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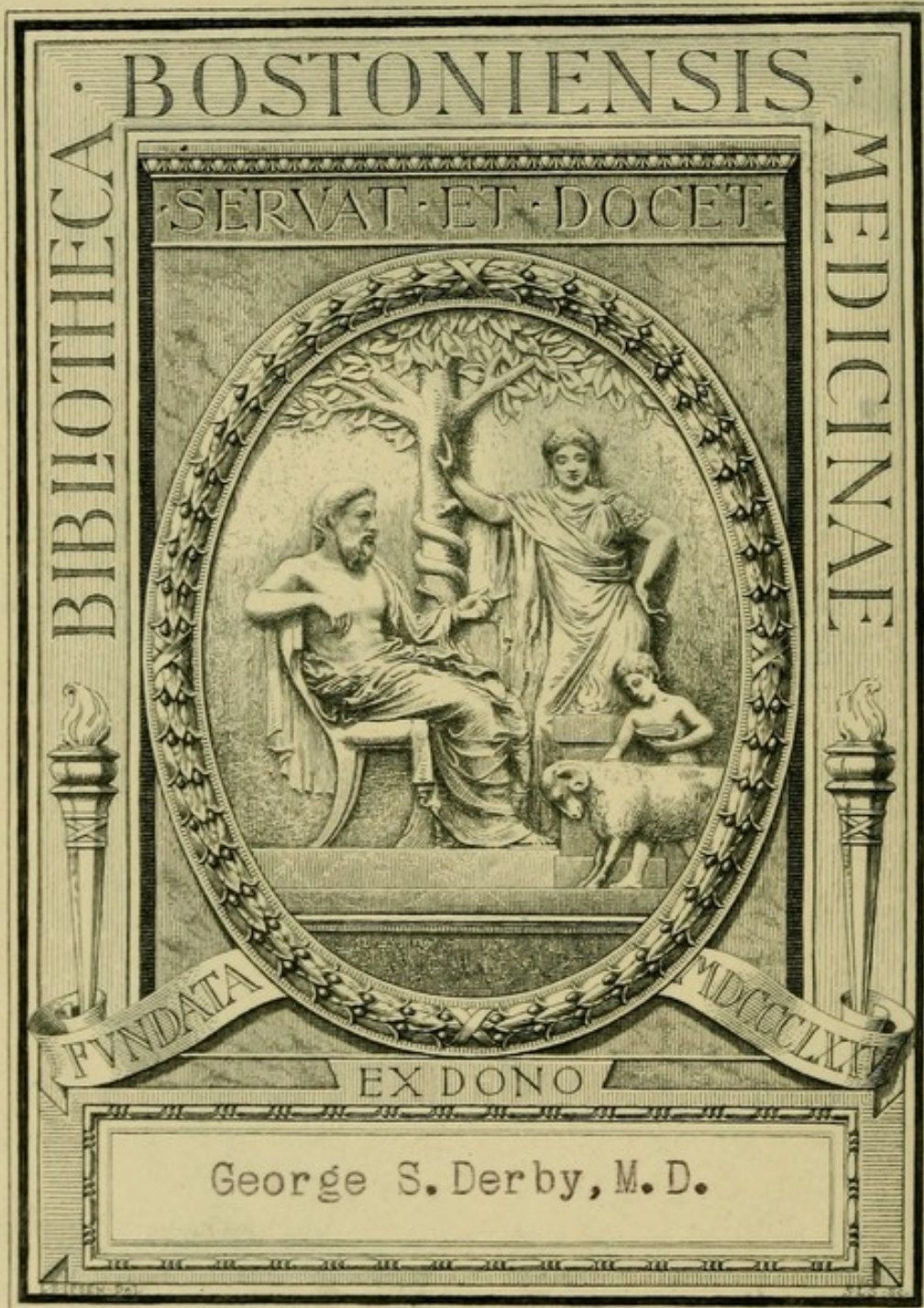
EPITOMES OF THREE SCIENCES

COMPARATIVE PHILOLOGY

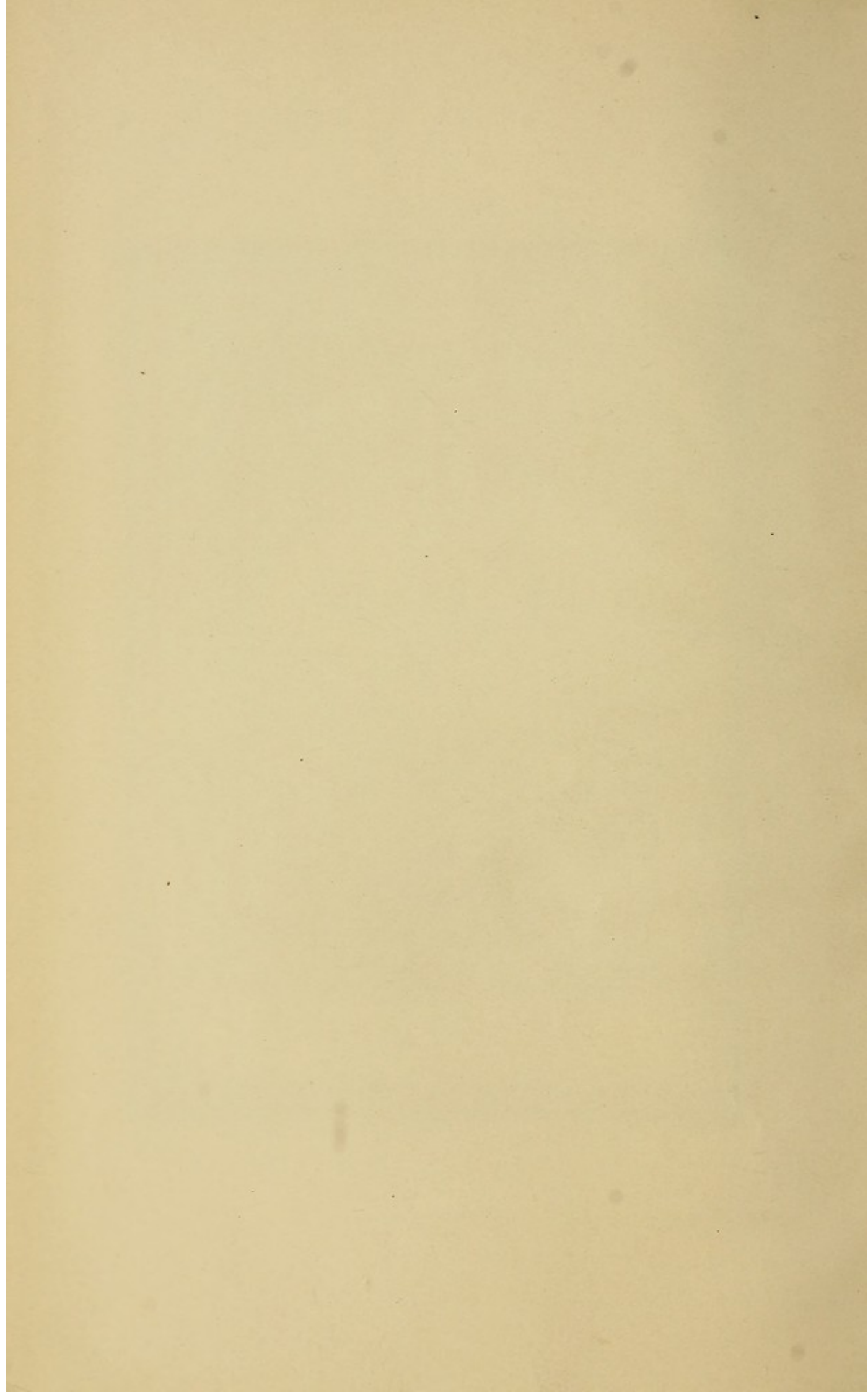
COMPARATIVE PSYCHOLOGY

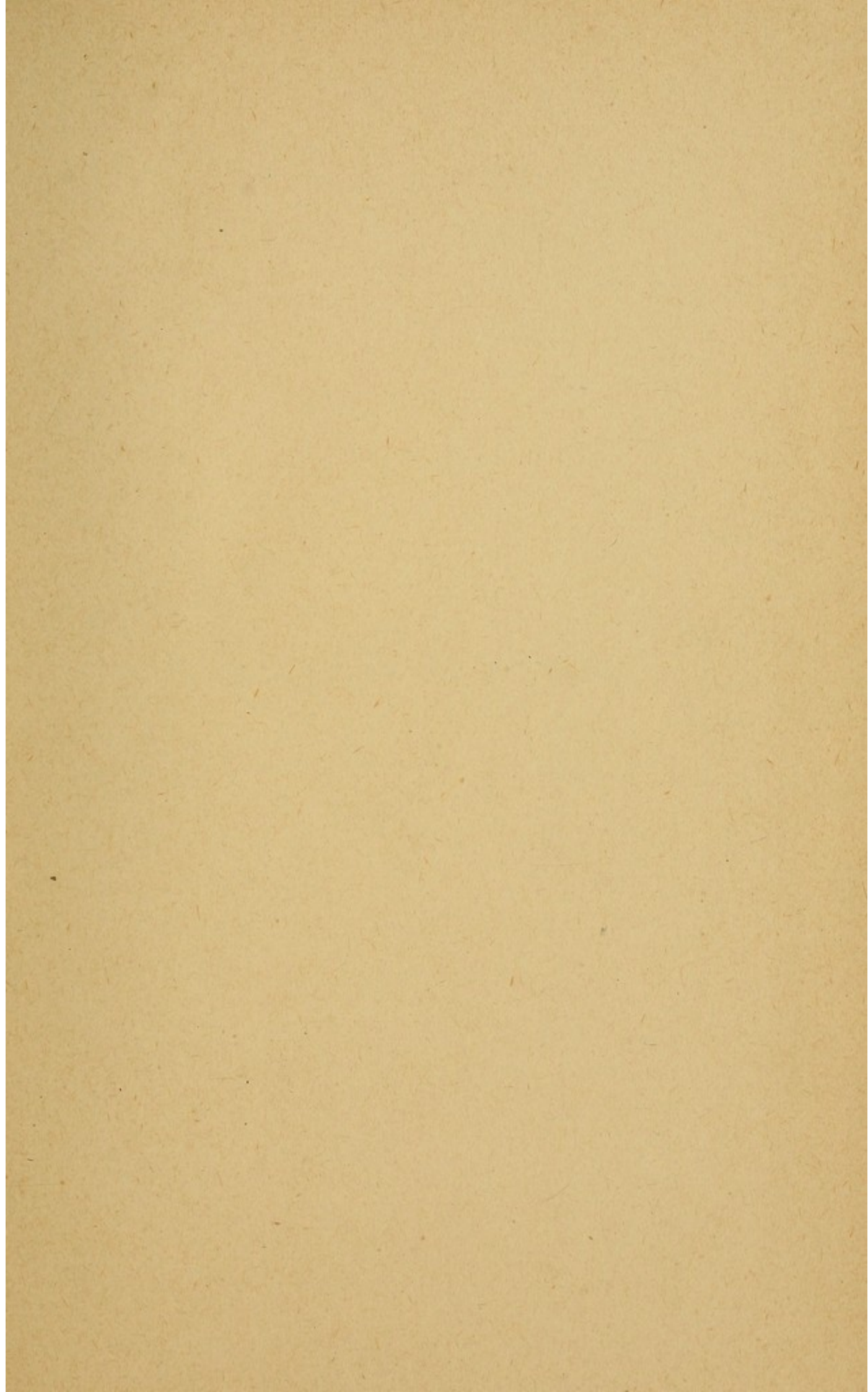
OLD TESTAMENT HISTORY

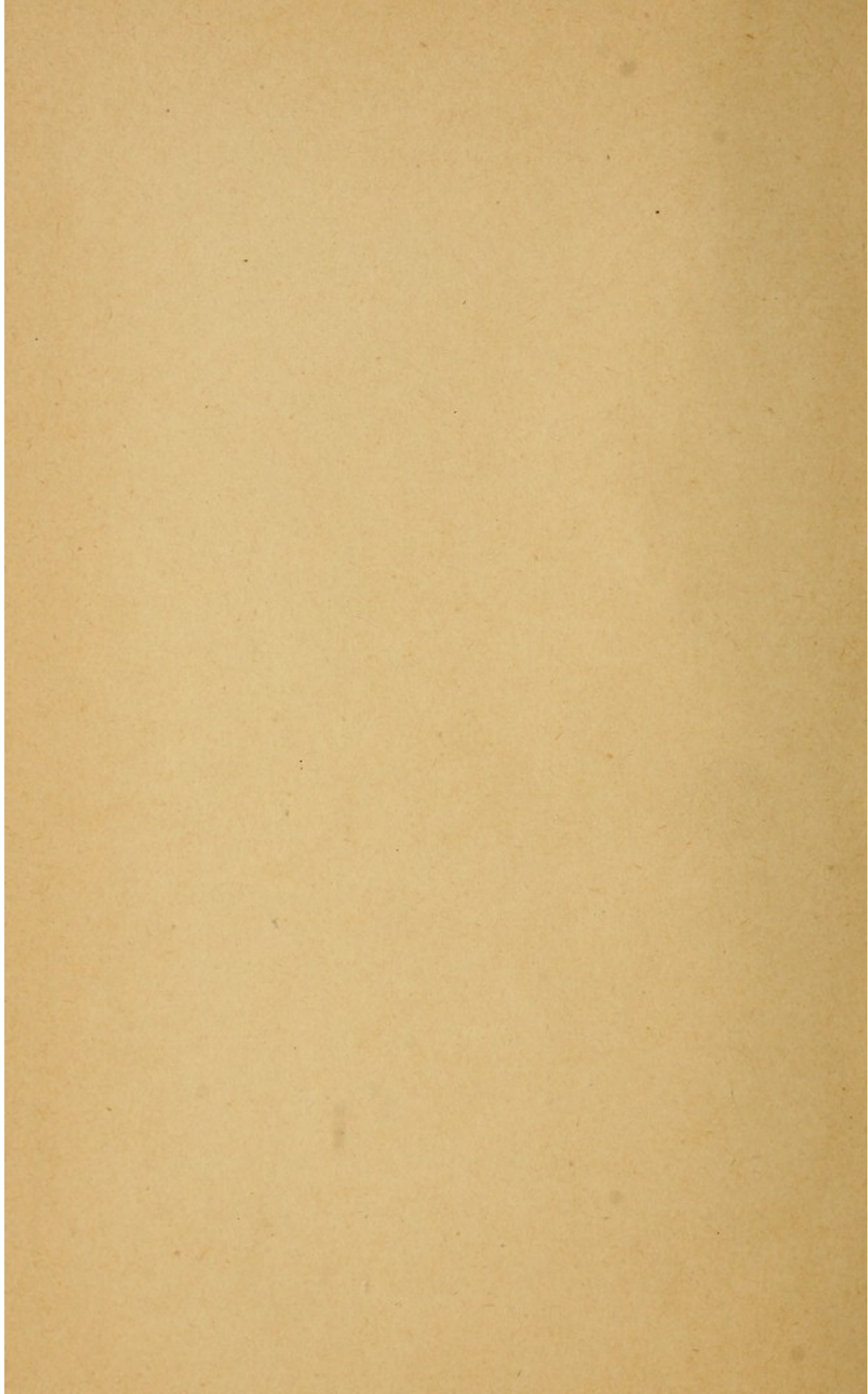
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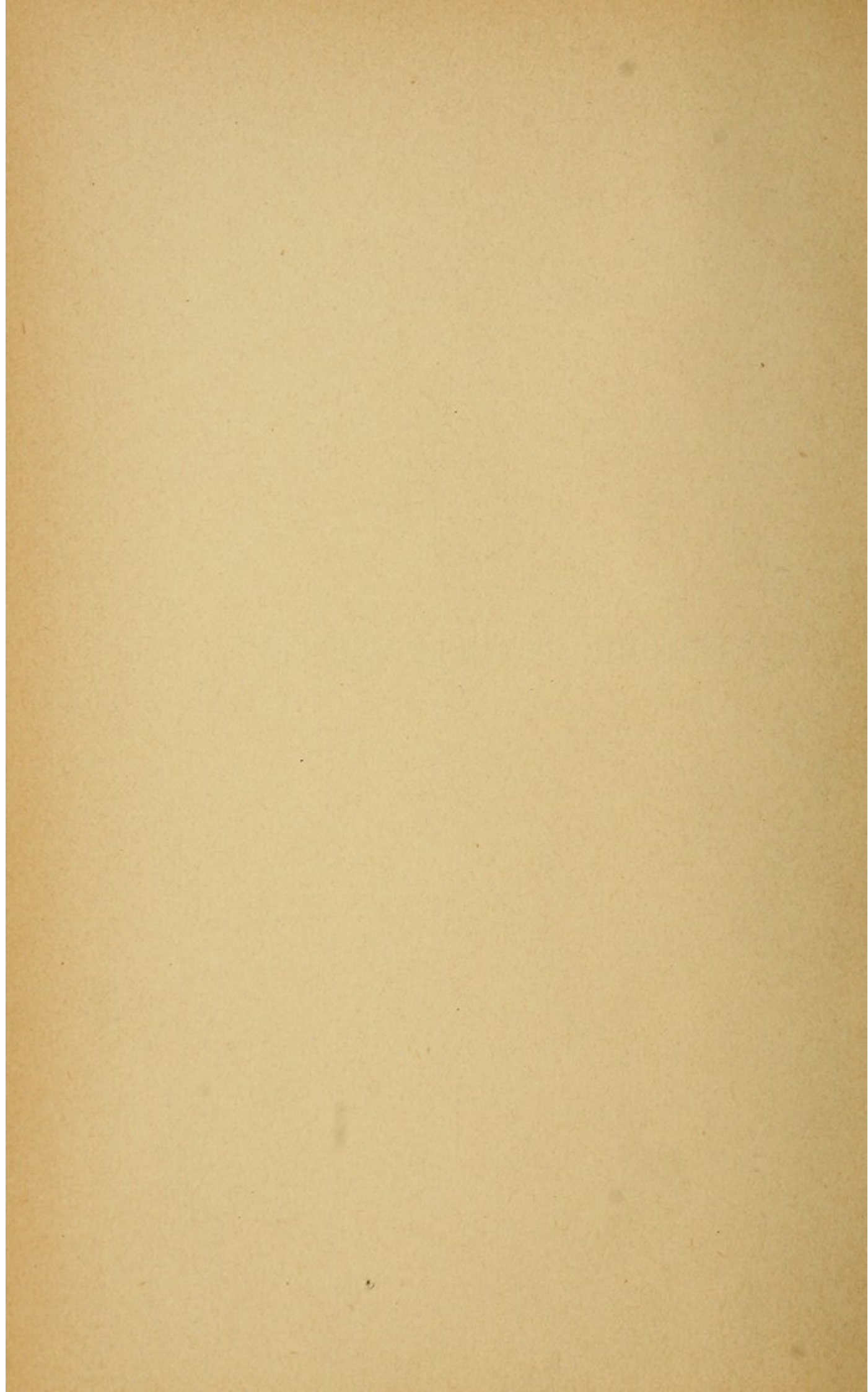
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EPITOMES OF THREE SCIENCES.



EPITOMES OF THREE SCIENCES

COMPARATIVE PHILOLOGY, PSYCHOLOGY,

AND

OLD TESTAMENT HISTORY.

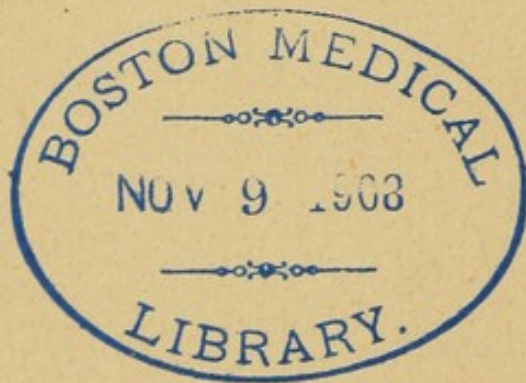
H. OLDENBERG

J. JASTROW

C. H. CORNILL

CHICAGO :
THE OPEN COURT PUBLISHING COMPANY
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PREFATORY.

THIS little book, *Epitomes of Three Sciences*, gives an account of the recent work done in three different fields of modern knowledge ; viz., Comparative Philology, Experimental Psychology, and Old Testament History. These three sciences have an almost direct bearing upon the religious views of our time, in spite of their difference of subject and the divergence of their authors' standpoints.*

This preface is intended to explain in a few words the relation in which Comparative Philology, Experimental Psychology, and Biblical History stand to one another.

Philology treats of language ; and it is language that has created man and human society. It is speech that distinguishes the soul of man from the souls of brute creation. We shall never understand the mystery of man's dignity, his superiority and dominion over the rest of the animal world upon earth, until we have acquired an insight into the growth of the human soul as mirrored in the evolution of human speech. Language is not, as has been supposed in former times, a supernatural phenomenon ; it is of natural growth ; and nothing elucidates this truth more than Comparative Philology, which demonstrates that where at first sight the whims of fanciful invention or wilful caprice seemed to reign, in reality definite laws obtain, shaping the development of our speech in all its innumerable phases and changes.

The same holds good of Psychology. The human mind is of natural growth, and the various caprices of the soul that at first

*It need scarcely be added that every one of the three authors is an authority in his specialty, and that none of these essays was written with any other purpose in view than that of summing up the present state of things in their three several departments.

sight appear to contradict all rule and method, and stand forth as seeming exceptions to the general order of nature, can after all be classified, demonstrated, and reproduced by experiment. This it is that modern Psychology has attempted to do, and the attempts to a great extent have been successful.

Who can doubt that the results arrived at are of the greatest importance for the future development of religion? The problem, What is the human soul? must be fearlessly faced by Theology; it cannot be blinked. The progress of science puts new problems to the defenders of religion, and our moral teachers cannot pass them by in silence. They cannot ignore them.

We have the firm confidence that the kernel of all religion, which is the moral truth that it contains, will remain unshaken through every new discovery and through every broadening of our scientific horizon. The religious teacher, that is to say the moral instructor of mankind, be he a Christian clergyman or a Rabbi, or the leader of an ethical society, need not fear for the great treasures that are entrusted to his care. The moral truths will, we are fully convinced, never suffer from the critical and most radical investigations of science. This the third essay teaches, which is a resumé of the critical investigations of the Old Testament and the stories of the Old Testament.

The author of the third essay is an orthodox Christian believer. This fact must be mentioned, chiefly to prevent the possible misconception that Professor Cornill's standpoint is the same as that of *The Open Court*. But it has another and greater significance. It proves that the criticism of the Old Testament is not conducted in rashness or in a spirit of hostility, but with scientific sincerity. The historical records of the Old Testament are searched with the same love and at the same time impartial scrutiny that any philological scholar ever bestowed upon Homer or Hesiod. Professor Cornill applies the principles of scientific research to the Bible, and he finds that the Old Testament loses none of its value in ceasing to be an absolutely reliable and lit-

erally inspired revelation from God. The Old Testament, as he takes it, is imperfect ; because it had to find and did find its fulfilment in the New Testament. He declares that no conflict is possible between belief and knowledge ; because believing and knowing are different.

We go one step farther than Professor Cornill, and we apprehend that the Theology of the future will have to follow us in our path. We look upon the New Testament in exactly the same light that Professor Cornill regards the Old Testament. The Biblical books do not lose one iota of their value because the view that they are literally inspired has, from the standpoint of modern scientific inquiry, become untenable. On the contrary, by understanding their historical growth we shall appreciate the better their grandeur and importance, without being offended at the imperfections that naturally attach to them.

Many are the conflicts between belief and science, if belief means imperfect knowledge : belief always has to give way to, and must attempt to develop into, scientific knowledge. Yet there can never be a conflict between faith and science, if faith means man's fidelity to, his confidence in, his love for, the moral ideal. Every progress of science gives us new knowledge, and will accordingly alter some of our beliefs ; but it will never alter our moral aspirations—or, if it alters them, the change will be for the better ; it will purify them, it will make them nobler and more humane.

There are Jewish Rabbis who, though they have no New Testament which they look upon as a fulfilment of the Old, accept the results of modern critical research as regards their own sacred scriptures ; and yet their religion is not destroyed in this way. The kernel of religion consists in its moral truths ; and the moral truths remain the same in the Biblical books, nay, are better appreciated if scientific criticism has cleared them from the briars and brambles of errors. No scriptural authority ought to be exempt from criticism. Let us, therefore, not hesitate to acknowl-

edge the principle of scientific research for the New Testament just as much as has been done for the Old Testament. Says Professor Cornill: "To that which has been acquired through strict and methodical scientific research, we are bound to bow *unconditionally.*" And this is universally true, not only in all scriptural investigations, but also in the researches of the natural sciences, and especially in the science of soul-life.

Thus, modern Psychology throws a new light upon the problems of the soul. Long cherished errors are dispelled and a scientific insight is gained into the nature of the human mind. The situation is as thoroughly altered as our conception of the universe was in the times of Copernicus, when the geocentric standpoint had to be abandoned.

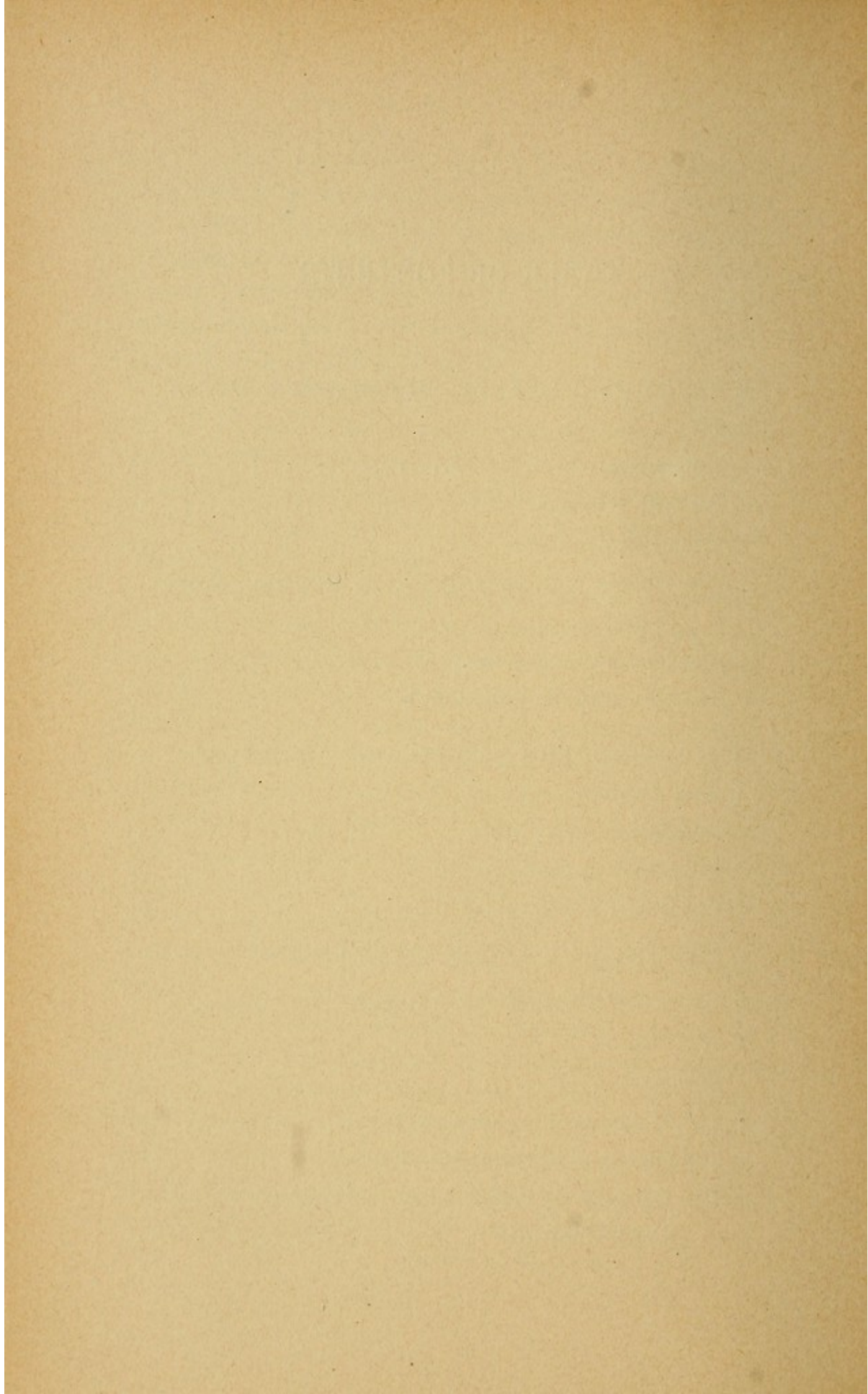
Modern psychology will influence the religious development of humanity in no less a degree than modern astronomy has done. At first sight the new truths seem appalling, and it appears difficult to renounce the egocentric standpoint. However, a closer acquaintance with the modern solutions of the problems of soul-life shows, that, instead of destroying religion, they place it upon a firmer foundation than it ever before possessed.

This little volume, *Epitomes of Three Sciences*, is not intended as a solution of the religious problem. It is a contribution only, to help the student in the gathering of material that will prove useful in the attempt to work out a solution.

There is a new Religion dawning upon mankind in which belief will become unnecessary because faith will have taken the place of belief. The old religions are in a state of transition; their dogmas are now recognized as unbelievable monstrosities irreconcilable with science. A superficial observer might declare that science will destroy all religion. Yet it is not so. Science is hostile to religion and to the antiquated dogmas of religion only because it is about to create a new religion, and the new religion will not come to destroy, but to fulfil, the old religions.

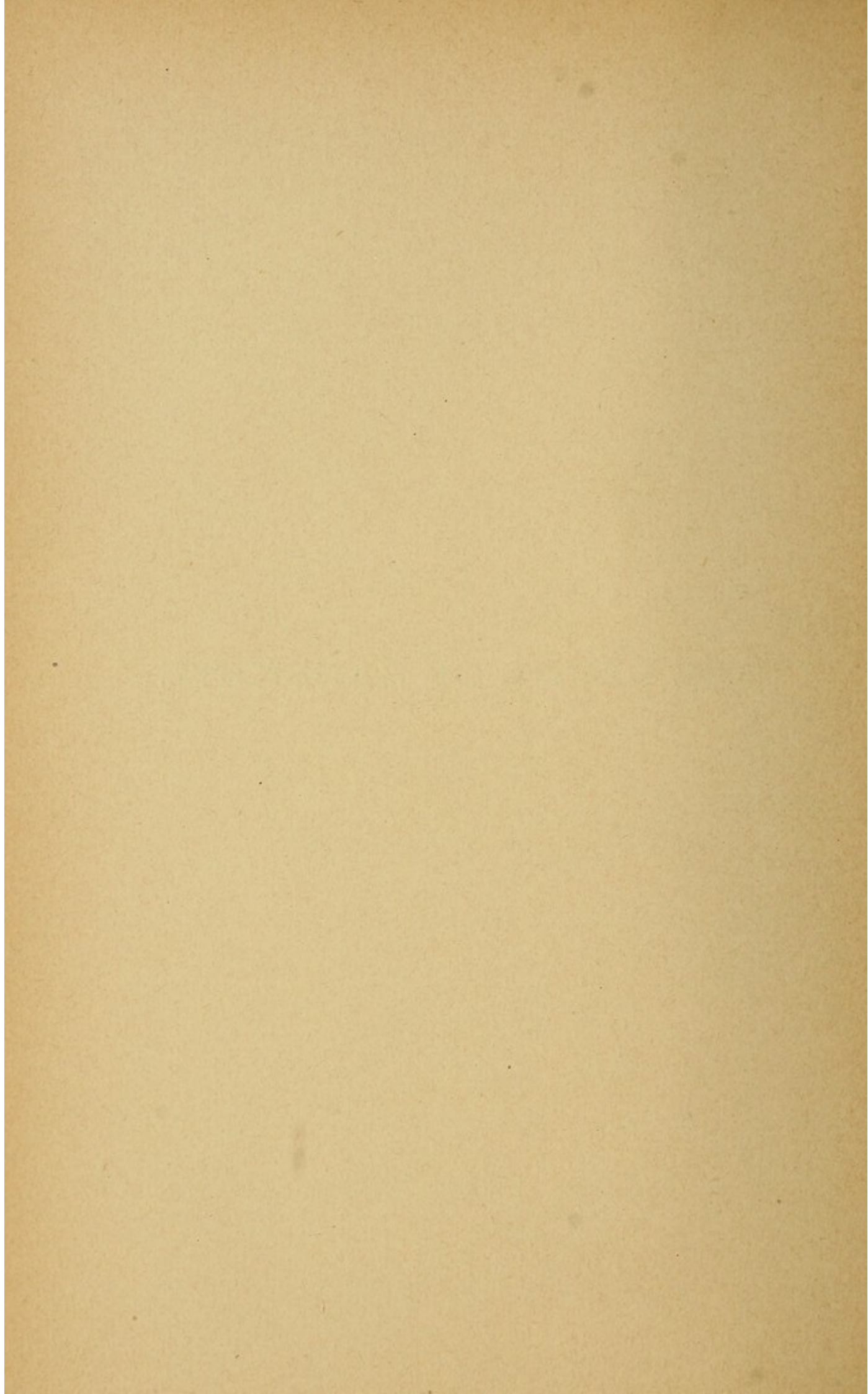
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THE STUDY OF SANSKRIT.





INTRODUCTION.

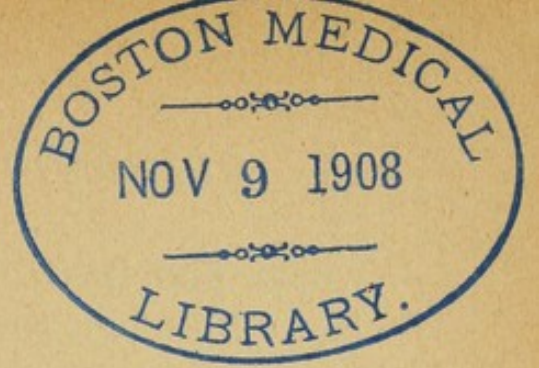
THE work of investigation in the language and literature of Ancient India, the development of which the following pages attempt to portray, has also in America long since acquired the rights of citizenship. A band of distinguished American scholars stands in the first rank among the laborers in this common work of investigation. We have sought in the following presentation to estimate the services of Böhtlingk and Roth, who produced the great Sanskrit Dictionary : we must add that by the side of this most excellent lexical production there stands a Grammar of the Sanskrit language, of modest compass compared with the monumental dimensions of the work first-mentioned, yet of not less fundamental importance.

The scholar to whom we are indebted for this Grammar, is the head of the American Sankritists—*William D. Whitney*. Whitney it was that first attempted to get at the meaning of, and to present the data of Sanskrit grammar, the exuberant inflectional systems of the Indian Noun and the Indian Verb *as they actually exist in the literature of the language*, and not as they appear, full of distortions mingled with phantasies of every description, in the theories of the native Indian grammarians. The investigator of the often so enigmatic texts of the Veda, the comparative philologist that seeks to explain the obscure formations of the Greek and Teutonic tongues by the aid of the light that Sanskrit sheds upon them, finds himself obliged, at every step, to have recourse to the grammatical data that the industry of Whitney has gathered and that Whitney's acumen has placed in their proper light.

The German author of the following essay believes that he can preface the same with no better word of introduction than by the expression of his admiration and gratitude for the aid and advancement that he has constantly received from the labors of his American friends and colleagues. It is to be hoped that the intimate and fruitful coöperation that has ever obtained between the Sanskrit scholars of Germany and America shall also, in the future, continue and endure ; to the manifold advantage of the investigation of these venerable monuments of primitive Indian civilization.

H. OLDENBERG.

KIEL, October 20, 1889.



THE STUDY OF SANSKRIT.

THE study of Sanskrit, the science of the antiquities of India, is about a century old. It was in the year 1784 that a number of men acting in Calcutta as judges or administrative officers of the East India Company, formed themselves into a scientific society, the Asiatic Society. We may say that the founding of the Asiatic Society was contemporaneous with the rise of a new branch of historical inquiry, the possibility of which preceding generations had barely or never thought of.

Englishmen began the work; soon it was taken up by other nations; and in the course of time, in a much greater degree than is the case with the study of hieroglyphic and cuneiform inscriptions, it has become ever more distinctly a branch of inquiry peculiarly German.

The little band of workers who are busy in the workshops of this department of science, have not been accustomed to have the eyes of other men turned upon their doings—their successes and failures. But, in spite, nay, rather in consequence of this, it is right that an attempt should be made to invite even the most disinterested to an inspection of these places of industry, and to point out and show to them, piece by piece, the work, or at least part of the work, that has been done in them.

There still lies formless in the workshops of this department of inquiry many a block of unhewn stone,

which perhaps will forever resist the shaping hand. But still, under the active chisel, many a form has become visible, from whose features distant times and the past life of a strange people look down upon us—a people who are related to us, yet whose ways are so far removed in every respect from our ways.

We shall first cast a glance at the beginning of Indian research toward the close of the last century. We shall trace the way in which the new science, after the first hasty survey of its territory, at once concentrated its efforts to a more profound investigation of its subject and advanced to an incomparably broader plane of study. We shall, above all, follow the difficult course pursued in the study of the Veda, the most important of the literary remains of ancient India, a production with which even the works of the oldest Buddhism are not to be compared in point of historical importance. Of the problems that this science encountered, of its aspirations, and of the successes that attended its efforts in solving difficult questions, we may venture to give a description, or at least an outline.

I.

THE first effective impulse to the study of Sanskrit and Sanskrit literature was given by Sir William Jones, who, in 1783, embarked for India to assume the post of Judge of the Supreme Court of Judicature at Fort William. The honor of having inaugurated a new era of philological inquiry, was heightened by the lustre and charm of personal character which this gifted and versatile man exerted upon his contemporaries. In prose and in verse Jones is extolled by his

friends of both sexes as the phoenix of his time, "the most enlightened of the sons of men"—encomiums many of which a calmer and more distant observer would be inclined to modify. The correspondence and other memoranda of Jones, which exist in great abundance,* furnish the reader of to-day rather the picture of an indefatigable and euphuistic *dilettante*, than that of an earnest investigator,—apart from the fact that he was alike greatly deficient in discernment and zeal.

As a young man we find Jones engaged in reading and reproducing in English verse, the works of Persian and Arabian poets; occasionally also with glimpses into Chinese literature. Then, again, a project of his own, an heroic epic—a sort of new *Æneid*, for which, and certainly with ingenuity enough, the Phœnician mythological deities were impressed into service—was to celebrate the perfections of the English constitution. On the journey to India this man of thirty-seven sketched a catalogue of the works, which, God granting him life, he hoped to write after celebrated models. These models were carefully designated opposite the separate projects of the outline. By the side of this heroic epic (after the pattern of Homer), we find a history of the war with America (after the patterns of Thucydides and Polybius), a philosophical and historical dialogue (after the pattern of Plato), and other plans of similar works.

With this feeling of omnipotent self-assurance, wholly untroubled with doubts, Jones was placed in India before the task of opening a way into the gigan-

* Edited by his biographer, Lord Teignmouth, and often given with more completeness than appears advisable considering the panegyrical character of the biography.

tic masses of an unknown literature, of a strange and beautiful poetry. He was as well qualified for the purpose (perhaps in a higher degree so) as many a more earnest and gifted scholar might have been.

The situation of affairs which he found in India forced it upon the European rulers of the land as a duty, to acquaint themselves with the Sanskrit language and its literature. The rapid extension and at the same time the redoubled activity of the English rule made it inconceivable that the existence of the old indigenous civilization and literature of the nation could long remain ignored or merely superficially recognized.

Preëminently did this necessity assert itself in the administration of justice, where the policy of the East India Company imperatively demanded that the natives should be suffered to retain as many of their laws and customs as it were possible to concede them. Already, in an act of parliament passed in 1772 in regard to the affairs of the company, a measure had been incorporated, at the suggestion of Warren Hastings, providing that Mohammedan and Indian lawyers should take part in court proceedings, in order to give effect to native laws and assist in the formulation of judgments. The dependence that thus resulted, of European judges upon the reliability or unreliability of Indian pandits, must have been trying indeed, to the conscientious jurist; for the assertions of Indian councillors as to the principles of the Law of inheritance, contract, etc., contained in the native books, were subject to no control.

Warren Hastings, in order to obviate the difficulty, had a digest made by several Brahmanical juriconsults from the old Sanskrit law books, and this was

translated into English. The undertaking had but little success, principally because no European was to be found who could translate directly from the Sanskrit. A translation had first to be made from Sanskrit into Persian and from Persian again into English.* The necessity therefore of gaining direct access to the Sanskrit language was unquestionable. The undertaking was not an easy one, though it was still quite different from such apparently impossible feats of philological ingenuity as the deciphering of hieroglyphic and cuneiform inscriptions.

The knowledge and likewise the use of Sanskrit in India had lived on in unbroken tradition.† There were countless pandits who knew Sanskrit as well as the scholars of the Middle Ages knew Latin, and who were eminently competent to teach the language. It was easy to overcome the opposing Brahmanical prejudices. To become master, however, of the obstacles which emanated from the indescribably intricate and perverted grammatical system‡ of the Hindus, offered greater difficulties, which could be only overcome by patience and enthusiasm.

Just at the first moments of this trouble came the arrival of Sir William Jones in India. Immediately he was the central figure. From him came the founding of the Asiatic Society; from him, the impulse to a new revision of the Hindu law of contract and inheri-

* Published in 1776, under the title, "A Code of Gentoo Law."

† This is the case at the present time. Compare, upon this point, Max Müller's "India what can it teach us" p. 78 et seq.

‡ The original complaint of Paulinus a S. Bartholomaeo, a missionary in India about the time of Jones, is well known.—"The devil, with a phenomenal display of ingenuity and craft, had incited the Brahmanical sages to invent a language so rich and so complex, that its mysteries might be concealed not only from the people at large, but even from the very scholars who were conversant with it."

tance, this time undertaken on a surer basis. He assembled about him competent Brahmans versed in Sanskrit. In the year 1790 he wrote: "Every day I talk Sanskrit with the pandits; I hope before I leave India to understand it as I understand Latin."

It was not now a question of research, but of acquisition, of study; that clear and satisfactory results might rapidly be acquired, and that a proper selection of noteworthy productions of the Hindu mind might be made and presented before the eyes of all. Jones translated the most delightful of all Hindu dramas, the story of the touching fate of the ascetic maiden, Sakuntala, who in the sylvan quiet of her retreat was seen and loved by the kingly hunter Dushjanta—a work, full of the most delicate sentiment, exhaling fragrance like the summer splendor of Indian Nature, and sung in the delicate rhythms of Kalidasa, of inspired eloquence.*

Still more important than the version of Sakuntala was the publication of a second great work, which Jones translated, the *Laws of Manu*. It seemed as though a Lycurgus of a primitive oriental era had come to light; for this wonderful picture of a strange people's life was ascribed to the remotest antiquity—a description of Brahmanical rule by the grace of Brahma, magnified and distorted by priestly pride, in which the people are nothing, the prince is little, the priest is everything. In the face of such an abruptly accumulated mass of unexpected revelations, respecting an an-

*It was formerly thought, for reasons that have not withstood the assault of criticism, that Kalidasa flourished in the first century before Christ; it was the custom to compare him to the Roman poets of the Augustan era, whose contemporaries he in that event would about have been. In point of fact he must be assigned to an era several centuries later,—about the sixth century after Christ.

cient civilization hitherto removed from all knowledge, how could one resist an attempt to give to that civilization and its language a place among known civilizations and languages? Wherever the eye turned weighty and pregnant suggestions offered themselves, and with them the temptation to let fancy stray in aimless sallies. What is more, Jones was in no wise the man to resist such a temptation. The vocabulary and the grammatical structure of Sanskrit convinced him that the ancient language of the Hindus was related to those of the Greeks, Romans, and Germans, that it must have been derived with them from a common mother tongue.* But side by side with the conception of this incomparably suggestive idea, innumerable fanciful theories abound in the works of Jones, concerning the relationship of the primitive peoples, where everything was found to be in some way related to everything else. Now the Hindu tongue was identified with that of the Old Testament; now Hindu civilization was brought into connection with South American civilization. Buddha was said to be Woden; and the pyramids and sphinxes of Egypt were claimed to show the style of the same workmen who built the Hindu cave-temples and chiseled the ancient images of Buddha.

Fortunately for the new study of Sanskrit, the continuation of the work begun by Jones fell to one of the most cautious and comprehensive observer of facts that have ever devoted their attention and talent to

*The identity of Hindu words with those of Latin, Greek, and other languages had been noticed by several before Jones, and likewise the correct explanation of this phenomenon, namely the kinship of the Hindu nation with the Latins and Greeks, had been declared by Father Pons as early as 1740. For fuller account, see Benfey, "History of the Science of Language," (*Geschichte der Sprachwissenschaft*) pp. 222, 333-341.

the study of oriental literatures. This was Henry Thomas Colebrooke (born 1765; went to India 1782), the most active in the active band of Indian administrative officers. He officiated now as an officer of the government, now again as a justice, then as diplomatist—a man well versed in Indian agriculture and Indian trade. One can scarcely regard without astonishment the multitude of disclosures which, during the long period he devoted to Sanskrit, he was able to make from his incomparable collection of manuscripts. These to-day are among the principle treasures of the India Office Library. From the province of Indian poetry, Colebrooke, who well knew the limits of his own power, kept aloof. But in the literature of law, grammar, philosophy, and astronomy, he had a wide reading, which in scope may never again be reached. He it was who made the first comprehensive disclosure in regard to the literature of the Veda.

Colebrooke's investigations are poor in hypotheses; we may say he withheld too much from seeking to comprehend the historical genesis of the subjects with which he dealt. But he established the actual foundation of broad provinces of Hindu research; filled with wonder himself at the ever widening vistas of that literature which were now revealed to him, and awakening our just wonder by the sure and patient toil with which he sought to penetrate into those distant parts.

While Colebrooke was at the height of his activity, interest in Hindu inquiry began to be awakened in a country which has done more than any other land to make of Hindu research a firm and well-established science—in Germany.

For the discoveries of Jones and Colebrooke there

could have been no more receptive soil than the Germany of that time, full of spirited interest in the old national poetry of all nations and occupied with the stirring movements rife in its own philosophy and literature. Apparently, indeed, the latter were closely allied to the spirit of the distant Hindu literature; for here too oriental romanticism and poetical thought sought no less boldly than the absolute philosophy of Germany, to penetrate to the primal and formless source of all forms. From the beginning, poets stood in the foremost ranks among the Sanskritists of Germany; there were the two Schlegels and Friedrich Rückert, and beside these, careful and unassuming, the great founder of grammatical science, Franz Bopp.

In the year 1808 appeared Friedrich Schlegel's work, *Ueber die Sprache und Weisheit der Inder* (The Language and Learning of the Hindus). From what was known to him of Hindu poetry and speculation, and according to his own ideas of the laws and aims of the human mind, Schlegel, with warm and fanciful eloquence, drew a picture of India as a land of exalted primitive wisdom. Hindu religion and Hindu poetry he described as replete with exuberant power and light, in comparison with which even the noblest philosophy and poetry of Greece was but a feeble spark. The time from which the masterpieces of the Hindus dated, appeared to him a distant, gigantic, primeval age of spiritual culture. There was the home of those earnest teachings, full of gloomy tragedy, of the soul's migration, and of the dark fate which ordains for all beings their ways and their end:

Obedient to this purpose set, they wander; from God to plants;
Here, in the abhorred world of existence, that ever moves to destruction.

While Schlegel gave to the world this fanciful

picture of Hindu wisdom, highly effective from its prophetic perspectives, but still wanting in sober truth, Bopp applied himself, more unassumingly, but with an incomparably deeper grasp and patient sagacity, to investigating the grammatical structure of Sanskrit; and, on the recognized fact of the relationship of this language with the Persian and the principal European tongues, to establishing the science of comparative grammar. In the year 1816 appeared his *Conjugationssystem der Sanskritsprache in Vergleichung mit jenem der griechischen, lateinischen, persischen, und germanischen Sprache* (Conjugational System of the Sanskrit Language in Comparison with that of the Greek, Latin, Persian, and Teutonic Languages).

This was no longer merely an attempt to find isolated similarities in the sounds of the words of related languages, but an attempt to trace back not only uniformities but also differences to their fixed laws; and thus in the life and growth of these languages, as they sprang from a common root and evolved themselves into a rich complexity, to discover more and more the traces of a necessity dominated by definite principles.

We can here only briefly touch upon the investigations made during the last seventy years, for which Bopp laid the foundation by the publication of his work. Rarely have such astonishing results been achieved by science as here. Elucidative of the early history of the languages of Homer and the old Italian monuments before they acquired the form in which we now find them written, the most unexpected witnesses were brought to give testimony; namely, the languages of the Hindus, the Germans, the Slavs,

and the Celts. Of these related tongues, the one sheds light upon the obscure features of the others, just as natural history explains the stunted organs of some animals by pointing out the same organs in their original, perfect form, in other animals.

The picture of the mother tongue, whose filial descendants are the languages of our linguistic family, was no longer seen in merely vague or doubtful features. The laws under whose dominion the system of sounds and forms in the separate derived languages have been developed from the mother tongue, are being ascertained ever more fully and formulated ever more sharply.

From the very beginning the essential instrument, yes, the very foundation of this investigation, was the Sanskrit language. In the beginning, faith in the primitiveness of Sanskrit in comparison with the related languages was too strong. During the last few years, however, this erroneous conception has been fully rectified; and this in itself is a decided step in advance. We know now that the apparently simpler and clearer state of Sanskrit in sounds and forms is in many respects less primitive than the complicated relations of other languages, *e. g.*, the Greek; and that we must often set out from these languages rather than from the Sanskrit, in order to make possible the explanation of Sanskrit forms. Thus Sanskrit now receives back the light which it has furnished for the historical understanding of the European languages.*

* It may be permissible here to illustrate this reversion of methods in a single point that has become of especially great importance to grammar. The Greek has five short vowels, *a, e, o, i, u*. The Sanskrit has *i* and *u* corresponding to *i* and *u*; but to the three sounds, *a, e, o* corresponds in Sanskrit only a single vowel *a*. Thus, for example, the Greek *apo* (English, *from*) reads in Sanskrit *apa*; the *a* of the first syllable, and the *o* of the second syllable of the

I must not attempt to follow in detail the course which the science of comparative grammar, apart from its connection with Hindu research, has taken. While the two branches of the study were rapidly advanced by Germans particularly, and likewise in France by the sagacious Bernouf, new material kept pouring in from India no less rapidly. In two countries on the outskirts of Indian civilization, in the Himalayan valleys of Nepal, and in Ceylon, the sacred literature of the Buddhists, which had disappeared in India proper, was brought to light in two collections, one in Sanskrit and one in the popular dialect Pali. The ingenuity of Prinseps succeeded in deciphering the oldest Indian written characters on inscriptions and coins. In Calcutta was undertaken and completed in the Thirties the publication of the *Mahabharata*, a gigantic heroic poem of almost a hundred thousand

Greek word is thus represented in Sanskrit by *a*. Or, to use another example, the Greek *menos* (English, *courage*) is in Sanskrit *manas*; Greek *epheron* (I carried)—*abharam*. What now is the original, *i. e.*, what existed in the Indo-Germanic mother tongue for the three sounds of the Greek *a, e, o*, or the single sound of the Sanskrit *a*? When scholars began to study comparative philology upon the basis of the Sanskrit they thought the *a*—and this was a conclusion apparently supported by the simplicity of the language—to be alone the original sound; and were led to believe that this vowel was later divided on European soil into three sounds, *a, e, o*. Investigations of the most recent time—and for these we are to thank Amelung, Burgman, John Schmidt, and others—have shown that the development of the vowel system took the opposite course. The vowels *a, e, o* were already in the Indo Germanic mother tongue; and in Sanskrit, or more accurately, before the time of Sanskrit, in the language which the ancestors of the Indians and Persians spoke when both formed *one* people, these vowels were merged into a single vowel. Thus the *e* of *esti* and the *o* of *apo* are more original than the *a* of *asti, apa*.

Now, we find in Sanskrit that where the Greek *e* corresponds to the Sanskrit *a*, certain consonants preceding this vowel, as, *e. g.*, *k*, are affected in a different way by the latter, than in instances where for the *a* of Sanskrit the Greek *a* or *o* is used. From the linguistic form of Sanskrit alone, which in the one case as in the other has *a*, it would not be intelligible why the *k* should each time meet a different fate. The Greek, in that it has preserved the original differences of the vowels, gives the key to an understanding of the peculiar transformations which have taken place in the *k*-sound in large and important groups of Sanskrit words.

couplets, in whose vast cantos with their labyrinth of episodes and sub-episodes many generations of poets have brought together legends of the heroes and days of the olden time, of their struggles and flagellations.

The sum and substance of all this newly-acquired knowledge has been incorporated in the great work of a Norwegian, who became, in Germany, a German—in the *Indische Alterthumskunde* (Hindu Antiquities) of Christian Lassen.

Lassen did not belong to the great pioneers of science, like Bopp. It must also be said that often that sagacity of philological thought is wanting in him, which sheds light on questions even where it affords no definite solution of them. And, indeed, was it not a herculean undertaking, a work like that of the Danaides, to explore the older periods of the Hindu past when, as the chief sources of information, one was solely limited to the great epic, and the law book of Manu? Even a surer critical power than Lassen possessed could not have discovered much of history in the nebulous confusion of legends, in the invented series of kings in *Mahabharata*, and in that colorless uniformity which the style of the Hindu Virgils spreads unchangeably over the enormous periods of time of which they assume to inform us. In spite of this, Lassen's *Antiquities*—the work of tireless diligence and rare learning—stands as a landmark in the history of Hindu investigations, uniting all the results of past time, and pointing out anew, by the very things in which it is lacking, still untried undertakings.

Just at this time, however, when the first volume of Lassen's work, treating of the earliest periods, appeared, came the beginning of a movement which has severed the development of Hindu studies into two

parts. New personalities appeared upon the scene and pushed to the front a new series of problems, for the solution of which an apparently inexhaustible, and to this day, in a certain sense, a still inexhaustible supply of freshly acquired material was offered. This was the most important acquisition that has ever been added to our knowledge of the world's literature through any one branch of oriental inquiry—the acquisition of the *Veda* for science.

II.

CONSIDERING the circumstances, this acquisition of the *Veda* for science can hardly be accounted a discovery. The existence and position in Hindu literature of this great work, had long been known. At every step the writings that had previously been brought to light, pointed to the *Veda* as the source from which all proceeded—even more strikingly than in the literature of Greece, we are led back, at every turn, to the poems of Homer. Manuscripts of the Vedic texts, moreover, were to be found, not only in India; they had long been possessed in great numbers by the libraries of Europe. But an attempt had scarcely, if at all, been made to lay hold of these and see if in the unmeasurable chaos of this mass of writings a firm ground for science could not be acquired.

The Sanskrit of the great epic poems, or of Kalidasa, was understood well enough; but of the dialect in which the most important parts of the *Veda* were written, no more was known than one familiar with the French of to-day would know of the language of the Troubadours. Without going deeply into the study it was easy to discern its inherent difficulties from the unwonted singularity of the text and its strange con-

tents, which, in part at least, were extremely complicated, and often involved in a maze of minor details. Would an earnest explorer of this territory, even in case he succeeded, be rewarded for his pains?

It was a band of young German scholars who bent their energies to this work. Most of them are still working in our midst—Max Müller, Roth, and Weber. Two others, whose names should not be omitted here, died a few years ago; these were Adalbert Kuhn and Benfey. There was no need of undertaking great expeditions, such as were those that set out for the investigation of Egyptian and Babylonian antiquity. Those monuments in whose colossal and strange forms fragments of a primeval age meet the eye, were wanting in India. The knowledge which was to be acquired was not contained in inscriptions, but in manuscripts.* Our scholars repaired to London for a greater or less length of time, and the work was begun among the store of manuscripts possessed by the East India House.

There was no lack of confidence. "It would be a disgrace," wrote Roth, "to the criticism and the ingenuity of our century which has deciphered the stone inscriptions of the Persian kings and the books of Zoroaster, if it did not succeed in reading in this enormous literature the intellectual history of the Hindu nation."

Much that Roth expected has been accomplished or is on the way towards accomplishment. Of much, that was hoped for at that time, we can now say that it was unattainable, and understand why. What has

* The royal library at Berlin also acquired and owns a rich collection of Sanskrit manuscripts, for which a foundation was laid by the purchase, at the command of Frederick William IV., of the Chambers manuscripts.

been attained, however, has given to the picture, which science formed of Hindu antiquity, an entirely different aspect. Unbounded in extent, this picture formerly seemed to lose itself in the nebulous depths of an immeasurable past. Now, determinate limits have been found, and the remotest initial point has been discovered for verifiable history. Authentic sources were disclosed, leading to the earliest age of Hindu civilization, from which, and regarding which, historical testimony in the usual sense of the word became accessible; and instead of the twilight, peopled with uncertain, shadowy giants, in which the epic poems made those times appear, the Veda opened to us a reality which we may hope to understand. Or, if in many instances, instead of the hoped for forms, it has afforded the eye but an empty space, even this was a step in advance. For then it was at least shown that the knowledge which was sought was not to be had; and that which had been given as such, had disclosed itself as an imaginative picture born of the caprice of a later legend-maker.

The literature of epic poetry, apparently, could no longer lay claim to an incalculable antiquity; it sank back into a sort of Middle Ages, behind which the newly discovered, real antiquity loomed forth, studding the horizon of historical knowledge with significant forms. We shall now see how the task of understanding the Veda was accomplished, and shall describe at the same time what it was that had thus been acquired. We have here a newly disclosed literature of venerable antiquity, rich in marks of earnest effort, logically developed in sharply, nay rigidly, characterized forms; we have a newly discovered piece of history, forming the historical—or shall we say unhistorical?—beginnings

of a people related to us by race, who at an early day set out in paths distinctly removed from the ways of all other peoples, and created their own strange forms of existence, bearing in them the germs of the misfortunes they have suffered.

By what means did we succeed in understanding the Veda?

Almost all the more important parts of the Vedic literature—for the Veda, like the Bible, is not a separate text, but a literature with wide ramifications—are preserved in numerous, and, for the most part, relatively modern manuscripts. Only rarely are they older than a few centuries; since in the destructive climate of India it could not be otherwise. The texts, however, of these later manuscripts descend from remote antiquity.

Before they came to be written in *the present* manuscripts, or written in manuscript-form at all, they encountered, in the course of great periods of time, many and manifold misfortunes. It is the task of the philological inquirer to ascertain the character of these events—to determine the genetic history of the texts. It may be said that these texts in the shape they have been transmitted to us, resemble paintings by old masters, which bear unmistakable traces of alternate injuries and attempted restorations by competent and incompetent hands. What we want to know, so far as it lies in our power, is the form and general character in which they originally existed.

The period to which the origin of the old Vedic poems belongs, we cannot assign in years, nor yet in centuries. But we know that these poems existed, when there was not a city in India, but only hamlets

and castles; when the names of the powerful tribes which at a later time assumed the first rank among the nations of India were not even mentioned, no more so than in the Germany which Tacitus described were mentioned the names of Franks and Bavarians. It was the period of migrations, of endless, turbulent feuds among small unsettled tribes with their nobles and priests; people fought for pastures, and cows, and arable land. It was the period of conflict between the fair-skinned immigrants, who called themselves Arya, and the natives, the "dark people," the "unbelievers that propitiate not the Gods."

As yet the thought and belief of the Hindus did not seek the divine in those formless depths in which later ages conceived the idea of the eternal and hidden Brahma. Wherever in nature the brightest pictures met the eye and the mightiest tones struck the ear, there were their Gods—the luminous arch of heaven, the red hues of dawn, the thundering storm-god and his followers, the winds. The Vedic Aryans had not yet reached their later abode on the two powerful sister streams, the Ganges and the Yumna; the Sindhu (Indus) was still for them the "Mother Stream," of which one of the oldest poets of the Rig Veda says : *

" From earth along the reach of Heaven riseth the sound;
Ceaseless the roar of her waters, the bright one.
As floods of thundering rain, poured from the darkened cloud-bosom,
So rushes the Sindu, like the steer, the bellowing one."

The poetry of the Rig Veda dates from the time of those wanderings and struggles that took place on the Indus and its tributary streams. Certain families exercised the functions of priestly offices, and

* Hundreds of Vedic melodies have been handed down to us in a form the interpretation of which can be subject to no real doubt. As it appears, they are the oldest but unfortunately the poorest memorials of musical antiquity.

possessed the acquisitions of an artificially connected speech together with a simple form of chant using but few tones. These families created Vedic poetry, and transmitted the art to their posterity. The songs of the Rig Veda, which are almost all sacrificial songs, were not really what we call popular poetry. We do not hear in them the language that pours forth from the soul of a nation, as it communes in poetical rhythm with itself. It was a poetry that wanted mainly the proper hearers—the masses of the people who spoke through the mouth of the poet. Their hearers were God Agni, God Indra, or Goddess Dawn; and the poet was not he whom the passionate impulses of his own soul or his own love of song and legend impelled to sing, but he was mainly one who belonged to a poet-family—one of the families of men who in the course of time became united as a caste and erected ever more insuperable barriers between their sacred existence and the profane reality of daily life. For the gods such a poet only “could frame a worthy poem, as an experienced, skillful wheelwright makes a wagon,”—a poem which would be rewarded by the rich princely lords of the sacrifice, with steeds and kine, with golden ornaments and female slaves from the spoils of war. “Thy blessing,” says a Vedic poet to a God,*

“ Rests with the givers,
With the victors, the many valiant heroes,
Who make gifts to us of clothing, kine, and horses;
May they rejoice in the splendor and plenty of divine bounty.

Let all things waste that they have won
Who, without rewarding, would profit by our hymns to heaven.
The godless ones, that boast their fortune,
The transgressors—cast them from the light of day.”

It has been fatal for all thought and poetry in India, that a second world, filled with strangely fantastic

* Rig Veda V. 42, 8-9.

shapes, was established at an early day beside the real world. This was the place of sacrifice with its three sacred fires and the schools in which the virtuosos of the sacrificial art were educated—a sphere of strangest activity and the playground of a subtle, empty mummery, whose enervating power over the spirit of an entire nation we can scarcely comprehend in its full extent. The poetry of the Rig Veda shows us this process of disease at an early stage ; but it is there, and much of that which constitutes the essence of the Rig Veda, is rooted in it.

In the foreground stands the sacrifice, and throughout, only the sacrifice. “By sacrifice the Gods made sacrifice ; these regulations were the first,” it is said in a verse which is thrice repeated in the Rig Veda. The praise of the God for whom the sacrificial offerings were intended, his power, his victories, and the prayers for possessions which were hoped for in return for human offerings—the prosperity of flocks and posterity, long life, destruction of enemies, the hated and the godless—such is the subject-matter of the multitudinous repetitions that recur throughout the hymns of the Rig Veda. Still, among these verse-making sacrificers there was not an utter absence of real poets. And thus among the stereotyped implorations and songs of praise we find here and there a great and beautiful picture—the wonder of the poet’s soul at the bright marvels of nature or the deep expression of an earnest inner life. A poet from the priestly family of the Bharadvajas sings of the goddess Ushas, the dawn:*

*The Indian word Ushas is related to the Greek Eos, the Latin Aurora.

“ We see thee, thou lovely one ; far, far, thou shinest.
To heaven's heights thy brilliant light-beams dart.
In beauteous splendor shimmering, unveilest thou thy bosom,
Radiant with heaven's sheen, celestial queen of dawn !

“ The red bulls draw their chariot,
Where in thy splendor thou o'erspread'st the heavens ;
Thou drivest away night ; as a hero, a bow-man,
As a swift charioteer frighteneth his enemies.

“ A beautiful path has been made for thee in the mountain.
Thou unconquerable one, thou risest from out the waters.
So bring thou us treasures to revive us on
Our further course, queenly daughter of heaven.”*

Another poet sings of Parjanya, the rain God: †

“ Like the driver who forward whips his steeds,
So he urges onward his messengers, the clouds.
From afar the thunder-tone of the lion arises
When the God makes rain pour from the clouds.

“ Parjanya's lightnings dart, the winds blow ;
The floods pour from heaven ; up spring grass and plants.
To all that lives and moves a quickening is imparted,
When the God scatters his seeds on the earth.

“ At his command the earth bows deeply down ;
At his command hoofed creatures come to life ;
At his command bloom forth the bright flowers :
May Parjanya grant us strong defence !

“ A flood of rain hast thou sent ; now cease ;
Thou didst make penetrable the desert wastes.
For us thou hast caused plants to grow for food,
And the prayer of men thou hast fulfilled.”

But we must turn from the description of Vedic poetry to examine the fortune that this production encountered on its way from distant antiquity to the present time, from the sacrificial places on the Indus to the workshops of the English and German philologists. Here a conspicuous fact is to be dwelt upon,

* Rig Veda VI. 64. The hymn following is V. 83.

† This God also reappears among the kindred peoples of Europe, as Fiörgynn in the northern mythology, and among the Lithuanians and Prussians as the God Perkunas, of whom an old chronicle says : “ Perkunas was the third idol ; and him the people besought for storms, so that during his time they had rain and fair weather and suffered not from the thunder and the lightning.”

which belongs to the strangest phenomena of Indian history, so rich in strange events. The hymns of the Rig Veda, as well as the hymns of the other Vedas, have been composed, collected, and transmitted to succeeding ages. There has been incorporated in them a very large sacerdotal prose literature, developed throughout the older and later divisions, and treating of the art and symbolism of sacrifice. There have also arisen heretical sects, like the Buddhists, who denied the authority of the Veda, and instead of its teachings revered as a sacred text the code of ordinances proclaimed by Buddha. *And all this has taken place without the art of writing.*

In the Vedic ages writing was not known. At the time when Buddhism arose it was indeed known—the Indians probably learned to write from Semites—but it was used only for inditing short communications in practical life, not for writing books. We have very sure and characteristic information as to the rôle which the art of writing played, or rather did not play, in the church life of the Buddhists at a comparatively late age, say about 400 B. C. The sacred text of this sect affords a picture, executed even in its minutest features, of life in the houses and parks which the brethren inhabited. We can see the Buddhist monks pursue their daily life from morning to night; we can see them in their wanderings and during their rest, in solitude and in intercourse with other monks, or laymen; we know the equipment of the places occupied by them, their furniture, and the contents of their store-rooms. But nowhere do we hear that they read their sacred texts or copied them; nowhere, that in the dwellings of the monks such things as writing utensils or manuscripts were found.

The memory of the spiritual brethren, "rich in hearing,"—what we to-day call a well-read man was then called one rich in hearing,—took the place of a cloister library; and if the knowledge of some indispensable text,—as, *e. g.*, the formula of confession which had to be recited at the full and new moon in the assembly of the brethren,—was in danger of being lost among a body of priests, they acted on the dictum laid down in an old Buddhistic ordinance: "By these monks a monk shall immediately be sent to a neighboring parish. He must be thus instructed: 'Go, Brother, and when thou hast learned by heart the formula of confession, the complete one or the abbreviated one, come back to us.'"

It must be admitted that under such circumstances all the conditions for the existence of books, and the relations between books and reader—if it be allowed me for the sake of brevity to use these expressions—must have been of a very different nature than in an age of writing or one of printing. A book could then exist only on condition that a body of men existed among whom it was taught and learned and transmitted from generation to generation. A book could be known only at the price of learning it by heart, or of having some one at hand who had thus learned it. Texts of a content which only claimed a passing notice, could not as a rule exist. This was fatal for historical writing and generally speaking for all profane literature. Above all, the existing texts were subjected to the disfigurements that errors of memory, carelessness, or attempts at improvement on the part of the transmitters must have imported into them.

Under conditions such as have been described above, the poetry of the Rig Veda has been handed

down from generation to generation through many centuries. Separate poems were brought into the collection in the course of oral compilation and transmission. The collection was re-corrected on repeated occasions and was brought to greater completeness; again only by oral compilation and transmission. It is conceivable enough that thus the original structure yes, even the existence itself of special hymns was often injured, effaced, or destroyed. Remodeling destroyed their form. The lines of division between hymns standing side by side would often be forgotten and numbers of them would be merged into an apparent unity. Modern, and easily intelligible terms drove out the obsolete phrases and the ancient word-forms—often the most valuable remains for the investigator, whom they help to explain the history of the language, just as the scientist deduces from fossil remains the history of organic life.

Especially fatal was it for the old and true form of the Vedic hymns that they have been stretched upon the Procrustean bed of grammatical analysis. Earlier and more strongly than in any other nation of antiquity, was interest and pleasure taken in India in scientifically dissecting language. Closely examining the separate sounds of speech and their underlying modifications, they employed exceptional ingenuity and discrimination in constructing a system from which, when it became known in Europe, the science of our century found ample reason to learn much that was marvellous. The ingenuity and penetration of the students of Vedic literature has been burdened like a curse with that genuinely Hindu trait, subtlety; the joy—which at times seems to border on maliciousness—of stretching and forcing things into an artistic

garment, of building up labyrinths of fine points, in whose involved courses the skilled and cunning student ostentatiously thought himself able to find his way. Thus, in this grammatical science, understanding and misunderstanding of the real truth are mingled in inexplicable confusion. That under the hands of such linguistic theorists the precious wealth of the old Vedic hymns has not remained inviolate, is easily comprehended. In some cases, isolated details of the traditions of prior epochs were caught and clung to with felicitous acumen ; in others, no hesitation was had in wiping out of existence entire domains of old and genuine phenomena to suit half-correct theories, so that the most patient ingenuity of modern science will only be able to restore in part what has been lost.

Finally, however, the caprice under which the hymns of the old singers must have suffered, had its end. The more people accustomed themselves to see in these poems not merely beautiful and efficacious prayers but a sacred revelation of the divine, the higher did their transmitted form—even when this is, or seems to be, of necessity, so irregular—rise in the respect of theologians, and the more careful must they have been to describe and preserve this form with all its dissimilarities.

We possess a remarkable work—it is composed in verse like many Hindu treatises and hand-books—in which a grammarian, Çaunaka, who must probably be placed about the time 400 B. C., has given a deep and unusually well-planned survey of the vocal peculiarities of the Rig Veda text. The study of Çaunaka's work affords us the proof that *from that time on* the Vedic hymns, protected by the united care of gram-

matical and religious respect for letters, have suffered no further appreciable corruptions. The most important manuscripts of the Rig Veda which we know, may be two thousand years later than this hand-book of Çaunaka's, but they bear all tests in a remarkable way if we compare them with it.

The Rig Veda, indeed, which that Hindu scholar found, was not unlike a ruin. And it was hardly possible by the help of Hindu scholarship to transmit it to posterity in a better condition than it was received. But still the conscientious diligence of the Hindu linguists and divines accomplished something: for the last two thousand years it has preserved these venerable fragments from the dangers of further decay. They lie there, untouched, just as they were in the days of Çaunaka. And the investigation of our day, which has already succeeded in bringing forth from many a field of ruins the living features of a by-gone existence, is at work among them, now with the bold grasp of confident divination, now in the quiet uniformity of slowly advancing deliberation, to deduce whatever it may of the real forms of those old priestly poems.

III.

WE may say, that the greatest undertakings planned and the most important results achieved in the field of Sanskrit research, are linked with the names of German investigators. If we add that this could not easily be otherwise, it is not from national vanity; we should but express the actual facts of the case, based upon the development of the science. It was natural that

the first movements toward the founding of Hindu research, the first attempts to grasp the vastly accumulated material and find provisional forms for it, should have been the work of Englishmen, men who spent a good part of their lives in India, and were there brought in constant contact with native Sanskrit scholars. But not less natural was it that the honor of instituting further progress and gaining a deeper insight should be accorded to Germans. The two fields of knowledge by which, especially, life and power were imparted to Hindu investigations were and are essentially German. These are comparative grammar, which we may say was founded by Bopp, and that profound and potent science, or perhaps more correctly expressed art, of philology, which was practiced by Gottfried Hermann, and likewise by Karl Lachmann, a man imbued with the proud spirit of Lessing, full of acute and purposeful ability, exact and truthful in small matters as in great. Representatives of this philology, moved to antipathy by many characteristic features of the Hindu spirit, and not the least influenced by the assertion that Latin and Greek grammar has this or that to learn from the Sanskrit, might meet the new science of India with reserve or more than reserve. Still this could in no wise alter the truth that the study of Hindu texts, the investigation of Hindu literary remains, could be learned from no better teachers than from those masters who had succeeded in improving and interpreting the classical texts with unerring certainty and excellence of method.

It was a Leipsic disciple of Hermann and Haupt who, at the instigation of Burnouf, in 1845, in Paris, conceived the plan of publishing the Rig Veda with the commentary of its Hindu expounder, the abbot Sa-

yana, who flourished in the 14th century after Christ. This was the great work of Max Müller, the first of those fundamental undertakings on which Vedic philology rests. It was necessary above all to know how the Brahmins themselves translated the hymns of their forefathers, which were preserved in the Rig Veda, from the Vedic language into current Sanskrit, and how they solved the problems which the grammar of the Veda presented, by the means their own grammatical system offers. Herein lay the indispensable foundation of all further investigation. It was necessary to weigh the Hindu *traditions* concerning the explanation of the Veda, which erred in underestimation as well as overestimation, and to test the consequences of both errors, in order finally to learn the art of scientifically estimating them. This constitutes the great importance of Max Müller's work extending through a quarter of a century (1849-1874). To complete was easy, but to begin was exceedingly difficult; for most of the grammatical and theological texts which formed the basis for Sayana's deductions, were, when Max Müller began the work, books sealed with seven seals.

A few years after the first volume of Max Müller's Rig Veda appeared, two other scholars united in a work of still greater magnitude. It has long since become to all Sanskritists the most indispensable tool for their labors. I refer to the Sanskrit dictionary, compiled under the commission of the Academy of St. Petersburg, Russia, by Roth and Böhtlingk. It was intended to make a dictionary for a language the greatest and most important part of whose texts were still not in print. The work was similar to that which the Grimm Brothers began at the same time

for the German language. Roth undertook the Vedic literature, the foundation of the whole ; Böhtlingk the later periods. Friendly investigators, and especially Weber, helped them by bringing into use the known and accessible texts or manuscripts that were serviceable to them. The most important thing was, that the Veda had now for the first time—setting aside a few previous studies—to be gone through with a view to lexicography. The explanations which the Hindus themselves were wont to give of the words of the Vedic language were regarded as a valuable aid for understanding it. But the matter did not rest here. “We do not hold it,” said the two compilers in their preface, “to be our task to acquire that understanding of the Veda which was current in India some centuries ago ; but we seek the sense which the poets themselves gave to their hymns and maxims.” They undertook “to get at the sense from the texts themselves, by collating all the passages related in word or meaning.” In this way they hoped to re-establish the meaning of each word, not as a colorless conception, but in its individuality and therefore in its strength and beauty. The Veda was thus to re-acquire its living sense, the full wealth of its expression. The thought of the earliest antiquity was to appear to us in new forms full of life and reality.

The execution of this work, carried on with tenacious industry and brilliant success for four and twenty years (1852–1875), did not fall short of the magnitude of the plan originally conceived. In minor points we find it easy to point out numerous deficiencies and errors. The two compilers well knew that without that spirit of boldness which does not stand in fear of unavoidable errors, it were better never to undertake

their task. In face, however, of the great value of that which they have accomplished, all faults sink into insignificance.

What a chasm separates their work from that of their predecessor, Wilson!* In Wilson's work there is little more than a fair enumeration of the meanings which Hindu traditions assigned to the words; for his dictionary the Veda scarcely exists, if it does so at all. Here in the work of Roth and Böhtlingk on the other hand, is brought to light the immense wealth, replete with oriental splendor, of the richest of all languages; the history of each word, and likewise the fortunes that have befallen it in the different periods of the literature and have determined its meaning, are brought before our eyes. The difference between the two great periods in which the development of Hindu research falls, could not be incorporated more clearly than in these two dictionaries. In the one instance are found the beginnings, which English science, resting immediately on the shoulders of the Indian pandits, has made; in the other is the continuation of English work conducted by strict philological methods to a breadth and depth incomparably beyond those beginnings, and at the head of this undertaking stand German scholars.

To Müller's great edition of the Rig Veda and to the St. Petersburg Dictionary further investigations have been added in great abundance, and these have more and more extended the limits of our knowledge of the Veda. Already a new generation of laborers have taken their places beside the original pioneers in these once so impassable regions. As a whole, or in its separate parts, the Rig Veda has been repeatedly

* Wilson's dictionary appeared in 1819; a second edition in 1832.

translated. Its stock of words and inflections has been studied and overhauled from ever new points of view and with ever new questions in mind. To many a picturesque word of the strong, harsh Vedic language its full weight has thus been given back.

The principles and practices according to which the old collectors and revisers of the Veda text proceeded, are now being examined by us with a view to being able to determine what came into their hands as tradition and what they themselves imported into the traditions. The readings of the passages quoted from the Rig Veda in the other Vedas are being collected, in order to trace in them the remains of the genuine and oldest textual form. The religion and mythology of the Veda have been described; the national life of the Vedic tribes has been portrayed in all its phases. The texts afford the data for such a portraiture of these features that it has justly been said that the description given surpasses in clearness and accuracy Tacitus's account of the national life of the Germans.* Finally an attempt has been made—or rather an attempt will have to be made, for even at this time the work is in its beginnings—to discover amid the masses of Vedic prayers and sacrificial hymns something which must be an especially welcome find to scientific curiosity—the beginning of the Indian Epic.†

There could be no doubt that in so poetical a period the pleasure of romancing produced abundant fruit. Short narratives, short hymns must then have

* H. Zimmer: *Altindisches Leben: die Cultur der vedischen Arier*. (Ancient Indian Life: the Civilization of the Vedic Aryans.) Berlin, 1879, p. vii.

† The remarks here made on the beginnings of the Indian Epic rest on conceptions which I have before briefly sought to establish. *Zeitschrift der Deutschen Morgenländ. Gesellsch.*, 1885, p. 52, et seq.

existed, enclosed, as it were, in narrow frames. Thus, in general, are the beginnings of epic poetry shaped, before poetic ability rises and ventures to narrate in wider scope and with more complicated structure the fate of men and heroes. It seemed, however, as though those beginnings of the Indian epic were lost. But they were preserved, though to be sure in a peculiarly fragmentary form. In the Rig Veda there is many a medley of apparently disconnected verses in which we have thought to discover the accumulated sweepings of poetic workshops. In fact we have here the fragmentary remains of epic narratives. These verses were once inserted in a prose framework; the narrative part of the Epic being in prose, and the speeches and counter-speeches in verse, just as, often, in Grimm's fairy-tales when the poor daughter of the king or the powerful dwarf has to speak an especially weighty or touching word, a rhyme or two appears.

Now, only the verses were memorized in their fixed original form by the Vedic tale-tellers. The prose, each new narrator would render with fresh words; until finally its original subject-matter fell into almost total oblivion, and the verses alone survived, appearing sometimes as a series of dialogues sufficiently long and full of meaning to enable us to gain an understanding of the whole, and then again as unrecognizable fragments no more admitting an inference as to their proper place and connection in the story of which they form a part than—to keep the same comparison—a couple of rhymes in one of Grimm's fairy-tales would enable us to restore the whole tale.

It may be permitted for the sake of making clear what has been said, to cite her a passage from one of

those old narratives whose connection, at least as a whole, may be conjecturally determined.* The scene is between gods and demons, its subject is the great battle which was fought in heaven, the thunder fight, which for the strife-loving spirit of that age was the pattern of their own victories. Vritra, the envious fiend, kept the waters of the clouds in captivity, that they might not pour down upon the earth; but God Indra smote the demon with his thunderbolt and let the liberated waters flow. Indra—this must have been said in the lost prose introduction to the narrative—felt, as he entered the battle, too weak for his terrible opponent. The gods, faint-hearted, withdrew from his side. Only one offered himself as an ally, Vâyu (the wind),† the swiftest of the gods, but he demanded as a reward for his fidelity, part of the sacrificial draught of Soma, which men offer to Indra. Vâyu speaks :

“ Tis I. I come to thee the foremost, as is meet;
Behind me march in full array, the Gods.
Givest thou me, O Indra, but a share of sacrifice,
And thou shalt do, with my alliance, valiant deeds of might.”

Indra accepted the alliance :

“ Of the honied draught I give thee the first portion;
Thine shall it be; for thee shall be pressed the Soma.
Thou shalt stand as friend at my right hand;
Then shall we slay the serried hosts of our foe.”

Then a new person appears, a human singer. We know not whether a definite one among the great saints of that early time, the prophets of the later generation of singers, was thought of or not. He wished to praise Indra; but can Indra now be praised? The hostile demon is not yet conquered; doubts as to

* Rig Veda 8,100. I omit a few verses of obscure meaning, and say nothing of difficulties, for which this is not the place to give a solution.

† He is also called Vâta. This name has been identified—though the correctness of this is highly questionable—with the German name Woden.

Indra and his might come to the singer. He says to his people :

“ A song of praise bring ye who long for a blessing,
If truth be truth, sing ye the praise of Indra.”

“ There is no Indra,” then said many a one,
“ Who saw him? Who is he whom we shall praise?”

Then Indra himself gives answer to the weak-hearted :

“ Here stand I before thee, look hither, O Singer
In lofty strength I tower above all beings.
The laws of sacred order make me strong;
I, the smiter, smite the worlds.”

The confidence of the pious in their God is restored, his hymn of praise is sounded. And now Indra enters the conflict. The falcon has brought him the Soma, and in the intoxication of the ambrosial drink, the victorious one hurls his thunderbolt at the demon. Like a tree smitten by lightning, falls the enemy. Now the waters may flow forth from their prisons :

“ Now hasten forth! Scatter thyself freely!
He who detained thee is no more.
Deep into the side of Vitra has been hurled
The dreaded thunderbolt of Indra.

“ Swift as thought sped the Falcon along;
Pierced into the citadel, the brazen.
And up to heaven, to the thunderer,
The soaring falcon bore the Soma.

“ In the sea the thunderbolt rests,
Deep engulfed in the watery billows.
The flowing and ever-constant waters
To him bring generous gifts.”

I pass over the difficult conclusion of the poem—the creation of language by Indra after the battle with Vitra. One fourth of the languages that exist on earth, Indra formed into clear and intelligible speech; these are the languages of men. The other three fourths, however, have remained indistinct and incompre-

hensible ; these are the languages that quadrupeds and birds and all insects speak.

This is one of the early narratives of the Hindus concerning the deeds of their gods and heroes. We must not endeavor here, to restore the lost portions written in prose which served to connect the strophes. To make the modern reader clear as to the connection of the verses, another method of expression must be chosen than that peculiar to the narrators of the Vedic epoch. As it appears, they were content with recounting the necessary facts, or rather with recalling them to their hearers, in short and scanty sentences.

The verses set in the narrative are not wanting, however, in flights of poetic eloquence—as the poem of Indra's battle will have shown. Without the finer shades of human soul-life, it is true, yet in earnest simple greatness, like mountains or old gigantic trees, the heroic figures of these ancient sagas stand forth. What takes place among them is similar, nay more than similar, to that which takes place in nature. For as yet the primitive *natural* significance of those gods has hardly been veiled by the human vesture which they wear, and in the narratives of their deeds the great pictures of nature's life with its wonders and terrors are everywhere present. The duty of bringing together and interpreting such fragments of this most ancient Epic activity, Vedic investigators must reckon among their most fruitful though perhaps not their easiest tasks.

iv.

At this stage of our inquiry, the question arises, What do we know of the history of India in the age which produced the Vedas? Where does the pos-

sibility here begin of fixing events chronologically? In that part of the province of history in which this precision is lacking, can any determinate lines of another sort be drawn?

Of a history of ancient India in the sense in which we speak of the history of Rome, or in the manner in which the history of the Israelitic nation is recounted in the Old Testament, the Vedas afford us no testimony. A succession of events clearly united with one another, the presence of energetic personalities, whose aspirations and achievements we can understand, momentous struggles for the institution and security of civil government—these are things of which nothing is told to us. We may add that these are things which seem to have existed in Ancient India less than in any other civilized nation. The more we know of the history of this people the more it appears like an incoherent mass of chance occurrences. These occurrences are wanting in that firm bearing and significant sense which the power of a willing and conscious national purpose imparts to its doings. Only in the history of thought, and especially of religious thought, do we tread, in India, upon solid ground. Of a history in any other sense we can here scarcely speak. And a people who has no history, has of course no written historical works.

In those eras in which, among soundly organized nations, interest in the past and its connection with the struggles and sufferings of the present awakes, when the Herodotuses and Fabiuses, the narrators of that which has happened, are wont to arise, the literary activity of India was absorbed in theological and philosophical speculation. In all occurrences was seen but one aspect, namely, that they were tran-

sitory; and everything transitory was recognized, we may not say as a simile, yet as something absolutely worthless, an unfortunate nothing, from which the sage was bound to divert his thoughts.

We can thus easily see how fully we must renounce our hopes of an exact result, when the question is raised as to the time to which the little we know of the outer vicissitudes of the ancient Hindu tribes must be assigned, and, especially, as to the time in which the great literary remains of the Veda and the changes which it wrought in the Hindu world of thought belong. The basis that might serve toward definitely answering these questions of chronology—lists of kings with statements of the duration of each reign—is wholly wanting for the Vedic period. Of early times at least no such lists have been handed down to us; there are no traces indeed that such ever existed. The later catalogues, however, which have been fabricated in the shops of the Indian compilers, can to-day no more be taken into consideration as the basis of earnest research, than the statements of the Roman chroniclers as to how many years King Romulus and King Numa reigned. How unusual it was in the Vedic times for the Hindus to ask the “when” of events, is shown very clearly by the fact, that no expression was in current use by which any year but the present was distinguishable from any other year.

The result of this for us, and likewise, of course, for the science of Ancient India, is that those long centuries were and are practically synonymous with immeasurable time. The standard by which we are accustomed to compute the distance of historical antecedence in our thoughts or imaginations, fail us in this richly developed civilization as completely as in the

prehistoric domains of the stone age, — in the first feeble glimmerings of human existence. In fact, as prehistoric research tries to compute the duration of the past ages which have given to the earth's surface its form, so as to determine approximately the age of the human remains embedded in the strata of the earth; so, in a similar way, the investigation of the Hindu Vedas, in its attempts to compute the age of the Veda, has sought refuge in the gradual changes that have imperceptibly taken place in the course of centuries, in that great time-measurer, the starry heavens.

There was found in a work, classed as one of the Vedas, an astronomical statement which has served as a basis for such computations. The result attained was that this particular work dated from the year 1181 B. C. (according to another reckoning 1391 B. C.). Unfortunately, the belief that in this way certain data are to be acquired had to vanish quickly enough. It was soon found out that the Vedic statement is not sufficient to afford any tenable basis for astronomical computations. Thus it remains that for the times of the Vedas there is no fixed chronological date. And to any one who knows of what things the Hindu authors were wont to speak, and of what not, it will be tolerably certain, that even the richest and most unexpected discoveries of new texts, though they may vastly extend our knowledge in other respects, will in this respect make no changes whatever.

There are two great events in the history of India with which this darkness begins to be dispelled—the one approximately, and the other accurately, referable to an ascertainable point of time. These are the advent of Buddha and the contact of the Hindus with

the Greeks under Alexander the Great and his successors.

That it was the old Buddhistic communities in India that first began the work of gathering up the connected traditions within historical memory, seems certain. At least this corresponds with the apparent and accepted course of events. To Vedic and Brahmanical philosophy all earthly fortunes were absolutely worthless—a vanity of vanities; and over against them stood the significant stillness of the Eternal, undisturbed by any change. But for the followers of Buddha, there was a point at which this Eternal entered the world of temporal things, and thus there was for them a piece of history which maintained its place beside or rather directly within their religious teachings. This was the history of the advent of Buddha and the life of the communities founded by him.

There is a firm recollection of the assemblies in which the most honored and learned leaders of the communities, and great bands of monks coming together from far and wide, determined weighty points of doctrine and ritual. The kings under whom these councils were held are named, and the predecessors of these kings are mentioned even as far back as the pious King Bimbisara, the contemporary and zealous protector of Buddha. Of the series of kings which in this way have been fixed by the chronicles of the Buddhistic order, two figures are especially prominent—*Tschandragupta* (*i. e.*, the one protected by the Moon) and his grandson *Asoka* (the Painless). *Tschandragupta* is a personality well known to Greek and Roman historians. They call him *Sandrokyptos*, and relate that after the death of Alexander

the Great (in the year 323 B. C.), he successfully opposed the power of the Greeks on their invasion into India, and lifted himself from a humble position to that of ruler of a wide kingdom. *Asoka*, on the other hand, is not mentioned by the Greeks; but in one of his inscriptions—by him were made the oldest inscriptions discovered in India, and these have been found on walls and pillars in the most distant parts of the peninsula—he himself speaks of Antijoka, king of the Iona (Ionians, *i. e.*, Greeks), Antikina, Alikasandara, and other Greek monarchs.*

Here at last a place is reached where the historical investigator of India reaches firm ground. Events whose years and centuries—as though they occurred on another planet—are not commensurable with those of the earth, meet at this point with spheres of events which we know and are able to measure. If we reckon back from the fixed dates of Tschandragupta and Asoka to Buddha—and we have no grounds for regarding the statements of time which we find respecting Buddhistic chronology as not at least approximately correct—we find the year of the great teacher's death to be about 480 B. C. His work therefore falls in the time at which the Greeks fought their battles for freedom from Persian rule, and the fundamental lines of a republican constitution were drawn in Rome.

Buddha's life, however, marks the extreme limit at which we may find even approximate dates. Beyond this, through the long centuries which must have

*Antijoka is Antiochas Theos; Antikina, Antigonos Gonatos; Alikasandara, of course, not Alexander the Great, but Alexander of Epirus, son of Pyrrhus, the enemy of the Romans. All these princes reigned about the middle of the third century B. C. Of Alexander the Great in India no traces have been found, with the exception of a coin which bears his picture and his name.

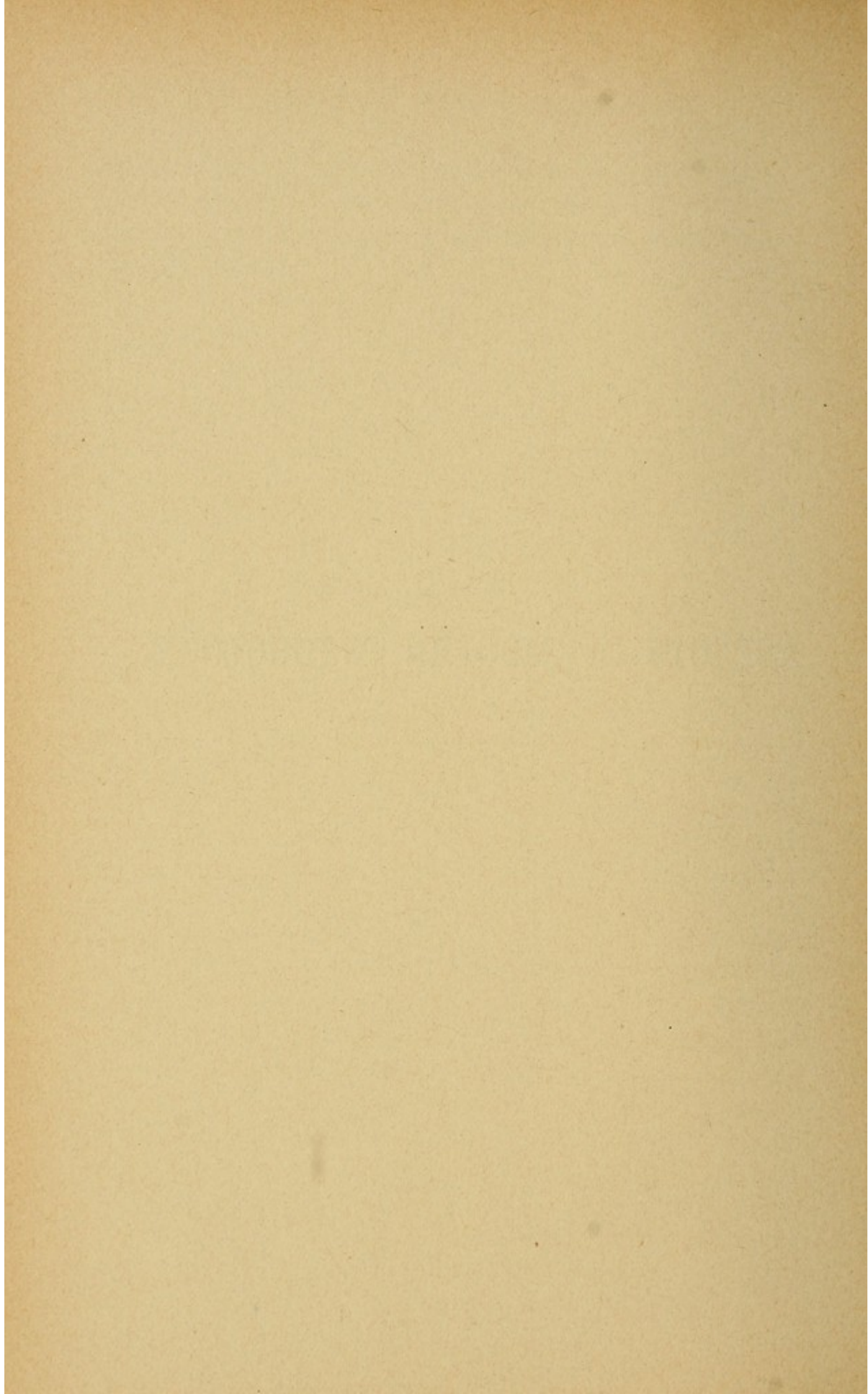
elapsed from the beginning of the Rig Veda epoch to that of Buddha, the question still remains: What was the succession of events—the few events of which we may speak? What the order in which the great strata of literary remains were formed? We observe the relation which one text bears to the others which appear to have previously existed; we follow the gradual changes which the language has suffered, the blotting out of old words and forms and the appearance of new ones; we count the long and short syllables of the verses so as to learn the imperceptible but strictly regular course by which their rhythms have been freed from old laws of construction and subjected to new forms; moving in a parallel direction with these linguistic and metrical changes we note the changes of religious ideas, and of the contents as well as the external forms of intellectual and spiritual life. Thus we learn in the chaos of this literature ever more surely to distinguish the old from the new, and understand the course of development which has run through both.

Many a path, it is true, in which research hoped to press forward, has been shown to be delusive and worthless; problems have had to be given up, changed, and presented in different forms. But in its last results the work has not been in vain. For, in respect to the Veda in particular, and the antiquities of India in general, we have learned to recognize the principal directions in which the tendencies of historical growth are to be traced.

From the second century of Hindu research we can scarcely expect discoveries similar to those which the first has brought: such a sudden uprising of unusual, broad, fruitful fields of historical knowledge. But we may still hope that the future of our science will

bring results of another sort no less rich—the explanation of hitherto inexplicable phenomena, the transformation of that which is half known into that which is fully known.

ASPECTS OF MODERN PSYCHOLOGY.



ASPECTS OF MODERN PSYCHOLOGY.

BY JOSEPH JASTROW, PH. D.

INTRODUCTORY.

THE study of mental phenomena has been pursued with varying interests and from various points of view throughout almost the entire historical period of the development of man. The various roots from which diverge the departments of learning so sharply specialized and accurately defined with us, are at bottom very closely bound together by a community in the general welfare of knowledge. An early distinction is that between the wise man, the initiated, the adept, and the common every-day man, the one uninitiated into the mysteries of knowing, the arts of doing. It is in this search after the wisdom of experience, this cultivation of the contemplative habit, that mind-lore has its origin. The first branch of the general growth to bear fruit is Philosophy,—not specialized as yet, but combining an appreciation of facts, a sympathy with human trials and successes, with a love of lofty ideals and of the processes by which they are developed and attained. Just as we find Poetry reaching a high development, while Science is still in its infancy, so the side of mind-lore that arises from the experience of thoughts and emotions finds a successful expression long before the apparently simpler results of observation and generalization are obtained. It is only after many systems have been elaborated and the merits of

rival theories discussed, that attention is directed to the basal facts upon which systems are built, and to the methods by which reasoning is conducted. These, as almost all the typical stages in the development of thought, are admirably illustrated in the history of Greek philosophy.

Looking through modern spectacles at the checkered career of the philosophical sciences in the past, one would ascribe the first distinct appreciation of the scientific study of mental phenomena to Aristotle, in whom were combined to an extraordinary degree the observing habits of the naturalist with the speculative powers of the thinker. The spirit of his activity can be traced in the writings of later *savants*, but it is in the main overshadowed by a dominant interest in speculation for its own sake, doomed in succeeding centuries to be displaced by a barren mixture of theological disputation, of hair-splitting logomachy, in which the method of authority was exalted and that of tangible proof ignored, and of an unmethodical propagation of narrowing systems. In the general revival of learning following these "dark ages," mind-lore matures into a fruitage replete with careful reasonings, methodical researches, and suggestive, though in great part premature, generalizations. The study of psychology as a distinct department of knowledge is cultivated, though with little uniformity of design or results. Scientific psychology can hardly be said to exist before the psychological importance of the results obtained by the physiologists and cognate scientists, had been recognized. This had been done, though in ways different amongst themselves and decidedly so from our way, by Descartes and Bacon, by Kant and Locke.

Turning more especially to this second, the observational root of mind-lore, we find in scattered observations of physicians and physiologists, from Hippocrates and Galen on, a more or less appreciative insight into that ever mysterious interdependence of body and mind. From the theory of the savage* who explains the phenomena of dreaming as the temporary separation of body and soul,—the latter in its liberated state wandering about and gathering strange experiences which it imparts to the possessor of the body upon reëntering it,—to the attempt of Democritus, to give a closely similar conception a more scientific formulation ; from these to the mediæval notion of the ousting of the soul from the body and the invasion of a foreign spirit, thus explaining the varied forms of insanity and heresy, and thence by an apparently short and yet so painfully long advance to the attitude of the modern scientist who unconcernedly dismisses the dream as the natural effect of an overburdened digestion, and, with the all increased care and humanity that the change of conception brings with it, treats the insanity as the evidence of a disordered brain ; in all these stages we recognize so many attempts at a working explanation of the bond that keeps soul and body together. Omitting any more detailed reference to that gradual advance and spread of scientific notions, especially in the fields of biology and medicine, that has so profoundly influenced everything that is modern, I will pass to the more immediate ancestry of Modern Scientific Psychology.

A word often used as synonymous with this,—Physiological Psychology,—indicates one most important groundwork of the science. Amongst the

* See Tylor, "Early History of Mankind," p. 7, et sqq.

factors contributing to the formative period of modern physiology, the writings and spirit of Johannes Müller are typically important. He drew distinct attention to the fact that a vast portion of the phenomena of sensation and of the higher faculties, in part, forms the common property of Physiology and Psychology ; that many of the problems concerning which philosophers had allowed themselves more or less arbitrary opinions could be definitely decided by the crucial test of physiological experiment. With this came the demonstration of the posterior and anterior roots of the spinal cord as the agents of the sensory and motor, the impressible and the expressive, functions; thus furnishing two rubrics fundamental to psychology. Again the establishment of reflex action as the physiological element by the complication of which many higher, more intellectual, forms of action and reaction could be explained ; the measuring of the time that a nervous impulse requires for traveling along the nerve ; and more recently the association of definite regions of the brain with definite sensory and motor groups of functions, the irritation of which areas excites these functions and the extirpation of which removes them ; all these, like the dark lines in the solar spectrum, are but convenient points for marking off the important stages of what is really a slow and continuous development. They have all profoundly influenced, and will for all time be important factors in the dominant conceptions of the nature of the psycho-physic organism. With this doctrine of the constant interdependence of bodily and mental states once fairly under way and its significance constantly accentuated by new discoveries ; with, too, the increased solidarity of the entire range of mental phenomena opened up by the conceptions of

evolution, the progress was many-sided and rapid. For the most part, however, the contributions were isolated and uncoördinated ; the physiologist touched the problems from one special side ; the physicist saw that he too must consider certain psychological aspects of his work ; the physician appreciated the tie that affiliates the abnormal processes with which he deals to the operations of the normal mind ; the philosopher, the educator, and the anthropologist must all in part be psychologists. Meanwhile, too, certain special psychological investigations, revealing essentially new problems and results, were undertaken. The work of Fechner* upon the psycho-physic law, that of Helmholtz † upon the relation of hearing and sight to their physical stimuli, belong to this category. It is not until 1874 that a comprehensive treatise ‡ appeared aiming to present at least the more important aspects and results of the new science that had grown up between the gaps left by the rugged outlines of the other sciences at their points of contact.

I have dwelt thus broadly, and necessarily sketchily, upon the historical antecedents of modern psychology, to show that it is bound to the past by real and intimate ties, and that, however bold and striking is the contrast between the psychology of to-day, and still more so of to-morrow, to that of yesterday, the inherent importance of the historical sense will ever prevent a too radical rupture with the past and should also allay the fears of those who look gloomily upon the materialism of the present. It remains to portray, as best I can, the several fields of study and the various

* "Elemente der Psychophysik," II. Vol., Leipzig, 1860.

† "Physiologische Optik," 1867. "Die Lehre von den Tonempfindungen."

‡ Wundt, "Elemente der Physiologischen Psychologie."

points of view that together form the content and the spirit of the new psychology.

We have then first this great department in which Physiology and Psychology go hand in hand. The general problem is the orderly correlation of the physical analogues of all those functions, small and great, that in one way or another enter into the mental life. The general plans and arrangements of nervous systems; the detailed properties of nerve-fibre, of nerve-cell, and of muscle as the elementary substrata of purposive action; the control and subordination of the various functions in the hierarchy of nervous centres in man, and in the lower animals; the special relation of that highest product of evolution, the cortex of the human brain, to the specially or prominently human functions, as seen in the light of anatomy, of pathology, and of experimentation upon animals; the gradual and orderly growth in size and complexity of the nervous system as paralleled by the increase of psychic faculty;—these are but a few of the many vital problems that have called out the ingenuity and the labor of eminent scientists, but are still far from a complete solution.

A borderland between this field and the science of Psycho-Physics proper is formed by the study of Sensation. The constant stream of impressions flowing in upon us from birth till death,—a stream converted into a rushing torrent by the environment of our modern civilization, is primarily conditioned upon the nature and limitations of our sense-organs. The senses of sight and hearing, as the more especially intellectual senses, naturally demand the greatest attention. The one is preëminently the organ of space-perception as the other is of time-perception; the one gives us the

understanding of written, the other of spoken language ; the one is keenly sensitive to minute distinctions of form and color, and thus furnishes the basis of the fine arts, while the other is gifted with a truly mysterious power of analyzing the mathematical relations of tone intervals, thus making possible the music 'that hath charms' ; each illustrates how intricately inference is intermingled with crude sensation, and how dominant traits of mind are connected with superiorly sensitive senses. Touch and the motor sensations are hardly less important ; the one yielding the most immediate and, perhaps, most primitive sensation-group, while the other introduces the active, the imitating faculty, so fundamental in education.

I can only mention by name the vast sciences of physiological optics and acoustics, that have done more than almost any others to perfect our knowledge of the adaptation of means to end in nature, in order to gain space for a few words regarding Psycho-Physics in its restricted sense. This includes the experimental treatment of the psychological aspects of sensation, chief amongst which is the group of problems centering about the psycho-physic law. This law, concerning which so large a literature has accumulated, emphasizes the fact that we are sensitive to ratios rather than to absolute differences of sensation, that relations and relative distinctions are more important to us than absolute ones. The every-day experiences that the rich man needs a greater increase of wealth to ensure a pleasurable sensation than the poor man, or that the system impregnated with a drug needs larger and larger doses to produce the same effect, find in the sphere of sensation an exact formulation in the law of Weber, that the distinguishability of two stimuli

differing slightly in intensity depends simply upon their ratio, (we tell ten ounces from eleven as readily as twenty from twenty-two,) which in turn leads to the formulation of Fechner, that as the sensations increase in an arithmetical series of equally marked sensation-differences, the stimuli increase in a geometric series with a constant ratio. The wide range of facts covered by this law, (influencing, as we can to-day show, the sorting of the stars into magnitudes by the ancient astronomers,) still awaits a clear exposition and an interpretation capable of harmonizing the apparently contradictory results of different observers.

Another equally recent branch of Experimental Psychology deals with the Time-relations of mental phenomena. A vast share of all conduct may be usefully regarded as the more or less complicated elaborations of that very natural and simple performance of the brainless frog which, when a bit of paper soaked in acid is placed upon its thigh, mechanically sets up movements resulting in the removal of the irritant. The diplomat's decision upon learning the complicated situation of political affairs, to pursue a certain line of conduct, like the frog's reflex action, is simply the response to an external stimulus; and we can measure the mental complexity of such responses, or reactions, by the time needed for their performance. When I measure the time required for pressing a key in immediate response to a flash of light, I measure the time for the nervous impulse to proceed from eye to brain and from brain to hand, and other physiological factors; but I am also enabled to measure the time of purely mental phenomena. For if I agree to react only when I see a *red* light, then the additional time measures how long it takes to perceive that an object

is red. Furthermore, if I agree to react with my right hand if a red light, but with the left hand if a blue light is shown, the additional time tells me how long I need to perform a simple act of choice, and so on. By much toil and by the aid of ingenious and accurate apparatus the times of all the simpler processes that lie at the basis of mental life,—discrimination, choice, associations of all kinds,—have been measured and an unexpected insight has been gained into the influence of attention, of familiarity, of expectation, of fatigue, and the action of drugs, upon the rate and nature of mental operations. The field is a new one and undoubtedly has a most promising future; we may perhaps even learn how to make our lives longer by learning how to go through mental operations more quickly and with a minimum of friction.

The unfoldment of mental faculty in the human infant has been elevated to the dignity of a special study under the title of Psycho-Genesis, or more simply Infant Psychology. The order of appearance of various powers, both receptive and expressive, can only be ascertained by the exact observation of a large number of normal infants. The earliest reflex actions and the general helplessness of the infant show the poverty of our original endowment compared with that of an animal lower in the scale. The latter, for example a chicken, emerges from the shell ready to enter upon the trials of life, and pecks quite accurately at a grain of corn when first it sees it,—a feat impossible to the human infant for many months. It is just because the child knows so little at the outset that it has the opportunity of knowing so much more at the end; it is less freighted with inborn habits, freer to develop habits of its own; and again it is from the long dura-

tion of this developmental period in the human child that the word education derives its supreme importance. For concrete instances of the manifold interests and great value of such observations, I must refer to the studies of Preyer and Kussmaul, of Perez and Taine, of Darwin and Pollock.

What the department of Animal Psychology would include can readily be inferred. Its aim is to show the continuous steps in the evolution of faculty in the animal series, showing where and how certain faculties reach a maximum of development, and wherein these differ from the peculiarly human faculties. Quite recently Mr. Romanes* has drawn up a table indicating certain general levels of intelligence as tested by the appearance of certain emotions and actions, according to which the performances of different groups of animals may be rated. The widespread sympathy that the evolutionary hypothesis gives to the study of animals is sufficient to ensure for it a rapid growth. The great difficulty is the keeping apart of observation and inference, and the great danger is the interpretation of animal conduct too closely by the feelings and reflections accompanying our own actions.

Anthropological Psychology finds its material in such of the records, past and present, of primitive man as deal with the processes and products of mental action. The notions of the uncivilized regarding nature and the universe; the universal tendency to personification, the projecting into the external world the feelings and reflections of the inner-self; the formation of myths to satisfy that primitive curiosity that is the ancestor of scientific inquiry; the crystallization of

* "Mental Evolution in Animals," 1884, and "Mental Evolution in Man," 1889.

thought-habits into curious customs, and the strange survival and perversion of such customs long after their original meaning has been forgotten. In these it is that the psychologist finds interesting and valuable information regarding the earliest stages of that long development that makes for knowledge and civilization.

The last three departments of psychology may be appropriately included under the general name of Comparative Psychology, for in each we are comparing stages of development with one another and with the mature, civilized human intellect; and the interest of all three is much enhanced by the light which each sheds upon the others. The generalization that the individual repeats *in parvo* the history of the race connects the study of the child with that of primitive man, while the equally suggestive analogy between the stages of child-growth and the evolution of mental faculty, especially as strengthened by an extension of the comparison to embryological peculiarities, serves as the bridge between the psychology of the infant and of the lower animals. The methods employed in all three are similar, and they serve to verify one another's results and to supplement one another's facts.

There is finally the very comprehensive department of Morbid Psychology. This includes, primarily, the varied phenomena of diseased mental action, the many forms of emotional disturbance, the curious and fantastic delusions of paranoia, the arrest of mental development in idiocy. Not only do we recognize in disease an experiment prepared by nature and enabling us to detect the functions of delicate and minute parts of the organism, but the study of the abnormal sheds direct light upon the nature of the normal and gives

us knowledge not easily obtainable from other sources. Thus the "law of regression" showing the decay of mental faculty to follow an order the reverse of the order of acquisition, analyzes the stages of such acquisition more perfectly than can be done from the rapid and complex growth of faculty ; and so reliable is this law that we can predict by it the successive loss of the different parts of speech in the gradual decay of language. Ribot's interesting monographs upon "The Diseases of Memory," "The Diseases of the Will," and "The Diseases of Personality," aptly illustrate the point of view here described. But the department of morbid psychology really includes much more ; it covers all those intermediate forms of mental divergence that bridge over the gap between the sane and the insane, "the genius to madness near allied" ; it includes the natural history of error, the subtile processes by which sense-deceptions pass into illusions, and illusions give place to hallucinations, as well as an analysis of that powerful mental contagion that reveals itself so terribly in the history of psychic epidemics ; it includes, too, those minor forms of defect, blindness and deafness, the study of which admirably illustrates the rôle of sensation in the higher intellectual development. And if we are disinclined to regard that very heterogeneous group of problems now summed up under the term "Psychic Research," as a separate department of psychology, we may treat of it as an appendix to the topic now under consideration. Of paramount importance here is the study of hypnotism, that has received so remarkable an impetus during the last five years. Though the true nature of hypnotism is still a matter of dispute, it has been rescued from the hands of

charlatans with whom it dwelt long enough to acquire an unenviable reputation, it has been enriched with an embarrassing number of novel facts and suggestive distinctions, it has been utilized as an unexpectedly fertile mode of analysis of complicated psychological traits, and it has received promising practical application to the treatment of disease. In this study and that of allied fields we are being overwhelmed with facts and theories from every source, good and bad, sound and unsound; difficult as it often is to understand what is reported upon the basis of existing knowledge, and strong as is the temptation to interpret this difficulty as the proof of hitherto undiscovered if not supernatural agencies, we have reason to think that the best results—and surely no one can doubt their supreme importance—will be secured by the use of that caution and firm reserve, that have always characterized the ways of science.

I need hardly add that the divisions of psychology here suggested are not the sharp boundaries between neighboring territories, but rather conveniently placed centres from which groups of facts radiate, and towards which dominant interests converge. Not only do the divisions shade into one another, but by forming parts of *one* science, they necessarily show evidences of that organic unity which rationalizes our fragments of knowledge and makes "all the world akin."

I.

PSYCHOLOGY IN GERMANY.

HAVING reviewed the general departments of modern psychological research, I shall attempt to portray in the light of a recent European tour, the actual condition of the study in the chief educational countries of Europe, and will append to this some notes upon psychological progress at home. The present contribution will deal with Germany and indirectly with the educationally allied countries of Austria and Northern Europe.

The two most prominent German contributions to psychology are in completing our knowledge of the physiological bases of mental action and in posing and partially solving the specifically psycho-physical problems of Experimental Psychology. The former developed naturally from the restoration to recognized kinship of two sciences that had become separated by mutual misunderstandings, and had been led to follow divergent paths with only occasional and half-concealed communications between them. While at first this new relation seemed to take the psychologist into fields far removed from his specialty, the frequent discoveries of psychologically important facts in unexpected quarters of this domain have deepened his interest in the labors of his brother scientists. The

modern problem, to the elaboration of which Germany has so largely contributed, is the detailed investigation of the functional nexus between portions of the nervous system and the complex of activities that constitute life. This problem becomes most interesting as well as most difficult in relation to the nervous system of man. At first the methods of gross anatomy and finer dissection revealed all that was known of the nervous system, but with the marvellously increased powers furnished by the microscope and the accompanying technique of section-cutting, hardening, and staining, with, too, the utilization of pathological conditions and of embryological formations, for studying normal relations, our notions of the wonderful complexity of the nervous system has been enlarged beyond all expectation and the range of physiological problems proportionately extended.*

It would carry us too far into details were we to attempt a resumé of the current facts and conceptions

*The chief anatomical methods of to-day are : (1) The methods of coarse dissection and fibering ; (2) Section cutting and a variety of stainings to bring out and differentiate the different elements of nervous tissue (the first section was cut by Stilling, in 1842) ; (3) The method of studying the progress of degeneration in nerves when cut at various points, introduced about 1850, and soon followed by (4) The application of the same principle to the effect of disease in man ; (5) Gudden's method of extirpating a peripheral or central portion of the nervous system in a young animal and observing what parts fail to develop, with (6) The application of this to abnormal conditions in man, *e. g.*, when a man is born without arms and the ganglion cells of the cervical enlargement are found shrunken or absent ; (7) The study of the embryological appearances, it being found that the several fibre-systems appear and are enclosed in their medullary sheaths (rendering them capable of functioning) at different periods, and thus making possible an analysis extremely difficult in the adult (Flechsig, 1872, on) ; and (9) The method of comparative anatomy, *i. e.*, noting the relative development of parts in differently endowed types of animals. For a concise statement of results in this field see Edinger, "*Zehn Vorlesungen über den Bau der Nervösen Central-Organe*," 1885. Or more fully and recently Obersteiner, *Anleitung bei Studium des Baues der Nervösen Central-Organe*, 1888. Special works are by Flechsig, Meynert (Translated), Von Gudden. Diagrammatic schemes are given by Flechsig, Aeby, and Rohon.

respecting the structure and function of the nerve-cell (the nucleus of which is now believed to be the origin of its growth, shrinking when the cell is overstimulated, paling away when the function is lost and containing within itself the ultimate elements of the forces of heredity) ; the growth, functioning, and decay of nerve-fibres ; the demonstration by a variety of mutually corroborative methods of the columns of fibres in the spinal cord, to which, generally speaking, the various sensory nerves contribute as they ascend posteriorly, and from which the motor nerves emerge anteriorly ; the reflex-centres of the gray matter of the cord, the properties of which, though mechanical, are so purposive in their nature as to lead some physiologists to speak of a "spinal-cord soul" and which though in a measure independent of the higher centres serve a most delicate and valued index of the efficiency of the whole organism ; the centres of the *medulla oblongata* that regulate for us the functions of mere living and so leave our brains free to make life worth living ; the complex system of centres lying near the base of the brain and collectively known as the basal ganglia, that may be regarded as an efficient force of clerks registering and controlling that large class of more or less habitual actions, that no longer need our voluntary and conscious attention and so have been handed over to our automata ; the centres of the cerebellum specially related to the process of locomotion ; and supreme in the hierarchy of nervous centres, the crowning centralizing power, the cortex of the cerebrum where lie, "half-concealed and half-revealed," the mysterious properties by virtue of which an impression is followed by an expression, the subject comes into relation with the object, and knowledge

and development become possible.* It would carry us still further into details to trace the connections between these various centres : the fibres of the corpus callosum that bind the two hemispheres of the brain together and perhaps prevent the dissolution of personality that seems to be a favorite fancy of imaginative writers ; the complication of relations introduced by the duplication of parts in the two halves of the body, and furthermore by the decussation of the fibres in their course from end-organ to brain, so that the right brain feels the pinch in the left hand, and the race is largely right-handed because it is left-brained ; the fibres of the corona radiata spreading in all directions from the basal ganglia and lower centres to the cortex of the brain ; the associative fibres uniting different centres of the same hemisphere as well as neighboring convolutions with one another. All these have passed from the stage in which they were personal or national contributions and have become part of the common knowledge of mankind.

The results just enumerated were elaborated by physiologists and as furthering the progress of their own science ; their psychological importance being

* These researches lead up to, and centre in, the localization of function in the cortex of the brain upon which so many scholars have concentrated their efforts, and which promises to form a permanent landmark in the history of physiology. The researches take their origin in the discovery of the electrical excitability of the cortex in 1870 by Fritsch and Hitzig, though in part connected with the earlier localization of the motor speech-centre (Broca's convolution) by the French physiologists. The chief methods are the method of irritation, observing the movements, etc., following the stimulation of definite areas of the cortex ; the extirpation method, removing such areas and noting the impairment of function that follows ; the method of pathology that correlates abnormal symptoms with *post-mortem* appearances besides the physiological applications of the anatomical methods above indicated. Very much of this work has been done and is going on in Germany, and the principal workers who have all published extensively on the question are, Exner (Vienna), Munk (Berlin), Goltz (Strassburg), and others.

recognized by the modern school of psychologists. We turn now to the contributions of the latter to the foundation of their own speciality. The leader in this movement is Prof. Wilhelm Wundt, of Leipzig, who in 1879 established there the first exclusively psychological laboratory. He, too, first brought together the scattered results in this domain (*Physiologische Psychologie*, first edition 1874, 2d 1880, 3d 1887) and effected the recognition of the new science by the scientific world at large. For anything like an adequate account of the problems and results of German psychological activity, one must refer to Wundt's treatise (closely followed by Ladd in his "Elements of Physiological Psychology") and for special studies to the numbers of the *Philosophische Studien* published by Wundt since 1882. It must suffice here to indicate the several lines of study and the general direction of advance.

What has been said in general under the head of experimental psychology applies with equal truth to German psychology in particular. The study of the psycho-physic law both theoretically and experimentally, is essentially a German study. Besides the work of Fechner himself and the important contributions of Prof. Müller, of Göttingen, Wundt and his pupils have done much towards establishing to what senses the law applies, within what limits its validity is confined, what factors contribute to, or interfere with, its applicability, what methods and precautions must be used in testing it. It is impossible to express in a few words the present condition of the study, though I may venture the statement that the law seems to hold approximately for sensations within the ordinary range of intensity—and for sensations yielding information

sufficiently definite and yet not definite enough to be apperceived as quantitatively composed.

The measurement of the time taken up by mental processes has been the favorite study in Wundt's laboratory for several years. The results have taught us how long it takes to signal that we have perceived a sight, a sound, or a touch; how long to recognize the character of a sensation, say, that a color is blue or a tone high; how long to make similar distinctions with letters, with sounds, and how this time increases as there are more and more impressions amongst which a distinction is to be made; how long it takes to will to move our right hand or our left, and how much longer to move a given one of the *ten* fingers; how long for one idea to call up another and how much longer when the nature of the association is limited, *e. g.*, when the relation between the words must be that of whole to part; how long to name a letter, or a picture; how long to translate a word or name an object in a foreign language; how long to form a simple judgment; to perform an easy numerical calculation or recall an item of information. Not the time-measurements merely, but the theories of mental acquisition that the results favor and the influences that vary the results have been carefully studied. The nature and intensity of the impression, the preparedness of the subject, the fore knowledge of the nature of the stimulus, and the direction of the attention, whether upon the sensation or upon the movement,—are all important factors. Mental weariness, sensory fatigue, irregular and unexpected impressions usually lengthen the process, while the action of drugs and semi-morbid conditions show another class of influences. The individual variations or 'personal equation' of the as-

tronomers, with whom indeed this study originated, also affects the result ; the general law being that the more complex the operation the greater are the differences in the times that it takes different persons to perform it. Again, the curve of practice has been experimentally derived, and the gradual shortening of the time in school-children, as they advance from class to class, and conversely the extreme lengths of these times in the dull and weak-minded suggest the practical importance of such studies. Nor is the field limited to these more elementary processes ; as the results themselves indicate a valid analysis of the processes of cognition, the researches are being pushed further on into the study of the higher faculties. We already have a valuable experimental study of memory by Dr. Ebbinghaus, and an ingenious investigation of complex associations and judgments by Dr. Münsterberg. Here too the study of the time is necessarily combined with a study of the nature of the mental operation in question. It may not be too venturesome to predict that the laws of association for which so many philosophers have earnestly striven, can only be adequately established on the basis of such experimental methods, and that these alone can bring about a correct appreciation of the laws of memory, that will make impossible the recent phenomenal success of a pseudo-psychological adventurer.

There remains the consideration of the study of the senses in other aspects than those treated, not to speak of the variety of miscellaneous problems gradually entering the domain of experimental psychology. The problems are here so many and so various as to make even a bare mention of them exceed the space at my disposal. As problems central in the interests

of German psychologists may be mentioned the researches growing out of the discovery of Weber, that there is for each part of the skin a limit at which the points of a pair of compasses will be perceived as two. On the forefinger two points separated by one-twentieth of an inch seem as one point, on the back of the neck they may be separated by over an inch and still seem as one. The theory of "sensory circles" has been devised to explain these facts. But the survey of the field is too incomplete to warrant the acceptance of any theory as final. The study of dermal sensibility has been enriched by the discovery of the 'hot' and 'cold points,' or areas in which a body of neutral temperature gives rise to distinct sensations of heat and cold; the possibility of pressure-points has also been indicated. The nature of the muscular-sense with the discussion of the 'innervation theory' is another closely allied department of research. A second important group of problems deals with the analysis of musical sensations to which Helmholtz has contributed so largely; it may be sufficient to mention the work of Prof. Stumpf, the Halle psychologist, (now appearing in several volumes,) as an evidence of the continued interest in this field. As a third central point may be mentioned the psychology of vision. Although much attention has been given to other problems, the main interest has been in those that contribute evidence bearing upon the theory of color vision, Helmholtz and Hering being the recognized leaders of the two views, and upon the great controversy between nativists and empiricists upon the perception of space. In connection with these, however, a large number of subsidiary points have been investigated. The sensitiveness of the retina in its different portions to form, color, and

motion ; the estimation of size and distance ; the perception of solidity as illustrated by that truly psychological instrument, the stereoscope ; the relations of sight and touch and the coördination of sensory with motor visual factors, are some of the dominant lines of interest in psycho-physiological optics.

While these are the departments of psychology specially cultivated in Germany, it can be fairly said that there is no promising line of investigation to which the Germans have not contributed. Prof. Preyer has written the most comprehensive treatise on child-development ; we have many valuable German studies of animal psychology both experimental and theoretical ; Prof. Bastian, of Berlin, is an acknowledged leader of the psychological anthropologists ; while in morbid psychology we have the most excellent contributions of Krafft-Ebbing, (Vienna,) and Emminghaus, (Freiburg,) of Kussmaul, (Strassburg,) and Wildbrand, (Hamburg). The phenomena of hypnotism are attracting the attention of German psychologists with renewed interest, and they have introduced into this study a valuable critical element. And finally the application of psychology to the German specialty, education, has resulted in the science of pedagogical psychology.

Before leaving the topic of German psychology, it may be worth while to survey the local centres of interest to obtain the basis for an outlook upon the future. The physiological, the anthropological, the comparative and morbid aspects of psychology have a sufficient guarantee of vitality in their growing practical importance, and in the various classes of specialists whose interests they command. It is rather for experimental psychology, as creating new realms and

methods of investigation and in part running counter to the traditional psychology, that special provision must be made. The influence of the psychological laboratory at Leipzig is spreading, and the foreign students studying there have, in several cases, succeeded in introducing similar innovations in their own countries. Prof. G. E. Müller, of Göttingen, has established a laboratory at that university, and Dr. Ebbinghaus has done the same at Berlin. Dr. Münsterberg of the University of Freiburg deserves great credit for the laboratory which he privately maintains there. Similar plans are under consideration for the universities of Bonn, of Breslau, of Prague, and doubtless elsewhere. Psychological societies have been formed, though the most prominent of these the *Gesellschaft für Experimental-Psychologie*, of Berlin and of Munich, devote their efforts mainly to the problems of "Psychic Research." The many literary contributions both as special studies and as periodical essays testify to the rapid progress of psychology in all parts of Germany. A serious obstacle to the growth of the department has been the difficulty of obtaining pecuniary aid from the State; this difficulty being increased by the isolation of the several parts of a German university, that prevents an easy affiliation of the psychological laboratory to the kindred departments of physiology or physics. There can be little doubt that as the special needs of experimental psychology are more distinctly appreciated, these hindrances to its free development will be gradually removed.*

* For further information concerning German psychology I can only refer in English to Ribot's "German Psychology of To-day," (by no means as good a compilation as his other works,) and to articles by Prof. Hall and by Dr. Cattell, published in *Mind*. There are very few general articles or treatises on the aims and methods of the new psychology in any language; in German one may consult a few of Wundt's "Essays," and a lecture by Dr. Götz Martius, *Ueber die Ziele und Ergebnisse der Experimentellen Psychologie*, 1888.

II.

PSYCHOLOGY IN FRANCE AND ITALY.

IN France and Italy psychology though pursued with great energy and devotion may be said to be an avocation rather than a vocation. While we find everywhere important contributions to psychology from representatives of other sciences, this is particularly true of France and Italy. The chief upholders of scientific psychology in these countries are alienists, physiologists, and anthropologists, together with general physicians, sociologists, philosophers, and *litterateurs*. Of these the alienists are sufficiently numerous to warrant the selection of a department of morbid psychology as most representative of French and Italian activity. The great medical schools and hospitals of Paris together with the naturally volatile and nervous French temperament have been important factors in this development. The portions of psychopathology specially prominent in French psychology are the diseases of the nervous system, the various forms of mania, of idiocy and epilepsy, of hysteria and melancholia, all of which branch out into obscure and subtle mental defects, hallucinations, delusions, anæsthesias, perverted sensations, abnormal emotions, changes of personality, and the like. It is in the careful description of these outlying and rarer forms of mental impairment that the French alienists have been

prominent. Hysteria and hystero-epilepsy, nowhere so common as in France, present to the psychologist the most protean aspects, at times seeming to reveal hidden forms of working of the nervous centres, and again presenting a mere bizarre and capricious picture from which no generally valid inferences can be drawn. More particularly, the genesis of illusions and hallucinations; their explanation as attempts more or less unconsciously elaborated by the patient to account for abnormal sensations; the diseases of language furnishing the most valid analysis of the several elements of the process; the diseases of the will showing the various stages of muscular inertia up to complete psychical paralysis; the many forms of the diseases of memory revealing the relative inter-dependence of various portions of the mental domain; the diseases of personality showing how gradual and subtle are the processes by which that most realistic of feelings the consciousness of being oneself is destroyed,—all these together with their many species and varieties form a most attractive chapter of French psychology. Out of this region there has emerged within the last decade a study now claiming the attention of every psychologist in France, and to which must undoubtedly be allowed the distinction of ranking as *the* French psychological specialty—Hypnotism. As though to atone for the psychic epidemic introduced by Mesmer as well as for the varied and pernicious consequences that followed in its train, the French have rescued the field of activity most closely associated with his name from the odium attaching thereto and have elevated it to the recognized science of Hypnotism. Not taking into account the very important works of James Braid in England, and of Dr. Esdaile in India, we may date

the beginning of the scientific era in the study of hypnotism from the taking up of the study, little more than a decade ago, by Dr. Charcot and his associates of the *Salpêtrière*, though in so doing we neglect the thoroughly excellent and independent work of Dr. Liebault, at Nancy, and a few others.

Owing to the incredulity regarding all 'mesmeric' phenomena induced by the frequent claims to supernatural powers on the part of operator, subject, or agency, and their equally frequent failures to substantiate their claims, it became necessary to demonstrate the genuineness of the phenomena, and to affiliate them to our knowledge of the nervous system and its functions. Braid had already done much by showing that the method of hypnotization and the personality of the operator were entirely insignificant factors, and indeed this conclusion had been reached by the first commission appointed by the French Academy of Sciences, on which served Lavoisier, Bailly, and Benjamin Franklin. By applying rigid physiological tests, such as the execution of normally impossible movements or the equally abnormal prevention of reflexes ; such as exalted conditions of sensibility as well as of insensitiveness to normally unbearable pain,—the reality of the condition was placed upon a sure footing. As it would be impossible here to record the several stages in the unparalleled progress of the study it may be most serviceable to present the two important views of hypnotism now maintained in France and the chief lines of study now cultivated.

The school of Charcot recognize certain physical agencies as characteristic in the production of the phenomena and certain physiological agencies as equally characteristic of the hypnotic stages themselves and as

furnishing the means of distinction between them. The school of Nancy, represented by Bernheim, regard all the phenomena and the modes of producing them as purely psychological in origin, and see in the term "suggestion" the key to them all. The former distinguish three stages, the cataleptic, the lethargic, and the somnambolic, characterized by unnatural immobility, by neuro-muscular excitability, etc. ; the transition from one to the other proceeding by opening or closing of the eyelid, pressure upon sensitive regions, and so on. The latter distinguish only different *degrees* of hypnotization, characterized by mental differences such as consciousness of surroundings, remembrance of what is done in the hypnotic state and the like, and depending upon individual differences of susceptibility and training. It should be said that this latter view is rapidly gaining ground, being the one upheld by the chief writers on hypnotism in Germany and Switzerland, in Italy, Belgium and elsewhere. Accordingly the selection of points for exposition here will be made from this latter standpoint. Regarding, first, the *nature* of the state, it is likened to a natural sleep, in which communication with the outside world is possible through the operator. The higher controlling powers are put out of play, and the subject becomes an automaton at the mercy of the suggestions made to him. These suggestions are unlimited in variety and no matter how absurd or abnormal, will be obeyed by facile subjects. One may take away sensibility to touch, to sight, or any particular visual image, say, of an individual, of all objects of a certain color and so on. One may effect an unusual sensibility such as reading within a few millimetres of the eye, and directly or indirectly hyperæsthesia of almost

every sense has been observed. One may obliterate the memory of a class of events, a period of life, or of a particular occurrence; one may induce the subject to accept as reality what is purely imaginary; one may induce changes of personality; place the subject in imaginary relations and see him act out the part to the best of his capacity; in brief there is hardly a phase of muscular, sensory, or psychic activity that cannot be modified in a variety of ways by suitable suggestions.

From the many important facts to be revealed by a careful analysis of these phenomena in relation to the condition of mind and body that give rise to them, I will select the following four as typical and instructive:

1. The extreme *influence of the mind over the body* is nowhere more clearly shown. Not only the use of hypnotism for curative purposes that furnishes the kernel of truth in the faith-cure movements, but the demonstrated possibility of changing the heart-beat, the temperature, of producing bleedings and healing sores, under the obedience to suggestions, reveal the vast reserve of energy that in this unusual condition is at the disposal of the mind. What must otherwise be rare and complex observations are here reduced to rigid and definite experiments.

2. In the *post-hypnotic suggestion* we have a suggestion impressed during hypnosis but executed during the normal waking condition. In so doing the subject usually accepts the act as of his own doing, giving reasons for it and repudiating any implications of the influence of the suggester. At times the act is done automatically, the subject not remembering at all that he did it though otherwise fully awake and con-

scious. We have thus revealed different strata of consciousness as it were, showing that this, as well as unconsciousness, is a matter of degree, and suggesting, too, that a large realm of mental phenomena now baffling explanation could be brought into order were we more intimately acquainted with these subconscious strata. Perhaps, too, we have here an experimental proof of the dictum of Spinoza, that the feeling of free will arises from the ignorance of the motives of our actions.

3. Nothing better illustrates the kind of analysis that hypnotism furnishes than the "*negative hallucinations*." These consist in rendering imperceptible to the senses an object really present. If it is suggested that one of the company has gone away, he may now speak to the patient, pinch him, stand in his way without the least effect. If he places a hat upon his head the subject sees it mysteriously suspended in mid-air, and so on. Or again, if the suggestion be given that the subject cannot read the word "not" he will read whole pages correctly always omitting that word. To do this he must really see the word in order to recognize that it is the word not to be read, and yet he does not see it. It is a condition similar to "psychic blindness," and again illustrates how hypnotism substitutes experiment for observation. The eye sees but the brain has a constant order that when such and such an impression knocks for admission, it should not be received.

4. The *analogies of hypnotism to more normal states* are many. Not only in sleep but in the waking condition, we find susceptible subjects, easily subjugated to the will of another, credulous, and by reiteration of their fancies acquiring a firm belief in their truth and

perhaps embellishing them with a mass of interesting detail. Hypnotic subjects in the waking condition often accept and act out suggestions just as if hypnotized, and such observations shed valuable light upon the genesis of illusions.

The interest in hypnotism is not confined to the description and explanation of its varied appearances, but several practical applications of it have been made. Foremost is the therapeutic use of it in the treatment of disease. By systematically giving suggestions that pains shall disappear, that abnormal processes shall cease, and diseased functions be restored, accompanying such suggestions by rubbing, etc., to fix the attention upon the part concerned; by gradually moving members the control over which was lost, a very considerable number of ailments have been successfully treated. This means that by applying an admittedly mysterious power of helping the action of nature, or by removing more or less imaginative obstacles to a natural cure, many, of course not all, forms of disease may be alleviated. Again, an educational hypnotization to the removal of bad habits by moral suggestions has been tried.

Finally, the law has had to deal with hypnotism; because these suggestions may be for evil as well as for good, may be abused as well as utilized. Not only is it possible to inflict injury upon a person hypnotized, or get him to injure others; to obtain his signature to an important paper; but the possibility of post-hypnotic suggestion gives opportunity for a large number of crimes, committed by persons apparently in normal condition and fully accepting the responsibility for their acts. These in the main are the problems to which the French psychologists are devoting their

energies, and to the elucidation of which they have largely contributed. In addition to the overwhelming and constantly increasing literature of hypnotism, there exists the *Revue de l'Hypnotisme*, appearing monthly, and in August last a very successful international congress of hypnotism was held in Paris.

Although the main psychological interests in France run in the channels already outlined, there are a number of by-streams that give evidences of vitality in other directions. What may be termed sociological psychology is eagerly cultivated, in particular the study of the criminal classes as sociological defectives; the effects of heredity in preserving acquired characteristics; the effect of the environment in the process of mental evolution—have been fully treated. Again, those general relations of sensation, of the feelings, of the movements, represented for example in the works of Paulhan, Beaunis, Féré, Binet, Egger, and Ballet, have received clear and interesting expositions. In comparative psychology we may cite the work of Espinas on animal societies and of Perez on the various stages of child development. The psychological laboratory and distinct professorships of psychology are almost unknown in France. The chair of experimental and comparative psychology that M. Ribot holds in the *Collège de France*, is a striking exception. By this position as well as by the editorship of the *Revue Philosophique*, a monthly periodical, always full of interesting psychological matter, M. Ribot has claims to rank as the leader of the modern psychological school in France. His admirable compilations have done much to give unity to what would otherwise be scattered results, and the position he represents shows that in spite of its somewhat disjointed char-

acter, psychology in France is a very active and promising study.*

What is true of France is largely true of Italy, except that hypnotism plays a less essential rôle. Morbid psychology in all its branches is assiduously cultivated, and the more important Italian journals of psychology are largely under the control of alienists. Sociological psychology is also very prominent, as is evidenced by Morselli's work on "Suicide," and the school of psychological criminologists headed by Lombroso. In his classic work, *L'Uomo Delinquente*, Lombroso regards the criminal as a distinct biological variety of the human species, and collects with great ingenuity the bodily and mental characteristics by which he can be distinguished from more normal men. The number of psychological students in Italy is small, so that the dominant interests of individuals are important. One should mention the works of the Florentine anthropologist Mantegazza, upon the expression of the emotions, upon the physiology of love, and upon the various forms of ecstasy; of Mosso on the psychology of fear; of Tamburini and Seppili on hypnotism; of Lombroso

* I know of no general account of psychology in France. Under hypnotism I would select the works of Bernheim on suggestive therapeutics (translated), of Binet and Fréré on animal magnetism (translated), of Liegois on the legal aspects of hypnotism, and of Janet, *L'Automatisme Psychologique*, as representing the typical phases of the study. Max Dessoir has published an admirable bibliography of hypnotism including over 800 titles. For Italy I can refer to *La Philosophie expérimentale en Italie*, by Alfred Espinas. In Switzerland and Belgium the state of psychology is similar to what it is in France and Italy; as the number of psychologists in these countries is small, individual interests are again important. In Switzerland may be mentioned Forel, who is primarily an alienist, but has written upon the psychology of the ant, and has introduced the study of hypnotism into Switzerland; Herzen, primarily a biologist, who has written upon the fundamental relations of body and mind, etc. Switzerland is also closely related to Germany, and many of the interests of German psychology are also represented. In Belgium the name of Delboeuf is important. He has written upon the psycho-physic law, upon the nature of sensation, and recently upon hypnotism.

on genius and insanity ; of Vignoli on myth and science, and upon animal intelligence ; and the very admirable handbook of physiological psychology written by Sergi, Professor of Anthropology at Rome. The Italian contributions to psychology though few, are of a high order and in the intellectual revival which that country is experiencing, the interests of psychology will surely be furthered.

III.

PSYCHOLOGY IN GREAT BRITAIN AND THE
UNITED STATES.

It is difficult for several reasons to describe justly and briefly the status of psychology in Great Britain. The mere enumeration of the more prominent authors and their works would hardly give much insight into the underlying influences and interests to which these works owe their origin. On the other hand in singling out certain phases of activity as representative, there is danger of slighting others, as well as of giving to British psychology an appearance of harmony and unity that it does not altogether possess. I shall attempt a middle course between these tendencies. Again, we must remember that the connection of present teachings with the past has been kept very vital in English philosophic thought, and that the specialization of psychology from the other mental sciences has not been as marked as elsewhere. The associationist-school directly continue the present with the former philosophical interests, and the traces of this parentage are evident in those who have adopted new methods and modern ideas. The names of Bain and Sully at once suggest themselves; both of whom have contributed largely to the maintenance of a healthy interest in mental science and have distinctly advanced the status of psychology in their country. Two other authors should be mentioned as eminently influential

in furthering the scientific view of the relations of body and mind, as well as in disseminating in attractive shape sound views of the minor forms of mental abnormality,—Carpenter and Maudsley. The former has given us the most attractive exposition of the chief phenomena of every-day mental life, as well as guided into healthy channels the popular views regarding hypnotism, thought-reading, and the borderland of mental science ; while the latter in his “*Physiology and Pathology of Mind*” offers an equally forcible treatment of allied problems. There should be mentioned, too, as illustrating the same line of activity, the work of Dr. Hack Tuke upon the “*Influence of the Mind on the Body.*” From a more distinctly pathological point of view we may cite the papers of Dr. Hughlings Jackson, and of Dr. Ireland (in his volume “*The Blot upon the Brain*”). The psychology of Herbert Spencer is too well known to need more than a mention here. Independently of any final verdict as to the merits of the general system in which this psychology finds a place, one must attribute to the influence of his works an essential share in the present psychological interests, as well as the general acceptance of facts and views that have contributed to clear and rational modes of thought. We could similarly pay tribute to other English psychologists, such as Croom Robertson and Ward, Romanes and Grant Allen. But it will better answer the present purpose to venture to trace the underlying spirit and attitude that inspire and unify these contributions, even though in so doing we run the risk of giving undue unity to the position.

Accordingly I should select, as most representative of British psychological activity, the study of comparative psychology. That much of this activity is directly

due to the influence of Darwin can hardly be doubted. The general deepening and widening of interests in biological matters that the introduction of the evolutionary hypothesis brought about, bore similar good fruit in the world of mental facts. Darwin's own work upon "The Expression of the Emotions in Men and Animals," his essays on instinct, and his study of the mental development of his own child, together with the numerous psychological observations with which his works abound, furthered and directed this interest. The detailed elaboration of the progressive scale of intelligences from protozoön to man has nowhere received a more studious cultivation than in England. The fullest and most systematic of such expositions is that given by Dr. G. J. Romanes, an eminent personal disciple of Darwin. In the first of his three works "Animal Intelligence," he has arranged and interpreted an abundant collection of instances illustrating the adaptation of means to ends at all stages of the animal scale. Constantly utilizing this interesting and valuable store-house of facts, Dr. Romanes proceeds in his second volume, "Mental Evolution in Animals," to trace the guiding principles that shall bring law and order into this domain. A portion of the result finds expression in a scheme indicating at what levels of intelligence certain typical emotions and actions first make their appearance, and such traits are further utilized to illustrate the correlation of mental with bodily function, both being regarded as resulting from favorable variations in the struggle for existence. In the completing work of the series, "Mental Evolution in Man," the same derivative argument is applied to the faculties of man, the especial object being to analyze critically the specific bases of human superiority,

and to show that the step from the highest stages of animal to the lowest stages of human development are not steeper than nature presents elsewhere. In the very painstaking and suggestive elaboration of this argument, Dr. Romanes has expounded general principles and proposed psychological distinctions of faculty, both human and animal, that have a high value independently of their place in his system. However little we may agree with the complete system of Romanes, and admitting that he classifies the facts of animal intelligence rather more systematically than nature offers them, we must recognize in his work a distinct advance upon anything that existed before, and feel assured that every future comparative psychology will build upon the foundations here laid down. If others have expressed themselves less systematically, they have none the less been guided by the same impulses and have contributed to the same end. Sir John Lubbock, in his study of "Ants, Bees, and Wasps," devotes his best energies to ingeniously testing the powers of their senses, their instincts of orientation, their modes of communication, their ways of solving the perplexing problems that an arbitrary change in their environment produces and so on. The same zeal in bringing a large number of apparently disparate facts into serial order dominates Grant Allen's exposition of the growth and development of the Color-Sense, as well as his treatise upon the origins of the pleasurable and painful effects of sensation and emotion,—"*Physiological Æsthetics.*"

Such studies have an intimate relation with the anthropological aspect of psychology, in which department English activity has been eminently successful. Of this the authoritative works of Tylor, upon "Prim-

itive Culture," and "The Early History of Mankind," and of Lubbock, upon "Prehistoric Times," are sufficient evidences. Their admirable expositions of the evolution of arts and customs; the varied career of the foundations and development of culture; their discussion of the beginnings of expression and communication, both pictorial and oral; their analyses of the more or less unconscious psychological systems that underlie the peculiar beliefs and thought-habits of primitive peoples; and the equally interesting tendencies to a reversion towards such beliefs, that appear all along the zig-zag line of advance in culture,—certainly no more entertaining chapters of mental development have been written.

In the remaining department of comparative psychology, "Infant Psychology," the English have shown a deep interest though they are represented by few original studies. In the closely allied field of the application of psychology to education, much appreciation has been felt in Great Britain, and it may suffice to again refer to the works of Bain and Sully.

The products of a mind so original as that of Francis Galton could not readily be classified in the psychological activity of any country. His studies of "Hereditary Genius," tracing by aid of painstaking methods the heredity of exceptional mental and physical gifts; his similar study of the effects of heredity and environment, of nature and of nurture, upon the production of English men of science; and the more general exposition of the laws governing the distribution of faculty in his latest work, "Natural Inheritance," are all deeply permeated with the evolutionary doctrines and form a unique chapter of science, interesting no one more deeply than the student of

scientific psychology. Mr. Galton's studies of the strengths of the links that hold together the chain of ideas, of the peculiar associations of sounds with colors, and the equally strange "number-forms," together with his invention of composite photography and many other ingenious devices for measuring and recording human faculty,—all merit careful attention and will be found in his "Inquiry into Human Faculty," and other works.

Although the present sketch makes no attempt to render a complete account of British psychology, it would be decidedly lacking were no mention made of a movement that at the present moment contributes more than any other to the discussion of psychological matters, and is amassing more rapidly than any other a vast and heterogeneous literature—I mean the "Psychic Research" movement. The "Society for Psychical Research" has in the six or seven years of its existence accumulated a bewildering mass of material, bearing on one phase or another of the miscellaneous group of problems that lie partly within and partly upon the border-lines of science and the mysterious borderland that some call the supernatural. One must refer, though not without misgivings, to the voluminous numbers of the "Proceedings" of the society and to the two volumes of the "Phantasms of the Living" for a more detailed account of the movement and its results. The main interest has centered in the possibility of the transference of thought from mind to mind apart from the recognized channels of sensation ; which possibility the society has accepted as proven and termed "Telepathy." While acknowledging that the observations contributing to this result have brought to light many unsuspected phenomena of genuine psy-

chological value, I cannot refrain from expressing my conviction that this premature verdict of the society and especially the application of this theory to the explanation of the still more dubious death-bed presentiments and the like, will have a deterrent influence upon the progress of psychology in Great Britain. The work of the society in investigating spiritualistic phenomena and in studying the psychology of deception deserves especial credit. The society has made many and interesting studies of Hypnotism and has added several instructive experiments to this study. They have also done well in rescuing from oblivion many facts either of psychological or anthropological value that without such organized effort are not apt to be accessible. While the future progress of the society has the good will of all psychologists, and its "Proceedings" will continue to be eagerly read, one must regret the tendency of this interest to withdraw attention from other and more important departments of psychological research.

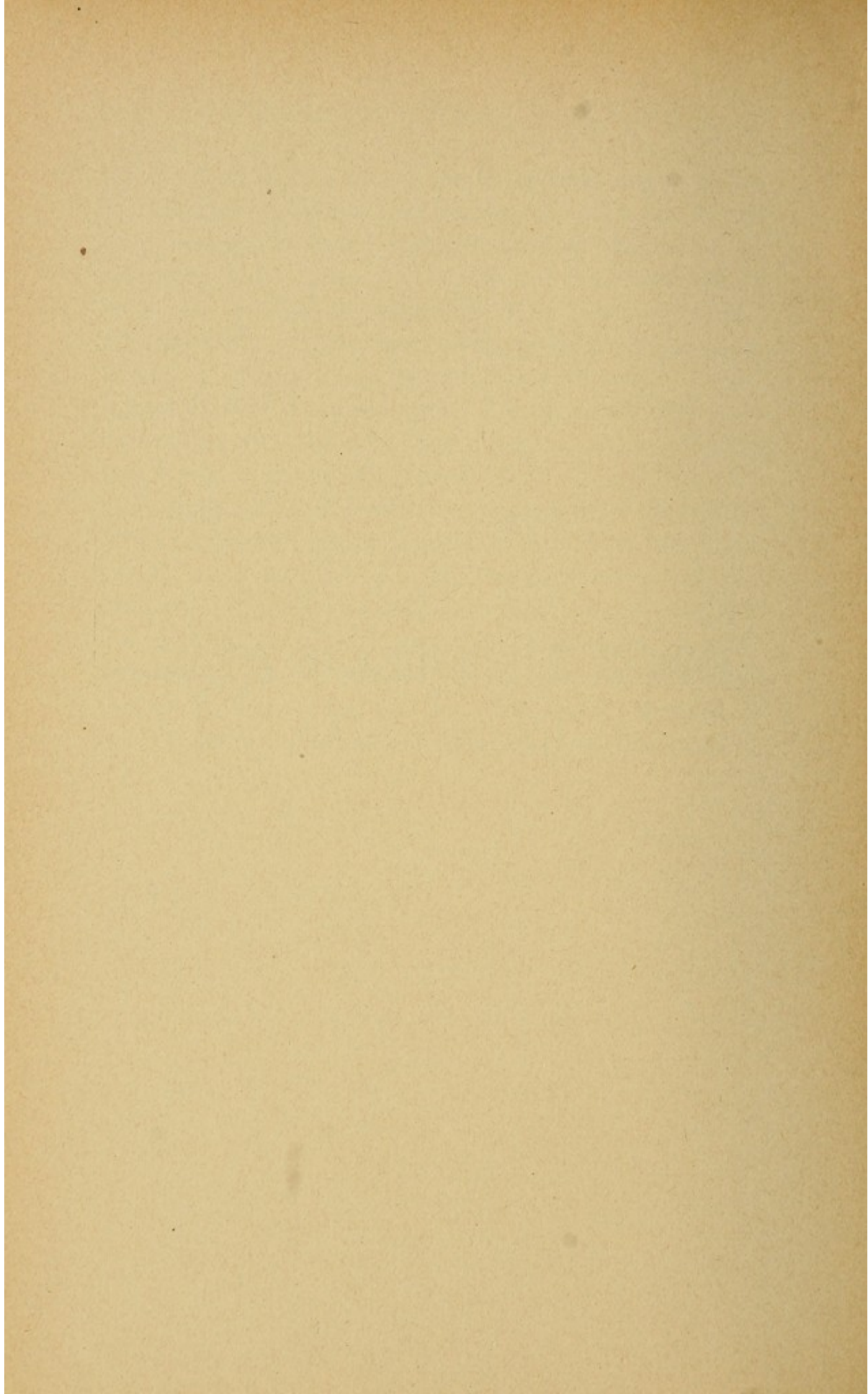
Turning from Great Britain to our own country, I find it still more difficult to properly characterize the status of scientific psychology. While in many respects we follow English traditions, using their text-books, and absorbing their literature, we diverge from them in being more eagerly on the alert for promising lines of work wherever found, in a readiness to introduce innovations whenever circumstances will allow, and in brief in utilizing the freedom, though not without appreciating the disadvantages, of intellectual and educational youthfulness. On the one hand the same interests that have been indicated as representative of British psychology will be moderately true of America. Biological science is in a very flourishing condition in

this country, and the interests in the mental side of life that such study furthers, has been duly cultivated. We have, too, an "American Society for Psychical Research," studying the same phenomena as the English society,* that has yet published comparatively little, but has maintained a cautious attitude, and brought to light quite a number of phenomena of high psychological importance. On the other hand we have found a great inspiration in the experimental psychology of Germany. While a very fair proportion of Wundt's students at Leipsic are Americans, I believe no Englishman has ever studied there. Amongst us the place of leadership in this field belongs to G. Stanley Hall, formerly Professor of psychology at the Johns Hopkins University, and now President of Clark University. At the former institution Prof. Hall introduced the psychological laboratory and conducted a vigorous department of scientific psychology. Some of the studies from this laboratory were published in *Mind*, the English journal of philosophy and psychology, and were continued in the *American Journal of Psychology*, when that periodical was inaugurated by Prof. Hall two years ago. This journal maintains a high standard of original contributions, presents a survey of current psychological literature such as is not to be found elsewhere, and may perhaps be regarded the most important contribution to psychology from this side of the Atlantic. There can be little doubt that with the advantages that Clark University offers, that institution will soon form the nucleus of psychological research in this country. Prof. James, of Harvard College, though with somewhat different interests, has contributed by personal

*Since these words have been written the American Society has decided to become a branch of the English Society.

influence as well as by a series of brilliant essays to the furtherance of psychological studies amongst us. Moreover, there are many indications that the career of scientific psychology in the United States is full of promise. Dr. Cattell, a pupil of Wundt, has organized a department of experimental psychology in the University of Pennsylvania, and other institutions are looking forward to a similar step. I may be allowed, too, to mention the chair of "Experimental and Comparative Psychology" at the University of Wisconsin, which I now occupy and with which is maintained a laboratory of experimental psychology. While thus we have simply entered upon the initial stages of our career, our interests are wide and well grounded, our foundations are securely laid, and one may be allowed to confidently hope, if not to predict, that amongst the advances in Psychology that the future holds in store, a good share will come from American psychologists.

RISE OF THE PEOPLE OF ISRAEL.



INTRODUCTION.

MY DEAR FRIEND :—

YOU have expressed your surprise, that in view of my firm adherence to the doctrines of the Church I could have assumed in questions of Biblical research so critical a standpoint as that exhibited in my little essay upon the early history of the People of Israel ; and you have declared that particularly for an American public, whom you wish to make acquainted with my unpretentious little treatise, would an explanation and justification of this apparently contradictory position be of interest. I shall, accordingly, briefly express my thoughts upon this subject.

First, I should like to point out, that we are here dealing with the Old Testament. As surely as Jesus himself said of the Old Testament, 'Search the scriptures . . . they are they which testify of me' (John 5, 29), and just as surely as Jesus saw in himself merely the fulfilment of that which the Old Testament had hoped, believed, and prophesied, so surely did the Old Testament by its fulfilment in Jesus and through Jesus become a mere preparation, a 'shadow of things to come' (Heb. 10, 1), so surely did the foundation of the new covenant make the old covenant old (Heb. 8, 13), and therefore the word of the apostle Paul also holds true with respect to the relation of the Old Testament to the New, that when that which is perfect is come, then that which is in part [imperfect] shall be done away (1 Cor. 13, 10). The subject of the faith of a Christian can be the life and work of Jesus alone, and not the Old Testament. To declare the Old Testament *also* a subject of faith for Christians is

equivalent to declaring the work of Jesus superfluous. Of what need were the revelation through Him if the Old Testament already contained a perfect revelation ?

The making of equal value in all respects, and the confounding of the New Testament and the Old have ever drawn with it retributive consequences. Either the Old Testament has been artificially forced up to the height occupied by the New, and the attempt made to find in it all that Jesus, and Jesus first, brought ; or—and this is the more frequent and worser case—the New Testament has been forced down to the plane of the Old, whose inferior moral viewpoint is more congenial to the carnal side of human nature than the rigider, higher demands of Jesus. And what this last course has led to, you in America have, in the life of the Mormon settlement, an example as classic as it is sorrowful. Out of the Old Testament the Latter-Day Saints can prove all their evil-doing as the revealed will of God.

If, now, in the regard of the Christian, the Old Testament must occupy a different position from that of the New, so also is the personal and scientific attitude of the Christian, with respect to the two, a different one. The New Testament is subject of faith, the Old is subject of criticism. From the standpoint of the New Testament, I must most positively reject a critique like that of David Friedrich Strauss, and most emphatically condemn it : here we deal with subjects of faith, before which criticism must halt.

But am I not speaking here, so far as the Old Testament is concerned, in behalf of the most boundless and devotionless subjectivism ? Indeed, not. I demand complete freedom only for *scientific* criticism, and that carries within itself its own corrective. Science is a sovereign power, which proceeds in accordance with laws of its own, yet which is also unconditionally bound to law : *without law, without discipline, no true science is conceivable.* But to that which has been acquired through strict and methodical scientific research, we are bound to bow unconditionally, be it welcome to us or not ; confidently trusting that like every good gift so

also science is not a work of the devil but comes from God. And far indeed is the regulated criticism of genuine science from injuriously affecting the respect due to the Old Testament. On the contrary it is the true apology of the Old Testament. For it teaches us to understand and recognize as conditioned by time and historical circumstances that which otherwise is obscure and often actually repulsive, and it exonerates us from defending as Christian doctrine that in the Old Testament which is purely and specifically Jewish.

In my own little treatise, indeed, I may call attention to just this apologetical character—I might almost say its eminently apologetical character. I sacrifice, to be sure, much of the *letter* of the tradition. For many, perhaps too much. But I preserve the *matter* by that very step, and explain much that according to the letter of the tradition would be utterly unexplainable. And the result is that we have in the traditions of the People of Israel respecting its early history, not mythology, not fantasy, but true history for whosoever knows how to translate the hieroglyphics of popular tradition into the language of history.

But are we not concerned in all this with a conflict between faith and knowledge? My opinion is that we are not. According to my firm conviction, no conflict whatsoever can arise between these two, for the reason that they have nothing in common, and that their respective provinces lie in two totally different spheres. That which I *know*, I do not *believe*, and that which I *believe*, I do not *know* in the sense in which science talks of knowledge. I do not 'believe,' on the contrary I 'know' that twice two is four, and that Chicago is situated on Lake Michigan: on the other hand, that Jesus redeemed me—this I believe, and for my own self also know it, and in life and death place my trust in it; but I do not know it in the sense of knowledge scientifically acquired that I can prove to everybody. Knowledge of the latter sort alone is subject of criticism, and where this kind of knowledge is concerned we must bow unconditionally before the results of scientific criticism.

Faith, criticism cannot touch ; and where unbelief—not-faith—appears as the result of criticism, the true faith in that case has not been dealt with, and frequently, too, true criticism has not been employed. The broadest freedom must be granted science, and I am able to discover in the fear that scientific truths can harm or overthrow faith, evidence only of little faith. He who said of himself 'I am the truth' (John 14, 6), 'For this I came into the world that I should bear witness unto the truth' (John 18, 37), and he who spake that great word 'And ye shall know the truth and the truth shall make ye free' (John 8, 32), his work can fear no truth of whatever kind it may be. The Copernican system did not destroy the Christian faith, although many, at that time, of little faith imagined that it was all over forever with the God of the Christians. For it was a truth, and Christianity bore the truth. Foolish undertaking that, in miscomprehended apologetic zeal to deny the truths of science as irreconcilable with Christianity and to attempt to destroy them ! 'We can do nothing against the truth' (2 Cor. 13, 8), and one is fain to cry out to those indiscreet zealots in the cause of God, the word of Job : " Will ye speak wickedly for God ? "

No ; I live in the firm and implicit assurance that no truth of science can injure Faith and Christianity, and believe that I serve my God when I modestly labor to find in that great monument of the history of Divine Revelation on earth—the Old Testament—the truth that science offers : hoping that this truth also will make free—not as though we possessed freedom as a cover for wickedness, but like as the servants of God, to whom, in the words of Saint Augustine, *Deo servire summa libertas.*

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February 20, 1890.

RISE OF THE PEOPLE OF ISRAEL.

BY PROF. CARL HEINRICH CORNILL.

ANYONE wishing to speak upon the history of the people of Israel must regard himself as particularly favored, from the very nature of the subject itself. To all of us, Abraham and Moses, Saul and David, and the others of whatever name, are like dear, old acquaintances. These, in fact, are among the first impressions which the susceptible minds of children receive, and the unique magic of religious poetry that clings to these legends always deeply and ineffaceably impresses itself upon their youthful hearts ; and even he who has long since forgotten to look upon the Bible with the eyes of faith, nevertheless will not be able to wipe out altogether those tender youthful memories.

I may, accordingly, anticipate a general interest in and, at least in its broad outlines, suppose a certain general knowledge, of the subject to be treated. Still, on the other hand, this knowledge is not so complete that I might not hope to be able to show those old and well-known forms in a new light, and through the accumulation of various details and the revelation of a grand historical inward connection, to work them into well-colored and realistic historical pictures.

Of truth, what an astonishing wealth and variety of separate material is here ready at hand ! The his-

tory of the people of Israel, in fact, shares with the common and many-sided life of humanity, the eminent quality of being interesting at whatever point we may touch it. We may turn our attention to characters more particularly belonging to political history and we shall behold a Saul, David, Ahab ; or to the heroes of the soul, and we shall encounter Moses, Samuel, Elia. We behold the ruin of the people as a political nation through Babylonian conquest, and the resurrection of the people as a religious sect through Ezra and Nehemiah. The ideal, heroical figures of the early Maccabees justly awaken our admiration, and even their degenerate descendants, during the period of the people's decadence, are themselves not altogether destitute of a certain attraction. The truculent grandeur of a King Herod, and the appalling extermination of the nation by the Roman sword—the most heartrending catastrophe, perhaps, that history ever has witnessed—fitly close this grand historical panorama, in which on every side and at all times we are confronted by entrancing phenomena, arousing all our interest.

From out of this superabundant wealth of accumulated materials I shall select particularly the rise of the people of Israel and of its national organization ; and as a legitimate ground for this preference of mine I may remark, that it accords perfectly with the predominant trait of our century and of its science, to investigate precisely the origins of organisms, and to explain all the most hidden processes in the life and action of nature ; for the nations of the earth may likewise be regarded as organisms. Still, my principal motive in choosing this part of the subject was the hope of being able to contribute, regarding this very epoch, results which are least known. In fact, since

the grand work of Heinrich Ewald, signaling an epoch in these researches, science has not achieved more for any era of the history of the people of Israel than for the history of its primitive existence. Our present subject, accordingly, expressed in popular language, will embrace the period from Abraham to David, as related in the five books of Moses and in those of Joshua, Judges, and Samuel.

The usual exposition is to the effect that Abraham went forth from the land of Haran into Canaan in order to settle there. In the fourth generation after him his descendants migrated to Egypt. In the latter country they led for a long period a quiet and peaceful life until the unbearable oppression of the Egyptians drove them out of the country. Their leader, Moses, by birth a Hebrew, yet thoroughly imbued with Egyptian culture, led them through the desert and across the peninsula of Sinai, back to the land of their fathers. Moses conquered the land to the east of the Jordan, Joshua the land to the west of that river; the latter exterminated almost entirely the Canaanite population and allotted the land as untenanted possessions to the Israelites. Thereupon twelve judges in succession wield the supreme power of the people, until finally the national kingdom arose in the person of the Benjamite Saul, which, in the person of his successor, David, is transferred to the house of Judah.

It cannot be denied that this was the prevailing idea, as early as the time of the Babylonian exile, when the historical books of the Old Testament were for the first time subjected to a comprehensive revision; and to-day, in fact, the Books of Judges, Samuel, and Kings lie before us, upon the whole, in this shape.

This version is a relatively recent one, having

arisen at a period when living historical tradition no longer afforded information. The oldest written sources, having by a fortunate chance been only slightly digested, and thus preserved in all substantial features, were incorporated in the great historical collection and give a widely different picture of the earliest history of the people of Israel.

At this point, there arises the unavoidable question whether, generally speaking, we are permitted to regard these oldest traditions of the people of Israel as history in the strict sense of the word. Not before the exodus from Egypt can we speak in a strict sense of a history of the people of Israel. All that lies before this point of time may be characterized as prehistoric or primeval. Only in the first Book of Moses, the book of Genesis, is information to be had of this prehistoric or primeval era.

Even regarding Moses as the author of the five books that bear his name, yet concerning this remote epoch, separated from his own by a series of centuries, Moses himself would have had to resort to oral hearsay and tradition. It was impossible for him to report these things as an eye-witness. But it is now generally conceded that Moses cannot possibly be the author of the books named after him. These books have rather originated from the comprehensive digestion of a whole series of independent written sources, of which the oldest cannot be older than King Solomon, nor yet much later, and written consequently between 900 and 850; thus between them and Moses there is an interval of several centuries. Only a few scattered sections in the Books of Judges and Samuel, and a few poetical fragments from the five Books of Moses might be older; any comprehensive and

coherent historical work earlier than 900 cannot be proved.

The memory of the past, accordingly, has been handed down substantially through the medium of oral tradition; the Israelitic nation itself is the author of these historical narrations, to which the biblical narrator, in giving them a permanent written form, has only imparted a finer psychological character and the magic of his unsurpassed art of representation. The material contents, the ingredients of these narrations, must be regarded from the point of view of popular tradition, of legend.

What is legend? Its main characteristic, of course, is popularity. Legend is a natural product, unaffected by tendencies, an unconscious poetry; and moreover it is characteristic of legend that it does not invent its material but that it embellishes extant tradition with poetic imagery; legend, like ivy, winds itself about cold matters of fact, often resistlessly overpowering them and flourishing in rank luxuriance, yet not able to thrive without them and unsupported by them.

Legend and history, therefore, are not contradictions, but advance together in brotherly harmony; the legend, from its very nature, presupposes an historical substratum. Only traditions that are attached to some definite locality, some definite monument, or name, are to be regarded as exceptions to the truth of these remarks; traditions of the latter kind adhere exclusively to the locality, monument, or name that they are intended to explain; instead of an historical they here have a material substratum, and even in these instances, they still have a substratum; the legend always stands with firm, marrowy frame upon solid

and durable soil, and not with uncertain foothold touching the stars, a play to wind and wave ; and on this ground, precisely, we are, in my opinion, altogether wrong in looking upon legend with an exaggerated skepticism.

Legend bears a resemblance to the youthful memories of man. The child will not retain everything, but only distinct events, and not always the most important ; but what it does retain it retains firmly. And above all the child will never be mistaken as to the total character of its childhood. A man who has spent a cheerless youth will never imagine that he has been a merry, happy child ; a man who has been raised in a village or among the mountains will never believe that he was born in a large city or on the plain. The youthful reminiscences of nations must also be judged according to this same analogy. The ready-made, artistically completé, and finished shape that these reminiscences have assumed on the lips of the people, or of any great poet, is to be called legend and, as such, the result of unintentional poetic creation ; but, on the contrary, its historical substratum and the basic character of the whole must be regarded as authentic tradition.

It shall be my endeavor to sketch in brief outline the character of the historical substratum underlying the oldest traditions of the people of Israel, and to show how upon this basis may be erected the true course of the early history of this remarkable people.

According to established tradition the people of Israel were not native in the land that afterwards became their home, but had immigrated from the north-east of Mesopotamia ; a tradition which is all the more striking in view of the fact that the language spoken

by the people of Israel could only have originated in Canaan itself. This linguistic difficulty was felt even in Biblical times, as the remarkable forty-seventh verse in the thirty-first chapter of the first Book of Moses testifies: in this verse, which is plainly the product of a later learned interpretation, "Laban the Aramæan" calls the stone-wall which Jacob in the Hebrew language had called Galeed, "Jegar-Sahadutha," a correct Aramæan expression.*

According to the familiar tradition of the Hebrew people itself, its primitive home was in the mountainous tract extending between the left bank of the Tigris and Lake Van, which separates Mesopotamia from Armenia and by the Greek geographers is called Arrhapachitis. (Arphaxad, son of Sem, is the ancestor of the Hebrew people—1 Moses x. 22-25; xi. 10). From the above-mentioned highlands there descended an emigration of tribes into the fertile plain of Mesopotamia. (Salah, Arphaxad's son, 1 Moses x. 24; xi. 12, denotes "emigration," "emission.") They crossed (Eber, Salah's son, 1 Moses x. 24; xi. 14, is "crossing," "passage") the Tigris, and then they separated, (Peleg, Eber's son, 1 Moses x. 25; xi. 16, is "separation," "division"); the main body advanced through the heart of the region and finally settled in and around the Haran, the Karrhae of the ancients, in the north-western part of Mesopotamia; a smaller band, including the ancestors of Israel, struck out in the opposite direction toward the extreme southeast and at Ur, in Southern Babylonia (1 Moses xi. 28, 31), endeavored to obtain possession of permanent settlements; still in the end they preferred to follow the main body of their

*All Hebrew words and names are given according to the spelling of the King James Bible.

kinsmen to Haran (1 Moses xi. 31). Here their migratory instincts awoke once more. Following the direction of the common high-road of the ancient world between Egypt and Babylonia they journeyed still further toward the southwest (1 Moses xii. 4, 5). The great leader of this tribal migration was Abraham.

The most careful and impartial weighing of all adverse arguments and difficulties has not as yet been able to shake my faith in the genuine historical authenticity of Abraham; I regard Abraham as an historical personality in the strictest sense of the word, as really so as Alaric, the king of the Visigoths, or Rurik, the prince of the Varangians.

Egypt, perhaps, was the original ultimate goal of this Abrahamic migration, that same Egypt which time out of mind had exerted a kind of magic attraction upon all Semitic tribes, and which probably even during the very centuries of the Abrahamic emigration, on repeated occasions, had received, and (not always willingly) harbored Semitic guests on its fruitful soil. Still, the story purporting to be an account of Abraham's expedition into Egypt (1 Moses xii. 10-20), is altogether a recent one and purely a luxuriant outgrowth from the stem of the original tradition. As a matter of fact the Abrahamic migration remained in Canaan. One division of this migration, the one personified in Lot, moved toward the eastern bank of the Jordan (1 Moses xiii. 7-12), where comparatively early both nationally and politically it became consolidated as Moab and Ammon (1 Moses xix. 37-38). Abraham himself settled in the west Jordan region, the Canaan proper (1 Moses xiii. 12).

Abraham and his tribal kinsmen were nomads, wandering shepherds, roaming peacefully about the coun-

try; while the aboriginal inhabitants of the land had long before attained the higher culture of city life. The immigrants borrowed their language from the latter, but at the same time guarded as before the primitive purity of their pastoral life, and their healthy, naïve natural sense revolted above all against the religion of the Canaanites.

The religious character of the Canaanites particularly displayed two characteristic manifestations: *viz.*, religious obscenity, and infant sacrifice; Abraham held aloof from both. In the touching and deeply poetical story of the intended sacrifice of Isaac, for whom ultimately a ram was substituted, tradition (1 Moses xxii.) has recorded Abraham's positive rejection of infant sacrifice.

In describing this predominant feature, and in characterizing Abraham as a religious hero, tradition has, further, correctly interpreted the true state of things. The work of Moses was not an absolutely new one; it is linked to a popular initiative of the past, and there is no reason for entertaining a doubt, when tradition even in this most specific manifestation of the Israelitic popular spirit makes Abraham the patriarch of his race; although very naturally we now are unable to prove and correctly expound in all its details this "faith of Abraham."

The descendants of Abraham in the West Jordan region, true to the usage and customs of their fathers, continued wandering nomads. Being unable to wrest lands from the superior power of the Canaanites, they turned their eyes southward to the highland about Mount Seir, where the primitive tribes of the Horites both in power and culture stood far below the Canaanites. The main body of the descendants of Abraham,

accordingly, pushed forward toward the south, conquered the Horites, and settled down permanently on Mount Seir as Edom (1 Moses xxxvi. 1 ; 5 Moses ii. 12-22), and soon effected their national and political consolidation. Edom thereupon remained in undisputed possession of the aforesaid territory.

The remnants of the descendants of Abraham, who had remained behind in the West Jordan region, would perhaps have been absorbed by the Canaanites, or would have been compelled to seek connection with one of the kindred tribes, if a new and considerable immigration from the common ancestral home of Haran had not brought them aid and reinforcements. This was the Jacobite migration, represented in the person of Jacob.

It is the merit of Ewald with subtle insight to have detected in Jacob the "after-comer," the "loiterer."

Jacob appears as the father of twelve sons ; these are the twelve tribes into which in historical times the people of Israel were divided. The twelve tribes again became subdivided into four groups, by legend personified in four mothers, two legitimate wives and two concubines of the patriarch, *viz.* : a Lea-group, a Rachel-group, a Bilha-group, and a Zilpa-group ; Lea and Rachel were the more considerable, Bilha and Zilpa the inferior groups. The Lea-group surpassed all the others in number and importance, and the Zilpa division was connected with it ; yet the Rachel-group was hardly inferior in power and nobility, and the Bilha-group closely adhered to the latter.

The legend states that Jacob brought along with him his eleven sons out of Haran ; only the youngest, Benjamin, was born in Canaan. Might we also from this draw certain historical conclusions ? As regards

the rise and growth of the tribes, we are confronted with the most obscure problems of the prehistoric period of the people of Israel, which perhaps never will be perfectly cleared up. Tradition is only in so far incontrovertibly right as it relegates the beginnings of tribal growth to pre-Egyptian times, while weighty reasons corroborate the truth of this fact; and we have likewise to regard as correct, that the tribe of Benjamin comparatively rather late branched off from that of Joseph. But nothing more definite than this can be asserted.

Ewald has given expression to a clear hypothesis, which, in fact, possesses a high degree of probability. He believes that in the Lea-group he can discern the remnants of the Abrahamic group that remained in Canaan; in the Rachel-group the auxiliary reinforcement from Haran, that is, the Jacobite migration:—a statement, that asserts much. At all events, the Jacobite migration certainly did join the remnants of the Abrahamic migration that had remained in Canaan, and henceforth becomes the representative of the entire national and historical development. The Jacobite migration, however, entered not only externally but also spiritually upon the inheritance of Abraham; the faith of Abraham passed to Jacob and was perpetuated in him as the father's noblest legacy.

Yet at an early time there must have arisen contentions among the kindred tribes. Joseph, from whom Benjamin perhaps had not as yet branched off, boasting his power and noble pedigree, claimed the supreme hegemony, but was forced to yield to a coalition of the other tribes, and went into Egypt where the rich pasturages of the Asiatic border-land, since remote antiquity had been the playground of Semitic

nomads. The Lea-tribes at this conjuncture seem to have attempted to draw the Bilha-tribes, Dan and Naphtali, into the spheres of their power, the latter sub-tribes having been deprived of their old support; and Reuben, particularly, seems to have intended to do them violence, (1 Moses xxxv. 22); but both those vigorous and valiant tribes were able to maintain their independence, and Reuben himself came out of this contention so severely damaged that henceforth and for all time to come he lost his "primogeniture," his old power and tribal prestige (1 Moses xlix. 4).

Later there occurred events that forced them all to emigrate; but we are, of course, utterly unable to give a precise account of these events. On this occasion Joseph wreaked a noble vengeance, hospitably receiving his brothers in the district in which he had settled, oblivious of the old injury and only mindful of the old relationship. And in this manner the sons of Jacob became inhabitants of the land of Egypt.

At first the Egyptian government seems to have assumed a well-meaning attitude of neutrality toward the strangers; but soon the situation became completely altered. The Pharaoh Ramses II happened, at the time, to be involved in a severe conflict with the populations and kingdoms of western Asia; Palestine, partly at least, being the theatre of the struggle. The contest, as regards Egypt, ended, indeed, not in open defeat nor yet in victory; the ultimate result being a peace which nevertheless failed to warrant complete security to either side. The consequence was that henceforward Ramses naturally began to look with mistrust upon the foreign population of alien blood that had settled on the Asiatic border, while at the same time he happened to be in need of laborers for

his numerous public works. He, accordingly, resorted to the expedient of pressing into the service of the State all the Semites who were settled on the eastern border of Egypt on the isthmus of Suez, and under strict military supervision compelled them to perform toilsome villein-service.

Incidentally I may observe, that I am fully aware of the arguments which have recently been advanced against the hypothesis that Ramses II, the Sesostris of the Hellenes, in reality was the Pharaoh of the oppression, and his son Merenpta the Pharaoh of the Exodus. These arguments are well worthy of a most earnest consideration, but the accepted identification of both Pharaohs still appears to me as the most satisfactory.

In this manner, Israel, from free nomads, had been turned into Egyptian socage-serfs. So long as Ramses, one of the most warlike of the Pharaohs, wielded with a strong hand his iron sceptre in Egypt, the oppressed Israelites seem reluctantly to have borne up with their hard fate. But even chains of servitude availed not to break the stubborn, independent heart of those proud Bedouins. When the turbulent Ramses was succeeded by a son very unlike his father, the people of Israel again took heart. There only lacked a resolute leader who should guide the latent ferment to a definite goal; this leader was soon found.

Moses, a Hebrew of the tribe of Levi, had through a fortunate chance been received into the ruling caste of Egypt and thus found an opportunity thoroughly to acquire Egyptian training and culture. But the natural impulse of his heart drew him toward his own people; he preferred to be the brother of these despised serfs rather than live in the enjoyment of

Egyptian splendor and magnificence. His keen insight soon discerned that the only way to free his people from the iron encompassment of Egyptian fortresses and military garrisons lay across the sea into the heart of the desert. It was a desperate undertaking. He obtained precise information concerning the topography and the political situation of the neighboring country, allied himself with kindred Bedouin tribes of the Arabian desert, and when dreadful scourges and visitations were terrifying the Egyptians, and had paralyzed their efforts, Moses thought the right moment was at last arrived: his fellow-countrymen with many other kindred national elements in their train (2 Moses xii. 38; 4 Moses xi. 4) assembled, and forthwith marched forth from the land of bondage.

By well-devised marches and maneuvers they were able to deceive the Egyptian guards on the frontier; they soon reached the Isthmus of Suez, but there they were overtaken by a flying corps of Egyptian cavalry. Before them the raging sea, behind them their pursuers, panting for revenge. It was a moment of supreme anxiety! A violent northeast wind drove the shallow waters from the channel, and they marched through on the dry bottom of the sea into the desert, to freedom. The pursuing Egyptians were overwhelmed by the retreating flood; but Israel was safe.

The entire highway leading to Canaan being in undisputed possession of the Egyptians, and the latter by treaties with the neighboring kingdoms having stipulated the mutual extradition of all fugitives, Moses accordingly led his people into the narrow defiles of Mount Sinai, which were accessible indeed to a band of wandering nomads but could not be approached by a large army. Israel tarried for a long time in the

region of Mount Sinai, and in this grandly impressive mountainous scenery tradition has located the scene of Moses's greatest work, his religious reorganization of the people. The entire tradition is agreed to the effect that Moses was the initiator, pioneer, and creator of that unique spirit which belonged peculiarly to the people of Israel, and through which it most radically differed from other tribes related by speech and descent. There, upon Mount Sinai, Moses gave to Israel its national God Jahve* (this is the original and correct pronounciation, instead of Jehova), thereby making Israel a nation as the people of Jahve. The name of Jahve, in fact, cannot be explained from the Hebrew tongue, but seems to have been borrowed from Sinai; and, indeed, according to Israelitic tradition, Moses's adviser and assistant, his father-in-law Jethro, was a priest of Sinai (2 Moses xviii).

Still, it remains utterly impossible to state precisely and positively of what the work of Moses really consisted, since—however unwelcome the truth may be—not even the ten commandments can be regarded as having been actually formulated by Moses; we have here only an inverted conclusion from effect to cause. Israel is the only people known to us that never had a mythology; not even making the easy step, by way of complement, of associating a female divinity with the highest divine being. Jahve's unique nature must accordingly be a Mosaic idea. Jahve alone is the God

*The word *Jahve*, according to the traditional etymology, is derived from the verb *hajah*, "to live, to exist, to be," and signifies "the being, the living, the eternal one." So it is explained in "The Idea of God," page 7 and 8. Professor Cornill in a private letter to the editor of *The Open Court*, writes: "My reason for not considering Jahve an original Hebrew word, is founded upon the fact that *hajah*, in the sense of *to be*, is not Hebrew. In a word originally Hebrew the change of *v* into *j* would be difficult to account for."—ED.

of Israel and this Jahve is the origin and source of all divine and human law; this must be a thought peculiarly Mosaic. A lofty spiritualization of the divine idea and, as a direct result of this, a lofty spiritualization of the Ethos are to be regarded the prominent features of the Mosaic Jahve faith. We have, moreover, to attribute to Moses the creation of, at least, a very simple worship; since a religion without worship would be, with primitive nations, inconceivable. The institution, also, of a priesthood as the only legitimate mediator between Jahve and Israel must be Mosaic; but the tradition that Moses entrusted his brother Aaron with this high office has not been found as yet among the oldest sources.

Sinai, however, was only a station and not the final goal of the migration. Soon after, the multitudes, strengthened by their rest, moved onward; this time to Kadesh-Barnea in the desert south of Canaan (4 Moses xiii. 27; xx. 1, 14; 5 Moses i. 19, 46; Judges xi. 16, 17). This locality, at least, seemed sufficiently adapted to receive the permanent colonization of frugal shepherds; it lay beyond the reach of the Egyptian arms, and yet on the very threshold of the coveted land itself. Here they might quietly await the development of things. According to all traces the sojourn in Kadesh must have been a rather long one. Moses probably died there. Tradition is constant in regard to the point that he never personally entered the land of promise; in fact, neither he nor any other of the emigrants that left Egypt. And this constant tradition is all the weightier if we recall to mind that here there is the question of a distance that under normal circumstances it would be easy to complete within a fortnight.

An external event finally brought Israel to the goal

of its wishes. The Canaanites, here called Amorites, under a king called Sihon, made an advance upon the eastern bank of the Jordan, drove the Moabites and Ammonites out of the most fertile parts of their territory and founded a new Amorite kingdom with the capital of Hesbon (4 Moses xxi. 26). Then they remembered their kinsmen in the desert at Kadesh. Moab and Ammon themselves, perhaps, on this occasion invoked the aid of Israel; at all events they were welcome allies, and the youthful and well-husbanded natural strength of Israel was able to achieve the proposed task: they destroyed the kingdom of Sihon of Hesbon; and Israel remained settled in the fruitful region, and kept for itself the price of war and victory.

Yet soon the fertile valleys and meadows could not contain the ever-increasing number of men and flocks; they were urged resistlessly to cross the Jordan. There seemed to exist every possibility of settling down across the river. According to all accounts the Canaanites were scattered in numerous small isolated territories without internal connections or mutual sympathy; moreover their energy had been relaxed by luxurious habits, and in valor they could not match the impetuous sons of the desert.

Judah was the first to advance (Judges i. 1-20; 1 Moses xxxviii. 1). He crossed the Jordan and turned toward the south where the mountain range that later bore the name of Judah, with its fruitful slopes excited his covetousness. Judah doubtless succeeded in gaining a permanent foothold in this region, but only at the cost of severe losses which were made good by the amalgamation of Canaanite, Edomitic, and Arabic elements; but after a hard and long struggle "the interloper" (Pharez) became the master of "the first be-

gotten" (Zarah) (1 Moses xxxviii. 27-30). In the time of David, when Judah stands in the broad day-light of history, the Israelitic part of the population is undisputed master of the country, and the latter throughout felt as Israelitic.

The tribes of Simeon and Levi made the second attempt, which turned out a complete failure. By means of treason they obtained possession of the Canaanite City of Schechem, commanding the Mountain of Ephraim ; but Israel turned shuddering away from the nefarious deed, and Simeon and Levi were vanquished by the revenge of the Canaanites (1 Mos. xxxiv. 25-30 ; xlix. 5-7). Levi as tribe was entirely exterminated, yet later through a most remarkable metamorphosis awoke to a new life as a sacerdotal caste, and the remnants of Simeon hid with the kindred tribe of Judah (Judges i. 3) by which they were absorbed.

The house of Joseph undertook the third and most successful expedition. Only Reuben and Gad continued to dwell in the East-Jordan district ; the other seven tribes under the leadership of the Ephraimite Josuah combined in a common campaign against Middle and Northern Palestine. They gained a firm foothold in Gilgal on the other side of the Jordan (Josh. iv. and v.) and from that position they were able to conquer Jericho (Josh. vi.), Ai (Josh. viii.), and Bethel (Judges i. 22-25). Then at last the Canaanites were aroused into a determined and general resistance, but at Gibeon they were an other time defeated by Josuah (Josh. x.) and thus Israel became the master of all Middle Palestine. In the north they were again confronted by a coalition of Canaanites under king Jabin of Hazor ; but at Lake Merom it was likewise vanquished by Josuah.

It would be erroneous to suppose that the whole land of Palestine, directly upon occupation, became the undisputed possession of the Israelites. In the first chapter of the Book of Judges—one of the most important and valuable of extant historical documents—we possess a detailed enumeration of all the Canaanites whom Israel “did not drive out.” From this enumeration it appears, that the best and most fertile parts of the country, and above all, the majority of the cities—with their strong fortifications, at all times impregnable to the rude military art of the Israelites—remained in the possession of the Canaanites. Only the forest-covered mountain ranges of Middle and Northern Palestine were occupied by Israel; and a very long and obstinate work had still to be performed before the Canaanite population was finally subjugated; a task partly accomplished by force of arms and the imposition of tributes, and partly by peaceable conquest and absorption with the people of Israel.

It must be admitted that to Moses and his work Israel was indebted for the power with which through ages it struggled victoriously in full consciousness of the high aim that was to be attained. Moses had given to the people a nationality and therewith an inalienable palladium, which, purified and strengthened by the power of religion, could not submit to oppression, but marched conquering onward; it was owing to Moses alone that in Canaan Israel did not become Canaanites, but, on the contrary, that the Canaanites were transformed into Israel.

Indeed, the actual outcome of the protracted conflict between these two peoples and different nationalities, had not, to human calculations, by any means been absolutely certain. In Canaan Israel

passed from a nomadic to an agricultural life, and might not such a radical change of life and of its conditions easily have brought about a transformation of national character? Irrespective of the superior culture and number of the Canaanites, Israel certainly harbored within itself a very dangerous foe, and a living germ of disorganisation; *viz.*, the stubborn, stiff-necked feeling of independence and the strong family instincts, peculiar to nomads, that still clung to the national character after the people had abandoned nomadic ways of life. Even after the common effort under Joshua had partially laid the foundations of national organization, the people were once again broken up into families and tribes, who without concerted action and without discipline, planlessly and aimlessly sought localities in which to settle down. Tradition, also, has expressly handed down a number of peculiar features of this tribal and family history.

One fraction of the tribe of Manasseh,—the families of Jair and Machir—conquered the region to the east of lake Galilee (4 Mos. xxxii. 39-41; 5 Mos. iii. 14-15; Judg. x. 3-5)—a fact of the greatest importance, because thereby there was reëstablished a connection between the West-Jordan country and Gilead, as the Israelites called the East-Jordan region. The tribe of Dan in its struggle against the powerful and warlike Philistines, had failed to secure a permanent settlement in the fertile plain along the coast of the Mediterranean; but Dan thereupon conquered the city of Laish in the far off north on the slopes of Mount Hermon, and changed its name into that of Dan (Judges xvii. and xviii.; compare also i. 34). Shamir, on Mount Ephraim, was settled by the family of Tola of the tribe Issachar (Judges x. 1-2); Pirathon, in the

same locality, by the family of Abdon (Judges xii. 13-15); Aijalon by the Zebulonite family of Elon (Judges xii. 11-12). This dispersion might have proved injurious and even ruinous, if over all of them, each family and each tribe, there had not reigned supreme one common idea; namely, Jahve, the God of Israel.

Jahve was the only national principle, the only bond that bound together all Israelites; in fact, as Jahve's own people they were a nation. Only extreme emergency had been able to effect a national union, and that not a general, but merely a transient one.

After Joshua's victories, the Canaanites, through the concentration and straining of all their resources, seem to have made but one single effort to overcome the invaders. Under the leadership of Sisera there was effected a powerful coalition of Canaanite kings, which undertook a war of extermination against Israel. This war of extermination threatened to be realized to the fullest extent. The Israelites were forced to seek hiding-places in the woods and in the mountains, where they stayed until Jahve finally brought assistance. At this critical moment a divinely inspired woman, the prophetess Deborah, aroused the discouraged Israelites. Under the leadership of Barak, of the tribe of Issachar, 40,000 Israelites of the tribes of Ephraim, Manasseh, Benjamin, Zebulun, Issachar, and Naphtali assembled together, and now the power of the Canaanites was unable to resist the ardent impetuosity of that great host, fighting for Jahve. At Taanak, on the river Kishon, the Canaanite army was defeated and dispersed, and Sisera himself in his flight murdered by a woman (Judges iv. and v.). After this battle we never again hear of resistance on the part of Canaanites.

Israel at last enjoyed rest from the Canaanites ; but now there threatened still another foe. Kindred tribes looked with envy upon the success of Israel, and naturally coveted their own share of the Canaanite prey. Thus Moab even advanced across the Jordan, and at Jericho, its king, Eglon, received the homage and tribute of the tribe of Benjamin, until the Benjamite Ehud stabbed Eglon and freed his people from the foreign yoke (Judges iii. 12-30). Likewise Ammon advanced toward the Jordan, and the hard-pressed tribe of Gad was only saved through Jephthah's valor (Judges xi.). At the very time when in Canaan Israel was becoming an agricultural people, the nation constantly suffered from the hostility and rapine of the sons of the desert ; Amalekites, Midianites, Ishmaelites, all of them sought to enrich themselves at the expense of the Israelite husbandman, and to rob him of the fruits of his labor.

The fact that bands of Midianites advanced, killing and plundering, as far as Mount Tabor, far in the north, in the vicinity of Lake Galilee in the West-Jordan region, is in itself a telling proof of how defenceless Israel remained through its unfortunate disunion against these predatory sons of the desert.

This invasion of Midianites, moreover, had certain important consequences. From sheer arrogance and wantonness the Midianites had on Mount Tabor butchered a number of prisoners belonging to the noble Manassite family of Abiezer. Then Gideon or Zerubbaal, the head of the family, took to arms to wreak vengeance of blood on the murderers. He assembled his own household and retainers, to the number of 300, and with these went in pursuit of the departed Mid-

ianites. He overtook them far beyond the Jordan ; he succeeded in dividing the forces of the enemy, and took prisoners the two Midianite kings, Zebah and Zalmunna, whom he ordered to be executed in expiation of his murdered brothers. He thereupon punished the inhabitants of Succoth and Penuel, who had scornfully refused him their assistance in this expedition of revenge (Judges viii.).

The conclusion of the narrative concerning Gideon has, unfortunately, been mutilated. It must have related, that Gideon actually founded a tribal kingdom, erected in his ancestral city of Ophrah a golden image of Jahve, and held a regular court, with a number of female retainers.

Thus from the house of Joseph proceeded the first attempt at political concentration—the foundation of a dynastical kingdom ; and, perhaps, from this dynastical kingdom there might have been developed a folk-kingship—but the time for this had not yet arrived.

Gideon, during his lifetime, remained in the undisputed possession of power over Joseph ; but after his death the harem-regiment—that constant curse of all oriental dynasties—likewise effected the ruin of his house. Abimelech, the son of a woman of noble birth from the city of Schechem—at the time a thoroughly Canaanite city—with the aid of his Schechemite retainers, seized the supreme power, attacked Ophrah and slew his brothers—according to tradition, three score and ten in number—upon one stone ; only the youngest escaped. This event, naturally, was not of a kind to cause kingship to strike deep roots in the heart of the people of Israel.

Abimelech enjoyed the usurped power for only three years, when he became involved in difficulties with the

men of Schechem. He also played the part of an Israelite king to the city of Schechem, which scarcely proved agreeable to the proud Canaanite nobles. They openly revolted against him ; in consequence of which event he conquered Schechem and razed it to the ground. But fate overtook him at Thebez, upon which city he had wished to bring the same ruin. In the act of setting fire to a tower, into which the inhabitants of Thebez had fled for shelter, a woman from the roof of the structure hurled a mill-stone upon his head, and he was killed (Judges ix.). Thus the first attempt to found an Israelitic kingdom had ended in murder and conflagration.

Again the old anarchy prevailed, the old lack of cohesion, which the Book of Judges describes in the following words : “ In those days there was no king in Israel, but every man did that which was right in his own eyes ” (Judges xvii. 6 ; xxi. 25).

Incidentally, it may be observed, that it is simply impossible to give even an approximate chronological statement and arrangement of the events between the exodus from Egypt and the reign of Saul. If Merenptah was the Pharaoh of the exodus, we may place them in the interval between about 1300 to about 1030; the year 1017 as the year of Saul's death seems tolerably certain.

The kingship of Gideon, like a will-o'-the-wisp, had vanished from sight, and been followed by utter darkness over the land of Israel. This darkness is only cleared up by the subsequent events that brought about the solid foundation of the national kingdom. The national kingdom had become an absolute necessity. An orderly government, popular feeling, and nationality could only be preserved through the concentra-

tion in some strong hand of all the scattered and, consequently, weakened national energies.

The notion that the creation of a purely human kingship would be a grievous sin, because an apostasy from Jahve, the only legitimate king of Israel, is but a later assumption of Hebrew theological schools, and discoverable for the first time, with certainty, in the prophet Hosea. This idea was entirely unknown to the olden time. The oldest sources relate all these events with a rejoicing and thankful spirit; in the rise of the national kingdom they justly behold a signal proof of the grace of Jahve; a direct, divine interposition of Jahve for the redemption of his people.

On the present occasion, the troubles arose from a different direction, and were by far more serious than any former had been. To the southwest of Mount Ephraim, toward the Mediterranean, there dwelt the warlike and valiant race of the Philistines—the hereditary foe of Israel. The Philistines profiting by the helplessness of Israel, advanced toward the mountain and invaded the fertile plain of Jezreel. The first collision between the belligerents, at Ebenezer, proved calamitous to Israel. Then Israel, in order to secure the assistance of Jahve, fetched out of the temple at Shiloh the Ark of the Covenant, the ancient and sacred war-symbol of the house of Joseph; but the second battle turned out even more disastrous. Thirty thousand Israelites covered the field of battle, the Ark of the Covenant was captured, and the power of Joseph had been utterly broken (1 Samuel iv.). The Philistines dragged the Ark of the Covenant as a trophy of war into their own country, burned and destroyed the temple at Shiloh, and conquered the whole land of Israel to the bank of the Jordan; the people

were disarmed and held in awe by Philistine viceroys and Philistine strongholds. Thus Dagon had triumphed over Jahve.

But Jahve had not forsaken his people; through the trying fire of extreme need and suffering he wished to weld it together to a strong and united nation. An aged seer, Samuel by name, had discovered in the Benjamite Saul the man of the period, and had kindled in his heroic soul a spark of patriotic enthusiasm. Just at this time the Ammonites also insolently insulted Israel, and threatened the city of Jabesh, in Gilead. Then Saul slaughtered a yoke of oxen and sent the bleeding pieces throughout Israel with the following message: "Whosoever cometh not forth after Saul, so shall it be done unto his oxen!" A desperate host then assembled around the bold leader; the enemies were taken by surprise and scattered to the winds.

The people, exultant over this first victory after long servitude and shame, bore the fortunate general in triumph to the ancient sacred spot of Gilgal, there to place upon his head the royal diadem (1 Samuel ix.-xi.).

Saul owed his crown to his sword, and his whole reign was one uninterrupted strife; for the main point was, to become master in his own land, and to secure it against determined enemies and overweening neighbors. Saul at once addressed himself to the more difficult and more important task of throwing off the yoke of the Philistines. His son, Jonathan, slew the Philistine governor, who held his court at Gibeah, and at this signal of revolt the Philistine armies again poured into the insurgent land of Israel. Saul could only muster 600 men who had remained with him; but the lofty consciousness of fighting for home and hearth,

David

for freedom and honor, imparted heroic courage to the men of Israel; Jonathan, above all, performed wonders of bravery, and, after a hot contest, victory declared itself for the desperate little band (1 Samuel xiii.—xiv.).

Yet this success was only a transient one. Saul regarded as his main task to keep in constant readiness the fighting strength of his people, and to this end he assembled about his person a small standing army, made up of 3,000 of his boldest subjects. Thus the star of King Saul arose at the beginning, bright and brilliant, but very soon it was overcast by dark clouds.

An "evil spirit from God" suddenly saddened the heart of the king. His attendants called to his side the Judean David, from Bethlehem, a man of tried courage, a skilled performer on the harp, a knight and troubadour in one, who, by his pleasant art, was expected to dispel the melancholy of the king. This new actor on the stage of Israelitic history is, next to Moses, the greatest personage of ancient Israel; for him had been reserved the glory of completing the work of Moses. What Saul began, David executed to its fullest extent; outwardly he made Israel free and independent, and inwardly united; the political and national consolidation of the people of Israel is the work of David.

David was one of those divinely endowed natures that win the hearts of all; a born ruler, to whom all willingly submit, and serve with alacrity. He appears before the king as a highly attractive figure, graced with every ornament of mind and body—radiant with youth, beauty, and strength; by his bewitching amiableness commanding the love of all. At first

everything went well. Saul, too, could not resist the magnetism of his person ; he made him his armor-bearer, his squire or "aide," and while David became devotedly attached to Saul's son, the king gave him his daughter in marriage.

This state of harmony, however, was not destined to last long. The Philistines again invaded the land and, during the war that ensued, David distinguished himself to such an eminent degree, that even the glory of the king was overshadowed. At that time of history kings had also to be the bravest of their nation, and we therefore easily understand that gloomy jealousy now began to devour the melancholy heart of the suspicious monarch. In a fit of sullen dejection once, he even hurled a javelin at his son-in-law, and the latter fled his presence. From that instant Saul's good genius forsook him forever, and the close of his reign exhibits a sad picture of civil strife and external troubles.

Despite the critical condition of his kingdom Saul, with an armed retinue, pursues the fleeing David, and, finally, drives him out of the country. The hounded fugitive was at last compelled to seek refuge among the Philistines—the enemies of Israel. Within a year and four months from that time, fate had overtaken the Israelitic king. The Philistine host again combined against Israel. A decisive battle was fought on Mount Gilboa, in which Israel was utterly routed. Saul, beholding the death of his three sons, fell, in a fit of despair, upon his own sword. Such was the untoward end of the first king of Israel.

Saul is a truly tragical figure. Although endowed with a grand and noble disposition, chivalrous and heroic, fired with ardent zeal, yet, after all, he

had achieved next to nothing. At his death the condition of things had again become the same as at the time of his accession ; Israel lay prostrate, and the power of the Philistines was greater and firmer than ever before. Saul's failures must be attributed mainly to his moral disposition. He was more of a soldier than a ruler. He lacked the commanding personality, the inborn power of leadership, and still more so, the versatile, statesmanlike talent that David possessed. Saul had honestly performed his kingly duties ; when attacked, he returned blow for blow with telling vigor ; but he was far from being a creative, organizing genius. Above all, he lacked, to a deplorable extent, all sense and appreciation of the essential character and national *raison d'être* of the people of Israel. In this latter respect, tradition has handed down a clearly drawn portrait of Israel's king.

Saul was well on the way toward changing Israel into a secular, military state, and thus turning the nation from its true historical mission. A conquering kingdom of this world, perhaps, might have boasted a brief period of transient splendor and prosperity ; but it would have disappeared, without leaving a trace of its existence, like Egypt and Assyria, Babylonia and Persia, Media and Lydia. King Saul, certainly, is entitled to our deepest compassion and heart-felt sympathy, but the fall of his dynasty was fortunate for Israel.

Yet not unavenged was Saul's blood shed on the heights of Gilboa ; his avenger and the genuine performer of his life-work arose in the Judean whom he had attacked and persecuted. Cautious conduct was now necessary on David's part. It would have been worse than foolhardy with only 600 Judeans to open

war with the Philistines. Above all David wished to save what still might be saved. He therefore caused himself to be anointed hereditary king of Judah, under Philistine suzerainty; while Abner, Saul's general, assembled the scattered remnants of Saul's power in the East-Jordan country, and at Mahanaim made young Ishbosheth king; the latter was Saul's only surviving son, and probably not yet of age.

David resided seven years in Hebron and Ishbosheth likewise seven in Mahanaim. Abner made the attempt to subject David to the sceptre of Ishbosheth, but in this attempt he was completely foiled by the bravery of David's Judeans. Shortly afterwards Abner, the only support of the house of Saul, was murdered and Ishbosheth himself fell a victim to the vengeance of blood; and at this conjuncture the northern tribes agreed to confer upon David the government of the lands of Saul.

Even the first measure enacted by David as overking of Israel bears witness to his high statesmanly genius. The city of Jebus remained still in the hands of the Canaanites; David conquered this city and made it the political capital of the new kingdom. This city was strongly fortified by its natural surroundings, situated rather toward the middle-region of the kingdom, and while independent of any of the tribes, and raised above and beyond their petty rivalries, it was better adapted for the purpose intended than any other city. As a characteristic contrast to this policy, Saul, even as king, had quietly continued to reside in his native village. The founding of Jerusalem, as David called his new "city of David," was a fact of the greatest historical importance, when we bear in mind

what Jerusalem became to the people of Israel and later through Israel to humanity.

Now, at last, the eyes of the Philistines were opened at their former loyal vassal, and they endeavored to choke, at its very birth, the rising power of David—but in vain. The task upon which Saul had been wrecked, was accomplished by David, and indeed definitively. David for all coming ages made the return of the Philistines an impossibility, yet, on the other hand, he did not molest them in their own country; did not rob them of a single inch of land or take a single stone from their fortresses.

David figures as the greatest warrior of ancient Israel. Victory ever remained faithful to him; he humbled all the neighbor-nations or conquered them—but we must particularly lay stress upon the fact, that David waged all his brilliant wars only in order to repel unprovoked attacks, and in defense of the most vital interests of his people. It cannot be proved, or even made to seem probable, that any of his wars had been begun by himself personally. David was no greedy robber, no vulgar swash-buckler.

Yet even all these heroical deeds are not the grandest trait of his character; what he achieved in the inner moral sphere is of infinitely greater importance. Above all his heart beat high in unison with the national soul of Israel. As a true Israelite he was a faithful servant and worshiper of Jahve, for whose sole glory and with whose trusting aid he wielded the sword. He wisely understood that a king of Israel must not only be a brave warrior, but that in the Israelitic state there also must be a place for Jahve. In conformity with this view David wished within the political centre of his kingdom to create also an ideal, religious centre.

While Saul characteristically had allowed the Ark of the Covenant, the people's old-time halidom, to perish from oblivious neglect, David's earliest concern was to fetch it back from the little village, where it remained forgotten, and bring it into the new political capital, where it would occupy a more worthy station; just as Gideon once had inaugurated his tribal dynasty by the erection of a sanctuary in his native city of Ophra. David himself never undertook any important action without first consulting Jahve through the priest.

The portrait of David is not wanting in human traits of the worser sort, and the books of Samuel with inexorable love of truth have not in the least wished to hide or mince the matter. Still, the fact remains that David stands forth as the most luminous figure and most gifted personality in the whole history of Israel, in greatness surpassed only by the prophet of Sinai, by Moses, "the man of God."

What David achieved for Israel cannot be rated too high. Israel as a people, as a political factor, as a concrete power in the world's history, as a nation in the highest sense, is exclusively the work of David; and, although the kingdom which he built up through the struggles and anxieties of a long and active life, soon collapsed; although Israel itself, even a few generations after his death, was again divided into two halves—still, the ideal unity long survived the division that had really taken place. The past grandeur of the Davidian Epoch still became the haunting dream of the future days of Israel; and it is not through a mere chance that the wistful longing, and even the consolation of Israel, should reappear in the form of a returning ideal David, who, in his own person,

should combine all the virtues and excellencies of the historical David, without any of his foibles.

With David the people of Israel had, once for all time, reached the acme of its national existence; his like never appeared again. After David, the history of the people of Israel changes into a continuous tragedy, pointedly illustrating the words of the Apostle Paul, that the misfortune of Israel enriched the world. The pearl is a disease of the shell, and kills that which creates it. And thus, also, the costly legacy bequeathed by Israel to the world, gushed forth from a well of tears. The worldly grandeur of Israel collapsed stone by stone, inch by inch, into utter decay; but the smaller it might appear outwardly the greater it became inwardly. In the downfall of Israel Jahve triumphed; and on the ruins of Jerusalem, Jeremiah proclaimed the New Covenant.

Israel died as a political nation, but arose again as a religious sect, as a community of the pious, the God-fearing, who, alone, would be privileged, and able, from out of their midst, to send forth another son of David, according to the flesh, and, spiritually, the performer of the work of Moses; greater than David, greater even than Moses.

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