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ANTHROPOLOGY:

As a Science

and

As a Branch of University Education.

BRINTON.



ANTHROPOLOGY:

AS A SCIENCE

AND

AS A BRANCH OF UNIVERSITY EDUCATION
IN THE UNITED STATES.

BY

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PHILADELPHIA:

1892.

PREFATORY NOTE.

This very brief presentation of the claims of Anthropology for a recognized place in institutions of the higher education in the United States will, I hope, receive the thoughtful consideration of the officers and patrons of our Universities and Post-Graduate Departments.

The need of such a presentation was urged upon me not long since by the distinguished president of a New England University. Impressed with the force of his words, I make an earnest appeal to our seats of advanced learning to establish a branch of Anthropology on the broad lines herein suggested. It may be but one chair in their Faculties of Philosophy; but the rightful claims of this science will be recognized only when it is organized as a department by itself, with a competent corps of professors and docents, with well-appointed laboratories and museums, and with fellowships for deserving students.

Who is the enlightened and liberal citizen ready to found such a department, and endow it with the means necessary to carry out both instruction and original research?

I do not plead for any one institution, or locality, or individual; but simply for the creation in the United States of the opportunity of studying this highest of the sciences in a manner befitting its importance.

ANTHROPOLOGY,

AS A SCIENCE,

AND

As a Branch of University Education.

What Anthropology Is.

Man himself is the only final measure of his own activities. To his own force and faculties all other tests are in the end referred. All sciences and arts, all pleasures and pursuits, are assigned their respective rank in his interest by reference to those physical powers and mental processes which are peculiarly the property of his own species.

Hence, the Study of Man, pursued under the guidance of accurate observation and experimental research, embracing all his nature and all the manifestations of his activity, in the past as well as in the present, the whole co-ordinated in accordance with the inductive methods of the natural sciences—this study must in the future unfailingly come to be regarded as the crown and completion of all others—and this is *Anthropology*.

The Value of Anthropology.

The value of the applications of this science can scarcely be over-estimated.

In government and law, in education and religion, men have hitherto been dealt with according to traditional beliefs or *a priori* theories of what they may or ought to be. When we learn through scientific

research what they really are, we shall then, and then only, have a solid foundation on which to build the social, ethical and political structures of the future. It is the appreciation of this which has given the extraordinary impetus to the study of Sociology—a branch of Anthropology—within the last decade.

Anthropology alone furnishes the key and clue to History. This also is meeting recognition. No longer are the best histories mainly chronicles of kings and wars, but records of the development and the decline of peoples; and what constitutes a “people,” and shapes its destiny, is the very business of Ethnology to explain.

So likewise in hygiene and medicine, in ethics and religion, in language and arts, in painting, architecture, sculpture and music, the full import and often unconscious intention of human activity can only be understood, and directed in the most productive channels, by such a careful historical and physical analysis as Anthropology aims to present.

Societies and Schools for the Study of Anthropology.

The world of science has been recognizing more fully, year by year, the paramount importance of the systematic study of Anthropology to the aspirations of modern civilization.

The first Anthropological Society—that of Paris—was founded by Paul Broca, in May, 1859. It has been rapidly followed by the organization of similar societies in London, Berlin, St. Petersburg, Vienna, Brussels, Munich, Madrid, Florence, Washington, New York, and many other centres of enlightened thought. In 1882 the American Association for the Advancement of Science organized its Section of Anthropology; and in 1884 the British Association for the Advancement of Science followed this example. It is a well known fact that these sections are more attractive to the general public, and are better supplied with material than any other sections in the Associations. This augurs well for the zeal with which students would welcome the creation of special departments for instruction in all branches of the science.

The first School of Anthropology was founded also by Broca, at Paris,

in the year 1876. It began with a corps of five professors, a number which it has now doubled, the demand for more extended instruction having steadily increased. The courses have been as well attended as any others, either at the Collège de France, or at the Sorbonne. A second school is organized in connection with the Museum of Natural History at the Jardin des Plantes. It has counted among its instructors various illustrious names, and its courses have also been highly popular.

Several of the German universities have organized a department of Anthropology. In those of Munich, Berlin, Marburg, and Buda Pesth the chairs are filled respectively by Ranke, Bastian, Von den Steinen, and Von Török. In the University of Leipzig, Dr. E. Schmidt is *docent* in Anthropology; and the same position is held in Berlin by Dr. Von Luschan. In a number of other institutions, lectures on the branch are given. The first degree in Anthropology was conferred by the University of Munich three years ago. The University of Brussels has established a full chair of Anthropology, occupied by Professor Houze; and a similar position is filled in the Musée Polytechnique, at Moscow, by Professor Dimitri Anoutchine.

In the United States, regular courses on Physical Anthropology and Ethnology have been given by me for the last six years, at the Academy of Natural Sciences, Philadelphia. But the only educational institutions which have distinctly recognized the branch are Clark University, Worcester, Mass., where Dr. Franz Boas is *docent* in Anthropology, and which, in March of this year, conferred the first degree in Anthropology given in America; and the University of Chicago, in which Dr. Frederick Starr is Assistant Professor of Anthropology. I cannot learn that any full professorship of the science has been established in this country.

Considerable attention has been paid to the subject by the scientists connected with the National Museum, the Smithsonian Institution, the Army Medical Museum, and especially the Bureau of Ethnology at Washington. The last mentioned, under the efficient administration of Major J. W. Powell, has enriched the literature of Anthropology with

a series of publications not exceeded in value by those of any other government.

Subdivisions of Anthropology.

The Study of Man in accordance with the laws of inductive research is, therefore, the aim and meaning of Anthropology. The subject is a broad one,—in space, as wide as the world; in time, longer than all history; in depth, reaching to the innermost consciousness. A man may be regarded merely as a specimen of a certain species of vertebrates; or, in his multifarious relations as a member of a social organization. We may study him as a living being; or seek to trace his actions and origin in ages long before history begins. Hence, Anthropology is divided into several associated departments devoted to the exploration of its varied realms of research. They may conveniently be divided into four, of nearly equal importance. An acquaintance with all of them is essential to the equipment of a sound anthropologist.

The first is the study of the physical nature of man, his anatomy, physiology and biology, so far as these bear on the distinctions of races, peoples, and nations. Psychology, so far as it is an experimental and inductive science, belongs in this department. This general division has been called by French writers "special Anthropology", and by the Germans "somatic Anthropology"; but we need for it a single term, and none better could be found than that suggested by the German expression. I call it, therefore, *Somatology*, a word long since, domesticated in the vocabulary of English and American medical science, and explained in the dictionaries as "a discourse or discussion on the human body".

The second division is *Ethnology*. This is, in its methods, historic and analytic. It contemplates man as a social creature. It is more concerned with the mental, the psychological part of man, than with his physical nature, and seeks to trace the intellectual development of communities by studying the growth of government, laws, arts, languages, religions, and society.

The third division, *Ethnography*, is geographic and descriptive in its

plans of research. It studies the subdivision and migrations of races, local traits, peculiarities and customs, and confines itself to matters of present observation.

Finally, *Archæology* comes in to supply the material which neither history nor present observation can furnish. It pries into the obscurity of the remotest periods of man's life on earth, and gathers thousands of facts forgotten by historians and overlooked by contemporaries. Often these unconsidered trifles prove of priceless value, and furnish the key to the real life of ancient nations.

Means of Practical Instruction.

Anthropology is not a theoretical science. It is essentially experimental and practical, a science of observation and operative procedures. It cannot be learned by merely reading books and attending lectures. The student must literally put his hand to the work.

For that reason every institution for teaching Anthropology must have a Laboratory attached to it; and in that Laboratory the best part of the work will be done.

Such a Laboratory will naturally be divided into two departments; one devoted to the study of the physical characteristics of man, the other to the investigation of the products of his industry. The former will be more especially related to the branch of Somatology; the latter, to those of Ethnology, Ethnography, and Archæology. The efforts of the Laboratory instructors will be directed to training the perceptions of the students in the requirements of this science and to giving them the practical knowledge and manual dexterity necessary to employ its tests.

Connected with the Laboratory, and really forming part of it, will be a Museum, of such extent as circumstances permit. It will include crania and osteological specimens; art-products, arranged both ethnologically, that is, in series showing their evolution, and ethnographically, that is, illustrating the geographical provinces and ethnic areas from which they are derived; and archæological specimens typical of prehistoric and proto-historic culture.

Hand in hand with the Laboratory work should proceed Library Labor. There is a strong tendency in students of sciences of observation to read only for immediate purposes and on current topics. Few acquaint themselves with the history even of their own special branches; an ignorance which often results injuriously on the effectiveness of their work. To correct this, a series of tasks in the literature of the science should regularly be assigned.

Finally, all that has been proposed must be supplemented by a course of Field-work, in which the student must be trained to apply his acquirements in really adding to the stores of knowledge by independent and unaided exertion.

I do not rest satisfied with presenting these general statements. More detail will very properly be demanded by any one seriously considering the foundation of a chair or department in this branch.

I have drawn up, therefore, and append, a scheme for a course or courses of lectures; a plan for laboratory instruction; another for library work; a sketch of what should be done in the field; and finally, I name a few of the best text-books on the various subdivisions of the general science.

I would ask the particular attention of those interested in this science to the classification and nomenclature which I here present. It is the result of a careful collation of all the leading European writers on the subject and of consultation with several of the most thoughtful in this country.

There is, unfortunately, considerable diversity in the arrangements and terms adopted by different authors, and it is most desirable that a uniform phraseology be adopted in all countries. That which I offer aims to be exhaustive of the science and to adopt, wherever practicable, the expressions sanctioned by the greater number of distinguished living authorities in its literature.

General Scheme for Instruction in Anthropology.

SYNOPSIS OF LECTURE COURSE.

PRINCIPAL SUBDIVISIONS.

- I. *Somatology*.—Physical and Experimental Anthropology.
 - II. *Ethnology*.—Historic and Analytic Anthropology.
 - III. *Ethnography*.—Geographic and Descriptive Anthropology.
 - IV. *Archæology*.—Prehistoric and Reconstructive Anthropology.
-

I.—*Somatology*.

A. Internal Somatology.

a. Osteology.—Bones of the skeleton, names, forms, measures, proportions, peculiarities, such as flattened tibia, perforated humerus, form of pelvis, os calcis, etc. Craniology; measurements of skull and face, sutures, angles, nasal and orbital indices, dentition, artificial deformations.

b. Myology and Splanchnology.—The muscular system and viscera so far as they concern racial peculiarities, as deficient calves, proportions of liver and lungs, etc. Steatopygy.

B. External Somatology.

Stature and Proportion. Anthropometry. Tests for strength and endurance. Color of skin, hair, and eyes. Color scales. Shape and growth of hairs. Canons of proportion. Physical beauty.

C. Psychology.

Application of experimental psychology to races. Comparative rates of nervous impulse, sensation, muscular movements, and mental processes. Right- and left-handedness. Anomalous brain actions.

D. Developmental and Comparative Somatology.

Embryology of man. Doctrines of heredity and congenital transmission. Teratology, or the production of varieties and monstrosities. Ethnic and racial anatomy. Evolution of man. Comparative anatomy of man and anthropoids. Simian and lemurian analogies. Fossil remains of man.

Biology of man. Changes produced by nutrition (food supply), climate, humidity, altitude, etc. Comparative physiology and pathology. Medical geography. Comparative nosology of different races. Criminal anthropology. Pathology of races. Fertility and sterility of races. Reproduction and stirpiculture. Comparative longevity. Immunity from disease. Vital statistics. Anatomical classifications of races. (Historical review; present opinions.)

II.—*Ethnology.*

A. Definitions and Methods.

Meaning of Race, People (*ethnos*, folk), Nation, Tribe. Culture and civilization. Measures and stages of culture. Causes and conditions of ethnic progress. Ethnic aptitudes for special lines of progress. Ethnic psychology (*Völkerpsychologie*).

B. Sociology.

- a.* Government.—Primitive forms. The gens; the tribe; the confederacy; chieftainship; monarchy; theocracy; democracy, etc.
- b.* Marriage.—Theories of primitive marriage; promiscuity; polygamy; polyandry; monogamy. Limitations of marriage. Forms and rites of marriage. Laws of descent and consanguinity. Social position of woman. Gynocracy.
- c.* Laws.—Origin of laws. Primitive ethics. Dualism of ethics. Evolution of the moral sense. The Taboo. Blood revenge. Tenures of land. Classes above law. Castes. Privileged classes. Codified laws. International laws.

C. Technology.

- a.* The Utilitarian Arts.—Manufacture of tools, utensils, weapons, and agricultural, etc., implements. Architecture and building. Clothing and fashions. Means of transportation by land and water. Agriculture. Domestication of plants and animals. Weights, measures, and instruments of precision. Media of exchange, currency, money, articles of barter and commerce.
- b.* The Esthetic Arts.—Theory of the sense of the beautiful. Decorative designs in line and color. Skin-painting. Tattooing. Sculpture and modeling. Music and musical instruments. Scents and flowers. Games and festivals.

D. Religion.

- a.* Psychological Origin of Religions.—Principles and method of the science of religion. Personal, family, and tribal religions. Ancestral worship. Doctrines of animism; fetichism; polytheism; henotheism; monotheism; universal religions.
- b.* Mythology.—Definition and growth of myths. Solar light and storm myths. Creation and deluge myths. Relation of myths to language.
- c.* Symbolism and Religious Art.—Relation of symbolism to fetichism. Primitive idols. Charms and amulets. Tokens. Tombs, temples, altars. Sacrifice. Symbolism of colors and numbers. Special symbols; the bird; the serpent; trees; the cross; the svastika; the circle, etc.
- d.* Religious Teachers and Doctrines.—The priestly class. Shamanism. Theocracies. Secret orders. Initiations. Diviners. Augurs and prophets. Doctrines of soul. Fatalism.
- e.* Analysis of Special Religions.—Egyptian religion; Buddhism; Judaism; Christianity; Mohammedanism, etc.

E. Linguistics.

- a.* Gesture and Sign Language.—Examples. Plan of thought in relation to picture writing.
- b.* Spoken Language.—Articulate and inarticulate speech. Imitative sounds. The phonology of languages. Universal alphabets. Logical relations of the parts of speech. The vocabulary and the grammar of languages. Distinctions between languages and dialects. Mixed languages and jargons. Relations of language to ethnography. Polyglottic and monoglottic peoples. Causes of changes in language. Extent and nature of such changes. Examples. Classifications of languages. Relative excellence of languages. Criteria of superiority. Rules for the scientific comparison of languages.
- c.* Recorded Language.—Systems of recording ideas. Thought-writing. Pictography. Symbolic and ideographic writing. Examples. Sound-writing. Evolution of the phonetic alphabets. Egyptian, Cuneiform, Chinese, Aztec, and other phonetic systems.
- d.* Forms of Expression.—Rhythmical. Origin of meter. Poetry of primitive peoples. Rhythm and rhyme. Characters of prose. Relation of prose and poetry to national language and character. Dramatic. The primitive drama and its development.

F. Folk-lore.

Definition, nature, and value of folk-lore. Methods of its study. Relations to history and character of a people. Traditional customs. Traditional narratives. Folk-sayings. Superstitious beliefs and practices.

III.—*Ethnography.*

A. The Origin and Subdivisions of Races.

Theories of monogenism and polygenism. Doctrine of "geographical provinces" or "areas of characterization." The continental areas at the date of man's appearance on the earth. Eurafica, Austafica, Asia, America, Oceanica. Causes and consequences of the migrations of races and nations.

- a.* The Eurafican Race.—Types of the white race. Its first home. Early migrations. The South Mediterranean branch (Hamitic and Semitic stocks). The North Mediterranean branch (Euskaric, Aryan, and Caucasian stocks).
- b.* The Austafican Race.—Former geography of Africa. The Negrillos or Pigmies. The true Negroes. The Negroids. The race in other continents. Negro slavery.
- c.* The Asian Race.—The Sinitic branch (Chinese, Thibetans, Indo-Chinese). The Sibiric branch (the Tungusic, Mongolic, Tataric, Finnic, Arctic, and Japanese groups).
- d.* The American Race.—Peopling of America. Groups of North and South American tribes.
- e.* Insular and Litoral Peoples.—The Negritic stock (Negritos, Papuans, Melanesians). The Malayic stock (Western Malaysans, Eastern, or Polynesians). The Australic stock (Australian tribes; Dravidians and Kols, of India).

IV.—*Archæology.*

A. General Archæology.

- a.* Geology of the epoch of man. Late tertiary and quaternary periods. Glacial phenomena. River drift. Diluvial and alluvial deposits. Physical geography of the quaternary. Prehistoric botany and zoölogy.
- b.* Prehistoric Ages.—The Age of Stone (chipped stone, or palæolithic period; polished stone, or neolithic period). The Age of Bronze. The Age of Iron. Epochs, stations, and examples. Methods of study of stone and bone implements, pottery, and other ancient remains. Indications of prehistoric commerce. Palethnology. Proto-historic epoch.

B. Special Archæology.

Egyptian, Assyrian, Phenician, Classical, and Medieval Archæology. Archæology of the various areas in America. Art in stone, bone, shell, wood, clay, paper, etc., in these areas.

LABORATORY WORK.

A. Physical Laboratory.

Comparing and identifying bones. Measuring skulls. Dissections of anthropoids and human subjects. Examination of brains. Study of embryology and teratology. Practical study of the hair, skin, nails, etc., of different races. Use of color scales, etc. Practice in anthropometry, with the necessary instruments. Testing for sense perceptions.

B. Technological Laboratory.

Study of stone implements; simple and compound; rough and polished; primary and secondary chipping; cleavage; firing; bulb of percussion; mineralogy of implements; patine, etc. Bone implements.

Study of metal implements. Hammering, smelting, casting. Results of exposure. Analysis of alloys. Coins, etc. Study of pottery. Pastes; burning; glazing; forms; decorative designs; painting and coloring.

Textile materials; ancient cloth and basket work; feather work.

Methods of making casts and models; taking squeezes, rubbings, copies, and photographs. Drawing, shading, and coloring ethnographic charts.

Practice in preserving, mounting, arranging, and classifying specimens. Tests for the detection of frauds. Incrustations, dendrites, etc. Practice in reducing unknown tongues to writing, by the ear. Practice in the repetition of unfamiliar phonetic elements. Study of the actions of the lingual muscles in the production of sounds.

LIBRARY WORK.

Researches in the history of anthropology.

Making lists of works and articles on special subjects, with brief abstracts.

Notes of the proceedings of anthropological societies and the contents of journals.

Presentation of the theories of particular writers on the science.

Familiarize the student with the past and present literature of his branch.

FIELD WORK.

Methods of surveying, photographing, and plotting ancient remains.

Plans for taking field-notes.

Instruction in the proper methods of opening mounds, shell heaps, etc., and in excavating rock-shelters and caverns. The preserving and packing of specimens.

Study of quaternary geology; alluvial deposits; river terraces; glacial scratches; moraines; river drift; loess; elevation and subsidence.

The collection of languages and dialects; of folk-lore, and local peculiarities.

TEXT-BOOKS.

As the plan of study here proposed is largely that which I have pursued and developed in my own lectures and published works on the subject, I may be permitted to insert the following list of these:—

Anthropology and Ethnology. 4to, pp. 184. In Vol. I of the Iconographic Encyclopædia (Philadelphia, 1886).

Prehistoric Archæology. 4to, pp. 116. In Vol. II of the Iconographic Encyclopædia (Philadelphia, 1886).

Races and Peoples; Lectures on the Science of Ethnography. 8vo, pp. 313 (N. D. C. Hodges, New York, 1890).

The American Race; a Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America. 8vo, pp. 392 (N. D. C. Hodges, New York, 1891).

In addition to these I would name the following as among the best works for the student of this branch:—

Anthropologische Methoden. By Dr. Emil Schmidt (Leipzig, 1888).

Éléments d'Anthropologie Générale. By Dr. Paul Topinard (Paris). Also *L'Homme dans la Nature* (Paris, 1891), by the same author.

Précis d'Anthropologie. By Hovelacque and Hervé (Paris).

Allgemeine Ethnographie. By Friederich Müller.

Die Urgeschichte des Menschen. By Moritz Hoernes (Leipzig, 1891).

La Préhistorique Antiquité de l'Homme. By G. de Mortillet (Paris).

Anthropology. By Dr. Tylor (New York).

Elements de Sociologie. By Ch. Letourneau (Paris).

To this list I add the names of some others of the distinguished foreign living writers on various departments of Anthropology:—

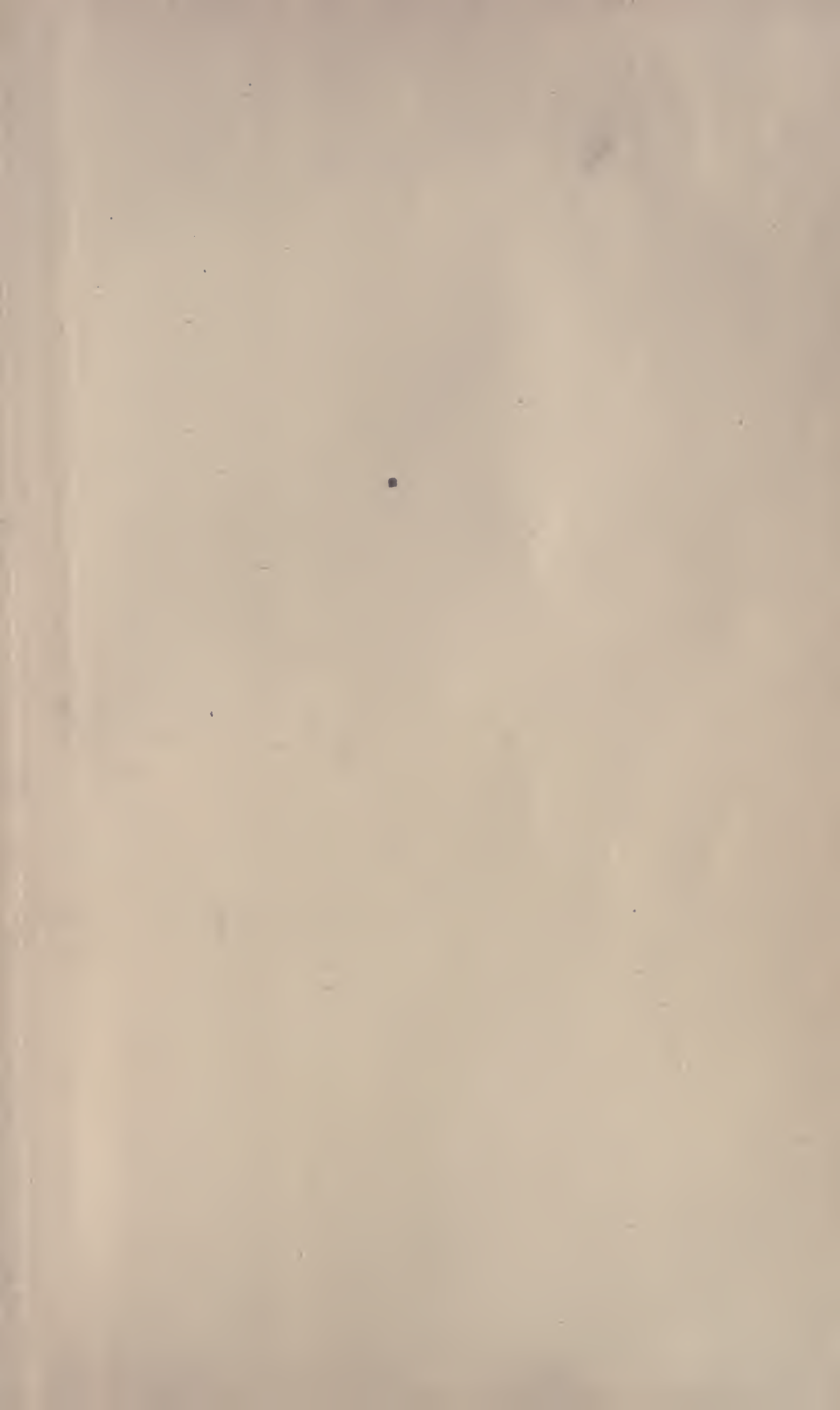
In France: Bertrand, Collignon, Letourneau, de Nadaillac. In England: Buckland, Flower, Galton, M. Müller. In Germany: Andree, Bastian, Meyer, F. Müller, Ranke, Schaafhausen, Steinthal, Virchow, Ratzel, Gerland. In Italy: Glioli, Mantegazza.

It is highly likely that many modifications and improvements on this scheme will suggest themselves to instructors; but I may say for it that it is the carefully considered result of a comparison of the methods

employed in the European schools, combined with a personal experience of some years in the presentation of the topics to classes.

Of course, the amount of attention which will be given to the separate divisions of the subject will depend on the position which the branch occupies in the student's plan of studies—whether a major or a minor. If the latter, he should attend a course of thirty or forty lectures about equally divided between the four headings under which the science is here presented, and should give double as many hours to laboratory work.

This is the minimum which would give him any adequate notion of the science. If, on the other hand, it be taken as a major, or principal subject, the greater part of his time for two or three years will be fully occupied in preparing himself for independent work, or for the instruction of others.





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