society may be described as self-conscious when, in addition to a community of thought and feeling, each individual realizes the significance of his own ideas and acts in relation to the aggregate of activities, and shapes his conduct in conformity with such knowledge or adopts general principles of procedure determined by collective deliberation.[2] Social self-consciousness thus develops out of

1 De Greef has worked out an elaborate analogy between the facts of individual and collective consciousness. He attempts to show a parallel between the progressive organization of the physical nervous system and the social organs of psychical communication and regulation.—*Introduction à la sociologie* (2me Partie), Chap. XIII.

2 Giddings thus characterizes social self-consciousness: "In a true social self-consciousness, which must be described rather than defined, the distinctive peculiarity is, that each individual makes his neighbor's feeling or judgment an object of thought, at the same instant that he makes his own feeling or thought such an object; that he judges the two to be identical, and then he acts with a full consciousness that his fellows have come to like conclusions, and will act in like ways."—*Principles of Sociology*, p. 137. This statement alone, perhaps from the nature of the phenomenon described, is somewhat disappointing in its vagueness. In order to genuine social self-consciousness there should be a knowledge in each individual mind of the aggregate or totality of individual activities in their relations, that which Giddings later describes as "a social perception." Throughout this discussion the term self-consciousness is used in general to connote definiteness of purpose, *e. g.*, society acts in a self-conscious way when individuals conduct themselves in harmony with some common plan of procedure which has a fixed end in view. Cf. L. F. Ward: *Dynamic Sociology*, Vol. II., pp. 249, 250, and Fouillée: *loc. cit.*, pp. 235-246.

Tarde has admirably described the formation of social consciousness from the products of individual consciousness: "Tout, dans la création d'une œuvre sociale quelconque, simple ou composée, n'est qu'acte de conscience, et, le plus souvent même, de réflexion et d'effort; mais, à l'origine, une invention [idea, theory, piece of literature as well as a machine] s'engendre lentement par la collaboration accidentelle ou naturelle de beaucoup de consciences en mouvement, cherchant chacune de son côté, apportant chacune son petit brin de paille ou d'herbe au nid commun; puis un moment arrive souvent où ce travail tout entier

social consciousness. Obviously, definite social self-consciousness is possible only in advanced societies in which the means exist for making accurate observations, organizing them carefully, and distributing them widely, and in which on the basis of such knowledge there are institutions for deliberation, decision, and execution. Social self-consciousness is a characteristic of social maturity, and the correlative of social purpose.[1]

Once more it is necessary to guard a general statement. The phenomena of social self-consciousness are clearly marked in connection with the activities of governments, but they are not so easily distinguished in the innumerable less formal and orderly procedures of the social mind. But even in governments it is obvious that except in rare cases and in a most general way, social self-consciousness is really confined to comparatively small groups which examine the data available, see the relations involved, reach decisions, and carry out policies. Democracies differ from autocracies in the area of self-consciousness, which in the former case might ideally extend to every mature mind, in the latter be confined to a small cabinet.[2]

Thus the social tradition does not grow as a result of the

commence et se termine dans un même esprit, d'ou un invention parfait en naissant, telle que le téléphone, comme l'a remarqué Reuleaux à propos des machines, jaillit un jour *ex abrupto*. Ce moment n'arrive pas toujours, mais toujours on y tend. Autrement dit, tout s'opère primitivement par *multi-conscience* et s'opére en suit ou tend à s'opérer par *uni-conscience*."—*La logique sociale*, p. 201.

Tarde further illustrates his point by asserting that the varying usage of different authors produces a "pluri-conscious" spelling, but when an academy fixes the usage it becomes "uni-conscious." *Ibid.*, p. 202. The social function of *gloire* (fame, notoriety, novelty, celebrity) is, in Tarde's view, to enable inventions to penetrate the social consciousness. *Ibid.*, p. 121.

1 L. F. Ward: "Sociology and Biology," *Am. Jour. of Sociology*, Nov., 1895.

2 It is in connection with the state that the idea of the self-conscious individuality of society has been chiefly insisted upon. The following is typical of a certain class of thinkers: "C'est le 'moi public' ou État qui est le cerveau du corps politique, comme le cerveau est l'État du corps physique."—Jean Izoulet: *La cité moderne*, p. 353.

self-conscious activity of society as a whole. While from time to time new observations and discoveries may penetrate the social consciousness, they are put in their relations and organized into the social memory by the purposeful efforts of small groups to which, in the development of collective thought, certain portions of the social tradition have been intrusted.[1] These groups represent the self-consciousness of society in a less definite and precise but essentially the same way as do legislatures and cabinets.[2]

To confine attention to those groups which are directly concerned in the organization of social knowledge, it is obvious that they are self-conscious in the sense that each individual is in communication with every other and knows that his own theories, experiments, and researches are related to the activities of the rest. He adopts a plan of work adjusted in the main to the pursuits of his

1 The recent discovery of Professer Röntgen is a case in point. By means of the press the main facts quickly entered the social mind, *i. e.*, the same general state of consciousness was common to almost all individuals of intelligence. The discovery is the object of a social self-consciousness confined to a comparatively small group of specialists who aim to relate the new fact definitely to other observed phenomena and systematically to carry on further investigations.

2 Schäffle has worked out an elaborate social psychology in which he discusses the general consciousness (*allgemeine Bewusstsein*) and social self-consciousness (*Selbstbewusstsein*). He employs the theory of the threshold of consciousness in an ingenious way. "Nicht jede Idee tritt ins allgemeine Bewusstsein, d. h. ins Bewusstsein der centralen Collectivorgane oder gar in das Bewusstsein aller Individuen. Nur ein sehr kleiner Theil aller geistigen Ereignisse des socialen Lebens wird den Centralorganen bewusst."—*Bau und Leben des socialen Körpers*, I. Auf., Bd. I., S. 403. By the economy of this arrangement the central organs of government are spared the distraction of considering many details which do not get above the threshold (*Schwelle*). As to social self-consciousness Schäffle makes an important discrimination: "Ein 'vollkommenes Selbstbewusstsein,' welches alle neben und nach einander vorkommenden geistigen Ereignisse des socialen Körpers vollkommen einheitlich, dem Inhalt und der Zeitfolge nach, in sich zusammensasste, ist auch in socialen Körper nicht wahrzunehmen."—*Ibid.*, S. 408. The psychical labor is divided among groups so that social self-consciousness is distributed rather than concentrated. Only in governmental activities is there an approach to genuine collective self-consciousness, but even there only a small portion of the social life is concerned.

fellow-students and aims at a more or less definite co-operation with them to attain a certain end. At the same time the contents of the social memory, so far as they relate to his special task, are in his consciousness and are undergoing constant revision and modification as new truth comes to light.[1]

In marked contrast with this procedure are the processes of the savage mind. The primitive group in its organization for war may display an incipient self-consciousness, but in the rationalizing of daily experiences there is complete unconsciousness. The social tradition is homogeneous or shows only the beginnings of differentiation. Each experience is explained and adjusted not to others of a similar nature but to the needs of the moment[2]—for even the primitive mind demands subjective unity. There may be social consciousness in a savage tribe, but social self-consciousness emerges only as the group begins to specialize its tradition and organize its psychical labor, setting up the communicating apparatus which these processes involve.

In a broad sense it may be said that social knowledge advances from a homogeneous and empirical to a highly

1 The importance of bibliographies is emphasized in this view. Just in so far as a scientist isolates himself from his fellow-workers and fails to keep himself informed as to their achievements, he withdraws himself from the self-conscious social mind, thereby either impairing his own work or wasting his time and energy in useless duplications.

The attempt of German anatomists to devise a systematic nomenclature is an admirable illustration of self-conscious coöperation. It is proposed to substitute about 5,000 terms rationally constructed and related, for the old terminology of more than 20,000 names vaguely conceived and variously employed in different works. This is a step from unconsciousness to self-consciousness, from haphazard growth to purposeful construction.

2 "Les sociétés primitives n'ont pas de conception physique ou sociale du monde; elles vivent au jour le jour, obéissant principalement aux conditions les plus générales de leurs milieux, a leur besoins et leur instincts guerriers économiques et génésiques, lesquels sont, de tous leurs besoins, les plus simples, les moins élevés et les plus irrésistibles."—De Greef: *L'evolution des croyances et des doctrines politiques*, p. 27.

differentiated and rationalized tradition, and that the procedure, characterized in its early stages by social unconsciousness, tends constantly to become increasingly purposeful.[1]

Yet this description is partial and needs a complementary statement. If this were the whole truth the term social memory or tradition would be inapplicable. There would be merely social memories and traditions. But as has been hinted, the stream of social consciousness does not flow always in clearly defined and separate channels, it is constantly dividing and combining in the minds of men. To change the figure, the social tradition has grown out of the life experiences of the race. Each new appearance had to be explained and fitted with the old and familiar so that things might hang together and satisfy the otherwise distracted mind.[2] Thus, from the very beginning, social tradition, a product of a unified life, had a certain unity in itself. Many of its elements grouped themselves into nuclei of facts in relations of obvious causality, but there were wide gaps which had to be filled with animistic and volitional agencies. Yet in some fashion the daily life was pieced together and the tradition which grew out of it gained coherence.

1 Durkheim has described the gradual progress of the collective mind from the concrete to the abstract which is closely related to the advance from social unconsciousness to self-consciousness. In a small society where all individuals have the same environment the common consciousness has a concrete character, but in larger groups, extending over a broader and more varied area, the collective conceptions become abstract.—*De la division du travail social*, p. 318. Durkheim also points out that the sciences developed from the arts, from the problems of daily life which were first practically solved and afterward rationally explained.—*Les regles de la methode sociologique*, p. 23.

2 "Pour sentir combien ce besoin est profond et impérieux, il suffit de penser un instant aux effets physiologiques de l' *étonnement*, et de considérer que la sensation la plus terrible que nous puissons éprouver est celle qui se produit toutes les fois qu'un phénomène nous semble s'accomplir contradictoirement aux lois naturelles qui nous sont familières."—August Comte: *Cours de philosophie positive*, Tome I., p. 52.

The same objective and subjective factors have been at work throughout the whole process of social evolution. Social life with all its increasing complexity has never lost its unity, and the human mind, bewildering as has been the increase of knowledge, has never ceased its efforts to "see things together."

Social knowledge, therefore, has grown not only by division but by combination. As Spencer has so clearly pointed out: "There has all along been higher specialization, that there might be a larger generalization; and a deeper analysis that there might be a better synthesis. Each larger generalization has lifted sundry specializations still higher, and each better synthesis has prepared the way for still deeper analysis."[1] Emerging social self-consciousness has been directed not only to the division of the social tradition and the elaboration of its parts but also to the recombination of them into a higher unity.

Up to this point, general statement has been employed, for the sake of presenting the facts as clearly as possible and to avoid the confusion which might be involved in the premature use of special terms. It now remains to inquire how this view of the social mind may be stated in terms of the familiar intellectual tasks of men.

Common or empirical knowledge forms a part of the social tradition and enters social consciousness, but is not a product of social self-consciousness. "We break the solid plenitude of fact," says James, "into separate essences, conceive generally what only exists particularly, and by our classifications, leave nothing in its natural neighborhood, but separate the contiguous and join what the poles divorce."[2] Such classification and rationalizing, purposeful efforts to reduce the world of phenomena to

1 *Essays: Scientific, Political, and Speculative*, Vol. II., p. 29.

2 *Psychology*, Vol. II., p. 634.

order and system produce sciences. Common knowledge is "untested and unanalyzed consciousness," while science is knowledge "in its completest and purest form."[1] The self-conscious element of the social memory, therefore, contains the sciences. From this point of view the progress of the sciences is the extension of the area of self-consciousness in the social tradition. Common knowledge, originally chaotic and haphazard, is gradually ordered, organized, and brought under the reign of law.[2]

The methodical organization and enrichment of the social tradition have been achieved by division of labor which has become increasingly minute. "Nous sommes loin du temps," says Durkheim, "ou la philosophie était la science unique; elle est fragmentée en un multitude de disciplines spéciales dont chacune a son objet, sa methode, son esprit."[3] He quotes also a passage from De Candolle,[4] who calls attention to the fact that in the epoch of Leibnitz and Newton the *savant* had two or three designations, such as mathematician, astronomer, and physician. By the end of the eighteenth century several titles were still necessary to indicate the achievements, in more than one of the sciences and departments of letters, of men like Wolff, Haller, and Charles Bonnet. In the nineteenth century this difficulty of description no longer remains, or at least is very rare. Candolle predicts that the dual profession of investigator and teacher will soon be

1 Flint: "Philosophy as a Scientia Scientiarum," *Princeton Review*, November, 1878.

2 "La succession des états de conscience primitivement, désordonnée et fortuite, s'organise peu à peu par l'activité de l'esprit. Elle ne devient intelligible pour lui que parce qu'il y met un ordre; et par l'idée d'ordre on arrive ainsi a l' idée de *loi*." Quoted from a review of Andre Lalande's *Lectures sur la philosophie des sciences*, by Charles Andler in *La revue philosophique*, Tome XIX., p. 329.

3 *De la division du travail social*, p. 2.

4 *Histoire des sciences et des savants*, 2me édition, p. 263.

definitely differentiated. Comte commented emphatically upon the increasing specialization of his day, and sounded a note of warning which is still reëchoing in popular phrases.[1]

In terms of the social mind such specialization has been shown to be a dividing up of the social self-consciousness and the formation of groups to each of which a certain class of phenomena is intrusted. Each science, therefore, "est le fruit d'une collaboration séculaire entre des générations de savants."[2] The advance of each science displays the processes of analysis and synthesis, the examination of details, and the recombination into a whole, a movement of which Froebel wrote: "I find in pure thought the type and law of all development."[3]

The same movement which within the social mind subdivides the collective tradition into sciences and arts, characterizes also the development of these special elements. "Division, analysis," declares Flint, "is a necessary and inevitable condition of progress both in life and science. Every stage of progress must be consequent on a stage of division, spontaneous or reflective, industrial or scientific."[4]

But division and analysis are only half the process. Combination, synthesis, render a complementary service. Just as each science is organized into coherence, so all the elements of the social tradition are constantly tending toward integration in philosophy.

The history of philosophy has been described by Falckenberg as "the philosophy of humanity, that great in-

1 *Loc. cit.*, Tome I., p. 23.

2 Tarde: *La logique sociale*, p. 214.

3 Quoted by Miss Blow in *Symbolic Education* from a letter of Froebel to Krause.

4 Robert Flint: *loc. cit.*

dividual which . . . approaches by a necessary and certain growth of knowledge the one all-embracing truth which is rich and varied beyond our conception."[1] As we have seen, humanity from the beginning has sought to unify its experiences, to explain all phenomena. This constant effort resulted at first in socially unconscious explanations which postulated the active agency of supernatural beings, and gradually with the increase of empirical or common-knowledge attributed all that happened to the power of a single God. This is the well-known theological stage of Comte's *Philosophie Positive.*[2] It is impossible to mark off into definite stages the progress of collective thought. Only the tendency can be characterized. Fiske has described the movement implied in Comte's theory as progress from the more to the less anthropomorphic,[3] and Spencer has shown that in essential nature there is no difference between the theological, metaphysical, and positive stages, that all alike involve "the postulating of some external existence, and the postulating of this ultimate existence involves a state of consciousness (in positive philosophizing) indistinguishable from the other two."[4]

The movement may also be described as progress from social unconsciousness to social self-consciousness, from

[1] *Loc. cit.*, p. 2.

[2] "En d'autres termes, l'esprit humain, par sa nature, emploie successivement dans chacune de ses recherches trois méthodes de philosopher, dont le caractère est essentiellement différent et même radicalement opposé : d'abord la méthode théologique, en suite la méthode métaphysique, et enfin la méthode positive."—*Loc. cit.*, Tome I., p. 3.

[3] "There are not three successive or superposed processes. There is one continuous process which (if I may be allowed to invent a rather formidable word in imitation of Coleridge) is best described as a continuous process of *deanthropomorphization* or the stripping off of the anthropomorphic attributes with which primeval philosophy clothed the unknown power which is manifested in phenomena."—*Outlines of Cosmic Philosophy*, Vol. I., pp. 175–176.

[4] *Essays :* "Reasons for Dissenting from the Philosophy of M. Comte," Vol. II., p. 127.

spontaneous, unreflective explanations to ordered, systematic, and purposeful investigation and conclusion. Between these extremes there are many grades of partial self-consciousness that correspond in general to Comte's metaphysical stage which he himself conceived and described as a transition from the first to the third rather than as a clearly differentiated period.[1]

The familiar "law of the three stages," therefore, may be restated more exactly in terms of social self-consciousness. Each science passes gradually from unconscious empiricism to socially self-conscious or reflective organization and interpretation, just as philosophy in its attempt to interrelate and unify the sciences advances from more or less instinctive explanations to definitely planned and systematic efforts to construct a rational conception of the whole. Again, the order in which the sciences become the objects of the reflective social mind clearly depends upon more factors than Comte has indicated.[2] The varying simplicity and consequent progressive dependence of the phenomena themselves constitute only one of the causes which determine their relative rates of advance into social self-consciousness. Phenomena become the objects of reflective explanation not merely in the order of their

1 " La première est le point de départ nécessaire de l'intelligence humaine ; la troisième, son état fixe et définitif ; la seconde est uniquement destinée à servir de transition."—*Loc. cit.*, Tome I., p. 3.

2 Comte's principle of decreasing generality and cumulative dependence in the classification of the sciences was also made to serve as an explanation of the order in which the sciences have advanced through the " three stages." The well-known heirarchy is mathematics, astronomy, physics, chemistry, biology (including transcendental biology—an abortive psychology), and social physics, or sociology. It should be said in justice to Comte that he himself recognized and admitted that the development and sequence was by no means rigidly linear. " On voit, en effet, que, quelque parfaite qu'on pût la supposer, cette classification ne saurait jamais être rigoureusement conforme à l'enchaînement historique des sciences. Quoi qu'on fasse, on ne peut éviter entièrement de présenter comme antérieure telle science qui aura cependant besoin, sous quelques rapports particuliers plus ou moins important, d' emprunter des notions à une autre science classée dans un rang postérieur.—*Loc. cit.*, Tome I., p. 68.

simplicity, but in proportion as they are (*a*) conspicuous or obtrusive, forcing themselves on the attention of men, (*b*) frequent, demanding theories by their very iteration, (*c*) concrete, seeking solution in definite tangible forms rather than in abstract relations, and (*d*) accessible or controllable within the natural or artificial range of human examination and analysis.[1]

Manifestly when all these influences are taken into the account the linear nature of Comte's law, based upon only one, must be greatly modified. The traditions of the social mind advance together in relations of mutual interdependence, the simplest aiding the more complex, while the latter often react in a most important way upon the former. In recognizing this organic growth of the social memory, it is unnecessary to go with Spencer to the extreme of wholly denying the existence of any order of progress based on the natural dependence of phenomena themselves. Even when Comte's rigid statement has been duly modified to include the other factors that have just been indicated, there remains the fact of objective dependence which cannot be ignored. "So far from having succeeded in overthrowing that scheme [Comte's hierarchy of the sciences]," says Flint, "he [Spencer] has only succeeded in modifying it. There is a logical dependence of the sciences. And why? Just because there is a natural dependence of phenomena. . . . There being such a hierarchy of phenomena, it is scarcely conceivable that there should be no corresponding hierarchy of sciences."[2]

A clear distinction should be made at this point between the historical order, in which certain bodies of knowledge

[1] Fiske: *loc. cit.*, Vol. I., pp. 208–211.

[2] "The Classification of the Sciences," *Presbyterian Review*, July, 1886, p. 523.

have emerged into social self-consciousness, and the systematic, reflective arrangement of these sciences in a scheme or classification designed to display their relations. Spencer[1] in demonstrating the inadequacy of Comte's historical argument seems to ignore this discrimination. It is quite conceivable that the chronological sequence might have been in many details other than it was, but the exigencies of logic compel men in a self-conscious effort to systematize the social tradition to recognize "a rational dependence of phenomena"—a necessity to which Spencer himself has yielded in the sequence of the various parts of his *Synthetic Philosophy.*[2] But this distinction, which deserves passing notice here, will be emphasized from the pedagogical point of view in a subsequent chapter.

It remains to show more definitely that philosophy corresponds to the synthetic movement of the social mind —a tendency toward integration which, no less than differentiation, is a condition of progress. The early philosopher had as his field a comparatively homogeneous social tradition; he regarded all wisdom as his proper pursuit.[3] Aristotle made a rational effort to specialize the social mind by the preliminary divisions of his classification.[4] A classification of human knowledge is in its nature an act of social self-consciousness. "In classing the sciences," says Bacon, "we comprehend not only things already invented and known but also those omitted

[1] *Essays:* Vol. II., "The Classification of the Sciences." Cf. also Fiske: *loc. cit.*, Vol. I., pp. 199–212.

[2] L. F. Ward: "Sociology in Its Relation to the Social Sciences," *American Journal of Sociology*, July, 1895.

[3] Flint: *The History of the Philosophy of History* (France), p. 32.

[4] Aristotle divided philosophy or knowledge into (*a*) theoretical, including physics, mathematics, and metaphysics; (*b*) productive, the arts; and (*c*) practical or moral, comprising ethics and politics, under the latter of which he also placed rhetoric and economics.—*Vide* p. 41.

and wanted."[1] Here was a definitely conceived purpose to review the achievements of mankind and to plan an intellectual campaign for systematic conquest.

Classification is a necessary preliminary for philosophical synthesis, it is a definite display of the analyzed elements which are to be organized into a unified conception.[2] Flint mentions eighty-two philosophers, from Plato and Aristotle to those of the present, who have worked out classifications of the sciences and arts as a part of their intellectual contributions. The list includes, with few exceptions, the most illustrious names in the history of thought.[3]

Thus far the term philosophy has been used as though it had a definite and universal meaning. Yet this is far from being the case. Perhaps no term in general use is so vaguely and variously conceived. We cannot consider in detail the many theories which have been advanced in the past, but must confine attention to certain modern views. Philosophy may be regarded as having a hierarchy of functions, each of which is an advance upon the preceding and rests upon it. In this view philosophy may be regarded as :

1. *Synthetic*, which Flint describes as "simply science that has attained to the knowledge of the unity, self-consistency, and harmony of the teachings of the separate sciences."[4] Hodgson in attempting to discriminate between science and philosophy presents among other theories virtually the same view, which he characterizes as

1 *Instauratio Magna* (tr. by Dewey), p. 10.

2 "All classification is a striving after unity. To classify it is necessary to generalize."—L. F. Ward: *Dynamic Sociology*, Vol. I., p. 3.

3 Flint: "The Classification of the Sciences," *Presbyterian Review*, July, 1885, and July, 1886.

4 Flint: "Philosophy as a Scientia Scientiarum," *Princeton Review*, November, 1878, p. 698.

"Comtean Positivism."[1] From a French source comes a statement of a similar tenor: "Cette conception [ontological] de la philosophie tend aujourd'hui à disparaître et être remplacée par une autre beaucoup plus facile à défendre, suivant laquelle la philosophie n'a pas d'objet spécial, est un simple unification du savoir, un ensemble du generalizations plus comprehensive que celles des sciences speciales, mais portant sur les mêmes objets."[2] Spencer in his examination of the nature of philosophy regards it as a fusion of all the contributions of the sciences into a whole,[3] and defines the progressive integration of knowledge in these terms: "Knowledge of the lowest kind is *un-unified* knowledge; science is *partially-unified* knowledge; philosophy is *completely-unified* knowledge."[4] M. Berthelot claims recognition for "an ideal science of the whole" which hereafter shall do purposefully what the systems of the past did with a sort of "unconscious dissimulation."[5] Royce asserts that the conspicuous tendency of modern thought is toward unity, the reconciliation of contradictions, "the unification of the world which anarchical passion and analytic reflection have conspired to rend asunder."[6] Not to multiply quotations which are cited less as authorities than to indicate the trend of thought in minds which look at the question from different points of view, it is clear that philosophy may be regarded in one of its functions at least as an organization and integration of the social tradition, a reflective unification of the special sciences.

[1] S. H. Hodgson: "Philosophy and Science," *Mind*, January, 1876.

[2] B. Bourdon: Review of R. de la Grasserie's "De la classification, objective et subjective, des arts, de la littérature et des sciences," *Revue philosophique*, Vol. XIX., p. 106.

[3] *First Principles*, p. 132.

[4] *Ibid.*, p. 134.

[5] M. Berthelot: *Science and Philosophy*, reviewed in *Mind*, July, 1886.

[6] Josiah Royce: *The Spirit of Modern Philosophy*, p. 297.

But there are other functions of philosophy which depend upon this first. They may be hardly more than indicated here, since they do not come within the limited scope of this essay. Philosophy may further be regarded as

2. *Critical*, examining the conditions of all knowledge; in the words of Bain, "tracking the facts of consciousness to their innermost deeps, planting all the special sciences upon common ground, giving every objective phenomenon its highest validity by showing its indissoluble relation to that fact of facts, self-consciousness."[1] Again philosophy may be conceived as

3. *Metaphysical*, viewing all knowledge in its relation to primary and efficient and ultimate and final causes. In this view philosophy becomes, according to Hodgson, "the discovery of absolute existence," while the sciences become scientific only "when they are deduced from the laws of the absolute existence, from which they receive their whole scientific character. This is the Hegelian view."[2] Once more, in so far as philosophy may deal with problems of conduct it may be thought of as

4. *Practical or moral*, attempting to discover fundamental principles for the guidance of humanity.

However the scope of philosophy may be conceived, the dependence of its various functions upon the primary task of integrating the special sciences cannot be denied. Flint has stated the relation clearly: "Philosophy as positive, *i. e.*, a unification of the sciences, must precede philosophy as critical, metaphysical, and as practical. Critical philosophy, metaphysical philosophy, and practical philosophy must further submit to be tested by positive philosophy, by the collective results of the sciences.

[1] Communication on an allusion by Hodgson to Lewes in *Mind*, April, 1876.

[2] *Mind*, January, 1876. This is not Hodgson's personal view, but one of four theories which he enumerates as having prominent advocates.

What has to be criticised are the conditions of all the sciences. What has to be viewed in relation to primary and efficient, and ultimate final causes are the results of all the sciences.''[1]

It is with the primary function of philosophy, the integration of the special sciences, that this discussion is concerned. Yet the fact should not be overlooked that the highest philosophic synthesis may go far beyond merely a systematic effort to relate and render coherent the various fragments of the objective world which the sciences present. The deeper insight into the nature of life is the crowning achievement of the self-conscious social mind. This is dependent, however, upon the preliminary synthesis. As Mackenzie remarks: ''If it is the business of philosophy to get behind the work of the sciences and see their true meaning and relations, it is clear that it must presuppose a certain development of the sciences and cannot easily outstrip them. We must have got the conceptions and be able to use them with some freedom, before we set ourselves to the task of investigating their significance.''[2] Purposely confining attention, therefore, to this single function of philosophy, as it is now conceived, we remark once more that the social tradition displays two distinct movements, a constant and increasingly definite analysis into parts, and a complementary recombination of these parts into general conceptions of the whole.[3] To revert to a figure already employed, the

1 Flint: ''Philosophy as a Scientia Scientiarum,'' *Princeton Review*, November, 1878, p. 714.

2 *An Introduction to Social Philosophy*, p. 38.

3 There seems to be discoverable in scientific division of labor a tendency to specialization according to *problems* rather in artificially and arbitrarily abstracted subjects. Such terms as ''physical-chemistry,'' ''astro-physics,'' ''chemical physiology,'' ''physiological psychology,'' etc., are full of significance. There are subordinate syntheses among groups of sciences.

L. F. Ward has pointed out the relations of science and philosophy. The

stream of social consciousness not only flows in more and more definite channels through the minds of men devoted to the various parts of the tradition, but now and again the separate currents converge in the consciousness of one individual and issue forth a fuller and deeper unity[1] only once more to undergo division and separation.

Such in general is the rhythm of the social mind, yet beneath the seeming chaos of ideas and feelings it is hard to trace the movement in definite outlines. Only a broad glance over a wide sweep of history can reveal the process. Contrast Aristotle's vague classification of the sciences with the definite divisions of Comte,[2] Shields,[3] or Wundt,[4] and compare the incoherent explanations of medieval philosophers with the precisely stated, though tentative, generalizations of Von Baer, Meyer, Darwin, or Spencer.

Philosophy, like the sciences—from which it differs in scope and definiteness rather than essential nature[5]—passes from unconsciousness to social self-consciousness. "Whether we will it or no," says Royce, "we all of us do philosophize. The difference between the temperament which loves technical philosophy and the temperament which can make nothing of so-called metaphysics is rather one of degree than of kind."[6] The difference of

former is concerned with ideal relations of coexistence or independent existence, the latter with real relations of sequence and dependence in a system. *Dynamic Sociology*, Vol. I., pp. 3 and 4.

1 Tarde describes this process as philosophy which is *uni-conscious*. ". . . la philosophie, c'est tout simplement l'état uni-conscient de la science, succédant, progrès immense à son état morcelé, émietté, multi-conscient. . . ."—*Loc. cit.*, p. 204.

2 *Loc. cit.*, Tome I., 2me Leçon.

3 *The Order of the Sciences.*

4 "Uber die Entstehung der Wissenschaften."—*Philosophische Studien* (Bd. V.). Cf. also R. de la Grasserie's *De la classification, objective et subjective, des arts, de la littérature et des sciences.*

5 Each science has its philosophy which gives it unity. An inclusive philosophy of the sciences bears the same relation to the group of these special pursuits.

6 *The Spirit of Modern Philosophy*, p. 2.

degree registers itself in terms of self-consciousness. The social tradition, at first vaguely and unconsciously unified, becomes gradually the object of more and more purposeful, reflective attention[1] until the culminating triumph of collective self-consciousness is a philosophy which represents a systematically planned effort to organize into unity the varied contents of the social memory.[2] Philosophy, like the sciences, is a product of social maturity.

The relation of the sciences and philosophy is one of interdependence. Philosophy, dealing with the materials which the sciences supply, must await their results and adjust itself to their discoveries. On the other hand, philosophy aids each special science by pointing out its relations to other pursuits,[3] and as a coördinating agency helps to show how the various sciences may assist each other.[4]

The development of each science does not display a definitely linear series of analysis and synthesis; there is no conscious determination to avoid unifying hypotheses until all particulars have been isolated and examined. On the contrary, analysis and synthesis are concomitant.[5] A few data are combined into a guiding theory, which is then tested by continued experiment, or wider observation,

[1] In connection with this subject Spencer's description of the stages through which human opinion passes is significant. The steps of the progress are: "the unanimity of the ignorant; the disagreement of the inquiring, and the unanimity of the wise."—*Education*, p. 101. In other words, the advance is from unconscious passivity to conscious observation and to self-conscious agreement.

[2] It should be remembered that this process of unification cannot be completely based on positive scientific knowledge. Falckenberg insists that a new metaphysics is needed to supply the gaps in experience and observation and thus effect a unity.—*History of Modern Philosophy* (tr.), p. 625.

[3] Flint: "Philosophy as a Scientia Scientiarum," *Princeton Review*, November, 1878, p. 699.

[4] *Ibid.*, p. 702.

[5] Spencer: *Essays*, Vol. II., "The Genesis of Science," p. 24.

modified to include newly discovered truths, or, if it fail to explain them, abandoned for a more adequate hypothesis.[1]

So it is with the progress of philosophy. The social tradition includes at the same time special sciences and unifying philosophies in action and reaction. Yet the dependence of philosophy upon the sciences is more obvious than the service of philosophy to the sciences. "It often happens in philosophy," says Fostor, "that a question is forgotten for a time while science prepares materials for asking it and answering it more definitely."[2] Spencer recognizes this relation of philosophy to science when he remarks that a single modern observation "has to be digested by the organism of the sciences."[3] The reason why the service which philosophy may render to the sciences has not been more clearly perceived is to be found in the fact that philosophy in the modern sense[4] has only within comparatively recent times emerged into the social self-consciousness. Philosophy has often seemed so remotely related to science in the past that the term does not commend itself readily to scientific minds.[5] But

1 Comte: *loc. cit.*, Tome I., p. 7.

2 H. M. Fostor: "Organic Evolution and Mental Elaboration," *Mind*, October, 1895.

3 *Essays*, Vol. II., p. 67.

4 Mr. John Fiske's statement of the cosmic philosophy may be regarded as fairly typical: "The cosmic philosophy is founded upon the recognition of an Absolute Power manifested in and through the world of phenomena; and it consists in a synthesis of scientific truths into a universal science dealing with the order of the phenomenal manifestations of the Absolute Power."—*Outlines of Cosmic Philosophy*, Vol. I., p. 263.

5 Prof. Josiah Royce has put these imaginary sentences into the mouths of the scientists: "See these idealists! They have long tried to call the world their dream and to construct it *a priori*. But they grow hungry in their wilderness, feeding the swine of strange masters and longing for the very husks of speculative guess-work and delusion. Now they come back like prodigals, hoping that experience, our master, will have facts and enough to spare for them. In truth had they remained at home their reflective cleverness might have been of much use to science. But they took the portion of intelligence that belonged to them,

the definite effort to bring the sciences and philosophy into organic relations is only another evidence of a synthetic movement in the social mind. With the progress of this movement, the aid which a positive philosophy can render in the advancement of the special sciences will be more and more clearly recognized.

Philosophy in its socially self-conscious phase represents the effort of a mature collective mind to preserve its unity. The social tradition, accumulated, sifted, and organized with increasing definiteness and purpose, has been divided into many sciences. All the materials of this growth have been derived from the phenomena of nature and human consciousness combined in the unity of social life. It follows, therefore, that the sciences themselves must make up a great whole, and that the system which they form must itself be an object of knowledge.[1] In other words, there must be a "science of the sciences" and this general science is philosophy.[2]

and went away, and here they come now, in all the rags of their poor systems."—*The Spirit of Modern Philosophy*, p. 270.

Ward declares that: "The leading distinction between modern and ancient philosophy is that the former proceeds from facts while the latter proceeds from assumptions. Every science is at the same time a philosophy."—"The Data of Sociology," *American Journal of Sociology*, May, 1896.

1 Flint: "Philosophy as a Scientia Scientiarum," *Princeton Review*, November, 1878, p. 697.

2 "Philosophy claims to be the science of the whole; but if we get the knowledge of the parts from the different sciences, what is there left for philosophy to tell us? To this it is sufficient to answer generally that the synthesis of the parts is something more than detailed knowledge of the parts in separation which is gained by the man of science. It is with the ultimate synthesis that philosophy concerns itself, it has to show that the subject matter which we are all dealing with in detail really *is* a whole, consisting of articulated members."—A. Seth: *Encyclopædia Britannica*, "Philosophy," Vol. XVIII., p. 792.

CHAPTER II.

SOCIAL PHILOSOPHY AS A SCIENTIA SCIENTIARUM.

In Chapter I. we described the formal process by which social knowledge advances from vague unconsciousness in common empiricism to definite, reflective, and purposeful organization in sciences which are themselves integrated in philosophy. The next step will include both an examination of the content of this process, *i. e.*, the general classes of sciences which have been gradually formed in the course of social development, and an attempt to show that they are naturally and rationally related and combined in a philosophy of society which by virtue of such service becomes truly a "science of the sciences."

Whewell in his *Philosophy of the Inductive Sciences*[1] presents two charts which are designed to show the progressive generalizations of astronomy and optics respectively from the earliest recorded observations of the Greeks to the sweepingly inclusive theory of universal gravitation and the undulatory hypothesis. In another work, the same author employs this figure: "The table of the progress of any science would thus resemble the map of a river, in which the waters from separate sources unite and make rivulets, which again meet with rivulets from other fountains, and thus go on forming by their junction trunks of a higher and higher order."[2] The same thought extended to the sciences in their relations to each other

[1] P. 118.

[2] *History of the Inductive Sciences*, p. 14.

would make philosophy a great stream gathering up the tributaries and rivulets of the various special pursuits. A chart which should exhibit in a synoptic view the chronological development of the various sciences in vertical columns, and indicate by horizontal lines the chief attempts of philosophy to bind these parts into unity, would be of great value if it could avoid, on the one hand, bewildering complexity of details, and, on the other, misleading uniformity and apparent definiteness.

It has been shown that all science has its origin in the common experiences of social life.[1] The various phenomena of the environment, physical and psychical, have demanded attention and explanation. Empirical attempts to modify and utilize the materials and forces of nature have preceded rational and systematic inquiry into their nature and laws which has in turn resulted in more successful practical applications.[2] The dictum that "every science has its art" may be more properly reversed and modified into "every art has its sciences," for science has sprung from art and every concrete art requires the synthesis of two or more abstract sciences.[3] From doing things men have advanced to rationalizing, reflecting upon the things they do, and in this process the concrete things themselves have been separated into ideal parts which have become objects of more or less isolated study. These abstracted, subjective products have been gradually arranged into so-called sciences. The attempt to form these various groups on some rational plan has been one of the problems of philosophy. There have been many solutions. Aristotle's classification assumed as its criterion

1 Spencer: *Essays*, Vol. II., "The Genesis of Science," p. 71.

2 A. Lalande: *Philosophie des sciences*, pp. 1, 2.

3 Flint: "Philosophy as a Scientia Scientiarum," *Princeton Review*, November, 1878.

the ends which the various pursuits may serve. Knowledge may be (*a*) *theoretical*, if it serve the end of pure thought in physics, mathematics, and metaphysics; (*b*) *productive*, if it be applied to the tangible things of life in the arts, or (*c*) *practical*, if it deal with problems of individual and social conduct in ethics and politics. Logic was regarded by Aristotle as the fundamental discipline preceding and conditioning all the other forms of knowledge.[1] The Stoics adopted a tripartite division into (*a*) logic to guide the reason, (*b*) physics to explain the world, and (*c*) ethics to rule the moral life. The vague generality of this scheme made it wide enough to include almost everything, although it seems to have ignored metaphysics, mathematics, psychology, and theology.[2]

It would not be worth our while to follow in detail the fanciful arrangements of knowledge on the basis of such intangible ideas as "four kinds of light"[3] which reveal truth, or four "mirrors" of nature—doctrine, science, history, and morals,[4] or Dante's poetical identification of the ten divisions of the sky with the ten sciences, by which the moon was made the symbol of grammar, Venus of rhetoric, and so on through the list.

The educational curriculum of the Middle Ages, the seven so-called liberal arts included in the *trivium* and the *quadrivium*,[5] is of significance as showing the generally accepted ideas as to what organized bodies of knowledge ought systematically to be transmitted from generation to generation. These studies represent socially purposeful efforts. The rest of the tradition was unconsciously transmitted in the form of common sense, technical skill,

1 *Metaphysics* (tr. by McMahon), p. 157.

2 A. Lalande, pp. 42–44.

3 St. Bonaventura (1221–1274). Flint: *loc cit.*, p. 417.

4 Vincent of Beauvais. *Ibid.*, p. 417.

5 Compayré: *History of Pedagogy* (tr. by Payne), p. 75.

legends, customs, and laws. The liberal arts were: grammar, dialectics or logic, and rhetoric, music, arithmetic, geometry, and astronomy, all, with the possible exception of the last, formal pursuits. The concrete studies were neglected, save perhaps in a few convents where the works of Aristotle were preserved and perused.[1] But this does not mean that there was no knowledge of nature, man, and society; only that such knowledge existed in an empirical, socially unconscious form. Reflective and purposeful effort was expended upon the mental processes of men, upon the machinery of thought and expression.

As a result of this situation there was great indistinctness of scientific ideas. Even the many clear notions of antiquity tended to lose their definiteness. "When men merely repeat the terms of science," declares Whewell, "without attaching to them any clear conceptions; when their apprehensions become vague and dim; when they assent to scientific doctrines as a matter of tradition, rather than of conviction, on trust rather than on sight; when science is considered as a collection of opinions, rather than a record of laws by which the universe is really governed—it must inevitably happen that men will lose their hold on the truths which the great discoverers who preceded them have brought to light."[2]

In such circumstances little scientific progress was possible—in fact, there was actual loss of ground—and attempts to classify knowledge into definite groups were doomed to failure.

Roger Bacon was "the first encyclopedic philosopher who emerged from the shadows of the Middle Ages."[3]

[1] Compayré: *loc. cit.*, p. 76.

[2] *History of the Inductive Sciences*, p. 238.

[3] De Greef: *L'evolution des croyances et des doctrines politiques*, p. 37.

He urged the necessity of observation and enlarged men's conceptions by his advocacy of linguistic, optical, and experimental studies,[1] but the limited development of the sciences prevented him from offering a really useful classification.

Little progress was made until Francis Bacon so vigorously stimulated social consciousness by his famous exhibit of human learning.[2] The principle of classification is subjective, *i. e.*, based upon the abstracted faculties of memory, imagination, and reason, out of which grow history, poesy, and philosophy respectively. This classification is vulnerable at many points. It is based upon a false, artificial psychology; it separates subjects which belong naturally together, as, for example, when it divides physiology into animal and human[3]; again it unites what ought to be separated in combining metaphysics with physics[4]; but the principles of historical judgment demand a contemporary standard. Considered from the point of view of his times, Bacon's classification is a remarkable contribution to the progress of thought. Moreover, it is valuable as an enumeration and discrimination of sciences, as an aid in their more definite formation. Bacon seemed consciously to recognize this service. "It is the office," he says, "of all sciences to shorten the long turnings and windings of experience so as to remove the ancient complaint of the scantiness of life and the tediousness of art; this is best performed by collecting and uniting the axioms of the sciences into more general ones, that shall suit the matter of all individuals. For the sciences are like pyramids, erected upon the single basis of history and ex-

1 Flint: "The Classification of the Sciences," *The Presbyterian Review*, July, 1885, p. 417.

2 *Instauratio Magna* (tr. by Dewey), pp. 77 *sq.*

3 *Ibid.*, p. 156.

4 *Ibid.*, p. 144.

perience."[1] In a broad, preliminary way Bacon may be said to have divided science or general philosophy into the sciences of (1) God, (2) Nature, (3) Man, and (4) Society. There remained, however, within this classification much confusion, overlapping, and artificial synthesis, which with the growth of more definite conceptions have been in large measure corrected.

Descartes proposed no complete classification of the sciences, but made a broad division into (1) *metaphysics*, under which he included the principles of knowledge, the attributes of God, and the immortality of the soul, (2) *physics*, by which he meant the principles of material things—earth, air, water, plants, animals, and man. By means of such knowledge, he declared, the other sciences become intelligible. Descartes employs the favorite figure of the tree of knowledge, the root of which is metaphysics, the trunk physics, and the branches all the other sciences which grow out of the latter. This seems to be a rather definite recognition of the natural dependence of the more complex upon the simpler sciences.[2]

Hobbes offered a classification on the basis of two kinds of knowledge: (1) *of facts*—history; (2) *of consequences*—science. This scheme was worked out with great ingenuity but did not contribute to the more definite formation of the science groups.[3]

There would be little profit in examining in detail the various classifications of the sciences proposed by Locke,[4]

1 *Ibid.*, p. 139.

2 "Ainsi toute le philosophie est comme un arbre, dont les racines sont la metaphysique, le tronc est la physique, et les branches qui sortent de ce tronc sont les autres sciences qui se réduisent à trois principales, à savoir la médecine, la mécanique et la morale; j'entends la plus haute et la plus parfaite morale, qui, présupposant une entière connaissance des autres sciences, est le dernier degré de la sagesse."—*Les Principes*, Ed. Liard, pp. 19–21.

3 *Leviathan*, Molesworth Ed. of Collected Works, Vol. III., pp. 71–73.

4 "All that can fall within the compass of human understanding, being either,

Leibnitz,[1] and Wolff,[2] all of which were subjective and speculative, resulting in cross-classification rather than in coördination. They were constructed in virtual independence of experimental knowledge and consequently ignored the existence of a natural objective relationship between different groups of knowledge.

The far-reaching influence of Kant could not fail to affect the problem of classification. It is treated in the *Kritik der Reinen Vernunft*, in the chapter on the "Architectonik der Reinen Vernunft." Kant's conception of science as an organism which grows from within, as a system of conceptions unified by a central regulative idea,[3] is of more value to our present discussion than is his classification itself. This betrays the same ignorance, or at least neglect of experience, which vitiates so many philosophic attempts at the coördination of knowledge.[4]

Hegel constructed a comprehensive ideal scheme which was consciously designed to unify all experience, objective and subjective. The philosophy of nature aimed to give a complete account of the external world, and the phi-

first, the nature of things, as they are in themselves, their relations, and their manner of operation; or, *secondly*, that which man himself ought to do, as a rational and voluntary agent for the attainment of any end, especially happiness; or, *thirdly*, the ways and means whereby the knowledge of both the one and the other of these is attained and communicated; I think science may be divided properly into these three sorts."—*Human Understanding*, Ed. by Frazer, Vol. II., p. 460.

1 *Nouveaux Essais*, Ed. by Von Gerhardt, Vol. V., pp. 503–509.
Leibnitz supports the ancient tripartite division into physics, ethics, and logic.

2 Wolff's classification is implied in the phrase, "cognitio humana, historica, philosophica et mathematica." *Philosophia Rationalis sive Logica*, etc., pp. 1–3.

3 "Das Ganze ist also gegliedert (articulatio) und nicht gehäuft (coacervatio); es kann zwar innerlich (per intussusceptionem) wachsen, wie ein thierischer Körper, dessen wachstum kein Glied hinzusetzen, sondern ohne Veränderung der Proportion ein jedes zu seinen Zwecken stärker und tüchtiger macht."—*Sämmliche Werke*, Ausg. Hartenstein, Bd. III., S. 548.

4 As an illustration of Kant's method the following passage may be cited: "Wenn ich von allem Inhalte der Erkenntniss, objectiv betrachtet, abstrahire, so ist alles Erkenntniss subjectiv, entweder historisch oder national.—*Loc. cit.*, p. 550.

losophy of spirit sought to do the same for human consciousness, both in its subjective phenomena and its external manifestations in social institutions and their development. Without undertaking to discuss the ideal scheme as a whole, we emphasize the fact that this classification exhibits clearly sciences (1) of nature, (2) of man, and (3) of man and nature in interaction.[1] Hegel's apparent failure to realize that though nature were merely objectified idea, that idea could be truly comprehended only by scrutiny of nature herself, renders the minor details of his scheme of no scientific value. His contribution is almost wholly a philosophic service.

Dr. Neil Arnott's[2] classification of knowledge about nature is divided into two parts: (1) natural history—materials of the universe, and (2) science or philosophy, including (*a*) physics, (*b*) chemistry, (*c*) science of life, and (*d*) science of mind. Of this second group Arnott writes: "They may be said to form a pyramid of sciences, of which physics is the base, while the others constitute succeeding layers in the order mentioned, the whole having certain mutual relations and dependencies well-figured by the parts of a pyramid." This idea approaches closely the principle of the classification suggested by Burdin, published by Saint Simon, but elaborated and incorporated into a general system of philosophy by Comte.[3]

The general principles of Comte's classification are:

[1] It is not asserted that Hegel made the statement in this form but that his division substantially included these sciences. The classification of Hegel is thus given in the introduction to his *Encyclopädie der philosophischen Wissenchaften*: "I. Die Logik, die Wissenschaft der Idee an und für sich; II. Die Naturphilosophie als die Wissenschaft der Idee in ihrem Anderssehn; III. Die Philosophie des Geistes als der Idee, die aus ihrem Anderssehn in sich zurückkehrt."—*Werke*, Bd. VI., S. 26.

[2] *Elements of Physics*, cited by Flint. I have been unable to find the volume.

[3] Fouillée: *Le mouvement positiviste et la conception sociologique du mond*, p. 2.

first, a division of sciences into abstract and concrete, *i. e.*, into sciences that deal with the laws which govern the elementary facts of nature, laws on which all phenomena actually realized must depend, and, on the other hand, sciences that concern themselves only with the particular combinations of phenomena which are found in existence.[1] This discrimination has been attacked by Spencer, who uses the terms in a different sense, but the criticism does not seem of vital importance, indeed is chiefly a verbal quibble.[2] The next step consists in an arrangement of these abstract sciences in a scale or "hierarchy," of decreasing simplicity or generality and increasing complexity or speciality, so that each science will depend naturally on that which precedes it. Mathematics is made the basis, as being the most general of all in its range, then follow astronomy, physics, chemistry, biology (including "transcendental biology"), and social physics, or sociology. The same hierarchical plan is applied with varying success to the subdivisions of the different sciences. Comte himself admitted that "il faut commercer par reconnaître que, quelque naturelle que puisse être une telle classification, elle renfermera toujours nécessairement quelque chose, sinon d'arbitraire du moins d'artificiel, de manière à présenter un imperfection véritable."[3] It is not a part of our plan to review the discussions to which this classification has given rise. Thus much remains after the critics have done their worst: the sciences are grouped into three general classes: (1) formal (mathematics); (2) inorganic nature (astronomy, physics, chemistry); (3) organic nature (physiology or biology and social physics or sociology); but, what is of chief

[1] *Loc. cit.*, Tome I., pp. 57 *sq.*

[2] Fiske: *Cosmic Philosophy*, Vol. I., pp. 193–220. J. S. Mill: *The Positive Philosophy of Auguste Comte*, p. 41, note.

[3] *Loc. cit.*, Tome I., p. 10.

importance, they are seen to be in such dependence that as the mind seeks to explain the highest phenomena, it finds itself of necessity forced back along the series step by step. Yet in this unbroken sequence there is a deception. No physiology, even transcendental, can bridge the chasm between vital and social phenomena.[1] Comte felt such contempt for psychology, was indeed so ignorant of it that he prematurely completed his scheme and gave to it a spurious appearance of finality.

If we turn to the classification of Comte's chief critic, Spencer, we naturally expect to find a wholly different arrangement. But when all discussion of terms and principles is done and we are confronted with a synoptic view of Spencer's scheme, it transpires that in spite of division into "abstract," "abstract-concrete," and "concrete" sciences, the hierarchical order persists, although greatly improved by the placing of astronomy after physics and chemistry, and by the interpolation of psychology between biology and sociology.[2] At almost the same time that Spencer denies the validity of the hierarchy he admits the general, progressive dependence and in his system of Synthetic Philosophy treats the concrete sciences in this order.[3]

Bain, Shields, Stanley, Flint, and others who have more recently proposed classifications of the sciences, have either consciously recognized or, what is quite as significant, unconsciously adopted in general the hierarchical arrangement. If other proof were needed that this idea of dependence has emerged into social self-consciousness, it

[1] Fouillée recognizes this gap and seeks to fill it by the synthesis of the idea of organism on the one side and that of the social contract on the other: "Nous croyons qu'il faut unir les deux idées d'organisme social et de contrat social dans une idée plus compréhensive, que nous appellerons l' *organisme contractuel.*— *Loc. cit.*, p. 111.

[2] Spencer: *Essays*, Vol. II., "The Classification of the Sciences," pp. 84–95.

[3] Ward: "The Place of Sociology among the Sciences," *American Journal of Sociology*, July, 1895.

might be found in the organization of educational curricula, and in the arrangement of scientific compilations.[1]

Yet there is a deceptive completeness and continuity about this hierarchy which requires careful examination. Is it made up of perfectly connected parts or does it fall into certain divisions, internally integrated, but externally less intimately joined? We have seen that in all the classifications, with the exception of Comte's, there has been a more or less definite grouping into sciences of form, of nature, of man, and, in several cases, of society. In other words, phenomena are broadly divided into: physical, vital, psychical, and social. It is one thing to assert that there is an order of progressive dependence among these phenomena; quite another to declare that the transition from one to the other forms a chain of unbroken and clearly perceived causal continuity. Life and consciousness may be accounted for in terms of chemistry, but scientific demonstration of the relation is still lacking.[2]

It is now in order to revert to a statement made in Chapter I.[3] and to elaborate and illustrate the idea somewhat more fully. The self-conscious social tradition is made up at any time of various groups of knowledge, *i. e.*, phenomena related by generalizations into so-called sciences. Each one of these groups passes from common sense to rational and purposeful organization. Each

1 Blum: *La philosophie des sciences.* Lalande: *Sur la philosophie des sciences.*

2 "Le determinisme, c'est-à-dire le fait que dans le monde vivant, comme dans le monde minéral, les mêmes causes produisent toujours les mêmes effets, n'a rein à faire avec la théorie qui ne veut vois dans les êtres vivants que le résultat de la libre action sur la matière des forces ordinaires de la physique et de la chimie. . . . La vie est une force qui se superpose à toutes les autres, y compris l'affinité."—Ed. Perrier: *Les colonies animales*, quoted by Eugene Blum in his *Lectures de philosophie scientifique*, p. 546.

3 Pp. 22, 23.

grows from an empirical nucleus, and by means of widening generalizations extends its area. Gradually these elementary groups are further combined into larger bodies of unified conceptions, until at the present day it is possible, as we have seen, to present in a comparatively small table a synoptic view of the main divisions of human knowledge, notwithstanding the marvelous accumulations of observation and experiment. Yet between these groups have always existed gaps which had to be filled by various anthropomorphic ideas. The progress of the self-conscious social tradition has been characterized not only by the growth and integration of the many groups of knowledge, but also by the gradual closing up of gaps, until it would seem that complete rational integration were about to be achieved. Yet, as has been indicated, breaks still remain in the ideal continuity. Only some relation of intimate dependence can be asserted.

A complete treatment of this process would involve nothing short of tracing, as Whewell has done, the formation of each of these great bodies of knowledge. For the present purpose it must suffice merely to indicate the broad features of the movement.

Such vast generalizations as the nebular hypothesis, the theories of universal gravitation, the unity of matter, and the conservation of energy have given a coherence to inorganic phenomena ; the development theory has unified a wide range of organic sciences ; the phenomena of consciousness are undergoing more methodical scrutiny and organization, while social life and its products are only beginning to be the objects of systematic, reflective study. Embracing all, and provisionally relating them in uninterrupted sequence, is the great hypothesis of universal evolution.

The scientists to whom each group of the social tra-

dition is intrusted are not only engaged in elaborating and extending the area of their subject, but many are attempting to relate it to other divisions of knowledge. Thus chemists and biologists seek to explain organic phenomena, psychologists and biologists are interested in the relations of brain and consciousness,[1] and sociologists seek more and more the aid of the psychologists. There is specializing in these border lands upon the problems of natural continuity.

We have seen that Comte's theory of the chronologically linear development of the sciences in the order of their increasing complexity must be, if not rejected, at least greatly modified. The sciences have advanced together in relations of mutual dependence, yet the groups highest in the scale have been unable to make genuine progress far in advance of those below them. "All the forces and laws of the universe," says Flint, "so combine and coöperate in the constitution and life of man, that all the sciences which instruct us as to their nature necessarily help us to understand why the course of history has been what it actually has been."[2] By the course of history is meant the concrete manifestation of the laws of social evolution or progress.

The fact that within the present century social phenomena have received so much attention, *i. e.*, have emerged into general consciousness and tended to become

1 "This conference [American Psychological Association, Philadelphia, 1895] between those who look upon many of the same phenomena from two points of view, the biological and the psychological, seems to me significant and promising. I think it is one of several indications that in general the devotees of the different particular sciences are coming more clearly to recognize the community of truth and interest which makes them depend upon each other; and that this recognition is producing more of the spirit of appreciation and of sympathy among them all. It is to be hoped that the day of the mere specialist is waning. It may reasonably be believed that the day is dawning when a broad culture, a genial attitude, and a firm grasp upon the verities of nature and of life will characterize the various departments of human knowledge."—G. T. Ladd, *The Psychological Review*, May, 1896.

2 *The History of the Philosophy of History* (France), p. 37.

the basis for socially self-conscious examination, deliberation, and collective action, should not lead us to suppose that men have only recently reflected upon social relations. From the earliest beginnings of associated life human experience has been consolidated in common sense, in customs and laws which were for the most part products of social unconsciousness. The ideal *Republic* of Plato and the practical *Politics* of Aristotle mark the definite dawn of social self-consciousness in its truest sense, *i. e.*, society's effort to understand and explain itself through individuals as organs of the social mind.[1] But the undeveloped condition of the natural sciences and of psychology made any general synthesis of knowledge into a scientific conception of society quite impossible. Here was the definite formation of a nucleus for the social sciences, but many centuries of development were needed to extend the growth and bring the group as a whole into organic relations with the other contents of the social mind. With the advent of Christianity, philosophy and theology were united, or rather theology became the dominant form of philosophy.[2] The natural sciences, as we have seen, were neglected, and social interpretation was attempted only in terms of divinity and ecclesiastical authority. Experience and common sense continued their unconscious consolidations and transmissions, but all reflective thought about social relations, such as St. Augustine's *De Civitate Dei*, was unified by theological conceptions.

While from one point of view this period seems characterized by intellectual stagnation, from another it is seen to be most significant for the further development of the social mind. The Christian conception of the ideal

1 Bosanquet: "The Relation of Sociology to Philosophy," *Mind*, January, 1897.

2 De Greef: *L' evolution des croyances et des doctrines politiques*, p. 36.

spiritual unity of the race,[1] the communicating system which the church established in its hierarchical organization, the preservation and reproduction of manuscripts, all combined to stimulate social consciousness and ultimately to render possible a purposeful advance.

St. Thomas Aquinas represented a movement which led eventually to the separation of theology from metaphysics in scholasticism,[2] and so prepared the way for scientific method based upon observation and freed from *a priori* conceptions. In terms of the development of the social mind, the compact and apparently final synthesis of a theological philosophy began to yield to a further analysis which found expression in the inductive sciences.

Comte asserted that while no definite beginning can be assigned to the positive mode of thought, it may practically be regarded as originating with Galileo in Italy, Descartes in France, and Francis Bacon in England.[3] None of these men specifically treated social phenomena, but by insisting on experiment and induction, by rejecting authority as such and appealing to reason, they laid the foundations of scientific method which De Greef describes as the highest procedure of both the individual and the collective consciousness.[4]

The progress of the social mind has since this beginning been the result less and less of blind empiricism, more and more consequent upon the elaboration of intellectual

[1] Flint: *loc. cit.*, p. 62.

[2] De Greef: *loc. cit.*, p. 38.

[3] *Philosophie positive*, Tome I., p. 15.

[4] "La méthode est le procédé le plus élévé de l'intelligence individuelle; elle est aussi supérieure au simple raisonnement que celui-ci l'est à l'action réflexe ou automatique. Ces derniéres sont également des modalités de l'intelligence collective; à défaut de la méthode positive, l'instinct, l'action réflexe et l'automatisme ont heureusement, jusqu'ici, garanti la conservation et le progrès des agrégats sociaux avec plus d'efficacité que n'eut pu le faire la raison individuelle ou collective de leurs membres."—*Introduction à la sociologie*, 1ere Partie, p. III.

devices for observation, comparison, and experiment, and the purposeful application of them to increasing areas of phenomena.

The dependence of the more complex sciences upon the simpler has been illustrated in the changing conceptions by which men have attempted to interpret the facts of society both in its organization at a particular period and in its historical development. Bacon shows real insight into the nature of the mind when he declares that "those things which are in themselves new can yet be only understood from some analogy to what is old."[1] As men have consciously pushed their way among the bewildering phenomena of social life, they have of necessity taken with them, as instruments of inquiry and explanation, conceptions formulated in connection with simpler subjects. "It is chiefly," says Flint, "through the growth of physical science that the notion of law in human development has arisen, and chiefly through it also that the path which leads to the discovery of law has been opened up. Not till long after induction was familiar to physicists, not till long after Lord Bacon had traced its general theory, was it, or could it be, practiced to any considerable extent in historical research."[2]

It has been pointed out that the social mind grows by analysis and synthesis, and that the two processes are at all times coexistent, although each act of analysis is in a general way the cause of a new synthetic conception expanded to include a larger content. The different groups of knowledge have been unified consciously or unconsciously by various theories which have successively proved inadequate to explain the phenomena and have yielded to more satisfying conceptions. Moreover these

[1] *Novum Organum* (tr. by Dewey), p. 388.

[2] *History of the Philosophy of History* (France), p. 36.

theories have been carried up from the sciences lower in the hierarchic scale to interpret the phenomena of greater complexity and by this process the scientific groups have little by little been drawn closer together. From the very first man's daily life has been the unity out of which the sciences have been abstracted, and to which they return with richer and deeper meaning. The effort of social self-consciousness has always been to put back these abstractions into their relations in the phenomena of society. All the sciences have thus been constantly converging in the focus of social life, at first to explain one by one the things that happen—the primary requirement of the human mind—then gradually to show the wider relations of coexistence and sequence which obtain between these phenomena, ultimately to display a system within which all events assume methodic organization.

A philosophy of life has existed from the very origin of human association. This philosophy of life has undergone continuous growth, adjusting itself constantly to increasing knowledge, widening to include larger and more definite views of nature and man, becoming more and more a product of social self-consciousness. The philosophy of life has been dominated by several conceptions, yet at every stage it has undertaken to account for all phenomena. The theology of the medieval church furnished a philosophy of life and of society to which all that happened could be readily related. Certain scientific notions and empirical forms of knowledge furnished nuclei of phenomena clearly related by natural causation. All other appearances or events were explained as the results of divine interposition, always, however, with a view to human welfare or punishment. Everything that happened was easily connected with a philosophy of social life, for, in spite of the emphasis laid upon the individual's relation to

God and a future life, society was at least a means to the chief end.

From one point of view Comte was right when he said that the positive philosophy would show God over the frontier, but it was the medieval conception of God which was gradually to disappear from the social mind, as the area of causal continuity enlarged.

The great advances of physical and astronomical science during the sixteenth and seventeenth centuries[1] effected marvelous integrations of knowledge and exalted mechanical conceptions which were carried up the scale of phenomena to explain and interpret the facts of life, consciousness, and society. Leibnitz conceived of organisms as machines. La Mettrie's volume on *L'homme machine* represented the extreme to which this interpretation could be carried.[2] Herbart's mechanical psychology was a result of this mathematico-physical movement. History or the course of social development was ascribed wholly to mechanical laws, resulting in what De Greef describes as a *Mechanique sociale.*[3] In this theory we have an apparently complete synthesis. All bodies of knowledge seem to be brought into close relations of causal continuity, and social philosophy in which all find their expression becomes a "science of the sciences." The physical basis of society, the thoughts and acts of men, all are combined in a system of mechanical dependence and mutual interaction. Every phenomenon can apparently be fitted into the scheme. All supernatural agencies may be dispensed with, and a Laplace can say: "God! I have no need of that hypothesis."[4]

But for how brief a time this synthesis served its pur-

[1] Royce: *The Spirit of Modern Philosophy*, pp. 38–40.

[2] De Greef: *Le transformisme social*, p. 146. Cf. *L'homme machine* (Ed. Assézat).

[3] *Loc. cit.*, p. 146.

[4] W. W. R. Ball: *A Short Account of the History of Mathematics*, p. 423.

pose! The social mind through the agency of Cuvier, Bichat, Von Baer, Lamarck, and others was consciously at work upon the phenomena of life.[1] The knowledge which resulted could not be fitted into the mechanical theory of nature and man. It gradually gave way to the conception of growth as the biological sciences were developed and organized under general vital principles. Comte, as we have seen, carried the biological notion almost directly over into social phenomena. It dominates all modern thought. "There are certainly few points," says Mackenzie, "on which thinking men in modern times are more thoroughly at one than in the recognition that everything that is deepest in nature—and especially in human nature—must be regarded as a product not of manufacture but of growth."[2]

It is unquestionably true that this organic idea had been vaguely and unconsciously entertained for many centuries, had gained in clearness during social progress, but it reached precise and systematic definition only with the formation of the sciences of life. It is necessary to discriminate constantly between empirical common knowledge and "the reasoned knowledge which is science."[3]

While, as we have seen, it is quite impossible for groups of scientific conceptions to develop in actual isolation, yet the connections between the sciences are less obvious in the earlier stages of their development. Thus, thought about social phenomena, although influenced and rendered more precise by conceptions derived from physics and biology, had attained considerable proportions before these notions were systematically applied. Vico the Italian is usually credited with one of the first conscious attempts to formulate a law of social development, which he declared

1 De Greef: *L'evolution des croyances et des doctrines politiques*, p. 66.

2 *Loc. cit.*, p. 127.

3 Giddings: *The Principles of Sociology*, p. 12.

to be an endlessly cyclical movement through three stages, divine, heroic, human.[1] Vico's theory rested neither on a theological conception nor upon any metaphysical formula derived, for example, from a notion of natural, preëstablished rights. His doctrine was based upon observation, highly generalized to be sure, but always subject to correction by the same means.[2] Vico stands clearly for law and development in human affairs—although the connections of social with other phenomena are not definitely demonstrated.

Montesquieu elaborated the idea of social law and emphasized the continuity and dependence of phenomena by showing the influence of natural conditions on social organization.[3] He was the first philosopher to call attention to the social significance of the economic forces which Quesnay and the physiocrats were beginning consciously to study.[4] This differentiation of social phenomena themselves is worthy of remark. The work of purposeful analysis begun by Aristotle, and carried on in political thought at least by Machiavelli,[5] Hobbes,[6] Locke,[7] Spinoza, and many others, implied a further division of the social tradition and created a demand for a still more comprehensive synthesis.

1 Flint: *Vico*, p. 213 *sq.*

2 De Greef: *L'evolution des croyances et des doctrines politiques*, p. 59.

3 Montesquieu thus enumerates the factors to which laws must be adjusted: "They should be relative to the climate of each country, to the quality of its soil, to its situation and extent, to the principal occupation of its natives, whether husbandmen, huntsmen, or shepherds; they should have a relation to the degree of liberty which the constitution will bear; to the religion of the inhabitants, to their inclinations, riches, numbers, commerce, manners, and customs."—*L'esprit les lois* (tr. by Nugent), Vol. I., p. 7.

4 The following sentence is characteristic of the physiocrats: "Le premier grain de blé, confié à la terre devient le germe assuré des empires; ils en résultent aussi *necessairement* que les épis que ce grain de blé fait éclore."—Dupont de Nemours: *Physiocrates* (Ed. Daire), p. 26.

5 *The Prince* (Morley's Lib.), pp. 68–69, 152–158, 297–299.

6 *Leviathan* (Molesworth Ed.), Vol III., Part II., Chaps. XVII. and XVIII.

7 *Political Treatise:* Works (tr. by Elwe), p. 278 *sq.*, pp. 301–308.

Among the economists Turgot was conspicuous both for his special studies and for his wider generalization of social progress. According to Flint, Turgot's great service was "that he definitely showed history to be no mere aggregate of names, dates, and deeds brought together and determined either accidentally or externally, but an organic whole with an internal plan progressively realized by internal forces."[1] Turgot recognized also that progress involves the coördination of all the elements of human welfare, economic, social, intellectual, and ethical, and foreshadowed at least the idea that while social phenomena may be abstracted into special pursuits, they must be synthesized again to represent reality. Adam Smith was hardly less a moralist than an economist. He published his *Theory of Moral Sentiments* seventeen years before his *Wealth of Nations* and recognized that ethical and economic problems are inseparably connected.[2] Bentham sought to rationalize morality and relate it to economic and political ideas, a task which John Stuart Mill carried on upon a higher plane.[3]

Thus we see social self-consciousness at the beginning of the nineteenth century engaged upon three converging problems :

1. The sciences were being gradually arranged in an order of natural dependence.

[1] Flint: *The History of the Philosophy of History* (France), p. 283.

Turgot's position is suggested in the following passage from his essay on "Geographie politique": "La géographie considérée par rapport aux différents gouvernements, aux différents caractères des peuples, à leur génie, à leur valeur, à leur industrie; séparer ce qui appartient là-dedans aux causes morales; examiner si les causes physiques y ont part, et comment."—*Œuvres de Turgot* (Ed. Daire), Tome II., p. 612.

[2] Dr. August Oncken in his volume *Adam Smith und Immanuel Kant* asserts in Buch I., entitled "Der 'Wealth of Nations' kein selbständiges Werk," that Smith really presented a complete system of practical or moral philosophy, including ethics, politics, and economics, the first contained in the *Theory of Moral Sentiments*, the second and third in the *Wealth of Nations*, S. 11–16.

[3] *Dissertations and Discussions*, Vol. II., pp. 315–316, and *Logic*, p. 583.

2. The phenomena of life were being examined and generalized.

3. Social phenomena were undergoing differentiation and the conceptions of interdependence and of growth according to law were being applied to them.

Such were the materials of analysis ready for a new synthesis. Comte made the first attempt and succeeded in establishing in principle if not in detail his hierarchy, and in exhibiting the sciences in their relations as a whole, an organized body of knowledge. "The presentation of scientific knowledge and method as a whole," comments Fiske, "whether rightly or wrongly coördinated, cannot have failed greatly to widen the conceptions of most of his readers. And he has done especial service by familiarizing men with the idea of a social science based on the other sciences."[1] Comte's philosophy of the sciences was primarily a social philosophy; all groups of knowledge were subordinated to a conception of society as a whole. But, as we have seen, Comte failed to include anything like an adequate psychology in his scheme, which had, therefore, a false completeness.

The work of the naturalists began to show results in the theories of Von Baer, Goethe, Treviranus, and Lamarck, which were already being applied to social phenomena when Darwin's *Origin of Species* offered a wide generalization of organic life.

With these conceptions at his command,[2] Spencer undertook his great work of synthesis, and eventually announced his well-known formula of universal evolution. The chief product of this whole developing process is the social life of men. Society itself is an organism growing, differen-

[1] *Outlines of Cosmic Philosophy*, Vol. I., p. 227.

[2] This is not to imply that Spencer had not worked out the general theory before Darwin's volumes were published. See introduction to the fourth edition of *First Principles*.

tiating, adjusting itself to its environment. And society can be understood only as a product of all the forces with which the various sciences concern themselves. While it is true that Spencer's philosophy is in its broadest range a cosmic philosophy, yet in so far as it unifies organized knowledge of nature, mind, and human association it is a social philosophy and as such a science of the sciences.

The biological concept, the idea of organism, the theory of adjustment to environment, and the transmission of acquired characters were quickly applied by social philosophers to the phenomena of associated life and were found far more satisfactory than mechanical analogies. Nor were psychical phenomena neglected. Lilienfeld[1] and Schäffle,[2] who adopted the biological theory, gave prominence to the cerebral side of the analogy, and Spencer in his system of philosophy gave a most important place to psychology. Yet in spite of these definite efforts, the stress was almost unconsciously laid by Spencer in actual interpretation upon the physical and vital factors of social organization and progress. De Greef charges Spencer with making sociology only an extension of biology.[3] The first biological synthesis was far richer and truer than the mechanical, but it is now yielding to another which shall include more consciously still another element of analysis—the psychical.

This century has witnessed an advance in the knowledge of mind quite as remarkable as the earlier progress of biological science. Herbart, Lotze, Fechner, Wundt, are associated with the beginning of a movement which is systematically reëxamining the facts of consciousness and attempting to relate them as closely as may be to the struc-

[1] *Gedanken über die Socialwissenschaft der Zukunst*, Bd. I., S. 171–234, Bd. II., Kap. IV., Bd III., Kap. II., VIII., and X.

[2] *Bau und Leben des socialen Körpers*, Bd. I., S. 392–430, 703–730, Bd. IV., S. 1–70.

[3] *Introduction à la sociologie*, 1ere Partie, pp. 16–25.

ture and functions of the brain. As a result, these researches and preliminary generalizations seek a place in a synthesis of the sciences, and just now psychological concepts tend to dominate social philosophy. Tarde gives a somewhat extreme expression to this tendency when he says:

"Ce n'est pas à un organisme que resemble un société, et qu'elle tend à resembler de plus en plus à mesure qu'elle se civilise; c'est bien plutôt à cet organe singulier qui se nomme un cerveau. . . . La société est en somme, ou devient chaque jour, uniquement un grand cerveau collective dont les petits cerveaux individuels sont les cellules. On voit combien, à ce point de vue, l'equivalent social du moi, que les sociologistes contemporaines, trop préoccupés de biologie, et pas assez peut-être de psychologie, ont vainement cherché, ce present aisement et du lui-meme."[1]

Yet on the same page Tarde speaks of the beings and things which support the social brain as "en quelque sorte les viscères et les membres," and remarks that in a society dominated by caste, the servile and plebeian groups "peuvent être appelées avec quelque vérité l'estomac des patriciens." Thus the psychological social philosophy does not reject or ignore any of the sciences; it includes them all and adds psychical factors to the synthesis. It is still a "science of the sciences."

The contributions of Lilienfeld and Schäffle have been supplemented by Ward, De Greef, Durkheim, Tarde, Fouillée,[2] Giddings, Small, and others, all of whom recognize ideas and volitions as factors in social progress. Thus the provisional synthesis of the present includes not only the physical objective interpretation of society but the psychical and subjective explanation as well.[3] It is the largest unity which has been as yet achieved. It affords a view of

[1] *La logique sociale*, p. 127.

[2] *Psychologie des idées-forces* and *La science sociale contemporaine.*

[3] Giddings: *loc. cit.*, p. 10.

society as the highest organization of physical and psychical forces in relations of either causal continuity or intimate interdependence ; the whole system constantly growing or readjusting itself in adaptation to the requirements not only of nature but of the will of man. Such a philosophy of society cannot neglect any element of human knowledge, it demands as its materials the sciences of all phenomena, physical, vital, psychical, and social ; it may rightfully claim to be the science of the sciences. Mackenzie, from a somewhat different point of view, remarks : "Hence the science which deals with social welfare may always be regarded as a master science in human studies, not indeed in the sense that, like logic, it regulates their principles, but in the sense that it determines their worth. It is worth while to know social philosophy, because until we know that, we do not know what else it is worth while to know."[1] In other words, until the sciences have been organized into a conception of social life they have no real significance, they remain abstractions out of relation to reality.[2]

Once more it should be stated that it is not a question as to whether there can be or ought to be a social philosophy. There always has been and must be a philosophy of social life—a way of conceiving the nature and end of society. This philosophy has constantly readjusted itself to the growth of knowledge, admitting new truth, rejecting false theories, or combining and reconciling new with old. It has generalized men's knowledge about nature and about themselves. The difference has been in degree of definiteness and consciousness, not in the kind of mental effort.

[1] *Loc. cit.*, p. 6.

[2] In the development of this subject the term sociology has not been technically employed, because it is altogether probable that as a more definite discipline its application may be limited to a narrower field than that which a social philosophy must survey.

But may we speak of a social philosophy as though there were one? Are there not many coexistent philosophies—naturalistic, idealistic, and the like? In its *form* social philosophy is one, *i. e.*, it coördinates and generalizes men's reasoned knowledge of all the phenomena of associated life. In its *content* social philosophy varies with the kind of knowledge consciously emphasized. Thus if self-conscious effort be expended almost exclusively upon physical and vital phenomena and psychical phenomena be unconsciously neglected, the resulting philosophy will be none the less a generalization of all the recognized sciences—purposefully systematized groups of knowledge—but it will have a naturalistic, material content. Such was the physiocratic philosophy of the eighteenth century and the historical theory of Buckle. On the other hand, when attention is concentrated upon subjective phenomena to the neglect of the objective world, social philosophy becomes idealistic, as in Hegel's *Philosophy of History*.

But, as we have seen, the present self-conscious effort of the social mind is first to examine and reflect upon all phenomena, objective and subjective, and second to combine the resulting generalizations into a philosophy which shall attempt "to account for the origin, growth, structure, and activities of society by the operation of physical, vital, and psychical causes working together in a process of evolution."[1] It is only when we regard the highest effort of self-consciousness as truly representative of the social mind that we can speak of one social philosophy. There are philosophies corresponding to varying degrees of purposeful reflection all the way down to the socially unconscious superstitions of the savages.

"Un société," says De Greef, "n'est pas seulement un association de cerveaux, mais de corps dépendants eux-

1 Giddings: *loc. cit.*, p. 8.

mêmes de la nature ambiante; un société ce n'est pas seulement une Académie, mais un *partie de l' univers organisée en société.*"[1]

Such is the subject matter for social philosophy which aims to afford a view of associated life by generalizing into a coherent conception the sciences which have been differentiated from the experiences of men, to recombine into reality the subjective abstractions of the social mind, to serve, in other words, as a science of the sciences.

[1] *Le transformisme social*, p. 276.

CHAPTER III.

THE DEVELOPMENT OF SOCIAL AND OF INDIVIDUAL THOUGHT.

WE have seen that the social tradition is made up at any given time of knowledge of details which in its systematized and reflective stage becomes science, and of theories of the whole which may be called philosophy. The primary task of a philosophy—whatever may be its further and ultimate problems—is to offer a theory of every-day human experience, a conception of the nature of social life. The growth of social knowledge consists, on the one hand, in the elaboration and extension of the sciences, on the other, in the widening and reorganizing of philosophy to include and harmonize new and broader generalizations.[1] The form of this process is in the main constant, but the content is ever changing, becoming not only richer but more definite and more purposefully coördinated.[2]

Let us next inquire whether the process by which social knowledge has been developed has any meaning for the student of mental growth in the individual; in other words, let us examine the time-honored theory that there is a

[1] "Le progrès de la pensée consiste dans le progrès simultané de l'observation devenue comparative et d'interprétations que se font de plus en plus larges."—M. Bernès: *Revue philosophique*, Tome XX., p. 374.

[2] De Greef states the idea in these words: "Les croyances, c'est-à-dire la pensée collective, ont pour point de départ et comme caractère commun d'être des réflexes qui, plus ou moins compliqués, centralisés et coördonnés, en arrivent à s'élever jusqu'à être des doctrines et des théories scientifiques."—*Le transformisme social*, p. 5.

parallel between the development of the race and that of the individual.

As a preliminary to this discussion, it may be well to revert once more to the term "social mind," which has been so frequently employed hitherto. Its usefulness as a working idea has, it is hoped, grown steadily more apparent. It describes briefly phenomena which in the absence of such a phrase would demand detailed and prolix statement. It serves the purpose for which all terms are devised. Yet if its connotation be vague or metaphorical it will cloud rather than clarify the argument. The term "social mind" has been used to describe reality, *i. e.*, the phenomena which result from the interaction of communicating individual minds. The German school of folk-psychologists, founded by Lazarus and Steinthal, have done much to lay the phrase "social mind" open to suspicion. In asserting that folk-psychology deals with the mind of the whole community which is different from all the different minds which belong to it, and which sways them all,[1] they may be simply using a figure, but from the common-sense point of view this seems very much like postulating a "social brain" and asserting the existence of thought apart from individual consciousness. Bluntschli in describing the state as a masculine personality has contributed certain elements to the mystical interpretation of social relations,[2] while Espinas in his studies of animal societies reaches conclusions which Fouillée regards as almost equally metaphysical.[3] Even Le Bon, one of the modern school of sociologists, does not altogether escape the suspicion of being a mystic or at least of pressing analogies too far.[4]

[1] *Zeitschrift für Völkerpsychologie*, Bd. I., S. 5.

[2] *The Theory of the State* (Eng. tr.), p. 23.

[3] Fouillée: *La science sociale contemporaine*, pp. 211, 236–246.

[4] For example, Le Bon speaks of "une âme collective" and declares that a crowd forms "un seul être."—*Psychologie des foules*, p. 12.

Against these forms of ontology there will always be vigorous protests.

"All psychical processes [declares Professor Paul] come to their fulfillment in individual minds, and nowhere else. Neither the popular mind, nor elements of it, such as art, religion, etc., have any concrete existence, and therefore nothing can come to pass in them or between them. Away, then, with these abstractions! For 'away with all abstractions' must be our last word if we wish to attempt in any place to define the factors of that which actually happens."[1]

The term, then, is to be defended only when it is used to describe concrete reality. Professor Tufts has suggested the use of the word "person" in social interpretation, not as a mere figure but as a suggestive analogy. "Personality, regarded as the purposive, interrelated, and unified activity of various desires, may thus be of all grades, according to the degree to which impulses have passed into conscious desires, and desires in turn have become systematized into unity of steadfast purpose." Wundt is quoted as asserting that the social person is as *real* as the individual person.[2]

It is in just this sense that we assert the reality of the "social mind," which on its cognitive side describes the organization of men's ideas into systematic unity—*through the sole instrumentality, however, of individual minds.* "Social consciousness," or "social self-consciousness," is used in the same way. Consciousness is implied in knowledge and extends its area with the latter. Social consciousness is simply consciousness of the same thought or feeling on the part of communicating individuals, while social self-consciousness implies a further element of purposive co-operation between such individuals toward a more or less

[1] *Principles of the History of Language* (tr. by Strong), p. xxxiv.

[2] "Recent Sociological Tendencies in France," *American Journal of Sociology*, January, 1896.

definite end. It is this common purpose which, becoming clearer and more definite in the consciousness of individuals, draws them together into a closer social unity.[1] The process may be described in terms of personality, collective mind, and the like, but these notions are employed only as tools of thought, as clues in interpretation. They have no mystical meaning; they describe actual phenomena which offer obstacles to systematic organization with other knowledge until they are symbolized in convenient terms. In every case where these phrases are used, some periphrasis in common language should be a possible substitute. If they will not stand this test they must be regarded as mere devices of logical jugglery.

So much of restatement seems a necessary preparation for the next stage of the discussion. In comparing the social and the individual mind, it is of fundamental importance that we have a clear notion of what we mean—and what we do not mean—by the former.

The idea that the individual passes in some sort through the same stages as the race, or that humanity has experienced periods of development corresponding roughly to the different ages of the individual, is one of those conceptions which may be traced back into the history of thought until it gradually fades away altogether. Or, from the other point of view, it is an idea which has developed from a vague and socially unconscious figure into a definitely elaborated scientific theory.

The unconscious notion is implied in such phrases as the "childhood of the race," and it may be traced throughout literature under many different forms. One of the earliest

1 "Ainsi, quelle que soit la société que nous considérons, toute aspiration collective qui, en se réalisant, aurait pour résultat de consolider le groupe, de le faire à la fois plus complexe, plus plastique, plus conscient de lui-même sera une cause de progrès pour le groupe, et par suite déjà une force sociale effective."—M. Bernès: *Revue de métaphysique et de morale*, Tome III., p. 172.

clear statements of this doctrine is found in the *Paidagogos* of Clement of Alexandria, in which he defends the teaching of Greek on the ground that since God conducted the race from Judaism through Greek culture to Christianity, the individual should be led through the same stages of education. The philosophers of history naturally made more or less use of this theory. Herder saw in humanity a great individual which passes through its several ages from infancy in the orient, boyhood in Egypt, youth in Greece, manhood in Rome, to old age in the Christian world.[1] Hegel's similar division is familiar.[2] Lessing asserted that every individual must traverse the same course as that by which the race attains its perfection.

Goethe, who was among the first to gain clearer ideas of development, said: "The youth must always begin again at the beginning, and as an individual make his way through the epochs of the world's civilization,"[3] while Kant raised the question whether individual education should follow the development of mankind in general through its different generations.[4]

It would be idle to multiply illustrations of this general nature. They have been zealously ferreted out by the Herbartians of Germany, especially by those of the Ziller school.

With Comte the theory gained in definiteness because of his method of checking inductive generalizations of history by deductive reasoning from the principles of human nature. Having established his "three stages" by the historical method he sought to verify his hypothesis by appealing to the facts of individual development. He

1 *Ideas for the Philosophy of the History of Mankind.*

2 *The Philosophy of History* (tr. by Sibree), p. 111.

3 Quoted by Rein, Pickel, and Scheller: *Das Erste Schuljahr*, S. 16.

4 *Pädagogik*, Werke heraus. von Hartenstein, Vol. VIII., S. 462.

declares that every mature person if he looks back upon his own history is aware that he was a theologian in his childhood, a metaphysician in his youth, and a natural philosopher in his manhood.[1] Here is a definite assertion on historical and psychological grounds of the parallelism between the development of race and of individual thought. The theory as presented by Comte, although possibly vulnerable from both points of view, marked an advance in definiteness and clearness. To educational philosophers the analogy is naturally suggestive. Rousseau recognized it in a very general way in the *Emile*,[2] and more specifically in one of his shorter, less famous essays.[3] Pestalozzi expressed the thought somewhat vaguely in his best known work, *Wie Gertrud ihre Kinder lehrt.* He makes much of a natural order of development in the child, to which the curriculum must be carefully adjusted.[4] The idea is at least hinted at in this statement of the problem: "How to find a common origin of all methods and arts of instruction, and with it a form by which the development of our race might be decided through the essence of our own very nature."[5] It is, however, in a comparatively unknown essay[6] that Pestalozzi most clearly states the theory. Herbart, as the interpreter and philosophic systematizer of Pestalozzi's vague educational ideas,[7] gave more precise form to the conception, stating specifically that "by imitating the traces of moral culture in the human race, the educator shall see in the progress of his pupil a recapitula-

[1] *Loc. cit.*, p. 6.

[2] Tr. by Payne, p. 164.

[3] *Discours sur l'origine et les fondements de l'inegalite parmi les hommes.*

[4] *How Gertrude Teaches Her Children* (tr. by Holland and Turner), pp. 23, 26, 29, 32.

[5] *Ibid.*, p. 89.

[6] *Meine Nachforschungen über den Gang der Natur in der Entwickelung des Menschengeschlechts*, S. 7.

[7] W. Rein: "Pestalozzi and Herbart," *Forum*, May, 1896.

tion of the great progress of mankind."[1] In his *Æsthetische Darstellung der Welt*, Herbart asserts that the beginning point for the child's intellectual and sympathetic education does not lie in the present, because the pupil's sphere is too narrow and quickly traversed, the adult's too high and complicated. Since, however, the time successions of history end in the present and our culture has its origin with the Greeks, the Homeric poems which reproduce the life and thought of that early period furnish appropriate materials for the beginning of education.[2] Ziller, one of Herbart's disciples, is credited with formulating the theory of the Culture Epochs (*Die Kulturhistorischen Stufen*) still more definitely,[3] and with an attempt to determine with some precision the different periods of race development and the corresponding stages of individual growth.[4] The elaboration of this theory has resulted in many schemes, some of which, like Hartmann's,[5] lay chief stress on the psychological aspect of the question, others, like Beyer's,[6] emphasize the social and economic side. To statements of Vogt which bear directly upon the present discussion, more space must be assigned. He asserts a parallelism of form and process rather than of content and products.[7] Confining attention to the growth of intelligence, we note the following progressive development in the mode of individual thought: (1) the imaginative (*phantasiemässige*) mode, (2) a realistic or matter-of-fact

[1] *Pädagogischen Schriften.*

[2] Tr. by Felkin, p. 73.

[3] De Garmo: *Herbart and the Herbartians*, p. 109.

[4] Rein: *Outlines of Pedagogics* (tr. by C. C. and I. J. Van Liew).

[5] *Das Erste Schuljahr*, S. 30.

[6] *Ibid.*, S. 44.

[7] Vogt declares, "dass es individuelle Entwickelungsstufen des kindlichen Geistes giebt, und solche der Menscheit oder eines bestimmten Volkes, welche den ersten homolog sind, und dass beide, Individuum und Volk, sich teils betreffs ihrer Intelligence, teils in practischer Hinsicht entwickeln."—*Ibid.*, S. 29.

(*thatsächliche*) mode, and finally (3) a reflective (*reflectirende*) manner of thought. The thought connections of the individual advance, therefore, in accordance with the categories of possibility (*Möglichkeit*), reality (*Wirklichkeit*), and necessity (*Nothwendigkeit*). In the case of a race or *Volk* the corresponding progress is from (1) a mythical (*mythische*) to (2) an historical and finally to (3) a philosophical mode of observation and thought, which successively find expression in the psychical products of a people.[1]

It is unnecessary to follow out the application of this analysis to a course of study. The point which deserves attention here is the concept of generally parallel modes of thought development in the race and in the individual—an idea to be discriminated carefully from that of definite epochs and periods, of stages and "cultural products."[2] The theory of Vogt translated into terms of the social mind is simply the assertion that the collective tradition is synthesized—first in a socially unconscious or semi-conscious manner, then more and more reflectively until it culminates in modern science and philosophy.

The general theory of parallelism has been greatly influenced by the development of biology during the present century. The researches of Wolff, Von Baer, Dumas, Döllinger, and others in embryology threw light upon the phenomena of individual growth, while the wider observations and generalizations of Treviranus, Lamarck, Darwin, and Wallace offered a general theory of race development.[3] By Darwin himself in part and notably by Ernst von Baer, Haeckel, Louis Agassiz, Spencer, and Huxley these results

[1] *Das Erste Schuljahr*, S. 29.

[2] It is interesting to relate Vogt's analysis to the "three stages" of Comte, theological, metaphysical, and positive or scientific.

[3] T. H. Huxley: "Evolution," *Encyclopædia Britannica*, 9th Ed., Vol. VIII., pp. 744–746.

were synthesized into what is popularly known as the "recapitulation theory,"[1] according to which the individual, in his development, passes rapidly through the various stages by which the species has reached its present morphological and physiological status, or, in technical terms, the ontogenetic and the philogenetic series are coincident.[2]

This biological conception is undergoing more or less damaging criticism at the present time, but it has done much to give support to the general idea which we are discussing. It should be noted that in its original form the recapitulation theory is asserted of vital phenomena only. The hypothesis has been carried up into the spheres of psychical and social phenomena. As we have seen, the causal connections between these groups are not definitely determined, so that the greatest care must be exercised in reasoning from the physical into the mental or from the mental into the social realm.[3] Again the purely physiological theory must be modified by the statement that for an ideal "recapitulation" identity of environment would be demanded. Even if the Lamarckian conception of heredity be accepted, it provides only one factor in the evolution of the individual. The influence of surrounding conditions upon the organism is another element to which large if not predominant importance must be attributed. This modification of the hypothesis must not be overlooked in applying it by analogy to the phenomena of consciousness and association. Of those who have systematically attempted to account for mental development in

[1] Haeckel: *Gesammte Populäre Vorträge*, S. 94.

[2] Le Conte: *Evolution and Its Relation to Religious Thought*, pp. 9 and 10.

[3] Spencer: *Essays*, "The Genesis of Science," Vol. II., p. 73.

Durkheim goes so far as to say: "En un mot, il y a entre la psychologie et la sociologie la même solution de continuité qu'entre la biologie et les sciences physico-chimiques. Par conséquent, toutes les fois, qu'un phenomène social est directement expliqué par un phenomène psychique on peut être assuré que l'explication est fausse."—*Les regles de la méthode sociologique*, p. 128.

terms of organic evolution Spencer and Romanes may be regarded as prominent types.

The former in his *First Principles* and more specifically in other parts of his philosophy has asserted that

"The phenomena subjectively known as changes in consciousness are objectively known as nervous excitations and discharges which science now interprets in modes of motion. Hence in following up organic evolution the advance of retained motion in integration, in heterogeneity, and in definiteness, may be expected to show itself alike in the visible nervo-muscular actions and in the correlative mental changes."[1]

Spencer traces this evolution both in the individual and in society and definitely asserts a parallel between them :

"The education of the child must accord both in mode and arrangement with the education of mankind as considered historically ; or, in other words, the genesis of knowledge in the individual must follow the same course as the genesis of knowledge in the race."[2]

The problem which Romanes set himself was to trace the development of consciousness from its first emergence up through the animal series to its highest organization in man. In his volume *Mental Evolution in Man,* he attempts to show the transition both in the individual and in the race from "receptual communication"[3] in animals to the "distinctively human faculty" of "conceptual predication."[4] He affirms that a characteristically animal mode of thought attains its highest development in the first part of a child's second year, at which period the emergence of a human form of intelligence begins to take place.[5] It is further asserted that in the light of actual history, tradition, and antiquarian remains, the race

[1] *First Principles*, p. 391.

[2] *Education*, p. 122.

[3] Pp. 36–39.

[4] *Ibid.*, pp. 34, 76–78.

[5] *Ibid.*, p. 237.

seems to have advanced continuously in stages analogous to those of individual development.[1] Romanes complains that the critics of his theory insist upon contrasting the adult psychology of civilized man with the lowest forms of animal intelligence, ignoring on the one hand the psychogenesis of the child and on the other the mental traits of the savage, both of which are of the greatest significance.[2]

The students of psychical phenomena, largely under the influence of biology, have been led to examine not only the facts of adult consciousness, but to trace the growth of mind from earliest infancy to old age. The aim of "child study" is primarily to determine the general laws of such development in the first years of life, the "plastic" period.

Preyer, Hartmann, Sully, Baldwin, and many others have given much special study to this problem, which has in some form engaged the attention of most modern psychologists. Sully gives expression to the theory in this wise :

"According to this way [the evolutionary] of looking at infancy the successive phases of its mental life are a brief *résumé* of the more important features in the slow upward progress of the species. The periods dominated successively by sense and appetite, by blind wondering and superstitious fancy, and by a calmer observation and a juster reasoning about things, these steps mark the pathway both of the child mind and of the race mind."[3]

Höfding traces the stream of consciousness in the individual from the fœtus state to death. It is said to form a curve with terminals representing comparatively simple states, while in the middle and at the highest point ideas, feelings, and expressions of will specifically appear. "What in this way applies to the development of the individual is valid also for that of the race. . . . It is a condition

1 Romanes : *loc. cit.*, p. 391.

2 *Ibid.*, p. 438.

3 *Studies of Childhood*, p. 85.

of any independent development of the life of thought and feeling, that the elementary, practical requirements of life should be satisfied." Only as social organization advances sufficiently to secure leisure to a few or to many can reflective thought apply itself to science. As the individual advances from vegetative and instinctive reactions to differentiated consciousness, so society passes from a mere animal struggle for existence to a division of physical and psychical labor, the discrimination and elaboration of thought in science, of feeling in art, and of volition in purposeful collective action.[1] Again, in discussing the influence of unconscious habit, Höfding declares that "In the individual, as in nations, sudden revolutions avail but little; below the surface tendencies persist which it takes time to overcome."[2]

This thought offers a natural transition to the sociological point of view, which in general regards society as a developing whole, to be interpreted, as we have seen, by concepts derived from biology and psychology—in terms, therefore, of structure, function, mind, consciousness, and personality.

Here also there are various degrees of definiteness and precision in the application of the theory. A community of boys is regarded as affording materials for a new science of "social embryology."[3] Children playing in a sand-pile develop methods of settling disputes which are declared to throw light upon the evolution of the idea of justice in the human race.[4] The ethnologist, taking a broad view of ages and races of men, seeking to discover the origins of nations and of civilizations, sees "in the growth of the

[1] *Outlines of Psychology* (tr. by Lowndes), p. 93.

[2] *Ibid.*, p. 75.

[3] Johnson: "Rudimentary Society Among Boys," *J. H. U. Studies*, November, 1884, p. 51.

[4] Hall: "The Story of a Sand-Pile," *Scribner's Magazine*, Vol. III., p. 690.

child from helpless infancy to adolescence, and through the strong and trying development of manhood to the idiosyncrasies of disease and senescence . . . an epitome in miniature of the life of the race.'' Philologist and artist study the child with the hope of finding some clue to the origin and development of speech and artistic expression from the earliest beginnings of society.[1]

We have noted that earlier sociologists, such as Comte and Spencer, have recognized the theory of parallel development with greater definiteness. The later schools of psychological interpreters of social phenomena have made still more of the analogy between the individual and society. In general, however, emphasis has been laid less upon genetic parallelism than upon statical correspondences.

Lilienfeld, however, states the proposition in terms of social development most clearly, asserting that the developmental stages of the human embryo's evolution represent the progressive social development of the race in its gradual rise during the course of the entire history of humanity.[2] He further points out what has been insisted upon by Baldwin from the standpoint of physiological psychology, that in social as well as individual evolution the lower forms are not fully reproduced but only hinted at, *i. e.*, there are ''short-cuts'' in the recapitulation.[3] Lilienfeld also applies the idea to education, and deprecates an exclusively scientific form of instruction which would in his judgment prove one-sided both for the individual and for the race.[4] Schäffle traces an elaborate analogy between individual and social psychology,[5] guard-

[1] Chamberlain: *The Child and Childhood in Folk Thought*, p. 3.

[2] *Gedanken über die Socialwissenschaft der Zukunft*, I. Theil, S. 247, 251.

[3] *Ibid.*, S. 249.

[4] *Ibid.*, S. 267.

[5] *Bau und Leben des socialen Körpers*, I. Auf., Bd. I., S. 392–409.

ing with comparative success against a fanciful use of terms.[1] In his treatment of the collective spirit (*Volksgeist*) and social self-consciousness (*Selbstbewusstsein des socialen Körpers*), which exist only in individual minds, he shows that the social spirit gives evidence of growth and development.[2] The common possessions of the race are declared to be the accumulations of countless individual contributions, gradually reacted upon, coördinated, and consolidated into a coherent whole.[3] The analogy is recognized in a general way and emphasis is laid upon the comparative brevity—and consequent rapidity—of individual evolution. Schäffle also discusses the recapitulation theory of Haeckel,[4] but chiefly with the object of differentiating sociology from zoölogy.[5] He outlines the main stages of social evolution but does not refer specifically to a parallel individual development. The whole work, however, is filled with allusions which leave no doubt as to the author's acceptance of the theory in its chief outlines.

De Greef approaches the question from the social standpoint and endeavors to show that social intelligence is formed in a manner strictly analogous to the growth of individual consciousness. Following the suggestion of Comte, De Greef has applied the hierarchical idea to social phenomena, arranging them in a scale determined by increasingly conscious social action. The evolution of society is characterized, therefore, by progressively pur-

1 In the second edition of his work, Schäffle has almost wholly abandoned the biological terminology.

2 *Loc. cit.*, S. 419. "Er schreitet in seinen Wachsthum nur langsam, doch unaufhörlich fort."

3 This process "muss bei dem weltgeschichtlich ausgedehnten Lebenslauf des socialen Körpers länger dauern, als analog bei der kurz lebenden Einzelnperson. Und doch braucht selbst die leztere Zeit genug für ihre charactervolle, selbstbewusste Durchbildung und für wechselseitige Accommodation aller Theile ihres Nervensystems."—*Ibid.*, p. 417.

4 *Ibid.*, pp. 827–847.

5 *Introduction à la sociologie*, 2me Partie, Chap. XIII.

poseful regard for social phenomena, economic, genetic, artistic, those relating to belief, juridical and political, successively.[1] The activities lowest in the scale are relatively unconscious, reflex, and instinctive, just as in the case of the individual the physiological functions are performed either automatically or with the minimum of consciousness. Again, as a certain measure of organization in the lower social phenomena is essential to the further development of the higher, so the instinctive and reflex activities of the individual form the necessary basis for the psychical functions.[2] "En résumé, la conscience sociale," says De Greef, "se forme naturellement suivant les mêmes lois que la conscience individuelle; elle passe du réflexe à l'instinct, à la mémoire, au raisonnement et finalement à la méthode; ce développement est organique."[3] The recognition of contract in social activities is regarded as an evidence of collective consciousness.[4]

De Greef makes much of the gradual fading away of consciousness, social and individual, after a purposeful decision has been reached. Every conscious act by repetition becomes habit in the individual and custom in society. Thus conscious gains are preserved and consolidated in automatism.[5]

It should be noted that De Greef concerns himself not with stages of cultural attainment, either in the individual or in the race, but with the general principles of intellectual development in both. He directs attention to form rather than to content, to process rather than to products. Yet he regards the latter as organic growths displaying

[1] *Loc. cit.*, 2me Partie, pp. 443 *sq.*

[2] *Ibid.*, p. 437.

[3] *Ibid.*, p. 453.

[4] "Le contrat est une forme intellectuale où la conscience se manifest naturellement à un degré plus élevé que dans toute autre forme psychique."—*Ibid.*, p. 453.

[5] *Ibid*, pp. 433, 441.

the same phenomena of formation.[1] Other sociologists have not specifically adopted the genetic parallelism, although they constantly point out or assume analogies which are related to it. Durkheim lays stress upon the determining character of the social *milieu* which molds the individual after its own model.[2] Tarde sees in the formation of the social tradition a process analogous to the growth of individual memory; in social standards and customs influences similar to the inherited tendencies in man.[3]

From the materials presented it is clear that in a general way at least the parallelism is widely recognized and has been incorporated in the social tradition. Yet this general conception may be rendered more precise in different ways. It may be treated as a biological problem, as a psychological theory, or as a sociological hypothesis. In all these aspects it must have meaning for teachers. Again the parallelism may be asserted for the products and types of race development and individual growth, as when it is affirmed that the youth must be for a time a savage or a cow-boy, that he must be interested by literature which describes pastoral, agricultural, and industrial life successively.[4] Or the correspondence may be stated in terms of mental modes. It may be urged that at certain periods the child will show fear, or will reason as do primitive men in similar circumstances. The former theory was pushed to its limits by Ziller, who attempted to systematize the educational process on this basis with an exactness

1 "Les croyances sont, à n'en pas douter, purement réflexes ou instinctives à leur origine, et il en est longtemps ainsi. . . . Précisément parce que le developpement des croyances est organique et non pas accidentel, leur développement suit la voie naturelle qui va du réflexe à l'instinct, au raissonnement et enfin à la pure methode consciente." *Ibid.*, p. 449.

2 *De la division du travail social*, pp. 385-391.

3 *La logique sociale*, p. 109.

4 Van Liew: "The Culture Epoch Theory," *First Herbart Year Book.*

and rigidity which ignored or underestimated the variations of organic growth and the modifying influences of heredity and a changing environment.[1] The later Herbartians themselves have reacted from this formalism, and have made their plans much more flexible, although these are perhaps still open to the charge of putting too much faith in "cultural products" as the appropriate material for successive periods of instruction.[2] Without attempting a discussion of this point, we may pass to the other aspect of the parallel, *i. e.*, mental modes in the race and the individual.

Once more we must give heed chiefly to the intellectual or reasoning processes, not losing sight of the fact, however, that in such a course we are abstracting an organic part of consciousness.[3] It has been pointed out that the social mind has been organized out of the vague unity of human life. Primitive men in whom reason first dawned were confronted by a confused whole, which they gradually analyzed into its components. So the infant looks out, in James' picturesque phrase, upon "thinghood as a whole."

"The first sensation which an infant gets is for him the universe. And the universe which he later comes to know is nothing but an amplification and an implication of that first simple germ which, by accretion on the one hand and intussusception on the other, has grown so big and complex and articulate that its first estate is unrememberable."[4]

James Ward expresses a similar thought in his phrase

[1] *Allgemeine Pädagogik*, S. 214.

[2] Van Liew: *loc. cit.*, p. 95.

Cf. C. A. McMurray: "The Culture Epochs," *Second Herbart Year Book*, p. 96.

[3] It is quite conceivable that considerations based upon a purely intellectual analysis ought to be modified by regard for emotional and ethical development. Thus the advocates of cultural products as materials of instruction lay stress upon their æsthetic and moral value. *Vide* C. A. McMurray: *loc. cit.*, pp. 103–106.

[4] *Psychology*, Vol. II., p. 8. Cf. also p. 344.

"presentation continuum." "We are led," he says, "to the conception of a *totum objectivum*, or 'objective continuum,' which is gradually differentiated, thereby becoming what we call distinct presentations."[1]

Yet it will not do to lay too great stress upon the earliest period, which has much in common with animal psychology. It must be remembered that to the child, as to the adult, "the sense of the whole comes first." The process of analysis asserts itself immediately, however, and the child begins to examine details.

But the social mind from the first demands unity also. The separated elements must be put together again. The germs of science and philosophy are present in primitive thought. So, too, the child mind is "endowed with a lively and inextinguishable impulse to connect and simplify."[2] But for this tendency his world would be apparently disconnected and hopelessly capricious.

Once more it has been shown that the sciences have grown out of attempts to meet the daily needs of life, *i. e.*, out of the arts. "Man began to reflect," says Sully, "on the connections of things in order to supply himself with food, to ward off cold and other evils. So with the child. Before the age of speech we may observe him thinking out rapidly as occasion arises some new practical expedient."[3]

Again, we have seen that the explanations or philosophies which have successively influenced the social tradition have become less and less anthropomorphic. In primitive society the theories based upon personal volition are very prominent and result in myths, fetishism, and theological explanations. The predominance of fancy and imagination among primitive people is significant, for in

[1] Art. "Psychology," *Encyclopædia Britannica*, Vol. XX., p. 45.

[2] Sully: *loc. cit.*, p. 73.

[3] *Ibid.*, p. 71.

these sources the thought which results in sciences and philosophy has its origin. The attempts of a child to account for phenomena in terms of its own imaginative consciousness are familiar.[1]

"Thus in the case of children, as in that of uncultured races, the supernatural realm is at first brought at most into only a very loose connection with the visible world. All the same there is seen in the measure of the individual child's intelligence the endeavor to coördinate."[2]

With the progress of society the search for causes and processes becomes more definite. In the history of human thought attempted solution of the more difficult problems of origins and final causes preceded in a general way the examination of processes and the determination of invariable sequences. Metaphysics had its turn before science. It would be going beyond the facts to assert that the child first concerns himself with metaphysical problems and then turns to a primitively scientific mode of thought, but a study of children's questions throws some light on the matter. "When this more definite scientific direction is taken by a child's questioning we may observe that the ambitious 'why?' begins to play a second rôle, the first being now taken by the more modest 'how?'"[3]

In general, therefore, it may be said that the social and the individual mind grow by a process of analysis and synthesis, by examination of details and the connection of them in explanations which become less and less anthropomorphic.

Yet this is only a partial description. The social tradition has accumulated a vast amount of experiences and observations which are not immediately available for organi-

1 This is admirably illustrated by the remark of a little girl who on seeing for the first time a horseless carriage exclaimed: "Look, mama, fairy horses must be pulling that carriage."

2 Sully: *loc. cit.*, p. 92.

3 *Ibid.*, p. 88.

zation, which await some higher and broader generalization and synthesis. These materials form a part of the social memory and are preserved for future use. In an analogous way the child mind during the ascendency of sense activity gathers a store of clear memory images as "a necessary preliminary to reflection and thought."[1]

With the systematization of abstract thought in the race the unity of social life begins to be more definitely analyzed and the social tradition becomes differentiated into specific parts, sciences, arts, literature. In the case of the individual, education superimposes this rationalized scheme to such an extent that it is impossible to determine just what part is played by natural development. Yet we know from the laws of mental growth that so far as this analysis into subjects has a real and not merely verbal existence in the pupil's consciousness, it has been achieved by differentiating his life experiences and memory images, classifying them and giving them an abstract form. To this subject we shall return in a subsequent chapter.

The gradual systematizing and development of the social tradition has been described as the result of collective action, at first unconscious, but ultimately with increasingly definite aim and methods, becoming self-conscious. These words are borrowed from individual psychology, so that to assert a parallel in terms would be simply to beg the question. If we turn our attention first to the individual side we are confronted with widely varying theories as to the nature of consciousness and self-consciousness. The view is maintained that there can be no consciousness that is not self-consciousness.

"Over and over again [says Baldwin] have systems been built upon the subject-object theory of consciousness; namely, that personality, subjectivity, consciousness in any form necessarily

[1] Sully: *loc. cit.*, p. 69.

implicated an antithesis, in consciousness, between ego and non-ego. But an example of what is thus denied may be seen upon the floor of any nursery where there is a child less than six months of age."[1]

Not only is there declared to be a distinction between consciousness and self-consciousness, but it is further asserted that consciousness shades away into the unconscious and that many thought connections are made below the "threshold."[2] Moreover, it is affirmed that these three states are not merely isolated mental conditions, but are genetically related in a process of development from unconsciousness to the highest form of self-consciousness. "Das Ich ist ein Entwickelungsproduct, wie der ganze Mensch ein Entwickelungsproduct ist."[3]

Chief attention has been given to the earlier developments of consciousness and self-consciousness in the individual. The transition from animal to human thought is marked according to Romanes by the substitution of "conceptual" for "receptual" thought, the recognition of abstract similarities rather than the mere association of habitually connected concrete things. James makes practically the same distinction in the phrases "association by similarity" and "contiguous association based on experience." True reasoning is the result of association by similarity, the abstraction from particulars of a common character by which they are united in generalized knowledge. Differences in reasoning power are simply differences in degree, not in kind, of ability to associate by similarity. "This answers the question why Darwin and Newton had to be waited for so long," says James. "The flash of similarity between the apple and the moon, between the rivalry for food in nature and the rivalry for

[1] *Mental Evolution in the Child and the Race*, pp. 5–6.

[2] Höfding: *loc. cit.*, Chap. III., especially pp. 72, 73, 75, 77, 85.

[3] Quoted by Romanes: *Mental Evolution in Man*, p. 207.

man's selection, was too recondite to have occurred to any but exceptional minds."[1] Intellectual growth, therefore, involves as one of its elements development of the power to detect similarities and to associate by means of them. But this process does not at the outset demand subjective recognition and direction by a self or personality. Romanes maintains that language and judgment may be developed in a child far beyond animal signs and receptual thought before he reaches the stage of differentiation between subject and object; that there is consciousness but not self-consciousness.[2]

Another distinction between animal and child is in the nature of their speech. At first in both it is "receptual," or by "contiguous association." The animal never passes this point, but the child gradually abstracts the idea of sign as sign and applies it intentionally. "This general purpose constitutes," in James' opinion, "the peculiarity of human speech, and explains its prodigious development."[3]

The ability to associate by similarity and the exercise of intention are the germs from which have developed—in correlation with the other mental functions—the marvelous power of human reason purposefully applied to the problems of life. It remains to show that the development of intentional thinking is accompanied by an expansion or extension of self-consciousness. The higher achievements of thought are made under the guidance of a growing personality which gains constantly a clearer, more definite view of its own nature, its wider relations, and its own ends. Here again we must confine ourselves arbitrarily to the cognitive side of the growth, which, however, can be understood fully only in its organic relations with feeling and conation.

1 *Loc. cit.*, Vol. II., p. 360.

2 *Loc. cit.*, p. 194.

3 *Loc. cit.*, Vol. II., p. 356.

Mackenzie distinguishes five ways in which self may be conceived :

1. The unimportant and arbitrary sense in which anything that can be regarded as an individual may be said to have a self. *E. g.*, a river empties *itself* into the sea.[1]

2. Next, an object is said to have a self if it *must* be regarded as a whole in order to be understood. An organism must be so regarded.[2]

3. The meaning of the term becomes still deeper when the unity of an organic being attains to consciousness, *i. e.*, the parts are reflected into a focus where their relations to the external world register themselves, and where a reaction upon the external world begins. The central element in this form of consciousness seems to be the simple feeling of pleasure and pain, *i. e.*, the consciousness of the harmony or disharmony of the content of experience with the unity in which it is contained.[3]

4. A still higher stage is reached when "the organic being becomes actually conscious of itself *as a unity*, *i. e.*, the stage at which it reflects upon its own life, and recognizes itself as one throughout all its changes." In this stage happiness as an ideal which sees wider relations takes the place of pleasure which is concerned merely with immediate gratification.[4]

5. Finally, man comes to realize not only that "his life is for him a whole, but also in the sense that his world is a whole. He is aware of his individual life not as a microcosm in a chaos, but as a microcosm in macrocosm, to the objective unity of which his individual life as well as everything else is referred."[5]

[1] *An Introduction to Social Philosophy*, p. 161.
[2] *Ibid.*, p. 162.
[3] *Ibid.*, p. 163.
[4] *Ibid.*, p. 164.
[5] *Ibid.*, p. 165.

Corresponding to these stages of developing self-consciousness are certain problems which human thought must successively attack. Here we should note the transition from those gropings and feelings after explanations which have been noted in children to the purposeful examination and reflection of adult life. The demand for pleasurable feeling requires a thinking out of the means by which it is secured, *i. e.*, a preliminary understanding of the laws of the physical world. Further experience and the recognition of happiness as a more remote ideal are accompanied by the rationalizing of subjective as well as objective phenomena. The immediate pleasure of interest in intellectual activity prepares materials for further reflection. Finally, the fuller recognition of self demands a conscious effort to formulate more definitely an end which the self may purposefully seek. The ideal can be formed only out of the materials of past reflection which are organized into a conception of social life as a whole to which the individual self is intrinsically related.

If we turn from the individual to the social mind, we observe that the latter is characterized not only by analysis and synthesis, by abstraction and generalization, but by increasing definiteness of purpose, the at least vague recognition of a common aim and a collective struggle to attain it. Ward asserts that social personality was the original stimulus to individual self-consciousness. "Collective action for common ends is the essence of society, and in taking counsel together for the good of the tribe each one learns also to take counsel with himself for his own good on the whole; with the idea of the common weal arises the idea of happiness as distinct from momentary gratification."[1]

Professor Tufts has stated the parallel even more clearly:

[1] James Ward: *loc. cit.*, Vol. XX., p. 84.

"True it is that in individual and in society the early life is impulsive, unrelated, with little conscious unity of purpose, yet with language and religion and art, with industrial and intellectual coöperation, many a people has come to 'know what it wants,' and to act unitedly in order to get it." [1]

To sum up, it may be asserted that in their development social and individual thought agree since they begin with an indefinite whole or "presentation continuum," which is gradually differentiated and progressively integrated, at first instinctively but later with increasingly definite purpose in response to an even clearer perception of an ideal aim or end.

[1] *American Journal of Sociology*, January, 1896, p. 454.

CHAPTER IV.

THE SOCIAL MIND AND EDUCATION.

THE function of transmitting from one generation to the next the contents of the collective tradition has itself been characterized by increasing social self-consciousness. Beginning in the haphazard communication of empirical knowledge, dexterities, customs, and beliefs from parents to children, instruction has been more and more socialized and organized until in the great educational systems of modern nations societies purposefully seek to secure the orderly transmission and constant enrichment of the collective knowledge, feelings, and volitions, which, realized in individual consciousness, form the content of the social mind. In general, education may be regarded from the social point of view as a reflective effort to preserve the continuity and to secure the growth of the common tradition. Just as the successive states of consciousness in the individual form a coherent unity with which self or personality is associated, so society gains unity and self-consciousness from a well-organized and continuous collective tradition which therefore constitutes the essential vital principle of the social organism.[1] Since the social mind can exist only in the minds of individuals, society

[1] Fouillée has emphasized this view in application to a nation and its educational system: "Le nation est un organisme doué d'une certaine conscience collective, quoique non concentrée en un *moi;* nous considérons donc comme une forme d'hérédité et d'identité organique à travers les ages tout ce qui maintient chez un peuple une continuité de caractère, d'esprit, d'habitudes et d'aptitudes, en un mot, une conscience nationale et une volunté nationale. . . . A nos yeux, le but dernier de l'éducation est d'assurer non seulement le développement de la race, mais encore celui de la nationalité, de la Patrie."—*L'enseignement au point de vue national*, p. vii.

seeks its own perpetuation and advancement by preparing the young gradually to appropriate the collective tradition in general, and by training a few minds to receive and elaborate its various highly specialized divisions. Thus, though individuals are constantly dying and others are taking their places, the social tradition not only persists but is progressively analyzed and synthesized, growing ever deeper and richer in truth, æsthetic and moral feeling, ideals, and aims. Education seeks, therefore, to relate individual consciousness intrinsically to the social mind.[1] The social organism is in final analysis a psychic organism.

It is usual to contrast the social and individual aspects of education, often as though they were quite distinct and even antagonistic points of view. While society is chiefly concerned with socializing the pupil, the latter is supposed to gain most from a "development of his powers." We have noted in a previous chapter the predominant influence of the collective mind upon individual consciousness. The so-called "powers" or activities of the mind are simply abstractions from concrete states of consciousness. These latter have a social content. "There is no individual man," says Professor Tufts, "for ethics, for psychology, for logic, or for sociology, except by abstraction —that is if by individual man we mean a being not influenced by social forces—nor are there any feelings, thoughts, or volitions in any man which are independent of such forces."[2] In other words, the individual can exercise his powers only upon social materials, and in attempting to secure for himself discipline he appropriates in some measure the social tradition and may be the means of its transmission and further elaboration.[3] The essen-

[1] Mackenzie: *Introduction to Social Philosophy*, p. 180.

[2] *American Journal of Sociology*, January, 1896, p. 455.

[3] This is not to deny that there are disciplines which are of much more remote social value than others.

tially social nature of education is being more and more fully recognized. The Culture Epoch theory, at which we just now glanced, is an illustration in point. Even Dr. William T. Harris, who is naturally and properly interested in the psychological side of education, has emphatically declared that a fundamental educational philosophy must be based not on physiology or even on psychology, but on sociology.[1] If we regard the content of consciousness, the individual is almost an abstraction. It is the thought of humanity which he thinks.[2] "It is only through the development of the whole race that any one man can develop."[3]

The harmonizing of the supposed antithesis between individual and social education has been admirably stated by Guyau in these words: "Pedagogy might be defined as the art of adapting new generations to those conditions of life which are the most intensive and fruitful for the individual and the species. It has been asked if the object of education is individual or social; it is simultaneously individual and social; it is, to speak accurately, the search for means to bring the most intensive individual existence into harmony with the most extensive social life."[4] The individual realizes his own possibilities by

1 *Educational Review*, June, 1893.

2 "How much more do we experience when we travel through ancient Egypt with Herodotus, when we stroll through the streets of Pompeii, when we carry ourselves back to the gloomy period of the crusades, or to the golden age of Italian art, now making the acquaintance of a physician of Molière, and now that of a Diderot or of a D'Alembert. What a great part of the life of others, of their character and their purpose, do we not absorb through poetry and music! . . . How great and comprehensive does self become in this conception; and how insignificant the person! Egoistical systems both of optimism and pessimism perish with their narrow standards of the import of intellectual life. We feel that the real pearls of life lie in the ever-changing contents of consciousness, and that the person is merely an indifferent symbolical thread on which they are strung."—Ernst Mack: *Popular Scientific Lectures* (tr. by McCormack), pp. 234–235.

3 Mackenzie: *loc. cit.*, p. 180.

4 *Education and Heredity* (tr. by W. J. Greenstreet), pp. xviii., xix.

incorporating in himself the achievements of the race and he contributes to social progress by modifying and improving in never so slight a way the tradition intrusted to him. But even this service cannot be well rendered in isolation. Only by purposeful coöperation are the best and most permanent results secured.

It has been shown that in a general way the social and the individual mind develop according to the same law—by analysis and synthesis, by the accumulation and organization of experience, and by the formation of ideals from instinctive, unconscious activities to reflective, purposeful, self-conscious efforts. The value of this theory depends upon the interpretation of it. The dangers involved in the application of this principle have been pointed out by Professor Dewey, who, while admitting the truth of the parallel "in a general way," insists that the ontogenetic series must be the determining factor with the educator. The phylogenetic series may and does serve a useful purpose in suggesting methods and in some measure materials of instruction, but the moment one attempts to assign anything like definite, corresponding stages in the two series, and to reason from one to the other, the probability is that the resulting educational system will be largely artificial and doctrinaire.[1]

The fallacy of relying in any specific way upon the phylogenetic series may be made clearer by reference to a theory already mentioned, which has recently been definitely stated by Baldwin. He asserts that by means of organically consolidated habit and accommodation, which may be perpetuated either through natural selection solely or through the transmission of acquired characters, certain organic "short-cuts" may be effected so that the individ-

[1] *Illinois State School Journal*, December, 1895. Reprinted in *Second Year Book of the Herbart Society*.

ual will omit in his own evolution certain elements or stages which were essential in the development of his ancestors.[1] This point is further illustrated by contrasting animals and men. In the case of the former, if higher centers of coördination be removed, in a short time the function will be resumed by a lower center, but in men, the connections having been established directly and not *via* the subordinate segments, the injury or removal of the chief directing apparatus results in a permanent loss of functional power.[2]

But there is still another though similar influence at work to modify the strict parallel. In adjustment to a changing environment, mental structure is being constantly accommodated or adapted. "By accommodation, with the new adaptations which it works, old habits are broken up and new coördinations are made which are more complex or new organic growths secured which simplify a function. These gains are again clenched by heredity or selection and constitute further variations from phylogeny."[3]

Baldwin also calls attention to the biological theory that the course of development of the embryo is dependent upon the amount of food, called "food yolk," which the egg supplies. It is asserted that a plentiful supply hastens progress toward maturity, *i. e.*, abbreviates the recapitulation process.[4] This theory of organic growth is interpreted in terms of mental life as follows: "Abundant food supply in the shape of lessons, rich suggestions in its social and educational life, urging forward in tasks of mind, etc., should give precocious mental development in the sense of early maturity of mind. The stages normally prescribed for natural growth may then be abbreviated.

1 *Mental Development in the Child and the Race* (2d Ed.), p. 20.

2 *Ibid.*, pp. 21–22.

3 *Ibid.*, p. 23.

4 *Ibid.*, p. 29.

The same effect is produced also by accidents of environment. Newsboys and street gamins become sharp and mentally agile to a phenomenal degree from their methods of life, while boys reared in the artificial seclusion and solitude of a single son, educated by a tutor in his father's house, show the contrary character."[1]

We are justified in assuming, therefore, that to organic modifications correspond certain psychical variations by which the individual escapes some of the stages through which his ancestors passed or through which the thinking of the race was compelled to develop. In view of these facts, we reaffirm that any system which regards the phylogenetic series as a norm to which the psychogenesis of the individual must conform in any definite, precise manner, must be regarded as arbitrary. Yet, on the other hand, the development of the race and that of the individual so clearly correspond in a general way that the facts of the social mind may by analogy suggest a more careful examination of the ontogenetic processes, and a consequent modification of educational methods. From the cognitive point of veiw, instruction ideally aims to incorporate in individual consciousness the social tradition as a generalized whole and some part of it in a specialized form. In this attempt, the educator fully recognizes the fact that consciousness is a growth, not a receptacle for information, that the subjective process is one of assimilation and organization, not merely of accretion or aggregation. Therefore, he supervises and directs phenomena of development, not those of manufacture. The aim is to have the pupil reach the highest intellectual and moral standpoint of the race in the briefest time and with the greatest economy of effort. This standpoint, however, is not that of mere information, nor of abstract "intellectual power," nor of

[1] *Ibid.*, pp. 32–33.

useful automatic conduct, but it involves knowledge incorporated in personality, an active organic growth possessing ability to assimilate new materials and advance to higher organization.

It has been said that education seeks to secure results in the briefest time and with the greatest economy of effort. The recapitulation theory in any form requires rapidity of individual development. Manifestly, even if all the phylogenetic stages are repeated, some of them must at best be merely suggested rather than actually reproduced. The difficulty of detecting the stages is obvious and any system dependent upon a discovery of them at all exact is evidently at a serious disadvantage.

Economy of effort implies coöperation with natural forces instead of opposition to them. It recognizes, *e. g.*, a development of consciousness and seeks in general to take advantage of its laws, not to attain an end apparently in violation of them. If, therefore, an educational theory be based upon detailed and complete recapitulation it can at best only urge the teacher to hasten on through some of the stages, but if it recognize the possibility of omitting stages altogether, it may advise purposeful "short-cuts" which neither waste time nor ignore principles of growth. From this point of view, the educational function may be described, though possibly not defined, as a purposeful social effort to effect "short-cuts" in the mental development of the individual as well as to hasten the whole process so that he may in the briefest time and in a thoroughly natural[1] way attain the standpoint of the race,

[1] This term "natural" is one to conjure with in educational theory. In one sense mental development will be natural (*i. e.*, in accordance with the fixed sequences and coexistences of psychological phenomena) in any event. Only the term supernatural can describe the opposite situation. But there are various degrees of resistance which mental processes offer to externally directed influences. Economy of effort, elimination of friction, following lines of least resistance, are phrases which express the idea that one plan is more "natural" than another.

i. e., be intrinsically related to the social tradition.

Dr. Paul has pointed out the service of language in enabling one individual to induce at once in the mind of another—who has the same sensuous or conceptual materials—an association which the former has spent a long time in organizing. "It is owing to this economy of labor and time to which one individual has assisted another, that the latter is in his turn in a position to employ the result of this economy to set up a further connection for which the first individual had no time at his disposal."[1] The educator methodically modifying the pupil's environment and, when language communication has been set up, through direct suggestion, aims systematically to control the presentations of the child's mind and to guide the activity of self in conscious association. In other words, from both the mechanical and volitional sides of the mind's operations influences of abridgment and omission are brought to bear.

The learning of language illustrates both the general parallel and the "short-cut" theories. It is true that the child unconsciously learns to speak. "And," says Paul, "the case is much the same with the period in the development of the human race which originally created language."[2] It is also a fact that the child employs denominations before verbs and later still applies modifying terms, moods, etc.[3] The advance from vagueness to definiteness of thought is objectified in language. In a general way, therefore, the process of individual growth in speech corresponds to the historical development of a language considered as a phylogenetic series. Again, as Spencer has pointed out, consciousness or reflection in

1 *Principles of Languages* (Strong's tr.), p. xl.

2 *Ibid.*, p. xlvi.

3 Sully: *Studies of Childhood*, pp. 170–182.

language, *i. e.*, the study of grammar, must follow its unconscious acquisition.[1] The confusion of the logical with the pedagogical order—so common in educational theory—has its classical illustration in Pestalozzi's plan—later abandoned by its author—of beginning with analytically simple but meaningless syllables which were subsequently to be combined into significant words.[2]

It is one thing to recognize and utilize this general correspondence, but quite another to assert complete and detailed recapitulation. The latter theory might be regarded as demanding instruction in archaic language forms —*e. g.*, the old plurals and verb-endings of early English. As a matter of fact, influences of inheritance and environment introduce factors which quite change the situation. It is asserted on the organic side that by "a child inheriting a direct tendency to respond to a visual stimulus with movements of the tongue and larynx would be saved the long course of development which has been necessary phylogenetically for the establishment of the direct connection now very generally held to exist between the visual and motor speech centers, with a corresponding saving on the mental side."[3]

From the objective side, moreover, the materials for imitation and the stimulating and varied suggestions[4] of a rich social environment induce a marvelous development of speech. The child of four or five, reared in a cultivated home, quickly and unconsciously acquires a vocabulary

[1] "In short, as grammar was made after language, so ought it to be taught after language; an influence which all who recognize the relationship between the evolution of the race and of the individual will see to be unavoidable."—*Education*, p. 106.

[2] *Wie Gertrud ihre Kinder lehrt* (tr. by Holland and Turner), pp. 90–95.

[3] Baldwin: *Mental Development*, p. 26.

[4] For an interesting discussion of the rôle of suggestion in education cf. Guyau: *Education and Heredity* (tr. by W. J. Greenstreet), pp. 12–45; Felix Thomas: *La suggestion: son rôle dans l'éducation;* and Baldwin: *loc. cit.*, 109-169.

and power of expression which is often a source of surprise even to parents. In so far as such acquisitions are chiefly the result of imitation, social approval of others, or mere subjective pleasure in rhythms of speech, they are to be deprecated as predominantly verbal, but when they are fairly well coördinated with mental images developed out of perceptions, they stand for genuine "short-cuts" in mental development and organic habits. So much by way of illustrating the respective functions of the two theories which merge into one. The recapitulation aspect emphasizes what the older education did not recognize, at least with clear consciousness, viz., that instruction cannot simply effect one great "short-cut," but must direct a process of growth. On the other hand, the "short-cut" theory points out the danger of underestimating the possibilities of rapid, abbreviated development, and providing for "stages" which have disappeared from the ontogenetic series. Both views may be carried to extremes. Their synthesis represents education as recognizing the general parallel of individual and race development, but as also consciously seeking to take advantage of all "short-cuts" for the sake both of the unit and of society.

In the light of this synthesis, the so-called inductive and deductive forms of reasoning assume new meaning. Professor Dewey has shown that the distinction between these two processes is one of direction rather than of essential nature. Both connect the universal with the particular. One starts with the particular and relates it to the universal, the other imposes the universal on the particular. In either case knowledge is the result.[1] But even though the results are similar the processes differ in their demands upon self-activity and in the time which they require. Inductive reasoning implies experience,

1 *Psychology*, pp. 224-225.

examination of details, association by similarity, and, finally, generalization. An induction is a result of growth. Deduction, on the other hand, starts from the general or universal and by association and dissociation subsumes or interprets the particular. Although the processes are analytically distinguished they really involve each other. The emphasis, however, is laid now on one, now on the other.

In education induction is advocated by those who recognize the ontogenetic and phylogenetic parallelism. Just as the race reached its generalizations from a mass of empirical observations, so the child must gradually advance through his own activity from particulars to universals. The *Emile*[1] insists upon this order of "nature," and Spencer's *Education*[2] is largely influenced by the same idea.

On the other hand, the "short-cut" theory in its extreme form relies upon deduction. It would save the time consumed in reaching generalizations. These, formulated by the race, should be transferred at once to the individual in order that society may advance in knowledge.[3]

Here we are confronted again by the old antithesis. Individual development demands gradual growth through induction; social welfare requires the rapid communication of the collective tradition through deduction. Once

1 Payne's translation, pp. 134-139.

2 Pp. 124-125.

3 This does not mean that "short-cuts" are confined to deduction. By guidance and the conscious modification of the environment the processes of induction may be greatly abridged.

Tarde's theory of the social syllogism is applicable here. In his view, the knowledge, judgments, and decisions of the race form major premises, *i. e.*, general scientific principles, maxims, rules of conduct, etc. The major premises are imposed upon individuals who supply out of personal experiences the minor premises and hence reach conclusions. All conduct, therefore, is the resultant of generalized race experience and individual applications. Society seeks to extend these majors as quickly as possible to all individuals.—*La logique sociale*, pp. 53-61.

more we may reconcile these apparently antagonistic theories by asserting that together they are able to satisfy the requirements for both genetic development and for "short-cuts."[1] In the earlier period chief emphasis may be laid on induction, but with the growth of self-activity and consciousness, deductive "short-cuts" may be economically introduced.[2]

Assuming, then, that for the first few years of childhood the inductive process must in the nature of things predominate, we may ask what problem first confronts the teacher. To introduce formal studies would be to impose deduction. As we have seen, it has required centuries of thinking by the race to elaborate these divisions of the social tradition. Here the phylogenetic series suggests that the vague unity of primitive man's environment corresponds to the undifferentiated presentation continuum of the infant. Both have to be analyzed and synthesized into more and more definite details and ever higher unities. The original unity is social life, even though it be merely

[1] Prof. W. N. Hailman has elaborated this idea in a paper on *Organic Relations of Studies in Human Development*, in which he distinguishes "developing instruction" and "didactic instruction," and discusses the function of each. The former he recommends for the earlier period, while he would put chief reliance on the second for the later stages of grammar and high school.—Reprint from Proceedings of the Jacksonville Conference on Superintendence, pp. 10–13.

[2] Lester F. Ward urges the deductive or "short-cut" theory in these words: "The idea that children in this enlightened age must go back to the ages of barbarism and grope along as their ancestors were compelled to do for crumbs of knowledge, that they must be allowed to get all kinds of errors into their minds along with a few truths because this was the method by which the primitive man first acquired ideas, . . . this entire scheme for converting education into a sort of social *ontogenesis* is false in principle, is not supported by any proper interpretation of the teachings of science, and is directly opposed to those furnished by every progressive step in the civilization of the race.

"Nothing is calculated more forcibly to impress upon us the conviction that the mass of mankind must get their knowledge through instruction and not through experience, nor yet through personal observation and research, than to note how such great minds as those of Copernicus, Kepler, Galileo, Bacon, and Newton groped about in darkness and doubt respecting the questions of planetary revolution, tides, gravitation, light, etc., with which every schoolboy is now familiar."—*Dynamic Sociology*, Vol. II., pp. 628–629.

the microcosm of the nursery or the family circle. This presentation continuum and the potential activity of the child are the factors out of which gradually by action and reaction are evolved a universe and a self-conscious personality.[1] The stimulus of sensations arouses the activity of self, which, little by little, acquires experience and progressively interprets and reinterprets the objective world, gaining at the same time clearer knowledge of its own nature. Yet at the basis of all this mental activity lie sensations, actual physically mediated raw materials out of which the products of thought are elaborated.[2] Sensations are wholly individual facts. They may be in a large measure controlled by artificial external arrangements, but they cannot be dispensed with. Each individual must therefore work over, interpret, and assimilate his own sensations.[3] Clearness can come only from differentiation. Education, or rather instruction, has for its primary task not the teaching of subjects but the formation of subjects or studies in the pupil's consciousness. It must help him to take apart the vague unity of his life, to associate, dissociate, identify, and discriminate as he forms ideal groups and makes generalizations. It is only when this process has been carried to a certain point that the idea of studies and disciplines, evolved out of race experience, can be assimilated by the self. Verbal memory may deceive the superficial observer in this regard, but the laws of thought cannot be violated. It is in recognition of this principle that the new primary education purposely avoids prematurely superimposing the logical differentiations of the social mind upon its pupils, but rather seeks to aid them in reaching by their own efforts

1 Dewey: *Psychology*, pp. 4 and 5.

2 *Ibid.*, p. 81.

3 Preyer: *Infant Mind* (tr. by Brown), pp. 66–69.

the idea of division and classification. With the further development of self-consciousness the conception of studies is readily assimilated and the whole self, vigorous from its earlier activities, reacts effectively and economically upon new materials, more than making up for the time apparently "lost" during the period of predominant sensation and spontaneous discovery.

The function of interest in education is being more and more clearly perceived. Under its influence the organization and interpretation of sense-impressions goes on rapidly in the earlier years. Childish interest concerns itself not with abstract or formal pursuits which imply a relatively considerable development of self-consciousness, but rather with the immediate concrete facts of the environment, with daily life. In seeking to find expression for its own activity the child gradually associates and generalizes these phenomena, utilizing this knowledge for its own purposes. It speaks without consciousness of language, counts with no thought of mathematics; walks, works, builds houses, dams rivulets in complete ignorance of mechanics and physics; watches birds and gathers flowers with never a notion that these are kinds of knowledge labeled ornithology and botany. For him life is a whole, a vague and indefinite unity, which he daily takes apart and puts together, gradually reading into it a deeper meaning as he perceives wider relations of likeness and sharper degrees of difference. It usually happens at about the period when this world unity is just beginning to display more or less clearly defined parts that the child is sent to school where subjects are thrust upon him and his universe divided up into study periods and text-books. Then life is taken apart indeed and happy is the pupil who can perceive some vague connection between the things he has loved out of doors and the subjects which he pursues in the

schoolroom.[1] This critical period during which the transition from spontaneous discrimination to logical division takes place has been too much neglected. Object lessons and observation classes have by no means solved the problem. Here it is that the theory of parallelism may render service by at least compelling the "short-cut" process to prove that conditions are ripe for the introduction of the latter. The gradual development of consciousness is also a factor to be considered. Only as the self becomes more definitely aware of its own activity in relation to the objective world of things and men, and gains fixity of purpose can it really grasp the more abstract and systematic forms of thought.

The very fact of growth, therefore, demands that this transition from vague unity to logical partition, from unconscious interest to self-determining effort, should extend over a long period and be achieved gradually and naturally. Attempts to force the process may result in apparent success, but only at a real ultimate sacrifice. The facile use of words without ideas is the clatter of machinery in a factory in which raw materials are scanty and poor. There may be sounds of activity, but the product will be disappointing. So the premature forcing of formal instruction to the neglect of sense-impressions and their spontaneous elaboration is barren in its results. It violates the laws of ontogenesis in an effort unduly to hasten the pupil's development toward the maturity of the race.

The task of differentiation then is the primary undertaking of instruction. The pupil begins, as we have already

1 "The young child *feels* the oneness of nature and of life. 'The nursery is the place where study is most general and universal' (President Hyde). To the six-year-old pupil the division of study into subjects has only just begun. Zoölogy, botany, meteorology, geology, agriculture, horticulture, astronomy, etc., all commence in the undifferentiated form of nature study."—Herman T. Lukens: "The Correlation of Studies," *Educational Review*, November, 1895.

insisted, with life as a whole, an indefinite unity out of which logical divisions are gradually to be discriminated, until differences are clearly apprehended. Then these are to be recombined ultimately into a deeper and richer conception or philosophy of the nature and end of society. In over-eagerness to impress the child with the varied elements of knowledge education has sought in the past and is still attempting to superimpose an already specialized curriculum instead of helping the child gradually to differentiate the environment for himself. In the latter way the transition may be made naturally and easily as a result of the pupil's own activity. In describing the relation of analysis and synthesis Professor Dewey says: "The analytic recognition of separate elements is a later process. Psychologically, the synthesis precedes analysis."[1] The mistake has been made of trying prematurely to force a logical analysis and of neglecting synthesis altogether. The child not only suffers from this artificial process of division, but in his own instinctive efforts to preserve his personality performs alone and unaided the acts of synthesis with great waste of energy and distraction of mind.

The danger arising from forced analysis and the mental isolation of elements or studies has not escaped the attention of educators. Plans for concentration, coördination, and correlation have been advanced with the aim of correcting the evils involved in breaking up the unity of life and thought into separated fragments. "Bring all things essentially related to each other to that connection in your mind which they have in nature,"[2] wrote Pestalozzi. Yet this might be regarded as aiming at an ultimate or philosophical unity—the end rather than the beginning or middle of the process.

[1] *Psychology*, p. 99.

[2] *Wie Gertrud ihre Kinder lehrt*, p. 78.

Herbart insisted that the threads of thought (*Gedankenfäden*) should be spun into a single cord, instead of being isolated in the mind by an arbitrary and artificial educational system which at the stroke of the bell introduces a new and unrelated subject.[1]

Ziller, like Herbart, laid stress upon the ethical value of unified thought.[2] Rein also points out that the person is a developing entity, that the ego does not originally possess unity but attains it in so far as the circle of thought is organized, not disconnected.[3] The synthetic activity of the youthful mind cannot be relied upon to establish connections spontaneously between manifold and varied ideas. Instruction must specifically aim therefore to aid the pupil in attaining unity of consciousness, which is the primitive foundation of character.[4] The idea that synthesis must accompany analysis in the normal development of thought has been carefully worked out in different systems to which the names concentration, correlation, and coördination have been applied.[5] We are concerned not so much with the details of these plans as to discover whether they have anything in common aside from the very general theory already indicated.

Concentration, which may be regarded as the original Herbartian proposal, demands the subordination of various pursuits to one or more studies or "centers." Rein distinguishes two spheres of knowledge: (1) Life of Man, and (2) Life of Nature, or culture studies and science

1 *Psychologie*, 2ten Teil.

2 "Durch Konzentration sorgt der Erziehungs-unterricht immer für das Dasein und die Erhaltung der Einheit des Bewussteins, d. h., der Persönlichkeit, bei dem Zöglinge, und das ist eine wesentliche Voraussetzung für Sittlichkeit und Glauben."—*Allgemeine Pädagogik.*

3 *Outlines of Pedagogics* (tr. by C. C. and I. J. Van Liew), p. 103.

4 *Ibid.*, p. 104.

5 Cf. article by H. T. Lukens on "The Correlation of Studies," *Educational Review*, November, 1895.

studies. They are to be related by means of geography primarily and the second group is to be subordinated to the first. Both are designed to educate the will of the pupil who "must acquire (1) an understanding of the limitations and aids that are based upon the ethical ideas, (2) an understanding of the limitations and aids that depend upon the relations of things in nature."[1] In other words, the pupil brings these two groups as aids in interpreting life. Other Herbartians insist upon regarding certain studies as themselves "centers" of concentration to which the remainder of the subjects must be related. F. A. McMurray, a prominent representative of this view, holds that literature in the earlier years and history in the upper grades are the real centers to which the whole curriculum must be adjusted. It is somewhat difficult to conceive of any study—an abstraction—as having an apparently objective existence in the sense that other subjects are related to it. This is to speak legitimately enough but nevertheless in figures. We recall the protest of Dr. Paul against the notion that parts of the "social mind" react upon each other.[2] All relating of ideas is effected in individual consciousness. Professor McMurray would surely admit that he uses the terms figuratively to describe processes which take place in the pupil's mind. Moreover, some misapprehension may arise from the application of the term "study" to any arbitrary group which has been formed for purposes of classification or instruction. There is a vast difference between an analytic study like physics and a synthetic study such as literature. Literature is in one view a social product, a reaction of an individual representing social forces against an environment of nature and man ; it is a reproduction or idealization of

[1] *Outlines of Pedagogics* (tr. by C. C. and I. J. Van Liew), p. 113.

[2] *Supra*, p. 68.

life in some of its manifold aspects. History is a more reflective picture of society conceived as developing in time. To assert, therefore, that literature and history are centers of concentration is simply to declare indirectly that social life is the external unity to which the self-active personality is all the while adjusting itself. In other words, there must be constant return to the center, the presentation continuum out of which studies have been differentiated.

Another plan may be described as coördination. This regards studies as naturally forming themselves into groups or "cores," no one of which is subordinate to the rest. All are of equal importance and coöperate to produce a symmetrical "circle of thought." President DeGarmo stands for this scheme. He proposes three groups: (1) the humanistic, having an ethical content in literature and history, (2) the nature group, and (3) the economic, dealing with man and nature in interaction.[1] These three "cores" are described as lying parallel and somewhat independent. They may be coördinated by means of reading in the form of literature or, better still, by geography, which in its three forms, political, physical, and commercial, constitutes a bond of unity. The latter phase, indeed, gives the pupil "not only . . . an enlarged conception of his own place and function in the world, but he learns practically the great ethical lesson that every part of the world, and every man in every part, is trying to serve self through service to others."[2] Clearly the attempt to combine knowledge of man, of nature, and of man in reaction with nature, is a recognition of the unity of social life, an effort to put back the elements of analysis into a more complete conception of reality. The

[1] *Herbart and the Herbartians*, p. 243.

[2] *Ibid*, p. 255.

real "core" then is life, the point of departure for all studies, the center to which all return with their constantly increasing contributions.

The Report of the Committee of Fifteen on "The Correlation of Studies" is disappointing in that it offers no very definite plan. Its proposal has been described as "interrelation of studies."[1] Yet on the whole it emphasizes the social aspect of education in a marked way. "In a word," reads the report, "the chief consideration to which all others are to be subordinated, in the opinion of your committee, is this requirement of the civilization into which the child is born, as determining not only what he shall study in school, but what habits and customs he shall be taught in the family before the school age arrives; as well as that he shall acquire a skilled acquaintance with some one of a definite series of trades, professions, or vocations in the years that follow school; and furthermore, that this question of the relation of the pupil to his civilization determines what political duties he shall assume and what religious faith or spiritual aspirations shall be adopted for the conduct of his life."[2] The report regards language as forming the center of instruction in the elementary school, but urges that more stress be laid on the meaning of words and recommends the use of literary selections which "portray situations of the soul or scenes of life or elaborated reflections."[3] That is, which help the child to interpret himself and his environment, by bringing all he learns to bear upon life. Geography is also regarded as extremely useful. Its study should begin with the pupil's immediate environment and thence work out into wider relations. The "predominance of the human feature in a

1 H. T. Lukens: "Correlation of Studies," *Educational Review*, November, 1895.

2 Report of the Committee of Fifteen on "The Correlation of Studies" (annotated by George P. Brown), p. 5.

3 *Ibid.*, p. 13.

study ostensibly relating to physical nature" is considered "necessary and entirely justifiable."[1] This pursuit is further defended as affording opportunities to study differences in climate and products, the unifying function of commercial intercourse, and as impressing the youthful mind with the law of economic and social interdependence.

Still another scheme is that of Colonel Parker, who regards the child as the center on whom the various sciences, conceived in a somewhat Comtean hierarchy, converge.[2] McMurray has made the point that to call the child the center is either meaningless or a truism. He would regard a study such as literature or history as the center.[3] But we have already seen that this is an indirect approach to the view of social life as the real objective unity to which the self is related by its own activity. Colonel Parker's theory is therefore only another way of saying that all studies must be related and unified in the pupil's consciousness, *i. e.*, must be transformed from elements of analysis into a synthesis which will present a more definite conception of life.

In a recent article on the "Correlation of Science and History," Prof. W. S. Jackman has contended for a theory which is closely related to the present discussion. "The pupil's relations to his own community life," he declares, "are the basis for history, as his relations to his immediate physical environment are the basis for science. No correlation of the two subjects is possible if in science the children are to live in the present and in history they are to dwell in the past. *Immediate life for immediate purposes* must be the motto for both."[4] In other words,

[1] *Ibid.*, pp. 28–29.

[2] *Talks on Pedagogics*, Diagram and Chapter I.

[3] F. A. McMurray: *First Herbartian Year Book*, p. 50.

[4] *Educational Review*, May, 1895.

to reiterate our position, the present social environment, including man, nature, and these two factors in interaction, is the unity which the pupil must gradually differentiate into classes of phenomena. This environment becomes thus the point of departure for mental excursions in both time and space. The difficulty at first is in enabling the young mind to form these classes, to leave the immediate here and now. When once this has been accomplished, however, quite another problem presents itself, namely, how are these classes to be combined and interrelated? All attempts to meet this last difficulty resolve themselves, as we have seen, in spite of differences of detail, into an effort to restore the abstracted factors to their places in the community life of which the pupil is an organic part.

Before leaving this subject it is important to discriminate between the unity of life as it appears to the young mind and the ultimate systematized and philosophical conception of mature thought. Colonel Parker's plan of concentration has been criticised as requiring a philosopher as a teacher and a child philosopher as a pupil. Whether this be just or not in the circumstances, it calls attention to the danger of attempting to force prematurely a philosophical conception upon a young mind. As the self develops and becomes conscious of sustaining wider and wider relations to nature and men, the conception of the objective world grows from a vague blank whole, and finally should attain a highly differentiated yet closely integrated unity. Between these extremes are many causally related stages of development. It is impossible for the pupil to be conscious of the final end, but the educator must see to it that each stage of growth is a step toward that end. The ideal teacher should be a philosopher and consciously, purposefully stimulate and guide the development of the pupil into a philosopher.

This philosophical conception as an ideal in the higher education has been vaguely recognized but as yet no one has proposed a definite scheme for what may be described, not as the correlation but as the integration of studies. The service which modern social philosophy may render in unifying the higher education remains to be discussed in our final chapter.

CHAPTER V.

THE INTEGRATION OF STUDIES.

"I AIM," says one of our prominent American scholars, "to keep one truth before the student, viz.: that he cannot leave out of the consideration those problems and convictions which belong to philosophy without overlooking that spiritual bond without which our science is a fragmentary thing and life can have neither wisely chosen ideals, nor a rational faith to support and strengthen it."[1] Dr. William T. Harris long ago insisted that philosophical studies should be a required part of the college curriculum, that they should be introduced early as an organizing, unifying influence and continued uninterruptedly to the end of the course.[2] It is not difficult to trace his thought also in such allusions in the Report of the Committee of Fifteen as that to "a deeper correlation such as is found in all parts of human learning by the studies of the college and university." The Greeks have given us the ideal of philosophy as a whole which is interpreted for our generation in these words :[3]

"There is no such thing as intellectual isolation. The worker in each domain should cultivate the power of viewing knowledge as a whole and of discovering the bond of unity between the several parts. From one department of learning, light is flashed back in unexpected ways upon another, and studies which have long seemed unrelated recognize one another on a sudden as

1 Quoted from a private letter in an article by A. C. Armstrong, "Philosophy in American Colleges," *Educational Review*, January, 1897.

2 *Nineteenth Annual Report of the Board of Directors of the St. Louis Public Schools* (1872–73), p. 80.

3 Ed. annotated by George P. Brown, p. 57.

sister sciences. . . . We must strive in the multiplicity of sciences to apprehend the common principles of knowledge, and to keep the parts in just subordination to the conception of the whole."[1]

For several years an interesting educational experiment has been in progress in the "Edinburgh Summer School of Art and Science," of which Professor Patrick Geddes is the head. From the very first the attempt has been "to work toward an educational synthesis—an organization of knowledge—and this not merely theoretically but practically considered."[2] This summer meeting is declared to express a growing effort to bring together specialists of various kinds who are in sympathy with each other and with a general aim toward order and synthesis of knowledge.[3] "Ideas must be orchestrated and not exist as innumerable solos"[4] strikes the keynote of this ideal.

From the New University of Brussels comes a similar theory: "Toute education," declares De Greef, "doit . . . recevoir son courronnement moral, social, philosophique; tout homme, en un mot, doit se former finalement un conception synthetique et rationelle du monde physique, moral et social, c'est-à-dire philosophie."[5]

Fouillée urges a reorganization of higher education in France as necessary to the preservation of the national genius. He deprecates the conflicts and antagonisms between the so-called humanities on the one hand and the natural sciences on the other,[6] and he strenuously demands the recognition of philosophical and social studies as the means by which harmony may be established among

1 S. H. Butcher: *Some Aspects of the Greek Genius*, 2d Ed., p. 243.

2 Prospectus of the Fifth Session of a Summer School of Art and Science (1891), p. 5.

3 *The Interpreter*, August 4, 1896.

4 *Ibid.*, August 5.

5 *L'enseignement intégral et la philosophie positive*, p. 27.

6 *L'enseignement au point de vue national*, p. x.

the various pursuits. These synthetic studies ought, he declares, "vivifier ainsi l'organisme tout entier."[1]

Citations need not be multiplied to prove that there is a more or less widespread conviction that in some fashion the higher education should exercise a unifying function and put its students in the way of looking at knowledge as a whole. Yet just how this shall be done is a very different matter. The moment men begin to put a content into this purely formal principle, the condition of educational aims and ideals seems at once to be chaotic. Literature, language, history, psychology, ethics, theology, the history of philosophy, political economy are variously urged as the pursuits best adapted to the purpose. While at first thought the very number of these solutions gives the impression of almost hopeless disagreement, further consideration discloses the fact that there is unconscious groping toward essentially the same ideal. The task of those who are interested in the higher education — in liberal studies — is to bring this common purpose into social consciousness, that is, to give it greater precision and to show how the various pursuits stand related to it.

To discuss one division of the curriculum apart from the rest is more or less to make abstraction. We have, however, traced the influences which are at work to maintain in natural unity in the pupil's consciousness the studies of the elementary school, and we have noted a similar effort in secondary education, so that in examining the college course we are not wholly neglecting its relation to the rest of the system. It is assumed that those who enter higher educational institutions will have been prepared in some measure to look at things in a consciously synthetic way.

It will aid us in approaching the subject to recall the demands which society may be conceived as making upon

[1] *Ibid.*, p. 365.

the individual through the process of education. These may be enumerated as :

1. A demand that the individual exercise and develop his capacities to such an extent that he shall be able to "see straight and clear; to compare and infer; to make an accurate record; to remember; to express thought with precision,"[1] and to have the body under conscious control.

2. That by means of language and other symbols the individual incorporate in his consciousness, so far as may be, the most general knowledge of his race, his nation, and his community.

3. That the individual possess himself in the fullest way of some part of the social tradition, either rational and æsthetic knowledge or manual dexterity or technical skill.

4. That the individual contribute something by way of rectifying or enriching the collective inheritance of knowledge, skill, taste, and ethical idealism.

5. That the individual recombine and elevate in his own personality the deepest truths and best ideals of the race and nation in such a way that his conduct may be both wise and ethical, *i. e.*, in harmony with the best interests of society and of his own nature.

Such in general terms are the formal ends of education thought of as a social function, performed not by the school alone, but by the family, the church, the state, social intercourse, and industrial institutions in coöperation with the more specifically recognized educational system.[2]

In examining any one of these agencies it is proper to test its methods by the criteria outlined above, bearing in

[1] President Charles Eliot: "The Unity of Educational Reform," *The Educational Review*, October, 1894.

[2] W. T. Harris: *Report of the Commissioner of Education*, 1892–93, Vol. II., p. 1460.

mind, however, that the work of one part is intimately, organically related to the services rendered by all the rest, and that at different stages in the process or with different institutions more stress is to be laid on some one requirement than upon the others.

When it was just now intimated that the higher curriculum—the regular college course—still awaits a genuinely purposeful organization, there was no intention to imply that theories of what the course of study should be have not been plentiful. On the contrary, in Tarde's phrase, the whole subject is in the *multi-conscious* or possibly the *pluri-conscious* stage. It remains to advance it to a *uni-conscious* state.[1]

The many different conceptions of what the college curriculum should be vary with the emphasis which is laid upon the five phases of the educational function. Thus those who are impressed with the social and individual importance of accurate observation and trustworthy reasoning, of precise communication, of prompt and energetic action in adjustment to the demands of life, insist upon regarding college studies as disciplines by means of which these habits and dexterities, mental and physical, may be formed, or, in popular terms, by which these powers may be developed and strengthened. This ideal is pushed so far at times that it seems to imply the possibility of developing power as a sort of abstract energy to be stored up and available at will. It might almost be inferred that power to do one thing can be easily drafted off for the performance of a very different task. The limitations of this theory have been pointed out by Professor Hinsdale: "... it is only in a limited sense that we can be said to have a store of mobilized mental power. In a sense men have percep-

[1] *Supra*, p. 19, note.

tions, memories, and imaginations rather than perception, memory, and imagination.''[1]

Again there are those who see vividly the importance of transmitting collective knowledge. They are led to prize information, concrete facts, and general laws as forming the essential basis of education. Mr. Lester F. Ward represents the knowledge theory in its most robust development. His principle is that "Everything that has been made known by man should be made known to all men. Not that every object, fact, and law of nature can be separately acquired, but that general laws embracing them all should be made known, through the knowledge of which these details are generally, though not specially, known.''[2] Since general laws become decreasingly trustworthy and definite with the increasing complexity of phenomena, it follows that the information theory makes large demands upon the natural sciences for such forms of knowledge, and upon the historical sciences for facts. There is a tendency also toward encyclopedic knowledge. It is urged that the student must collect all kinds of information, in all the great departments, and thus round out and make symmetrical his accumulated store. This way of regarding the higher education arises chiefly from a popular misconception of the importance of learning as contrasted with knowledge which has been "assimilated and transformed'' into organized personality.

Once more, to those who are impressed by the economies and triumphs of a division of mental labor, it seems of prime importance to discover at the earliest moment special individual aptitudes and to begin at once a systematic, continuous development of these peculiar abilities.

[1] B. A. Hinsdale: "The Dogma of Formal Culture," *Educational Review*, September, 1894.

[2] *Dynamic Sociology*, Vol. II., p. 622.

Ideal social schemes very generally include devices for finding these various kinds of talent and for putting them at the disposal of the commonwealth. In another view, the social mind seeks its own perpetuation by drafting into service individuals peculiarly fitted to be intrusted with its many different elements. This ideal has struggled for a deserved recognition in the college curriculum and is now firmly established under the elective system which in some measure at least is to be found in all institutions of higher education. Valuable as this theory is to the individual and to society it leads easily to an extreme which seems to sacrifice the individual to society. In reality it both warps the former and impairs the vigor and capacity of the latter. The menace of "premature specialization" has been proclaimed so vigorously—at times even hysterically—that no iteration is needed here.

The task of pursuing truth for its own sake, of critically examining and reorganizing the collective tradition, of adding to it new elements, appeals naturally to the ambition of the scholar. The systematizing of research among historical and literary materials, in the geological field and in the laboratory, has advanced with remarkable rapidity and has found a home in the university. It is not strange that university ideals have reacted upon the college curriculum and that research methods are urged as a part of the training which the college should afford. It is asserted that the habit of dealing with phenomena at first hand, of seeking only the exact truth, of relying on personal observation rather than upon the authority of others, is not only of great importance intellectually but ethically exerts a stimulating influence upon the life of the student.

Yet the "laboratory method" seems in some danger of becoming a fetish in itself, much as the "object lesson"

has in many cases come to be regarded as end rather than means.

Finally, there is a large class who demand of the higher education that its chief concern be the development of men and women who shall not simply garner a wide store of knowledge or acquire a special skill but take up into their lives, organize into their characters the greatest thoughts, the highest ideals, the noblest impulses of humanity.[1] Education is declared to be more than instruction, more than discipline, it is the incorporation in the individual of the loftiest aspirations of mankind,[2] and "in striving to advance the race toward the ideal, he is himself realizing that ideal in his own person."[3] Liberal studies are eulogized because they set the mind free from all narrowness and prejudice.[4] "Leave in traditional preëminence," said Lowell, "those arts that were rightly called liberal; those studies that kindle the imagination, and through it irradiate the reason; those studies that manumitted the modern mind."[5] Education thus conceived approaches the classical Greek formula of the true, the beautiful, and the good—a formula into which the race has been reading a deeper, fuller meaning.

In these five ways, then, from the social standpoint may

1 This does not involve a faculty psychology which discriminates arbitrarily between intellectual and emotional phenomena. The mind as a whole grows by establishing connections between old experiences and new. These connections may be predominantly intellectual, *i. e.*, a fact may be related to other facts in time and space, or it may also be connected with emotional experiences of the self. Education should consciously seek to establish a symmetrical system of associations by which knowledge may be completely not partially incorporated in personality.

2 "Man is activity of relating the ideal and the real; education in general is the development of man's powers to frame a noble ideal of life and to realize this ideal."—Anna Boynton Thompson: *Educational Review*, April, 1895, p. 359.

3 Joseph LeConte: "The Effect of the Theory of Evolution on Education," *Educational Review*, September, 1895.

4 G. T. Ladd: "Essentials of a Modern Liberal Education," *Educational Review*, October, 1895.

5 Harvard Anniversary Address.

education be regarded. Obviously methods will vary with the particular element which is emphasized. Yet a moment's consideration will show that these are but different aspects of the same thing, different functions of the same process. The unity of consciousness may be analyzed for convenience but the reality remains indivisible. True, one function may be exercised at the expense of others but not in isolation or independence. Mental discipline is gained only through the process of acquiring knowledge. Peculiar aptitudes cannot be cultivated without the exercise of intellectual power. Knowledge and skill once communicated or developed will be modified or enriched by individuality, be it in never so slight a way. The emotional and ethical life will depend upon the materials and organization of knowledge and in turn will react upon all the other functions. The problem of education therefore lies in an attempt to keep these various factors in relations of mutual coöperation and reinforcement.

Again these five elements are not to be thought of as coördinate but rather as assuming various positions of subordination to the last, which is regarded as the final end or purpose of education. Discipline, knowledge, specialization, contribution all become subordinate aims, each important in itself, but getting its full meaning only in relation to the others and to the ultimate end, *i. e.*, moral and social self-consciousness.

Once more, knowledge has a fundamental place among these various activities. Discipline, as we have seen, requires knowledge as a means to its development, specialization and contribution are also conditioned by knowledge, while sentiments and ideals are inseparably associated with it. It is evident, therefore, that upon the kind of knowledge which finds a place in the curriculum

will depend the successful achievement of both the subordinate aims and of the ultimate end.

In knowledge two things are implied—materials and organization. While in close analysis even the simplest notion or concept is an organization of sensations it is legitimate enough to speak of these primary products as materials which are constructed by classification and generalization into larger systems.

First of all, it is obvious that in the higher curriculum there must be a conscious isolation of studies, of the parts which have been analyzed out of accumulated experiences by the reflective thinking of the race. There is some danger that in higher education, as in elementary and secondary, the plea for unity may be misinterpreted into a demand for a vague, ill-defined mingling of all kinds of knowledge. Manifestly such a tendency would be retrogression rather than progress, disorganization instead of genuine unity. The integration of studies demands that these pursuits be definitely set off and unified within themselves in order that they may be further articulated into a larger whole. The Committee of Fifteen has admirably expressed this essential principle:

"There should be rigid isolation of the elements of each branch for the purpose of getting a clear conception of what is individual and peculiar in a special province of learning. Otherwise one will not gain from each its special contribution to the whole."[1]

An examination of studies discloses wide differences in the degrees to which they may be successfully isolated. Comte's division into abstract and concrete and Spencer's classification into abstract, abstract-concrete, and concrete are expressions of these variations. Here, too, the hierarchical order, which is of little value in the lower,

1 Report of the sub-committee on "The Correlation of Studies," Ed. annotated by G. P. Brown, p. 58.

unconscious stages of education, begins to have a meaning. Experience is now being reorganized on a reflective basis and studies must assume certain relations in a logical scheme. Hence mathematics and language, as instruments or tools of thought, and physics and chemistry as dealing with the general principles of force and matter, are capable of pretty definite isolation. They furnish subject matter for discipline of the mind, they make at least a preliminary test for special abilities, and they modify somewhat the student's general conception of the world.

Yet large fields of experience remain virtually unexplored in a systematic way. We have seen that the collective tradition has gradually been analyzed into phenomena of matter, life, mind, and society. In the old classification of studies the first two would be included in the natural sciences, the second two in the humanities. Since these elements have been analyzed out of human life it follows that they all are necessary to a complete view of reality. There is a substantial consensus of opinion that the higher education should have all the great departments represented in some measure in every curriculum.

Dr. Thomas Hill proposed before 1850 a hierarchy of the sciences as follows: (*a*) studies dealing with space and time—mathematics; (*b*) sciences of matter—physics, chemistry, biology, etc.; (*c*) historical studies—law, language, arts, trades; (*d*) psychological studies—ethics, æsthetics, mental philosophy; (*e*) religious studies—theology and natural religion.[1] At each stage in the curriculum, he declared, these five elements should always be represented.[2] Dr. Harris has long advocated what he describes as "keeping the five windows of the soul open

1 *The True Order of Studies*, p. 22.

2 *Ibid.*, pp. 159–163.

to the world." This theory was outlined in 1872 and has been restated in many articles. It is to be traced very clearly in the Report of the Committee of Fifteen. The division adopted is primarily into nature, and man or spirit. Nature is subdivided into : 1. Inorganic—mathematics, physics, and chemistry ; 2. Organic—physical geography, astronomy, botany, etc., and man into : 3. Theoretical or thinking power—logic, philosophy, philology ; 4. Practical or will power—civil history, social and political sciences ; 5. Æsthetic or art power—literature and art.[1] At all times, from the elementary school through the college, these five windows must be open.

Prof. George T. Ladd reduces the number of essential groups to three : 1. Language and literature ; 2. Mathematics and natural sciences ; 3. The soul of man, including the products of his reflective thinking.[2] This division is a little disappointing in its vagueness and yet it clearly includes the inorganic and organic spheres, the phenomena of mind, and in some measure the products of social life, *i. e.*, language, literature, philosophy. Even more general are the essentials announced by Butcher : "Literature, Art, and Science—these are the three chief disciplines by which man seeks to attain truth or strives after beauty ; and these departments are so inherently connected together as to form an ideal unity." It requires some ingenuity to read into literature, art, and science all the studies of the curriculum, yet the ideal of certain great departments as presenting necessary aspects of truth as a whole is clearly maintained.

It seems necessary to discriminate mathematics and language regarded as prerequisites of all mental prog-

1 *Nineteenth Annual Report of the Board of Directors of the St. Louis Public Schools*, 1872–73, p. 75.

2 "The Essentials of a Modern Liberal Education," *Educational Review*, October, 1895.

ress from studies which deal with concrete phenomena. Physics and chemistry, as we have seen, fall between. The latter, however, are to be grouped with the inorganic sciences rather than separately classified. We thus have five great divisions : I. The Formal Studies—mathematics and language (grammar and logic); II. Inorganic sciences ; III. Organic sciences ; IV. Sciences of mind—psychology, ethics, literary art, philosophy ; V. Social sciences—literature,[1] history, economics, political science, sociology.

But this primary grouping according to the objective nature of the phenomena has certain pedagogical disadvantages. It carries subdivision too far in the earlier groups and leaves the last too large. There is need for unification into subordinate divisions on the one hand and into minor sections on the other. Just as each science has its own philosophy, so groups of sciences have their unifying conceptions. Thus divisions II. and III. above may be combined into a philosophy of nature, division IV. becomes the philosophy of mind, and division V. the philosophy of society including (1) social products, literature, language (philology), law ; (2) the social process, economic, political, and social forces working in historical development.

1 The disposition of literature in this scheme presents a problem. Wundt in his *Methoden Lehre* (Div. IV., Chapter I.) asserts that while philology is plainly a social science, literature is, like painting and sculpture, a much more individual creation and is therefore more closely related to psychology than to sociology. Literature may, however, be regarded from two points of view, *i. e.*, it may be studied as to form or as to content. Thus Tennyson's poems or Shakespeare's plays may be looked at as creations of peculiar personalities; or a Churton Collins and countless commentators may seek in the past the materials which have been gathered from many sources and recombined in new forms or they may study the contemporary forces which have influenced the authors. In the first case the study is chiefly psychological, in the other predominantly social. It seems best therefore to place literature as form or art under the sciences of mind, and literature as content or as an historical growth under sciences of society. It is, of course, obvious that this, like almost all classifications, abstracts and separates parts of a unity.

It will be noticed at the first glance that these divisions arrange themselves in a certain logical order which, however, is not to be confused with the chronological order of instruction. The study of literature, for example, is not to be postponed until knowledge of nature and mind has been systematized. Nor is the study of history to await a mastery of all which precedes in the schedule. On the contrary, all these divisions should be represented, some of them simultaneously in the curriculum, and only gradually and naturally should the philosophic scheme into which the various pursuits fall be presented to the growing self-consciousness of the student. The final aim of higher instruction should be to aid the student to unify his knowledge. The integration of studies implies the definite formation and isolation of pursuits and the combination of them, first into subordinate systems which are afterward further combined into larger wholes, and these again into a higher final unity.

The student, therefore, should be required to pursue courses in each one of these great divisions for a sufficient time to enable him to understand the materials, methods, and aims, both of a particular study and of the group to which it is immediately related. That is, whether a student devote his time to physics, or to geology, or to botany, his attention should be consciously and systematically called to the philosophy of nature as a whole of intimately related parts. Or if he turn to psychology, he must not only enter into the spirit and methods of analyzing consciousness but he must be shown how on the one hand consciousness is related to nature through body and brain, and how on the other its activities are the sources of language, reasoning, ideals, literature, social institutions, etc. In a like manner the student of literature must see in the works of great authors not only the

creations of individual genius but the products of nature and mind in society working in interaction and giving expression to the thoughts and aspirations of the race. Language itself should be displayed as a social growth to be accounted for by physiological and psychical and social causes. History is no longer in our colleges a collection of dates and names and events, but is unified by the idea of uninterrupted sequence of cause and effect—in a development which includes concrete physical, mental, and social factors. Once more, social philosophy seeks to display the collective life as a process in which all elements of human knowledge find their coördination—in which the individual gets his meaning from the whole, receiving the heritage of the past and finding his highest happiness in transmitting it purified, enriched, and elevated to posterity. Finally this synthesis of studies should be related to the great cosmic ideal of a universe in which our natural and social system is only a subordinate part.

It remains to show how this ideal may be realized, in some measure at least, in the organization of the college curriculum. At the outset it will be well to indicate certain guiding principles, some of which have been implied in what has gone before.

1. The college course must be regarded as primarily designed to afford the student means for gaining a coherent view and high ideals of life. However important individuality and independence may be to university departments, in the college the students' best interests should be the supreme end and each department should coöperate with the rest in an intelligent, unified plan.

2. Continuous work in some one subject or small group of subjects is in perfect harmony with the first proposition and permits that development of special aptitudes which has been shown to be one of the demands

both of social progress and of individual self-realization.

3. Requirement in studies should be reduced to the minimum so far as *continuance* of a study is concerned, but should be employed chiefly to secure representation of the great departments and to insure attendance upon unifying courses on the philosophy of the natural sciences, social philosophy, literature, social ethics, and general philosophy. That is, the largest latitude in the choice of particular studies should be combined with a rigid insistence upon a conscious and systematic effort to display those studies in their wider relations.[1]

Much has been said in this chapter about synthesis, unification of knowledge, and the like. It remains to give a more definite meaning to these formal phrases. One might almost fancy that by some psychical loom the various threads of the special sciences and arts were to be woven into one great fabric, or, to change the figure, that these studies by a *tour de force* were to be held simultaneously before the mind's eye as if graphically displayed upon some mental chart. Mechanical analogy fails us and even biological conceptions are far from adequate.

The idea of growth, as we have seen, involves stages of development. What are the stages of mental growth which fall within the college period and what methods are appropriate to them? It is true that the whole period is one of self-consciousness on the student's part, yet there are various degrees of self-consciousness which must be

1 This thought has been admirably expressed by George S. Morris: " . . . in whatever department the special subject of his studies may lie, whether history, language, literature, or the physical and natural sciences, he [the student] should be expected to accompany his study of and research for particular truths and orders of truths, . . with the study of and the search for the truth, the universal truth to which all special orders of truths or 'sciences' and orders of 'science' are organically related; in which as in an universal organism they are all concretely one, 'members one of another,' and in the light of which alone each becomes complete."—*Methods of Teaching and Studying History* (a collection of essays by various authors), p. 152.

regarded. It is all very well to assure the college freshman that all knowledge is a great unified organism, but does that mean anything to him? We may assure him that the world is an orderly whole, but as it is presented to his senses, is it such? James states the case clearly:

"The real world as it is given at this moment is the sum total of all beings and events now. But can we think of such a sum? Can we realize for an instant what a cross-section of all existence at a definite point of time would be? While I talk and the flies buzz, a sea gull catches a fish at the mouth of the Amazon, a tree falls in the Adirondack wilderness, a man sneezes in Germany, a horse dies in Tartary, and twins are born in France. What does that mean? Does the contemporaneity of these events with each other and with a million more as disjointed as they form a rational bond between them, and unite them into anything that means for us a world? Yet just such a collateral contemporaneity, and nothing else, is the real order of the world. It is an order with which we have nothing to do but to get away from it as fast as possible. As I said, we break it; we break it into histories, we break it into arts, and we break it into sciences, and then we begin to feel at home."[1]

This process of breaking up the world has been in considerable measure accomplished by the college freshman and he is familiar with the idea of unification in the subsuming of many particulars under a general principle. So, too, he is able to follow the process by which subordinate principles are unified by a still more general law. The idea of the unity of nature is thus easily within his mental grasp early in his academic career. The exact sciences and those in which relatively precise general laws are discoverable lend themselves readily to organization.

As phenomena increase in complexity, however, general explanation becomes more difficult, the tax upon conscious attention is greatly increased, and the interest of the student cannot so surely be counted upon. Particular

1 *Psychology*, Vol. II., p. 635 (foot-note).

concrete events or problems attract notice and demand explanation. The idea of unity is gained from the discovery that on every phenomenon of daily life the various studies may be focussed to give luminous interpretation.

This synthetic habit of looking at problems is the very key to wisdom. Life may be described as the solution of a continuous series of problems. Success varies with the degree of ability with which these demands for interpretation and action are met. No skill of analysis alone will avail; there must be recombination into a concrete judgment. On the other hand, the decision which neglects important elements of analysis will fall short of real insight. Analysis and synthesis are organic parts of one process; each alone is an abstraction. Yet one may be developed at the expense of the other. In each science or study both are insisted upon, but in higher education, in the relations of studies to each other and to life conscious, systematic heed has been given to analysis while synthesis has been left for the most part to "natural maturity of judgment," "the gradual accumulation of experience," and more to the same purpose. There is here implied a confusion between a method of thought and the products of thinking. It is certainly true that other things being equal the concrete judgment of a youth will not be as wise as that of a mature man, but it may be that the former's method of reasoning is actually better. He lacks data, however, and his conclusion is faulty. The higher education is concerned not so much with getting formulated wisdom into consciousness as in developing the reasoning methods and mental attitude which will gradually achieve wisdom in response to the actual needs of life. Sage precepts may be mere unrelated information which has no real meaning for the self.

Maxims, like facts, may fill the mind with useless lumber.

The superior flexibility of an analytical alphabet as contrasted with a system of synthetic characters—represented in material form by movable types and the early wooden printing blocks respectively—is typical of all intellectual progress. Empirical and practical education sought to enforce by precept and discipline a fixed physical, intellectual, and moral character, to fit human beings to meet certain situations, to solve certain definite problems of industrial and social life. The experiences of the race in various concrete combinations were stereotyped as it were in human beings. Sciences were bodies of transmitted dogma, arts were customary ways of doing particular things, ethics was a mass of concrete maxims and rules.

Now all is being changed. Elements of analysis are prized because they involve possibilities of countless combinations for special unforeseen needs. With the increase of social complexity the tools of human thought must become more and more refined and adjustable. As social arrangements lose their rigidity and are rapidly modified, the individual, to resume the figure, must be a case of type rather than a stereotyped plate if he is to adapt himself to the changing demands of his environment. Each study isolated and mastered is an element of potential strength, but it becomes actually a power only in contributing to some concrete synthetic judgment which otherwise would lack completeness. The accumulation of many studies or much learning by a mind which is deficient in the habit of seeing things together is like a font of type in the hands of a bungling compositor.

The preliminary notions of unity in the more highly special facts of life therefore are to be gained from the interpretation of particular concrete phenomena which are seen to be parts of a vast plexus of events in orderly

relations of coexistence or sequence. Historical studies in combination with the natural sciences afford these conceptions of continuity and interdependence carried up into the complex facts of human life. Contemporary social problems challenge attention, emphasize the intricacy of society, and create a demand for some coherent view of human association.

Again, with a more exact knowledge of the laws of mind the student is prepared to reëxamine the concrete materials of history. Social facts are seen to group themselves into certain grand divisions and yet to be parts of a great unifying conception, that of a developing social life. In the light of this hypothesis much unrelated information accumulated during childhood and youth begins to assume organization. A preliminary order succeeds the chaos of mere haphazard experience. A way of looking at life, crude doubtless, yet coherent, thus begins consciously to take form in the student's mind. Valuable as this synthesis will prove to his mental development, it will be merely a stage of transition. Drawing its conceptions largely from the physical and biological sciences, it may give a false sense of definiteness and finality. The young mind is often attracted by such theories as those of Buckle with their explanations in terms of food supply and climate and aspect of nature. These hypotheses gratify the demand for unity and many times are welcomed. Or there may be a vague, instinctive resistance to these doctrines—a demand for a larger science and a rational sanction for an emotional repugnance.

Necessary perhaps as a stage of growth, a predominantly naturalistic way of looking at the world must be consciously broken up to admit more complex facts—facts of mind, "idea forces." The ideal element in social life finds its expression largely in literature which at the same time

reflects nature and man in mutual reaction. The presentation of great literary masterpieces as displaying the forces of mind at work in society has the double advantage of affording concrete material of inherent interest, and of setting up those emotional associations which are essential to the development of personality.

The provisional survey of society or social philosophy, thus broadened and enriched both by literary studies and collateral pursuits of one or more of the special social sciences, may next be more thoroughly organized; general principles may be developed out of the concrete facts of experience, historical reading, and the laws of economic and political theory. At last phenomena may be arranged in their logical order. The sciences fall into their rational sequence; studies are seen to be related in a great unified system of mental conceptions which, put behind the apparently unconnected daily experiences, sets them in order and gives a deeper, clearer meaning to both individual and collective life. Thus an original chaos of perceptions becomes finally, through many stages of growth, a cosmos of ideas.

But it is not enough that the predominantly intellectual aspect of consciousness only be set in order; there must also be a systematic attempt to aid in the unification of the emotional and volitional life. Conduct as well as thought must be organized. The old curriculum, which suddenly in senior year introduced a moral philosophy that had little or no relation to the other studies of the course, is passing away. There is need of a social ethics which shall grow naturally out of the pursuits which precede it, which shall base principles of conduct on the essential nature of man living in association with his fellows, which out of unified knowledge shall guide the unification of personality for the achievement of ideal ends.

All this leads to a systematic synthesis of studies and experience into a philosophy, a conscious view of the world, an ideal scheme within which events take their places in orderly relations. Such a philosophy must in the nature of things be provisional. It must grow with growth in knowledge and experience, but it is nevertheless a purposeful putting of things together—a habit which once formed becomes a vital necessity of the mind.

It is not, then, Utopian to believe that the time will come when many of the ablest minds will be specially trained and devoted to the service of helping college students to organize and integrate their studies into a philosophy of social life and a way of looking at the universe. For this is a task which cannot longer be neglected. If the experience of the race counts for anything, the view of the whole is quite as important as the knowledge of details. This view of the whole should not be left to happy accident. A purposeful "short-cut" must be directed by the higher education. "Knowledge comes, but wisdom lingers." Much has been done to hasten the advent of knowledge. It remains to accelerate in some measure at least the tardy pace of that unified knowledge which is wisdom.

CHAPTER VI.

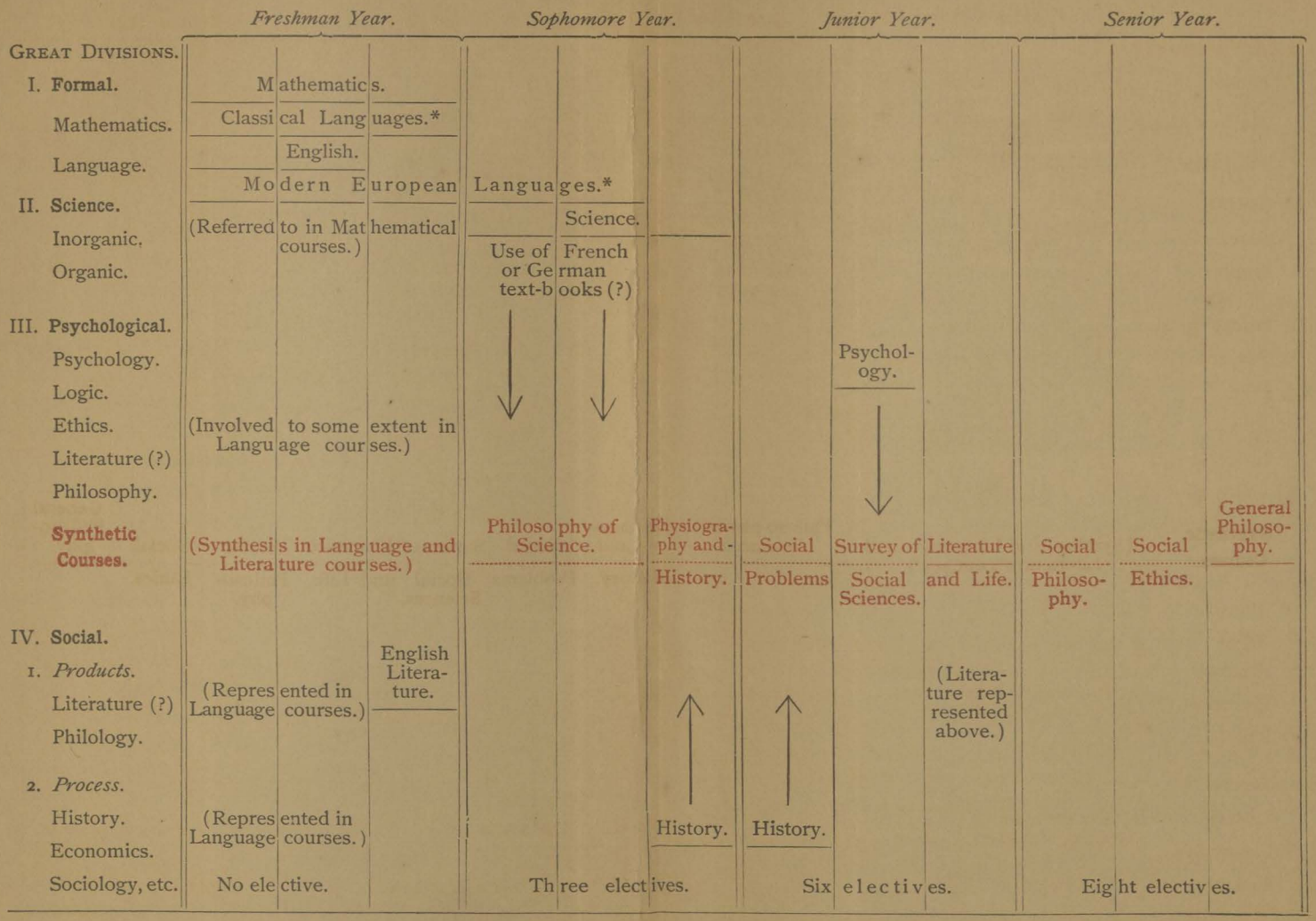
A TENTATIVE CURRICULUM.

ARNOLD TOYNBEE once asserted that changes can be accomplished only by two things: first, an ideal which arouses interest and kindles the imagination, and second, a definite, intelligent plan for carrying that ideal out into practice.[1] If the ideal which has been outlined in the foregoing chapters is to have any value it must be shown to be capable of introduction, in provisional form at least, into present educational arrangements.

The following scheme is presented as a basis for discussion and as a suggestion for definite machinery of instruction. Inevitably the writer exposes himself to the charge of being a doctrinaire. He would emphatically disavow any thought of dogmatism concerning so complex a problem, and above all would have it distinctly understood that no mechanism can be a substitute for motive power, no arrangement of courses, however philosophically sound or pedagogically wise, can in itself insure that spirit of instruction which alone will give the structure life. This plan is designed to show how an earnest purpose to integrate the college curriculum might work itself out by means of certain definite courses. In the absence of such a vivifying purpose this scheme would be merely dry bones.

Again this essay definitely disclaims any attempt to offer conclusions on three points: (1) as to the precise

[1] Quoted by Professor Herbert B. Adams in a lecture on "Arnold Toynbee," reported in *The Chautauqua Assembly Herald*, August 4, 1888.



SYNOPTIC CHART OF REQUIRED COURSES IN A PROPOSED CURRICULUM.

EXPLANATION.—Only required courses are indicated. Each horizontal line between any two perpendicular lines represents one unit of four or five hours per week for one term. Each dotted horizontal line represents a lecture course of one hour per week for one term.

* Obviously the required languages might be distributed in several different ways to serve various special ends.

details of the requirement of different studies, (2) as to the wisdom of having one academic degree or more, (3) as to a definite group system by which election of one subject shall *ipso facto* determine in general the use of the other electives.

The positive aim will be (1) to indicate a required curriculum which *does accomplish the general representation of subjects* although others might conceivably render equally good service in this regard; (2) to show how a series of synthetic courses might be introduced in this or another curriculum to guide systematically the development of the student's mind out of isolated studies into a unified way of looking at life and conduct. The emphasis is to be laid upon the second aim and the first is important only in relation to it.

Certain existing conditions must at the outset be accepted as limits beyond which changes cannot at present be carried. Thus the period of the higher education must include on the average four scholastic years of approximately nine months, and each year must be further subdivided into three terms of about equal length. Again, the number of exercises per week cannot ordinarily exceed an average of fifteen. Once more, five great divisions of study at least must be represented at some period in the required courses of the curriculum, and at the same time a sufficient number of free electives must be provided to permit continuity of work in any one study or group of studies.

An outline of the proposed requirements in the curriculum is as follows:

FRESHMAN YEAR. (Twelve required units of four hours per week for one term, grouped into four general courses. No electives.)

I. *Formal Studies.* Mathematics (3 units), Classical

details of the requirement of different studies, (2) as to the wisdom of having one academic degree or more, (3) as to a definite group system by which election of one subject shall *ipso facto* determine in general the use of the other electives.

The positive aim will be (1) to indicate a required curriculum which *does accomplish the general representation of subjects* although others might conceivably render equally good service in this regard; (2) to show how a series of synthetic courses might be introduced in this or another curriculum to guide systematically the development of the student's mind out of isolated studies into a unified way of looking at life and conduct. The emphasis is to be laid upon the second aim and the first is important only in relation to it.

Certain existing conditions must at the outset be accepted as limits beyond which changes cannot at present be carried. Thus the period of the higher education must include on the average four scholastic years of approximately nine months, and each year must be further subdivided into three terms of about equal length. Again, the number of exercises per week cannot ordinarily exceed an average of fifteen. Once more, five great divisions of study at least must be represented at some period in the required courses of the curriculum, and at the same time a sufficient number of free electives must be provided to permit continuity of work in any one study or group of studies.

An outline of the proposed requirements in the curriculum is as follows:

FRESHMAN YEAR. (Twelve required units of four hours per week for one term, grouped into four general courses. No electives.)

I. *Formal Studies.* Mathematics (3 units), Classical

Languages (3 units), Modern European Languages (3 units), English Language (2 units).

II. *Sciences of Nature.* (Referred to incidentally in mathematical courses.)

III. *Psychological.* (Involved to some extent in language and literary courses.)

IV. (1) *Social Products.* (Represented in language courses.) English Literature (1 unit).

(2) *Social Process.* (Represented in language courses.)

SYNTHETIC.—History, literature, geography, applied science, art, are all correlated in the language courses which, conducted in the modern spirit, can meet all the needs of unity for the first year.

SOPHOMORE YEAR. (Six units of five hours per week for one term. One weekly lecture course. Three elective units.)

I. *Formal.* Modern European Languages (2 units).

II. *Sciences of Nature.* A laboratory science (3 units).

IV. (2) *Social Process.* History (1 unit).

SYNTHETIC. (1) *Required lecture* course (one hour per week for two terms) on the Philosophy of Nature, dealing with the inorganic and organic sciences as parts of a systematic view of natural phenomena. (2) Required lecture course (one hour per week for one term) on Physiography and History, bringing nature and man into relation. (3) Possible use of French and German manuals in science and other courses.[1]

JUNIOR YEAR. (Three units of four hours per week for one term. Two lecture courses. Six elective units.)

[1] This has been tried in several institutions. The plan is advocated because it makes a language an actual means to an immediate and necessary end. The usefulness of the language is at once apparent.

III. *Psychological.* Psychology (1 unit).
IV. (2) *Social Process.* History (1 unit).

SYNTHETIC. (1) Lecture courses (one hour a week for first term). Social Problems. The presentation in detail of several leading problems in economics, politics, and sociology. (2) A survey of the Social Sciences, affording a preliminary philosophy of society and indicating the various studies which deal with its different aspects. (3) Course (1 unit). Literature and Life. A course on Shakespeare or Milton.

SENIOR YEAR. (One unit. Two lecture courses. Eight elective units.)

SYNTHETIC. (1) Lecture course (one hour a week for one term). Social Philosophy—presentation of a general theory as to the origin and development of society and the leading principles of association. (2) Lecture course (one hour a week for one term). Social Ethics—criteria and ideals of conduct, civic duty, social service, etc. (3) Course (1 unit). Philosophy—either (*a*) the development of modern philosophy or (*b*) the presentation of the system of one great philosopher.

It is, perhaps, necessary to indicate still further in detail the character of the synthetic courses proposed in this curriculum. At the outset it must be insisted that the success of the whole scheme would be absolutely dependent upon a spirit of hearty coöperation in the teaching staff. If these courses were regarded simply as so much additional work to be gone through with perfunctorily, they would prove virtually useless. The students would quickly detect the apathy and come to look upon the lectures as largely a formality not organically related to the course as a whole. Again, the faculty should be socially self-conscious, *i. e.*,

each fully informed as to the general purpose and adjusting his instruction to this end.

Moreover, these unifying courses should be prepared with the utmost care and skill so that their organizing function might be performed with the greatest economy of attention and effort. Their aim should be not only to convey information but to set in order knowledge already acquired. These courses, too, should be accompanied by syllabi and brief bibliographies. Regular examinations should form a part of the plan. Indeed, every legitimate device should be employed to impress upon the students the fundamental and essential nature of the mental habits for which these lectures and courses would stand.

During the first year the instructors in language would be intrusted with the task of preserving in a general way the unity of the course. This they are more and more fully able to do, as the new spirit of classical instruction makes its way into colleges and universities. Geography, history, social science, ethics, and philosophy, as well as literature, philology, and logic, are naturally related in a study of the language and literary masterpieces which have grown out of the social life of a classical people. The outcry against the utter barrenness of a course given over largely in its first years to language and mathematics, is a protest against the outworn, dry, scholastic methods which happily are being replaced by new theory and practice.

In the second year an attempt to put natural phenomena into a rational system may well be made. The student's preparation in the nature group, and his pursuit of some one laboratory science in the first terms of the sophomore year, enable him to comprehend a course of lectures on the general classification of natural phenomena, the chief laws by which each group is unified, and the more inclusive

hypotheses, such as that of the conservation of energy, the equivalence of forces, the law of gravitation, and the like. Finally, a theory of cosmic development may be presented, and the mind may be carried through the various stages by which the natural world is conceived as gaining its present form and aspect. Thus, physics, chemistry, astronomy, geology, and biology are all displayed as bodies of knowledge which organized into a whole give a complete picture of one great division of man's experience.[1]

It is next necessary to bring the nature group into relations with the social. At this point a suggestion comes from the lower schools. Why may not geography play a part quite as important in the college curriculum as in the elementary and secondary schools? Physiography has been recently made a college study and gives great promise of service. It correlates the natural sciences on the one hand and on the other offers a point of contact with the social sciences represented especially in history. A course of lectures, therefore, on physiography and history would provide the necessary step in building up a conception of society as both dependent upon its natural basis and as reacting upon it. Here various facts as to the influence of natural conditions, contour, resources, water supply, climate, etc., upon race and national development could be introduced and discussed with comparative thoroughness instead of being left as now to more or less casual allusion in history courses. Enough material is now available to enrich such a course with ample illustrations, and to prepare the student for an intelligent comprehension of a most important aspect of social growth. The Edinburgh summer school, mentioned above, has done important work in this direction by developing a method of studying the region

[1] A course of this kind has been given by President Jordon at the Leland Stanford, Jr., University with marked success.

about Edinburgh from the double standpoint of geology and history.[1]

It is to be noted further that the schedule requires students to pursue a course in history at the same time with this synthetic course so that there would be frequent opportunity for cross reference and illustration.

Logically the next step would be the presentation of a unified way of looking at society, but, as has been pointed out, the student is first attracted to concrete, definite problems rather than to general theories. In race development theories grow out of the solving of problems. It would be better, therefore, to present during the first term of junior year certain typical social problems—definite, concrete situations which demand careful analysis and wise solution. The habit of looking at such problems from many standpoints can best be encouraged by describing in detail the facts concerning them, pointing out difficulties and outlining critically some of the proposed solutions. In this way the value of detailed study on the one hand and the absolute need of synthetic judgment on the other would be vividly impressed upon the student.[2]

The consideration of these vexed questions of contemporary life would be likely, it is true, to produce the effect of hopeless disagreement upon the student's mind. Each problem might seem more or less isolated from every other, and society might appear fragmentary, a thing of many details. Yet if these problems were wisely presented there would grow out of them a conviction that some coherent way of conceiving social relations is a fundamental

1 Such a course as this should not deal with vague theories but should present concrete practical problems such as those discussed by Professor N. S. Shaler in "Nature and Man in America," Professor James Bryce in his chapter on "The Home of the Nation," and Professor F. J. Turner in his monograph on "The Frontier in American History."

2 This method has been employed successfully at The University of Pennsylvania and other institutions.

condition of rational solution. Thus a demand for a provisional social philosophy would develop naturally out of the attempt to judge particular situations and difficulties. A unified way of looking at the relation of the individual to society, the activities of associated life, and social institutions would form the subject matter of another lecture course during the second term of junior year. In other words, a preliminary and superficial survey of society as a whole, and the discrimination of certain general classes of phenomena, should precede the detailed study of such groups. It is most important that the student should gain that conspectus of society which will enable him to correlate what knowledge of social phenomena he may already possess; and to perceive the principles upon which they are distributed among the special social sciences. Political economy, political science, anthropology, sociology, are thus shown to be parts of a vast coöperative attempt to explore and interpret the associated life of men. Such a general view affords a certain synthesis, but after all it must be consciously recognized as only a provisional unification. Premature generalizations and conceptions are to be avoided. The "circle of thought"—to use the Herbartian phrase—should be frequently completed for a time, but never finally closed.

A course of lessons and lectures on some great literary masterpiece—a Shakespearean play for example—might admirably serve a twofold purpose. It would furnish a tangible and concrete subject matter to be studied in the light of nature, psychology, and society, and it would provide material for æsthetic and emotional development, which is too likely to be slighted unless it be consciously fostered in some such way. The more or less arid generalizations of social science, if they are to be of real service, need all the while to be brought back to the special and concrete.

With the preparation involved in what precedes, the college senior would be able to comprehend intelligently a course of lectures on social evolution or social philosophy which would attempt to trace the origin and growth of society and to interpret the process in terms of physical, vital, and psychical forces. The sciences could be displayed in their logical arrangement crowned by a science or philosophy of society in which all take their places and get their true meaning. Here consciously studies would be integrated, *i. e.*, not merely correlated, but unified into an organism of knowledge.

The presentation of social philosophy would naturally be followed by a course of lectures on social ethics based—so far as content goes—upon the conception which, regarding the individual and society as each an abstraction, in reality sees both in organic relations, the individual realizing himself in serving society. A truer conception of civic duty could be developed from this view of life and the highest ideals could be brought into natural relations with a unified knowledge of the nature and progress of society.

The final step would consist in relating social philosophy to a way of looking at the cosmos. Here two plans are possible. Either a history of modern philosophy might be presented in such a way as to trace the gradual development of certain philosophical ideas or the system of one of the great philosophers such as Kant or Hegel might be studied in detail. The criticism usually made upon the average course in the history of philosophy is that it distracts rather than unifies the student's mind. He passes from one system to another so rapidly that all seems chaos and confusion. The fault is one of teaching method rather than inherent in the subject matter which may be presented from the developmental standpoint so as to show the growth of a unified way of regarding the universe. That

is, the emphasis is laid on the common characters of successive philosophies rather than upon various differing details. For a short course, however, much is to be said in favor of studying a single system—one great man's way of conceiving things as a unity.[1] It is not even desirable that this become a permanent creed, but it should serve as a first structure to be renewed and remade, but never as a whole to be abandoned—as a form permanent, however, the content may change.

If the question be asked: who is to give these synthetic courses? it may be replied that at first a number of men must contribute—perhaps one for the sciences, another for physiography and history, still another for the social sciences, a fourth for the literature, and a fifth for the courses of senior year. In the present state of specialization few men would be prepared to venture far beyond the limits of their particular fields. Yet if these lecturers by conference and discussion would work out in detail a coherent articulated scheme and then each would do his part in harmony with this common plan, much might be accomplished at once.

It seems not unreasonable to hope, however, that in time this synthetic service will itself become a special function to which a man will devote his whole time and energy. It is usual to deride such a suggestion as implying that one person can master the whole of human knowledge—a manifest impossibility if by mastery is meant an acquaintance with all the details of all departments. But obviously scientific knowledge has been organized out of details and the general principles include vast areas of particulars. To deny that one man can gain a general grasp of these principles and conceive them in still wider

[1] *Vide* letter of advice to a young student of philosophy from Taine: *Pour et contre l'enseignement philosophique*, pp. 162, 163.

relations of unity, is by implication to assert that men have piled up more knowledge than they can organize, that specialization instead of enriching and strengthening the social tradition is ever loading it with indigestible facts.

Such in barest outline is a plan for giving greater unity and clearer purpose to our higher education. Like all plans it is in itself impotent. It is presented, however, with the hope not that it will prove adequate in all its details, but that it may at least suggest a general end toward which the work of our undergraduate curriculum ought more consciously and definitely to be directed.

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INDEX.

ERRATUM.

On page 93, note 2, "Mack" should read "Mach."