

Clark University

Clark Digital Commons

---

Historical Dissertations & Theses

Archives & Special Collections

---

6-1912

## The psychology of senescence: An introductory study

Charles W. St. John

Follow this and additional works at: [https://commons.clarku.edu/hist\\_disstheses](https://commons.clarku.edu/hist_disstheses)



Part of the [Biology Commons](#), and the [Psychology Commons](#)

---

The psychology of senescence:  
An introductory study

by

Charles W. St. John

Submitted for the Degree of Master of  
Arts at Clark University, Worcester,  
Mass. and accepted on the recommenda-  
tion of

G. Stanley Hall

June 1912

TABLE OF CONTENTS

Introduction - - - - - p. 1

Auguste Comte - - - - - p. 3

    Conclusions - - - - - p. 31

Emmanuel Swedenborg - - - - - p. 34

    Conclusions - - - - - p. 83

Leo Tolstoy - - - - - p. 89

    Conclusions - - - - - p. 129

Gustav Theodor Fechner - - - - - p. 138

    Conclusions - - - - - p. 167

General Conclusions - - - - - p. 170

Bibliography - - - - - p. 183

INTRODUCTION

The following biographical studies have been made with the purpose of showing through concrete cases some aspects of mental decline in senescence. To the objection that each of these cases follows a course in a degree divergent from that of normal mental decline, the reply is that a study of these striking instances, we believe, affords a more ready insight into the underlying phenomena than would a similar one which dealt with average or typical cases. The significance of exceptional cases should not be underestimated. Certain peculiar conditions have been present which have modified the typical phenomena, but after due allowance has been made for these conditions and their effects, the underlying essential causes stand out the more clearly.

As a basis for the studies, the writer has taken the literary and philosophical productions of the individuals studied, and the accounts given by biographers. The attempt has been to make allowance for any personal bias on the part of biographers, and in view of this variable factor greater weight has been placed on the writings of the men themselves. Especially in the cases of Tolstoy and Swedenborg, valuable information has been obtained from

their own diaries and confessions. And, aside from these, any extended literary, scientific or philosophical production must bear the marks of the mind in which it originated; the attitudes, tendencies and beliefs of the writer are bound to appear in the content and form of the work, even when it is not professedly a statement of the writer's views. Any conscious product is the manifestation of certain mental conditions and processes, and to obtain some insight into the mental conditions back of these products has been the object of this study.

In apology for the length of the paper, the writer submits his belief that, to be of value, such a study must be somewhat detailed. It cannot concern itself wholly with the transition period, but must take into account both the preceding and the following periods. In regard to mental development, Dr. Sanford writes: "Each stage of development is already held in germ in the preceding", and arises from it "without the interference of any extraneous force, simply by the elevation (to higher potency) of the elemental psychic conditions already active there". (86, p. 427)

The law of mental decline asserts that the reverse process occurs after the maximum of development has been attained. Consequently an attempt to explain any one step in the course of mental development or decline, without giving due consideration to what has preceded it, is unwarranted. The reason for the perhaps tedious detail with which certain features have been presented in each case

is made more clear in the final conclusions, and in the brief review that follows each study.

The several cases are presented, not with the aim of bolstering up a theory, for the selection of a few scattering cases would, of course, be absurdly inadequate for such an end. In each of these instances we have good evidence of the nature of the change, which it is commonly much more difficult to obtain. Stripping off the exceptional features lays bare the essential underlying process, which, to repeat, we believe is the same as that which takes place in senescence in the average individual. These cases are sufficiently divergent to illustrate several of the factors which may have significant bearing upon this period of mental life.

#### AUGUSTE COMTE

Auguste Comte was born at Montpellier, France, January nineteenth, 1798. His parents were of the middle class, of but moderate culture and education, but reputable and sincere. At home he received excellent training from his mother, who was a devout Catholic and an admirable woman. His father was a cashier in the department of the Receiver General, and of staunch monarchical tendencies, which were shared by the mother. The family was of moderate circumstances, but the son was given good ed-

educational opportunities. At the age of nine he was sent to school, and he showed very early exceptional mental ability amounting even to precocity. He seems always to have been intensely interested in his studies - so much so that he practically isolated himself from the family and entered, to use his own term, a "scholastic seclusion". Robinet, who was his physician and life-long acquaintance, considers this seclusion, together with school influences, as responsible for his early disavowal of all theological beliefs and of all sympathy with the royalist party. Comte himself, in later years, deploras this former isolation, as having deprived him of "an incalculable affective development".

As a boy, he showed throughout his school life the same remarkable powers of application and capacity for intensive work that appear in his more mature years, and he proved an exceptionally good student. In 1814 he was sent to the Ecole Polytechnique at Paris. At the Ecole the spirit of the republican movement still lived, and it further stimulated the anti-monarchical tendencies which were already taking root in his rapidly maturing mind. As for his studies, though his interests centred in mathematics, he found time to attend the philosophical and political lectures and to become acquainted with the writings of the eighteenth century, the annals of the revolu-

tion, and the republican literature, all of which had strong attractions for him.

But the work here was not to last long. Though Comte always felt the most sincere respect for true worth, there was very deeply embedded in his nature a spirit of rebellion against mere arbitrary authority and domination. This resulted, after two years of attendance at the Ecole, in a mutiny of which he was the leader. The Ecole was temporarily disbanded and Comte returned home, but only for a short time, for he soon went back and became a tutor in mathematics.

In 1818 he became acquainted with Saint-Simon, and remained very closely associated with him as friend and pupil for some six years. That this connection was of marked importance for Comte there can be no doubt, for the basis, the starting point, of his philosophical and social theories unquestionably came from Saint-Simon. The visionary theories of the latter served not only as a stimulus to Comte, but also as the groundwork of the great system elaborated by his master mind.

Wilfred Schoff draws the following contrast between Saint-Simon and Comte: (In Saint-Simon) "a considerable originality of conception, a good general knowledge of science, and a fertile imagination were offset by a total lack of constructive power. He made no lasting contribution to science or philosophy; the only part of his thought which he ever attempted to systematize was his scheme



of social and religious reorganization. He was a man who suggested much but completed little. Comte, on the other hand, was nothing if not constructive. His powers of combination greatly outweighed any originality of thought that he may have possessed.....He had the faculty of coordinating fugitive ideas into systematic order". (20, p 63.)

Comte came to Saint-Simon with the philosophical training of the eighteenth century empiricism. In him he found a typical representative of the social and religious reaction which was taking place, and which had found a ready adherent in Comte himself. Saint-Simon, advocating neither a return to the old system of government, which the Revolution had abolished, nor a radical and sweeping reconstruction upon entirely new grounds, saw good points in the old system which might well be re-established upon new grounds. This proposed reorganization met with Comte's hearty approval, and here at the outset of his career we find the contradiction which stands out in bold relief thirty years later - the contradiction between Saint-Simon's social and political thought, and Comte's philosophy of the empirical school.

Two significant points of conviction which forced themselves upon Comte while he was with Saint-Simon were, first, that social phenomena are really subject to law, and, second, that the aim of philosophy must be social.

Saint-Simon could not fail to appreciate the merit of his pupil, and entrusted to him many important tasks in connection with his own work. After a few years, how-

ever, Comte began to develop his own philosophy, which was often at variance with that of his former master, jealousies and disputes arose, and finally in 1824 the two separated.

The starting point of Comte's philosophical system is his theory of the three stages. The human mind passes through the theological stage to the metaphysical, and last to the positive. In the theological stage all phenomena are believed to be determined and governed by conscious wills. The first and lowest form of theological belief is the fetishistic; objects are regarded as actually living beings possessed of reason and will. Later, polytheism appears and certain groups of phenomena are believed to be controlled by invisible beings. Finally, monotheism assumes a single divinity, the creator and ruler of all things. The gods of fetishistic, polytheistic and monotheistic belief are clearly anthropomorphic. Theological belief, then, might well be called personal or volitional.

In the second and transitional stage, the metaphysical, we find substituted for this the abstractional or ontological explanation of facts. Phenomena are governed by powers, tendencies, or occult qualities - realized abstractions. "The rise of water in a pump is attributed to Nature's horror of a vacuum. The fall of heavy

bodies, and the ascent of flame and smoke, are construed as attempts of each to get to its natural place. In medicine the curative force of Nature furnishes the explanation of the reparative processes which modern physiologists refer each to its own particular agencies and laws".  
(16, p.11)

The positive philosophy of Comte represents the third and last stage, which might be called the phenomenal or experiential. All knowledge is derived from experience; we know nothing but phenomena, and consequently all knowledge is relative. We may know the coexistences and sequence of phenomena, which are constant - the laws of nature are universal and invariable - but we must not seek the beginnings or the end of things, for these we cannot know. Comte's philosophy excludes Metaphysics and Religion.

Now each science in its development passes through the three stages, but since the various branches of human knowledge advance with unequal rapidity these stages are not reached by all of them at the same time. Comte's study of the order of development led to his classification of the sciences. He makes first the division into the abstract and the concrete. The concrete sciences, for instance Mineralogy, Zoology and Botany, are those which are concerned with objects and with the combinations of phenomena, while the abstract sciences deal with the universal laws which govern phenomena. The concrete sciences, since their theories of phenomena depend upon

the laws which are the subject of the abstract sciences, are the later to develop and have not yet passed beyond the descriptive stage.

Setting aside, then, the concrete, we find that the abstract sciences are not independent, but are related throughout. Each science deals, not with an isolated group of laws, but with certain ones which are found in all the sciences, to which it adds those laws strictly within its own field. This relationship is the basis of a classification in which the sciences are arranged in a series of increasing complexity but of decreasing generality. In mathematics, the science of numbers, Arithmetic and Algebra, deals with the most general and the simplest laws. To these Geometry adds a more special class of laws, those peculiar to extended bodies, and Natural Mechanics, while depending upon the more general mathematical sciences, contributes certain still more special laws, those of equilibrium and motion. Based upon the laws of the strictly mathematical sciences, but in no way upon any other group, is the science of Astronomy, whose special laws are those of gravitation. After Astronomy and all the more general sciences there follows Physics, then Chemistry, then Biology, and finally, as the most special science, comes Sociology, which depends upon all those preceding and adds its own new data.

It follows from the fact that each science depends upon and makes use of all the laws of the more general sciences, that this arrangement also presents the sciences in the order of their difficulty. This has also been the order of their development, and should be the order in which they should be studied.

Since the more special sciences necessarily develop later; and since all the sciences pass through the three stages, Mathematics must have attained the metaphysical stage while Astronomy was still in the theological, and when Mathematics had advanced to the positive stage and Astronomy to the metaphysical, Physics must still have been in the theological, and so on. Before Comte's time Sociology had not yet entered the positive stage - those of its laws which were fit to form the connecting links among the rest were not yet discovered and proved, or pursued to their consequences. The goal of Comte's whole work seems to have been to advance Sociology to the positive stage.

The social theories embodied in the positive philosophy are briefly these. Society is made possible first by the social instincts and propensities of man and the benevolent impulses with which he is to a certain extent endowed. These must always be weaker than the individualistic instincts, but there is a constant struggle be-

tween the two. Society advances with the growth of the social instincts as compared with the individualistic, and with the development of the intellect, which controls the personal instincts. The second essential element of society is family life, which is the great school for the training of social feelings and conduct. The third and last universal phenomenon of society is cooperation and the division of labor. While the beneficial economic and moral effects of this are very great, there is an undesirable effect - under the extreme specialization resulting from this, the interests of society at large are often lost sight of by the individual. Hence the youth must receive a liberal education before any specialization begins. The further suggestions for the amelioration of this condition will be shown later in the proposals for the reorganization of society.

From this the static phase he goes on to Social Dynamics, the study of the evolution of society. The development of mankind consists in the increasing preponderance of the essentially human attributes over those that are purely animal; and of these human attributes the intellect is most important, as the guiding and unifying power. Parallel with the transition in intellectual development from the theological to the metaphysical and thence to the positive stage there is the advance from the

military regime to the industrial. Man becomes skilled in modifying the facts of nature in proportion as science becomes positive and the laws of nature are recognized. With these as the fundamental principles of Sociology he proceeds to verify them from the facts of history.

Upon the fact that social evolution will ultimately raise the positivist and the industrial leader to supremacy Comte bases his recommendations for the reorganization of society. There must be a Spiritual Power, a body of men who have full authority and receive due recognition and respect, who will assume the spiritual government of all parts of society. In 1851, at the end of a course of lectures at the Palais Royal, he said:

"In the name of the Past and the Future the servants of humanity - both its philosophical and its practical servants - come forward to claim as their due the general direction of the world. Their object is to constitute at length a real Providence in all departments - moral, intellectual and material. Consequently they exclude from political supremacy the different servants of God - Catholic, Protestant, or Deist - as being at once behindhand and a cause of disturbance".

"The temporal which is to coexist with this spiritual authority consists of an aristocracy of capitalists, whose dignity and authority are to be in the ratio of the degree of generality of their conceptions and operations - bankers at the summit, merchants next, then manufacturers, and agriculturalists at the bottom of the scale. No representative system, or other popular organization, by way of counterpoise to this governing power, is ever contemplated. The checks relied upon for preventing its abuse

are the counsels and remonstrances of the Spiritual Power, and unlimited liberty of discussion and comment by all classes of inferiors. Of the mode in which either set of authorities should fulfill the office assigned to it, little is said in the treatise: but the general idea is, while regulating as little as possible by law, to make the pressure of opinion, directed by the Spiritual Power, so heavy on every individual, from the humblest to the most powerful, as to render legal obligations, in as many cases as possible, needless". (16, pp. 122-123)

Very briefly reviewed, these are the essentials of the positive philosophy. It is apparent that the method, at least up to the proposed reorganization of society, is purely objective, and that it is all a philosophy of the intellect, not of the heart - the emotional side of the philosopher has apparently entered but little into it.

In 1825 Comte married a Mlle. Caroline Massin. He realized that up to this time his emotional nature had been subordinated to the intellectual, and he sought to effect its education through this marriage. It is hardly necessary to say that such an attempt failed. His wife was an intelligent and capable woman of business, ambitious and practical, and while she did, in a way, appreciate her husband's ability, yet she was wholly without sympathy for his new system of philosophy or its results, and impatient with the impractical way in which he made use of his genius. Comte felt that the ordinary duties and obligations of domestic life, in view of his great



work, should not be expected of him, and in his home he was probably very exacting and unpleasant. If there had been children, it is possible that their relations would have been more harmonious, but unfortunately that was not the case. The marriage was most unhappy and continued to grow more and more so until finally, after seventeen years, a permanent separation occurred.

While Comte accepted philosophically this breaking up of home ties, it really was a most painful experience for him. "Believing profoundly in the indissolubility of marriage, insisting with the whole strength of his powerful intellect on the perfectness and perpetuity of the marriage relation as the golden band which purifies and holds society together, his own experience at once justified and illustrated his theory in his own eyes".

(5, p. 189)

His attitude towards marriage is shown clearly in the following passage from a letter written to an intimate friend during the first year of his married life. "I have nothing left but to concentrate my whole moral existence in my intellectual work, a precious but inadequate compensation; and so I must give, if not the most dazzling, still the sweetest part of my happiness".

Comte now began making frequent contributions to *Le Producteur*, which not only served to alleviate his decided financial embarrassment, but also to introduce his theories to philosophical circles. In 1826 he began a course of lectures which were largely attended and which drew the attention of many eminent scientists and philosophers. After the third lecture, however, he was inter-

rupted by "a severe attack of cerebral derangement, brought on by intense and prolonged meditation, acting on a system that was already irritated by the chagrin of domestic discomfort". (17) Comte's own observations on

this are interesting. "The three months in which the medical influence developed the illness, made me gradually descend from positivism to fetishism, stopping at monotheism and longer at polytheism. In the five following months, according as my spontaneity, despite the remedies, restored normal life, I slowly reascended from fetishism to polytheism, and from it to monotheism, whence I promptly recovered my former positivity". (4, Vol. 3, p. 75)

After a slow recovery from this mental crisis he was able in 1828 to continue the series of lectures begun two years before, and in 1830 he published the first volume of his Cours de Philosophie Positive, a ground plan of which had appeared in 1826. The sixth and last volume of the Cours was completed in 1842. In 1833 he was appointed an examiner, in the provincial schools, of boys who wished to enter the Ecole Polytechnique. He also obtained two other positions as teacher of Mathematics. His total salary now amounted to about two thousand dollars, and between this time and 1842 he was but little troubled with the financial difficulties which harrassed him throughout the rest of his life.

What Comte calls a second mental crisis occurred in 1838, during the time between the completion of the third volume of the Cours and the beginning of the fourth,

which deals with the dogmatic part of his social philosophy. In regard to this "crisis" Comte says:

"Its principle marked result consisted in a vivid and permanent stimulation of my taste for the different Fine Arts, especially poetry and music, which then received a considerable increase. You feel immediately the spontaneous affinity with my ulterior tendency towards a life principally affective; and further, it very happily improved my work in all relating to the aesthetic evolution of humanity. In domestic affairs, this period has some interest as also intermediate between two essential crises; for I ceased then, for the first time, soliciting, while still permitting, a postponement of a temporary separation, and signified my firm resolution of making in the future any similar occurrence irrevocable". (19, pp. 211-212)

This experience, then, would be characterized rather as a marked development of new interest in the Fine Arts than as a "mental crisis", in the ordinary sense of the words.

The year of the publication of the last volume of the Cours was almost a disastrous one for Comte. He was in the midst of a lawsuit with his publishers, which resulted from their insertion in this volume of a protest against a footnote in which Comte spoke depreciatingly of Arago. His domestic troubles had reached their climax and in this year the final separation took place. His preface to the last volume of the Cours had antagonized the men whose office it was to elect the examiners for the Ecole Polytechnique, and consequently he lost his re-

appointment. This resulted in the renewal of his financial difficulties. The year witnessed the breaking off of many of the ties that connected Comte with his own past; his life was now open to new influences.

From this time on he was constantly occupied with the plan for his *Systeme de Politique Positive*, whose four volumes were published between the years 1851 and 1854.

In 1845 he met Mme. Clotilde de Vaux, whose circumstances were in so many ways similar to his own that the two could not fail to be mutually attracted.

"Born of a respectable but obscure family, delicate, and surrounded always by an air of touching sadness, which seemed a prophecy of her future destiny, Madame de Vaux became early the wife of a man who was subsequently convicted of a capital crime, imprisoned, and finally sent to the galleys, yet, by the laws of France, still maintained his right and authority as her husband... ..It is admitted by all that she possessed graces of person combined with remarkable purity, tenderness and dignity of character... ..The admirable delicacy and consistency which had distinguished her conduct in her peculiarly trying and unfortunate position, established at once a claim upon Auguste Comte's sympathies... ..Moreover, Madame de Vaux, notwithstanding that she possessed a mind of the finest order, was as little understood by her family circle as was Comte by the rest of the world - a fact which, united with Mme. de Vaux's convictions in regard to the moral nature and duties of woman, so different from those of the best known contemporaries, but in exact accordance with Comte's own predilections, created a new bond between them... ..Like Comte, her nature remained unwarped by the sad issue of her own conjugal relations... ..Under these circumstances it is not surprising that Clotilde de Vaux

became to Comte a revelation of the power, purity, genius, and suffering of a woman, or that, having worked out his theory of Divine Humanity, he should recognize its highest development in her noble, self-sacrificing life.

It is a fact worthy of particular remark that, notwithstanding the exceptional nature of their mutual positions, no breath of suspicion, even in France, ever attached to their relationship. Slander itself was dumb before the purity of her character, the modesty and dignity of her life. Her intercourse with Comte was wholly that of master and pupil; and although he fully acknowledges that to her he was indebted for his entire knowledge and education of the heart, yet this was unconscious on her part, and she hardly realized that the chivalrous and reverential nature of his sentiments towards her, and all women, owed their development and expression mainly to herself". (5, pp. 187-8)

After one year thus, Mme. de Vaux died, leaving a most profound impression upon the mind of Comte, - indeed one questions if her living influence could have had more manifest effect upon his life than did her memory. Comte, in the preface to the first edition of the Catechism of Positive Religion, after giving his reasons for presenting his material in the form of a dialogue, writes as follows:

"I naturally chose the angelic interlocutress who, after only one year of direct living influence, has been now for more than six years subjectively associated with all my thoughts as with all my feelings. It is through her that I have at length become for Humanity, in the strictest sense, a twofold organ, as may anyone who has worthily submitted to woman's influence. Without her I should never have been able practically to make the career of St. Paul follow upon that of Aristotle, by founding the universal re-

ligion of true philosophy after I had extracted the latter from science".

The character of the remarkable relations between the two appears in a later passage, in which Comte speaks of Mme. de Vaux as

"my pure and immortal companion, the subjective mother my second life presupposes, and the objective daughter who was destined to add grace to my transient existence". He continues, "From the time that her invariable reserve had so purified my affection as to raise it to the level of her own, all I aspired to was the openly avowed union which should follow upon a legal adoption suitable to our disparity in age".

It is beyond the question of a doubt that their intercourse was always that of father and daughter, of master and pupil; the man nearing fifty and the woman in her early twenties drawn and held together not only by physical attraction, but for the greater part by the bonds of mutual understanding, of common heart-deep convictions, of natures deeply and truly sympathetic and stirred by those profound and genuine emotions which man feels only at his best. For such a pure connection, the highest form of Platonic love, one feels the deepest respect and veneration.

Certain personal details in Comte's life testify to his feeling towards Mme. de Vaux. During his remaining nine years his prayers were directed daily to the spirit of the one of whom he speaks as his "sainted companion".

Her little poem "Thoughts of the Flowers" he repeated every morning as a part of his private devotions, and he prized very highly her novellette "Lucie". There is an unmistakable touch of fetishism in Comte's devotion to these rather inane little works.

In the year in which Comte met Mme. de Vaux the transition from the first to the second phase of his double existence first becomes decidedly apparent, and this year is marked by his third and last "mental crisis!" The nature of this crisis may be seen from the following passage:

"M. Littré has charged Auguste Comte, since his death, with having changed the method in the elaboration of his two great works. In his *Philosophie Positive* the objective method prevails, while in his *Politique Positive*, on the contrary, the subjective method principally reigns.

M. Littré finds the cause which drove Comte into the subjective method in a purely psychological effect - in a word, in a mental crisis - experienced by him in 1845, preceded and followed by the following circumstances:

'Since he finished in 1842', says he, 'the *Systeme de Philosophie Positive*, he never ceased to revolve in his mind his promised book upon positive politics. Yet, not until 1845 were its character and plan settled. This initial elaboration of his second great work (Comte's own expression) coincided with a grave nervous illness'.

M. Littré cites afterwards two of Comte's letters to Mr. J. S. Mill, of June 27, 1845, and May 6, 1846. In the first, Comte speaks of interesting details (necessarily deferred) upon a grave nervous illness, produced, doubtless, by the resumption of his philosophical composi-

tion, which occurred some days after his last letter (May 15).

M. Littré remarks that this letter is mysterious; that one does not promise interesting details upon a fever or fluxion; but that it was really a crisis in which Comte's mind suffered profound impressions and durable modifications. He finds this plainly set forth in the following extract from his second letter to Mill: ... '...The decisive invasion of this virtuous passion (for Mme. Clotilde de Vaux) coincided last year with the initial elaboration of my second great work. You can thus imagine the true gravity of a nervous crisis, up to the present imperfectly known, in which I have run a true cerebral risk, and from the forcible personal recollection of which I have been happily saved, without any vain medical interference'.

In his second letter Comte speaks, not of an illness, but of a nervous disease. Before 1845, this disease was indeterminate, adds M. Littré. 'But the fatiguing effort of thought as it neared completion, encountered the impassioned love inspired by Mme. de Vaux. From this time the disease took a determinate form, impressing the seal of sentiment upon the conception elaborated. So, between profound meditation ruling his intellect, and passionate tenderness captivating his heart, the obstacles which had hitherto stopped him disappeared, the scales fell from his eyes, and the subjective method appeared to him a luminous guide which introduced him at the most distant future to a humanity altogether devoted to love. From this time his work was traced throughout; it was only a question of deduction and combination; and what greater mind for concatenating and following out combinations ever existed than his?' (18, pp. 163-164.)

In regard to this crisis, Littré says further "Its influence was mystic, especially when death, which soon came, had consecrated the recollection; and the mysticism was an aggravation of the subjective method." (13, p. 570)  
(See 13, pp. 566-577)

The works of Comte which were produced during his "second career" are the *Système de Politique Positive*,



Catechisme Positiviste, the Appel aux Conservateurs, and the Synthese Subjective. It is interesting to note a peculiar rule which Comte religiously observed - to read nothing whatever except a very few favorite poetical works. This seems significant, as partially explaining the extremes to which he allowed himself to be carried by his intense desire for systematizing and unifying. It appears inevitable that such a course should result in some degree of narrow-mindedness, and quite probable that the vast self-confidence which characterizes him was in large measure due to this.

The central thought of the Religion of Humanity is well epitomized by Frederic Harrison - "To moralize both Thought and Action, by inspiring Thought with an ever-present social motive, by making Action the embodiment only of benevolence - such is the aim of religion as Positivism conceives it". Its keynote, as stated by Mill, is "the power which may be acquired over the mind by the idea of the general interest of the human race, both as a source of emotion and as a motive to conduct.....It ascends into the unknown recesses of the past, embraces the manifold present, and descends into the indefinite and unforeseeable future. Forming a collective Existence without assignable beginning or end, it appeals to that feeling of the Infinite, which is rooted deeply in human nature, and which seems necessary to the imposingness of all our highest conceptions.....As M. Comte truly says, the highest minds, even now, live in thought with the great dead, far more than with the living; and next to the dead, with

those ideal beings yet to come, whom they are never to see.....And when reflection, guided by history, has taught us the intimacy of the connection of every age of mankind with every other, making us see in the earthly history of mankind the playing out of a great drama, or the action of a prolonged epic, all the generations of mankind become indissolubly united into a single image, combining all the power over the mind of the idea of Posterity, with our best feelings towards the living world which surrounds us, and towards the predecessors who have made us what we are". (16, pp. 135-136)

Throughout the whole system there runs the idea of the subordination of the intellect to the feelings. The supreme end of existence is the predominance of altruism over egoism - carried to, but not beyond, the point where the capacity for service to others would actually be reduced through self-neglect. Only the affections may be gratified; all other indulgence is immoral. The egoistic instincts, if indulged, tend to disrupt the personal and social unity which Comte holds to be so essential; they must be controlled by the social feelings. The religion of Comte imposes the most severe moral restraint, it "requires that all believers be saints, and damns them if they are not".

The set of religious observances which is a requisite of all religions is not lacking in that of the positivist. "Private adoration", which is "a mere outpouring of feeling,.....is to be addressed to it (the Grand Etre, Humanity) in the person of worthy individual representatives, who may be either living or dead, but must in all cases be

women; for women, being the xexe aimante, represent the best attribute of humanity, that which ought to regulate all human life, nor can Humanity possibly be symbolized in any form but that of a woman. The objects of private adoration are the mother, the wife, and the daughter, representing severally the past, the present, and the future, and calling into active exercise the three social sentiments, veneration, attachment, and kindness". (16, p. 150)

The two parts of the prayer are first the commemoration, the summoning up of the most vivid possible image of the person addressed, and, second, the effusion, the expression of the feelings of the worshipper. Two hours is the amount of time given daily to this private adoration, and there are appointed three definite times during the course of the day when it is to take place.

"The public cultus consists of a series of celebrations or festivals, eighty-four in the year, so arranged that at least one occurs in every week. They are devoted to the successive glorification of Humanity itself; of the various ties, political and domestic, among mankind; of the successive stages in the past evolution of our species; and of the several classes into which M. Comte's polity divides mankind. M. Comte's religion has, moreover, nine Sacraments; consisting in the solemn consecration, by the priests of Humanity, with appropriate exhortations, of all the great transitions of life; the entry into life itself, and into each of its successive stages: education, marriage, the choice of a profession, and so forth". (16, p. 152)

Death is the transition from objective to subjective existence, to life in the memory of friends, and to final existence in the Grand Etre. The final sacrament is a public commemoration which takes place seven years after death.

Comte's New Calendar of Great Men (8) presents an interesting phase of his proposed reorganization. He would have the year divided into thirteen uniform months of twenty-eight days each, arranged to illustrate his general theory of historical development. Each month is to represent a chapter in the advance of civilization, and the months, days and weeks are named from great men of the period in question. The following schema shows the proposed calendar year, with the names of the months and the social stages represented by each.

Month	Representing	Name
First	Theocratic civilization	Moses
Second	Ancient poetry	Homer
Third	Ancient philosophy	Aristotle
Fourth	Ancient science	Archimedes
Fifth	Military civilization	Caesar
Sixth	Catholicism	St. Paul
Seventh	Feudal civilization	Charlemagne
Eighth	Modern epic poetry	Dante
Ninth	Modern industry	Gutenberg
Tenth	Modern drama	Shakespeare
Eleventh	Modern philosophy	Descartes
Twelfth	Modern statesmanship	Frederick II
Thirteenth	Modern science	Bichat

The names of the weeks in the month of Moses are Numa, Buddha, Confucius, and Mahomet; in the month of Aristotle - Thales, Pythagoras, Socrates, and Plato; in the month of Dante - Ariosto, Raphael, Tasso, and Milton; in the month of Bichat - Galileo, Newton, Lavoisier, and Gall, and so on throughout the year. The days bear the names of less eminent representatives of the period.

In the reorganized society the authority is to lie, first, in the hands of the domestic Spiritual Power, composed of the women of the family, who purify and develop man through the affections, and educate the children up to the age of fourteen. Woman's duties are confined to this field, and she is permitted to take no active part in political or industrial affairs. There may be neither divorce nor second marriage. The second part of the Spiritual Power, the priesthood, consists of men from the philosophical class, and its duties are, first, to guide not only domestic but also public matters of a spiritual nature. Its financial support comes from the State, and, like the women, its members take no active part in industrial or political matters. The priesthood, or clergy, also have charge of the scientific education of the youth, and serve as physicians. They are the moral advisors and judges of all classes of society, especially of the rich in their relations with the poor. The authority of the clergy depends upon the masses, the working class, who thus form a third part of the Spiritual Power.

The Temporal Power is made up of the rich, the captains and directors of industries, who are educated for their duties. The capital resulting from industrial pursuits must be divided among a very few, and the capitalist must regard his wealth as a means of effecting the

betterment of the conditions of the poor. The possessions, lodging, and so forth, and the amount of remuneration to be received by the laborer are arbitrarily fixed. The capitalist is given the power to choose, not necessarily from his own family, the successor to his position and wealth, as is the case with all public functionaries. The entire political government is in the hands of the rich, the patriciate.

"First.....the existing nations are to be broken up into small republics, the largest not exceeding the size of Belgium, Portugal, or Tuscany; any larger nationalities being incompatible with the unity of wants and feelings, which is required, not only to give due strength to the sentiment of patriotism (always strongest in small states), but to prevent undue compression; for no territory, M. Comte thinks, can without oppression be governed from a distant centre.....In each state thus constituted, the powers of government are to be vested in a triumvirate of the three principle bankers, who are to take the foreign, home, and financial departments respectively.....Their power is to amount to a dictatorship", but "as a check on the dictators, there is to be absolute freedom of speech, writing, printing, and voluntary association". (16, pp. 167-168)

All men are subject to the three dictators, together with the one High Priest of Humanity (Comte himself), who is the supreme head of the Spiritual Power.

The end of all action must be social; the general good is the supreme goal of all. Now, while theoretically all classes have absolute independence of belief, it comes about through the nature of the Spiritual Power

and through the supremacy of the High Priest of Humanity, that the exact reverse holds true - the standards of conduct are fixed by the High Priest and the sacerdotal order in accordance with their own ideas of what promotes the general good.

Strange as it may seem, in view of his former interests, Comte develops an actual hatred of those pursuits which are purely intellectual and which deal with abstractions and reasoning. The scientist is prone to work towards a goal set by pride and ambition and to neglect the social aspect of conduct and thought. Art, which involves the emotions more than the intellect, is the only permissible so-called "intellectual" employment, except that which is necessary to develop the abstract sciences to such a degree that each may serve as the foundation for that directly above it. In teaching the fundamental truths of the abstract sciences, proof should by no means be offered, and the inquiring, scientific spirit must be discouraged; the pupil must accept implicitly that which the High Priest and the Spiritual Power deem fit. The library of the positivist consists of a hundred volumes chosen by Comte; all other books should be avoided, if not actually destroyed. All this constitutes a system of mental economy, it permits the greater perfecting of our selves as social beings. The

efforts of all mankind are, at one and the same time, to be directed towards improvement along some one definite line, selected by the High Priest of Humanity.

Comte actually has the self-confidence to predict that at the end of seven years from the time of writing he himself will have absolute control of education in France; that five years later political supremacy will have been given over to a positivist triumvirate; and that the following twenty-one years will bring about the complete reorganization of society on the positivist plan.

All of this proposed reorganization and regeneration of society is directed towards "putting an end to anarchy and systematizing human thought and conduct under the direction of feeling".

In addition to the religious and political ideas reviewed above, the *Systeme de Politique Positive* contains a complete revision of the philosophical considerations embodied in the *Cours de Philosophie Positive*, but entirely from the subjective point of view.. It consists in "the arrangement and coordination of all useful knowledge, on the basis of its relation to human wants and interests". All proof is dispensed with; the criteria are those which present themselves subjectively to the mind of the writer.



Comte now adds to the six abstract sciences a seventh, the science of Morals, which is based upon Sociology, and is the last, the most complex, and the least general science. In his philosophy of general history he places great emphasis on the fetishistic stage of theological belief, since that is a religion essentially of the feelings, not of the intellect, and he regards it as a religion which cultivates universal love. Fetishism he believes to be more closely allied to positivism than any other religion.

From the last volume, on the Philosophy of Mathematics, it is clear that Comte's attitude has now become truly fetishistic. Aside from his actual designation of the earth as the "Grande Fetich", it is apparent that the three first numbers ("les nombres sacres") and all prime numbers, especially seven and thirteen, are for him real fetishes. He proposes a revised numerical system in which seven is to be the unit.

It is hardly necessary to call attention to the disparity between this and the Cours de Philosophie Positive. The intellectual and strictly objective method is replaced by the subjective. The truly "positive" tone of the earlier writings is lost in the religious and political constructions, whose essential element is the preponder-

ance of the heart, the feelings, over the intellect. The intellect, with its keen, critical faculty is best able through the chosen few to execute and to direct specifically, but the heart always and everywhere must dictate the goal of conduct. Between the two phases of Comte's writings - the objective and the subjective, the strictly intellectual and the affective - there appears the transitional stage in the last three volumes of the Cours de Philosophie Positive, his earlier work on Social Science. Here the method becomes less objective. But in the last phase the emotional tone appears throughout, and especially in the glorification of woman as the supreme representative of all that is best in mankind, of all that ennobles and effects the betterment of man; in a word, she is the living embodiment of the Grande Etre, Humanity. Guided by universal love, humanity is ultimately to attain the long-sought goal of perfection, the general good is to supplant selfish gratification as the motive to conduct, and the world is to become a vast temple of peace and benevolence and love.

\* \* \*

A glance in review brings out several points whose bearing upon his mode of thought and his change of thought is significant. The faithful Catholic training of his youth, in spite of his early disavowal of all connected

with it and his subsequent rejection of all theological beliefs, bears its fruit in later years when the interests of his mid-life have faded to insignificance before the glow of new feelings and thoughts. The influence of Catholicism and of a sincere religious training upon his later beliefs is too evident to need comment.

As another factor of his early training, his attendance at the Ecole Polytechnique had significant results. The spirit of the Ecole readily molded his still plastic mind, and it left him a revolutionary in politics, a skeptic in religion, and an empiricist in philosophy. His philosophical point of view came from Diderot and Voltaire, Condorcet and Hume. These philosophical systems stood back of the rigid conceptions of systematized natural laws with which the then dominant sciences of Mathematics and Physics were set forth. Here, then, are the roots of the Philosophie Positive.

His association with Saint-Simon turned his attention to the social aspect of philosophy, and his new master's somewhat radical propositions for political and social reorganization loosened the soil where the germs of his Politique Positive were taking root.

With these points as bearing directly on the content of Comte's philosophical and social theories, let us turn to more personal details. During the first part of his

life we find him in a position peculiarly suited to stifle the affective side of his nature. In his early years his voluntary isolation from the family and his devotion to his studies was, doubtless, both an effect and, as he himself believed, a cause of the underdevelopment of his emotional nature. His childless and extremely unhappy marriage further tended to still his higher feelings and affections, and drove him to apply himself still more intensely to his intellectual work.

We find him in his forty-seventh year in trouble and alone. While he was involved in a lawsuit, deprived of his former position and plunged into new financial difficulties, the climax came in the culmination of his domestic troubles and his legal separation from his wife. Now began his friendship with Mme. de Vaux. The isolation of both, together with the similarity of their natures and the community of their beliefs, strengthened the mutual attraction and warmed the friendship into the truest devotion. Her death within a year stamped her memory indelibly upon his mind, and gave new color to all his thought. Already turning to his social theories and leaning towards the subjective method, his new-found feelings, intensified by the loss of the one who had inspired them, found expression in his works. The new affectivity which speaks from all the pages of his later

writings, and in the acts of his daily life, assumed the form in which we find it under the stimulus of this new experience and new knowledge. The content of his later writings, we have seen, has its origin further back in his early training.

#### EMANUEL SWEDENBORG

Emanuel Swedenborg was born at Stockholm, January twenty-ninth, 1688. His father was at the time chaplain of the Royal Horse Guards, but shortly afterwards became Professor of Theology at the University of Upsala, and dean of the same institution. In 1719 he was elevated to the bishopric of Skara, West Gothland. While not brilliant, he was patriotic, devout, industrious, and a remarkably voluminous writer, both on religious and secular subjects. To his father Emanuel Swedenborg doubtless owes in large measure his vigorous health, his longevity, and his love of writing. We should note that the father was convinced that he had a guardian angel, with whom he talked on one occasion, and that he claims to have effected two miraculous cures, one through "the laying on of hands", and the other through prayer.

What we can find concerning Emanuel Swēdenborg's youth indicates that he received a thorough scientific education; and the religious and ecclesiastical tone of

the home left its mark deep in his soul. At the age of eighty-two he wrote to a friend, Dr. Beyer:

"From my sixth to my twelfth year, it was my greatest delight to converse with the clergy concerning faith; to whom I often observed that charity or love is the life of faith, and that this vivifying charity or love is no other than the love of one's neighbor; that God vouchsafes this faith to everyone; but that it is adopted by those only who practise that charity".  
(40, p. 23)

Whether in this letter Swedenborg has read back into his childhood the beliefs of his later life, or whether these early days did really foreshadow what was to come, it is difficult to say, but in any case the son of Jesper Swedenborg could not fail to receive the highest moral and religious training, as well as the scientific education to which his later work bears witness.

Emerson says of him:

"Such a boy could not whistle or dance, but must needs go grubbing into mines and mountains, prying into chemistry and optics, physiology, mathematics and astronomy, to find images to fit the measure of his versatile and capacious mind. He was a scholar from a child". (22, pp. 96-97)

The scene of his academic career was the university of Upsala. While a student there he lived with his brother-in-law Eric Benzelius, who was then librarian of the university, but later became professor of Theology, and finally Bishop of Upsala. For Benzelius he acquired a deep friendship which lasted throughout his life. After

he had left home, religious influences continued to bear upon him, as, in fact, they did to a large degree all through his life. His work as a student seems to have shown, perhaps not precocity, but constant and regular development. As in his theological dogmas he clung to the real and substancial, so in his studies and as a scientist he seems always to have sought the practical. His strictly scholastic life was ended in 1709, when at the age of twenty-two he received the degree of Doctor of Philosophy at Upsala. His dissertation consisted of selections from Seneca and other Latin writers, with comments and notes of his own.

Swedenborg now turned his attention especially to mechanics, and made the acquaintance of the "Swedish Archimedes" Polheim, with whom he lived for a time. In 1710 he left Stockholm for London and Oxford. During his year's stay there he devoted his time to the continuation of his studies. Besides getting in touch with many of the prominent scientists of the day in London and Oxford, he communicated constantly with the Royal Society then newly formed at Upsala, and purchased for them many instruments and scientific books. In a dissertation on the Royal Society, Swedenborg is spoken of as one of its best members:

"His letters to the society while abroad witness that few can travel so usefully. An indefatigable curiosity, directed to various important objects, is conspicuous in all. Mathematics, astronomy, and mechanics seem to have been his favorite sciences, and he had already made great progress in these. Everywhere he became acquainted with the foremost astronomers and mathematicians. This pursuit of knowledge was also united with a constant zeal to benefit his country. No sooner was he informed of some useful discovery, than he was solicitous to render it beneficial to Sweden, by sending home models. When a good book was published he not only gave immediate notice of it, but contrived to procure it for the library of 'the University'".  
(41, p. 13)

After remaining in London for one year, Swedenborg crossed to Holland. From Holland he went to France, and spent a year in Paris and Versailles, where again he sought and became acquainted with the foremost mathematicians. Returning through Holland, he now went on to Pomerania and to the University of Greifswalde, but his somewhat protracted stay there seems, from a letter written at that time to his father, to have impressed him unfavorably. When the siege of Stralsund began, Swedenborg left for Stockholm, where he arrived in 1715, terminating his travels of over four years.

The contact with these several centres of the scientific thought of the time must have served not only to broaden his knowledge, but also to stimulate his interest in the subjects whose appeal had already been strong, but which are now to form the special field of his activity.



In 1715, while at Greifswalde, he published an oration on the return of Charles XII from Turkey, and a volume of Latin prose fables. We are afforded a little insight into the nature of the man through a book of poems which he published upon his return to Sweden. Although the poems suffered, perhaps, through translation, it is clear at least from them that Swedenborg was not possessed of poetic imagination. White says:

"Indeed, it was well that Swedenborg was but slightly endowed with the poetic faculty. Much of his future mission lay in fields which require the coolest and calmest minds to describe; the sight and contemplation of which would have sent a Shakesperian or Byronic temperament into ecstatic frenzies". (40, p. 27)

Upon returning from his travels, Swedenborg received considerable attention in his own country. His lineage alone, and his connections with other distinguished and noble families, would perhaps have assured him a position suited to his tastes and abilities, but the interest aroused, especially in academic circles, by the letters of the last four years, made for him a place which offered the very best opportunities for his entrance upon a scientific career. In 1716 he became editor of a new periodical, *Daedalus Hyperboreus*, which was devoted to mathematics and mechanics. He now got in touch again with Polheim, the great mathematician, and it was largely

through his recommendation that Swedenborg obtained in 1716 the office of Assessor of the Board of Mines. The duties entailed upon him by this appointment were to assist Polheim, to have a seat in the College of Mines, and to advise on mathematical and mechanical affairs. The records show that he was most diligent and faithful in his official capacity, although he was constantly occupied with his studies and his writing.

By virtue of the act of Queen Ulrica Eleanora, which ennobled the Swedenborg family in 1719, Emanuel Swedenborg was made a member of the House of Nobles. This position he occupied honorably until his death half a century later, and the considerable number which have been preserved of the papers read by him before the House testify to his genuine interest and real ability to advise in matters financial, political and industrial. His entrance to the House coincided in time with the re-establishment of freedom in Sweden, and he favored throughout the restriction of the arbitrary power of the hitherto unlimited monarchy.

In 1716 he had gone again to live at the home of Polheim, and was very much attracted by the mathematician's second daughter, Emerentia. The match was favored by Charles XII, and Polheim was pleased to draw still

closer the ties of friendship between himself and Swedenborg by writing an agreement, promising him his daughter in marriage. This the young lady, who was at the time only a little more than fifteen years old, signed obediently, but her subsequent dejection and sadness made it clear that the engagement was really not to her pleasure. Upon finding that this state of affairs continued, Swedenborg caused the agreement to be broken off, and never again considered marriage. This disappointment in love was followed by a rather long period of depression. M. Sandel, a member of the Royal Academy, in his excellent eulogium of Swedenborg writes that while Swedenborg never married, "this was not owing to any indifference to the sex; for he esteemed the company of a fine and intelligent woman as one of the purest sources of delight". 29)

In 1717 he published two works, first "The Art of the Rules, an introduction to Algebra whose style and method have been highly praised, and the second part of which, though it remained unpublished, was the first Swedish treatise upon the higher branches of differential and integral calculus. His second work of this year was entitled "Attempts to Find the Longitude of Places by Lunar Observations". His four publications of the year 1719 were "A Proposal for the Decimal System of Money

and Measures"; "A Treatise on the Motion and Position of the Earth and Planets"; "Proof Derived from Appearances in Sweden, of the Depth of the Sea and the Greater Force of the Tides in the Ancient World"; and "On Docks, Sluices and Salt Works." One of these, the work on the decimal system, was reprinted as late as 1795.

Though Swedenborg had in these early days permitted himself a few bold and striking speculations - as to, for instance, the possibility of constructing a submarine boat, a flying chariot, an aquatic clock, and others - yet in the main he had confined himself to the practical; he sought to serve his country in the sad state of depletion which resulted from the long wars of Charles XII. His profound and productive mind was already rapidly winning for him the name of a deep thinker and a ready writer. He was undoubtedly far ahead of his times, and was not restrained by that extreme dread of innovations which is the millstone about the neck of so many a humdrum scientist or man of the world. He writes: "In every age there is abundance of persons who follow the beaten track, and remain in the old way; while there are not more than six or ten in a century who bring forward innovations founded on argument and 'reason'".

Garth Wilkinson, an admirer and disciple of Sweden-

borg, reviews his life up to this time in these words:

"He germinated, as nearly all children do, in theology; rose thence into poetry and literature, speedily alternating these with mathematics; out of these proceeded mechanical and physical studies, having a reference to practice. His early manhood was devoted to active employment, and spent partly under the eye and command of the most severe of the Swedish kings. Even at this time a widely contemplative element glimmers from such of the foregoing works as we have perused. His ardent pursuit of geology, then a comparatively new science, was already converting itself into cosmogonical speculations. We are not indeed aware that any great brilliancy was displayed in his works up to this date, but rather great industry, fertile plans, a belief in the penetrability of problems usually given up by the learned, a gradual and experimental faculty, and an absence of precocity. In regard to general truths, he showed the evidence of a slowly-approaching, persevering, but at last thoroughly comprehending mind. If we may use the metaphor, the masonry of his intellect was large, slow and abiding, but by no means shewy; from the plans hitherto constructed, we could hardly prophesy whether the superstructure would be a viaduct, or a temple, a work of bare utility, or a palace for sovereignty and state.

On the moral side we infer strong but controllable passions, not interfering with the balance of his mind, or the peepness of his leisure. His filial affection is brilliant, though we have no record of the extent of his obligations to his mother, whose death took place in 1720. His energy and fidelity in his business commended him to those above him, and he was probably more indebted to intrinsic qualities for his position, than to his family connections, or to clever courtiership on his part. His religious beliefs at this time nowhere appear; but from indications in his books and letters it is certain that his mind was not inactive on the greatest of subjects, and that he was a plain believer in revelation, though not without his own convictions about its meaning and import. Such was Swedenborg in the spring and

flower of his long manhood". (41, pp. 20-22)

The fact that at this time it was impossible to get books published in Sweden, and that the proofs could not be properly corrected without the oversight of the author, made it necessary for Swedenborg to request a leave of absence from his duties, and to depart in the spring of 1721 for Holland. He desired also to become familiar with the methods of mining outside of Sweden. In Hamburg he published his *Prodromus Principiorum Rerum Naturalium*, and in Leipzig his *Miscellanea Observata*. After visiting a large number of mines in Holland and Saxony, and all the mines in the Hartz mountains, he returned to Stockholm, having been absent for fifteen months.

The four works published during this trip, and not mentioned above, are physical, astronomical and mechanical treatises. The four volume *Miscellanea Observata* deals with mineralogy, chemistry and physics, and approaches and interprets the facts in these fields through the laws of mathematics and mechanics.

"The beginning of nature is identical with the beginning of geometry; the origin of natural points is due to mathematical points, just as is the origin of lines, points, and the whole of geometry: because everything in nature is geometrical, everything in geometry, natural".  
(41, p. 23)

He applies the fundamental sciences to those that are more complex, using the true a posteriori method. Wa-

ter is for him, as for Thales, the first material existence, the mother of all other matter. All the primary solids were molded in the many-formed interstices between the particles of water, and subsequently of other fluids, and through fracture and heat new shapes and the first particles of new substances were produced. From water there was first produced common salt, which was the original form of the land, and from which all substances have developed. At the heart of all this there is, however, the latent principle, the "subtle matter", fire or caloric, which guides the mechanical principle. Yet even into this he has introduced his mechanics. Mechanical ideas are coextensive with all knowledge of nature, and, while they do not give motion or life, are essential to Being itself. His theory is applied with the greatest ingenuity and in minutest detail to the physical and chemical facts which were known in his day.

"This extraordinary attempt to bring the invisible to light, has been thoroughly justified by the success which has attended Dalton's hypothesis, in an age better prepared for its application; and by the equally remarkable fact that the definition of the solids, acids and alkalies, have gradually approximated very near to those which result from Swedenborg's hypothesis. We say nothing here of a latent connection between the principle on which it is founded, and some of the results obtained by Berzelius, whose fame as a scientist is as wide as the civilized world". (40, pp. 36-37)

Dumas, the French chemist, refers to this work as the

origin of the science of crystallography, and calls attention to the fact that the idea has been renewed by several distinguished men, notably Wollaston.

It was not until his return from this last-mentioned trip that Swedenborg undertook in full his duties as Assessor of Mines. His knowledge of metallurgy, now so extensive, made him of very great practical service to his country, and his later books on mining are valued highly by those who are competent to judge them. In the year of his return he published a second pamphlet on the currency, which was republished in 1771.

The next eleven years of his life were devoted exclusively to his official work. In 1724 he was offered the professorship of mathematics at the University of Upsala, but this he declined on the ground that such an occupation is too speculative and unpractical. In 1733 he completed his three volume "Opera Philosophica et Mineralia", for whose publication he again went abroad. He spent five months in Germany, employing his time there, as we have seen him before on his travels, in taking advantage of every opportunity for acquiring new knowledge. In 1734 the Opera was published at Leipzig and Dresden, and at the same time a small book, "A Philosophical Argument on the Infinite, and the Final Cause of Creation; and on the Mechanism of the Intercourse be-



tween the Soul and the Body", which is supplementary to the larger work. Upon the printing of these volumes, Swedenborg returned and resumed his duties.

Swedenborg's surprising combination of philosophy and metallurgy, as suggested by the title of the larger work, is not without its reason in the mind of the writer. Philosophy for him is of value just in so far as it is allied to the things of the material world. Here he treats of its alliance with the mineral universe; later he turns to its connection with the organic, and finally with the human.

The last two volumes, the second on iron and the third on copper and brass, are devoted wholly to mining, and their value is attested by the fact that parts of each have been several times reprinted and even now are held in high esteem. In the first part, the "Principia Rerum Naturalium", the origin and the laws of motion are treated, philosophically and then geometrically, from the first natural spot to the formation of a solar vortex, to the elements as successively produced, and finally to the mineral, vegetable and animal kingdoms. all motion tends to a spiral figure, and the actual spiral and vortical motion of particles produced the first planetary bodies. In the second part of this volume he tests and applies this theory in the field of magnetism;

and in the third part he carries it into cosmology, chemistry, mineralogy and biology. Through this active geometry he reads the story of the cell and of the living organism, of the atom and of the universe, of the most minute partical and of the infinite.

While for the groundwork of this one cannot claim originality, it is astonishing in how many ways the work anticipates later theories in the fields of the various sciences. Here an explicit statement is made of the theory of the position of our sun and system in the Milky Way, which is later attributed to Herschel. The theory of cyclar mutation of the planets, for which credit is given to La Grange, is repeatedly and accurately stated. The theory of Kant, Mitchell and La Place in regard to the groupings of the stars into distinct systems was stated in the Principia. Other hypotheses which appear in this work, in regard to the magnetic poles, the composite nature of air and water, and other things quite undreamed of before 1734 but later accepted by science, distinguish this as a remarkable work. It won him at once a wide reputation.

In 1736, one year after the death of his father, he again went abroad, spending a short time in Holland, and from there going on to Paris, where he stayed for a year

and a half. His journal of this time evinces his keen enjoyment of the pleasures afforded him by sight-seeing and by the various amusements of Paris. He was by no means an ascetic. In March, 1738, he left Paris for Italy, where he visited the principle cities, and arrived at Rome in the fall of the year. His journal of this period is quite as interesting as that of the preceding months, but after March, 1739, at which time he was at Genoa, it is a blank.

"It is most probable that he deposited the manuscript of the Economy at Amsterdam, on his way from Leipzig to Sweden in 1740; that he lived in his own country from 1740 or 1741 till 1744, and in the latter year came again to Holland, and from thence went to England, where we meet him in 1745. To these conjectures we are helped by his publications". (41, p. 40)

In 1740-1741 he published the Economy of the Animal Kingdom at Amsterdam, and in 1744-1745 the Animal Kingdom, Parts I and II at the Hague, and Part III at London.

It is quite beyond the scope of the present paper to attempt the briefest review of these two works, whose nature is that of philosophical anatomy. The method is as follows: extracts from the best anatomists are presented at the beginning of each chapter, and upon these follow the author's deductions, with concluding comments and illustrations from facts. The Economy of the Animal Kingdom treats of the blood and the organs which con-

tain it; of the activity of the brain as coincident with respiration; and of the human soul. His doctrine of the coincidence of mental activity with respiration is interesting, in view of his own peculiar powers of respiration, which we shall see later. Respiration and the thoughts and emotions are shown to correspond exactly. The cessation of breathing always results either in unconsciousness, or else in that peculiar condition where thought persists in the spiritual state, though quite incognizant of the body or the lower world. This, as we shall see, characterizes for Swedenborg his own condition a few years later.

The Animal Kingdom treats first of the organs of the body, but his aim is, through anatomy, to attain knowledge of the soul, to harmonize the soul with science. Although, of course, he failed in this, as he himself confesses later, yet he shed much light upon the organization of the body.

"Fruitless though these works were, in their highest aim, yet in lower ends they are treasure-houses of thought and suggestion. Taking for his basis the dry facts of the anatomists, he proceeds to clothe them with life and comeliness. He shows how part is bound to part in the human system, and fills the cold facts of science with a warm and human interest".

(40, pp. 54-55)

"Swedenborg's mind", says White, "was essentially constructive; whenever it was plunged into a solution of facts, crystallization at once ensued; by nature he was an architect and

no brickmaker. His commentaries on the facts of the anatomists manifest is every way the creative spirit which transforms the inorganic to the organic". (40, pp. 65-55)

In the Animal Kingdom we find his doctrine of representation or correspondence, that there is a constant symbolic relationship between corporeal and spiritual life. He attempts to show

"the astonishing things which occur.....not..  
 ...in the living body only, but throughout nature, and which correspond so entirely to supreme and spiritual things, that one would swear that the physical world was purely symbolical of the spiritual world; insomuch that, if we choose to express any natural truth in physical and definite vocal terms, we shall by this means elicit a spiritual truth or theological dogma, in place of the physical truth or precept".  
 (Animal Kingdom, Vol. I. p. 451)

This doctrine we shall meet frequently from this time on.

In 1745 there appeared "The Worship and Love of God," an embodiment in story form of the scientific theories of the author, treating of the origin of the earth and the vegetable and animal kingdoms; of the birth of man; and of the soul.

"Swedenborg's is a theory of spontaneous generation, extending to universes with their contents.....There reigns throughout it, however, a constant sense of the presence of the Creator, who descends through all his work (spontaneous generation being his way of causation, then), and at last reappears beneath his work as above it, and of himself attaches it to himself through his final creature, man." (41, p. 63)

This work Wilkinson regards as "an expectant day

dream of his theology, abundant in charming details and crowded with significance". White, while viewing it as the culmination of his scientific works, considers it of little importance, a mere exercise of fancy without serious intent. It is, indeed, highly imaginative and fanciful, as Swedenborg himself acknowledges. The tone of the work is admirably shown by Wilkinson in the following passage, which, though somewhat lengthy, we venture to insert.

"The reader is guided deeper and deeper into a delicious enbowment and treads the carpets of a golden age. Every clod, leaf, grove, stream, and a multitude of rejoicing inhabitants, all the dews, atmospheres and skyey influences, the very stars of the firmament busily administer with a latent love, and each with a native tact and understanding, to the coming heir of the world, the son of the earth, the mind in human form, who can look from the paradise of earth to the paradise of heaven, and adore the Creator, returning to God immortal thanks for himself and all things. At last in the central grove, in the most temperate region of the earth, where the woven bosage broke the heat of day, .....and where the gushing streamlets veined the area, and lifted by the sun in kindest vapors, hung upon the heavens, and descended in continual dews,- in this intimate temple of the general garden, lo, the tree of life, and the arboreal womb of the human race. Truly a bold Genesis, but the steps that lead to it, though beautiful as sylvan alleys, are also of logical pavement, and the appreciating reader, for the time at any rate, is carried well pleased along in the flow and series of the strongly-linked narrative.

The subsequent portion of the work is inferior in interest to the beginning; less artistic and more didactic; certain abstractions which are difficult to embody, wisdoms, intell-

igencies and the like demi-persons, are among the actors of the drama. It reminds one, though in an elevated ratio, of the tales of the genii, for there is something inhuman about all that is more or less than human, and wisdoms and intelligences come under one or the other designation.....It is in the philosophical narrative that Swedenborg has shown truly surprising powers which we may challenge literature to surpass: so far as this extends the work is a great and rushing inspiration; but for the rest, it is a poor unripeness of his theology".

(41, pp. 64-65)

The work shows a mixture of childlike simplicity and profound meditation. It seems to mark the transitional stage of Swedenborg's life, which was becoming evident even in the Animal Kingdom. Through his mathematical, physical and mechanical principles he had failed to grasp the infinite or the spiritual, or to show their relations to man and his organism. The scientific inquirer was soon to become the supernaturalist prophet. In this little work, *The Worship and Love of God*, we find the traces of his scientific doctrines, together with the glimmerings of the mysticism which so wholly involves his later life.

There is a most interesting change in the style of the works up to this time. From the style of the *Principia Rerum Naturalium*, which is clear, distinctive, occasionally repititious, but also occasionally eloquent in a somewhat formal way, there is a manifest change to that of the *Economy of the Animal Kingdom*, with its

freedom and its aspiration united with a remarkable self-confidence in entering upon the unknown. The lofty style of the later part of this is highly commended by Coleridge. In the Animal Kingdom we find still more of ripeness and freedom of style - it is the poetry and song of science. Finally, in the Worship and Love of God,

"the ornament.....is rich and flamboyant, but upborne on the colonades of a living forest of doctrines.....Swedenborg's address becomes more intense and ornamental from the beginning to the end of these works; a somewhat rare phenomenon in literature, for the imagination commonly burns out in proportion as what is termed sober reason advances, whereas with this author his imagination was kindled at the torch of his reason, and never flamed forth freely until the soberness of his maturity set it on fire from the wonderful love that couches in all things".

(41, p. 66)

In sharp contrast with this freedom of style, however, stand his later writings, with their most sober and matter-of-fact expositions of even the wildest sweeps of his fancy. The products of his imagination he then views with the greatest seriousness, and for him they admit of no light treatment. Regarded as divine revelations, they are set forth in all simplicity, and with the greatest reverence.

Now, at the close of Swedenborg's scientific and philosophical career, let us pause and review what we have seen. We have observed his constant devotion to his official duties and to his intellectual pursuits,



his wide experience and extended observation, the keenness and the logical faculty of his mind. We have been impressed by his surprising productivity, his great versatility, the breadth and profundity of his mind, his many-sided and intense interests. But, as a scientist, just what place are we justified in giving him? We have glimpsed his contributions to the science of metallurgy, of physics, chemistry, and crystallography; we have noted a few of the theories in which he anticipated the later work of the specialists in the various fields. But all this was based upon speculation rather than upon objective investigation. His reputation as a scientist strictly must depend upon his earlier works on mineralogy and metallurgy, which indeed are excellent scientific productions. His later work was characterized rather by a wonderful comprehensiveness of view, which disposed him to arrange acquired facts, to search for the universal plan of nature, rather than by observational and experimental methods to seek knowledge of new facts. He was a maker of systems, and the gaps in his systems he sought to bridge rather by theories than by investigation.

We find a real contribution in the intimate relationship between his science and his philosophy - he gave the abstractions of the old philosophy a living power and brought them to bear upon the world of science of his

day; he vitalized the dry facts of science, giving them a warm place in human interest.

Emerson writes of him:

"A colossal soul, he lies vast abroad upon his times, uncomprehended by them, and requires a long focal distance to be seen; suggests, as Aristotle, Bacon, Selden, Humboldt, that a certain vastness of learning, or quasi omnipresence of the human soul in nature, is possible. His superb speculation, as from a tower, over nature and arts, without ever losing sight of the texture of things, almost realizes his own picture, in the Principia, of the original integrity of man. Over and above the merits of his particular discoveries, is the capital merit of his self-equality. A drop of water has the properties of the sea, but cannot exhibit a storm. There is a beauty of a concert, as well as of a flute; and in Swedenborg, those who are best acquainted with modern books will most admire the merit of mass. One of the missouriums and mastedons of literature, he is not to be measured by whole colleges of ordinary scholars. His stalwart presence would flutter the gowns of an university". (22, pp. 102-103)

All of his leading ideas may be traced back to the scientists and philosophers of an earlier day, to Harvey, Gilbert, Descartes, Newton, Maipighi; to the dissectors, Swammerdan, Leuwenhoek, Eustachius, Vesalius; to Linnaeus; to the cosmology of Leibnitz and Christian Wolff; to Locke and Grotius.

"What was left for a genius of the largest calibre but to go over the ground and verify and unite? It is easy to see, in these minds, the origin of Swedenborg's studies, and the suggestion of his problems. He had a capacity to entertain and to vivify these volumes of thought".  
(22, pp. 105-106)

His learning and his acquaintance with modern and ancient philosophy seem to have been more or less scattering and superficial, and perhaps it was well so, for thus he may have escaped the danger of mere scholarship, of the systematic fascination which may result from a too sympathetic understanding of any system. The fact of his somewhat meagre learning shows that "a certain ignorance is a genial night when a new birth is to come".

The few hints of his work which have been given have been necessarily all too brief and inadequate to permit an estimate of Swedenborg's place as scientist and philosopher, and in any case it seems that few are competent to pass judgement upon all the products of his mind. The question naturally arises, "Why, if his science and philosophy were such, have they been overlooked and neglected? Why is Swedenborg regarded as a 'religious genius' only?" It may be well to remark that his scientific works, as well as his religious works, seem, within the last decades, to be attracting much more attention; but still few think of him as a scientist or philosopher. His first practical works met with considerable approval and won him an enviable reputation, even throughout Europe, but after his change he passed through a first period of opprobrium to final oblivion in the philosophical world, which but now, we judge, is giving way a

bit. Swedenborg himself seems to have been quite content at this state of affairs. Many passages of his works attest the genuineness of his disinterested pursuit of truth for truth's sake. Even in his second career he never sought disciples; he even experienced a certain reticence in conversing on the subject of his revelations. His life was one of sincere devotion to truth, and, after its first intensely practical turn, of unruffled search for the inner, deeper things. The applause or neglect of the world had no influence upon his work, and he apparently felt no bitterness at the lack of appreciation to which he, as all men who are ahead of their times, was doomed. The neglect into which his philosophical works fell was doubtless due in part to this very attitude of his, and in part to the fact that at this time the author was introduced to a new world where the interest of philosophical speculation paled before the revelations of things so far beyond and above what he had formerly sought to know. The extraordinary nature of his later life and writings, which, especially in those superstitious times, would make so strong an appeal to the world at large, outshone the products of his earlier years, and these works were consigned to the shelves to collect the dust of a century before serious attention should be turned to them again.

Before we turn to the second part of his life, we will do well to consider for a moment his theology of this time, and the idea of the soul at which he had arrived. In his works thus far, the name of God appears but few times, but all subjects are treated with a peculiar sacredness, every object and living being is the house of

God. "Without having stirred a step, we suddenly find that we are in the sanctuary; we kneel with the kneeling creation, with the stones, the suns, and the organs, and the invisible love hears its own murmur in our heart of hearts.....Swedenborg's natural theology is all things and facts, which, won to speak by his good genius, tell their own tale, and acknowledge, and to the limit of their capacity describe, the Author of their being". (41,

His idea of the soul bears an evident resemblance to that which would be suggested by apparitions. It is finite, and a part of a purer world; immortal both through the grace of God, and through "the contrivances and immunities of nature"; it differs in different men, is most active, subtle and all-pervading; it is enclosed in a sort of ethereal envelope which is wholly similar in appearance to the body. The body is formed by the soul before the mind is awakened by sensory impressions. The senses serve to inform the soul of what takes place in the body, and thus make possible the directing of the body by the soul. At death the soul leaves the body and seeks its own sphere, and the elements which have been

borrowed to make up the body return to the earth and the air. The soul never again takes to itself a body, so we see even at this time that Swedenborg does not accept the doctrine of the resurrection of the body. To the soul there is joined the rational mind, and in investigations connected with this we find other anticipations of later discoveries in regard to the anatomy and function of the brain.

Before going on, we take the liberty of touching upon a disputed chapter in Swedenborg's life. His life, on the whole, was a very moral one, and while we present the following account, which has bearing on the subject of the paper, it is with some hesitation, for the accuracy of the account has been disputed.

Rohsahn, an admirer of his and an intimate friend during his later years, writes; "It is well known that Swedenborg in his youth had a mistress, whom he left because she was false to him. Besides this there cannot be found in his life any traces of a disorderly love". (37, Vol. II, p. 628)

General Tuxen, while entertaining Swedenborg at the age of eighty-two, asked him "whether in his youth he could keep free from the temptations in regard to the sex? He replied, 'Not altogether; in my youth I had a mistress in Italy'". (25, p. 16) White observes that there is a

fair chance for belief in both of these accounts, but Tafel objects that Robsahm's statement was made merely on hearsay. This is doubtful, for Robsahm was a respectable man, and an intimate friend and disciple of Swedenborg. Wilkinson nowhere refers to the matter. It should be observed that Tuxen cites Swedenborg as saying, "in my youth I had a mistress in Italy". Now he never went to Italy until he was fifty years old, yet to a man of eighty-two the fiftieth year, it seems, might appear as a part of his youth. Swedenborg himself admits that he had had a strong inclination towards women, and in his *De Amore Conjugialis* he says that the keeping of a mistress, under certain circumstances, is pardonable.

Here one is reminded of the peculiar break in his journal of travel, which up to this time had been kept, conscientiously and faithfully, in his own private note book. This book, after his death, was given over by the family for publication, but the leaves containing pages 734 to 745 they removed. The last entry was made at Genoa, March 17, 1739. A description of the manuscript, written by the heirs, gives the following account of the missing pages:

(37, Vol. II, p. 130)

"On pages 730 to 733, and 741 to 745 is contained a description of Swedenborg's dreams in 1736, 1737, 1738, 1739, and 1740", and a footnote adds: "These pages were taken out of the volume into the safe keeping of the family itself".

According to this account, seven of the missing pages are devoted to a record of dreams, but the other eight pages are not accounted for. In the part which is still intact, the continuation of the journal of travel is promised for page 737, but why, when all of the preceding journal and all of that which follows have been presented to the public, has this alone been withheld? The suggestion is natural that here was something of a nature too personal to permit of publication. Its connection with "the mistress in Italy" is a matter for conjecture only.

This chapter in his personal history, then, remains an open question, since his biographers disagree in regard to it.

In 1745, at the age of fifty-seven, Swedenborg entered upon his second career. We have seen the constant tendency of his life thus far, a steady ascension from the sciences to philosophy and to natural theology. Now comes the change which transforms him from the philosopher to the mystic. His followers regard his previous life merely as a preparation for his second career, but, however that may be, there is an apparent break in the continuity of his life. From now on, although his scientific and philosophical doctrines find their way into his religious writings, yet he makes no intentional all-



usions to them.

"What he thenceforth claimed to have received and to be in possession of was spiritual sight, spiritual illumination, and spiritual powers of reason. And certainly in turning from his foregone life to that which now occupies us, we seem to be treating of another person.....The spring of his lofty flights in nature sleeps in the dust at his feet. The liberal charm of his rhetoric is put off, never to be resumed again. His splendid but unfinished organon is never to be used again, but its wheel and essence are transferred for other applications". (41, p. 74)

At the time when Swedenborg left Stockholm in 1743 for Holland for the purpose of publishing his *Regnum Animale*, he was beginning to experience certain physiological and mental disturbances. This condition of his health resulted perhaps in part from overwork in the preparation of his anatomical treatise. We find unquestionable indications that his nervous system was at once exhausted and excitable. His eyesight was weakened. He had long sleeps, with nearly every night impressive and vivid dreams. Even while awake he was at times in a state of ecstasy, when he was subject to visual and auditory hallucinations. Of these Swedenborg speaks in the *Regnum Animale*, and in 1748 he writes in regard to this period:

"During several years not only had I dreams by which I was informed concerning the things on which I was writing, but I experienced also, while writing, changes of state, there being a certain extraordinary light in the things which

were written. Afterwards I had visions with closed eyes, and light was given me in a miraculous manner.....Fiery lights were seen, and conversations heard in the early morning, besides many other things". (37, Vol. II, p. 145)

One of Swedenborg's most interesting documents, published in connection with his Spiritual Diary, contains an account of his dreams and his interpretations of them, from July 21, 1743 till October 27, 1744. His philosophy of dreams may be briefly summarized as follows:

1. Visions are either significant and bear a latent import, or, in his own words, are "mere illusions, and contain hardly anything except mere diversions originating in the things suggested by the blood and past thoughts".
  2. All true dreams are induced by spirits, and may come from three sources - first, from God, in which case they are prophetic; second from angelic spirits, when they are instructive; and third, from evil spirits who are near man when he sleeps, and are always responsible for deceptive dreams.
  3. Dreams are representations of the ideas of God, angels and spirits by correspondences.
  4. These correspondences differ according to the state of the spirits who are with onw while he sleeps, and according to the state of man's own memory.
- All of the dreams included in the Diary Swedenborg regards as significative, and most if not all of them he believes to have come from God.

His doctrine of correspondences we first saw in the Regnum Animale. Every natural object represents a spiritual truth; our very natural speech bears a hidden meaning which we may educe if we are familiar with the correspondences. In his dreams he interprets persons as representing those qualities and states which he had found in them as he had known them; woman signifies affection for the truth, or the sciences; a king signifies God; fire, love; bread corresponds to spiritual good; birds to the things of the understanding; dragons to "reasonings in the lust of the devil"; the feet to that which is natural, and so forth.

Limited space prevents our giving more than a few of the dreams and his interpretations, but the following show his method.

April 8-9 - - "It seemed to me as if I held a dog on my knees, which, to my astonishment, was able to talk, and ask after its former master, Swab. It was of a blackish color, and even kissed me.- I awoke, and entreated Christ's mercy for cherishing so much pride and arrogance, by which I flatter myself". (37, Vol. II, p. 152)  
(It should be observed that the person Swab was an acquaintance of Swedenborg's, whom he regarded as over-arrogant.)

April 14-15 - - "I climbed up on a platform, and broke off the neck of a bottle; some thick stuff came out, covering the floor upon which it flowed down.- This, I believe, means that yesterday a good deal of evil was rooted out of my thought".

April 15-16 - - "It seemed to me as if I

were climbing up a ladder from a great deep; others, women, came after me. I stopped, and frightened them purposely, and then went up. A greensward received me, where I lay down. The others came up after me, they were women, and lay down beside me; one was young, and the other a little older. I kissed the hands of both, and did not know which of the two I should love.- Those who finally came up with me, and whom I met, saluted, and received again, were my thoughts and my mental occupations, which are of two kinds".

In 1744 or 1745, when Swedenborg was in London, he lodged with a Mr. Brockmer. Twenty-two years later this gentleman gave to Rev. Aaron Mathesius, a minister of the Swedish church, an account of an incident, which, if it really did occur, seems to have marked the climax of this crisis of Swedenborg's. The truth of the account, as printed by Mathesius, has been hotly contested, and one of Swedenborg's disciples, Hindmarsh, claims that Brockmer himself later denies it. Of Swedenborg's three best students and biographers, White believes in the accuracy of the original statement, Wilkinson passes over it entirely, and Tafel uncompromisingly denies it. The statement, too long to cite here, reports that, while Swedenborg on the whole had appeared quite normal at the home of Brockmer, on one occasion he shut himself up in his room for two days, after which he appeared in an excited state and claimed that he was associated with two spirits, each of which wished to lead him away, but in opposite

directions. After this he was put under the charge of a doctor, and a little later, according to this account, there followed a period of actual insanity, when he had to be kept constantly under the care of a keeper for some time. It must be recalled that the original statement as printed was a repetition of an account given from a twenty-two years' memory, and that it has met with the most violent opposition from many quarters.

After a consideration of the many records, from Swedenborg's own hand, of his physical and mental condition during these years, the evidence seems to point to the fact that with this crisis there was a deep physiological change taking place. A causal relationship between the two one hesitates to assume, but it at least suggests itself. Possibly excessive mental and physical fatigue resulting from the work on the two anatomical treatises was a determining factor, but both before and after this time his habits of work, though quite the same, had had no such effect. The writing of the volumes of his theological works after this time never interpered with his physical or mental well-being. He always enjoyed remarkably good health.

We believe that at this time Swedenborg was passing the last great milestone of his life, that the virility of strong manhood, having suffered a decline, perhaps,

for some time, here came to an end. Many of the dreams recorded in the Spiritual Diary are of a highly erotic nature, and all of them offer rich material for analysis. The results of such analysis would, we believe, be quite in accord with the conclusion just stated, but direct evidence is not lacking to substantiate it. In December, 1743, in the early part of the Diary, we find these comments on his physical condition: "That I was no longer inclined towards the sex, as I had been all my life long" And a little later, "How my inclination for women, which had been my chief passion, suddenly ceased". (37, Vol. II, p. 148)

The whole story seems to appear in the manifest content of the following dream of April 10-11, 1744.

"I came into a low room where there were many people; but I looked only at a woman who was in black, but not ill-looking; she went far into a chamber, but I would not follow, though with her hand she beckoned me towards the door. Afterwards I went out, when I found myself several times stopped by a spectre, which attached itself to me, covering the whole of my back; finally it disappeared. I came out, when a hideous spectre approached and did the same; it was an ugly old man; at last I escaped from them". (37, Vol. II, p. 170)

If Swedenborg, in 1739, at the age of fifty-one, did actually have a mistress in Italy, it appears to us as but another indication of the physiological crisis which he must, consciously or unconsciously, have felt at the time approaching him. It seems to have been prompted by a desire to taste the last drop <sup>from the cup</sup> whose con-

tents, untouched before by his lips, seemed to him to have been wasted. The impulse so beautifully sublimated by Comte seems here to have sought a lower outlet, but in both cases we believe the source to have been a deep heart-yearning for one hour of a warm, living summer before the cold days of the long winter so rapidly approaching.

There is unmistakable evidence that along with the marked sex decline there was a decided mental decline, which was progressing rapidly throughout the whole period of the crisis. Senile mental decay, coinciding at its beginning with the various conditions of the crisis, manifested itself in the extraordinary was which we shall see.

The dreams of 1743 and 1744 Swedenborg would call his first spiritual experiences, but the first actual manifestations seem to have taken place in London in 1744 or 1745, when the Lord appeared to him, and, to quote Robsahm's statement of Swedenborg's account, told him "that he had chosen me to explain to men the spiritual sense of the Scripture, and that He Himself would explain to me that which I should write on this subject". Further, "That same night also were opened to me, so that I became thoroughly convinced of their reality, the world of spirits, heaven and hell, and I recognized there many

acquaintances of every condition of life. From that day I gave up the study of all worldly science, and labored in spiritual things, according as the Lord had commanded me to write. Afterwards the Lord opened, daily very often, my bodily eyes, so that in the middle of the day I could see into the other world, and in a state of perfect wakefulness converse with angels and spirits". (37, Vol. I, p. 30)

Throughout his second career he was enabled thus to converse with all spirits, and to be transported to all spiritual realms, and his theological works embody the arcana thus revealed to him.

But this opening of his spiritual sight took place gradually. All of his previous life he considers as but a preparation for this great event. In the *Adversaria* (Part II, no. 839) he writes:

"The Divine Providence governed the acts of my life uninterruptedly from my very youth, and directed them in such a manner, that by means of the knowledge of natural things I was enabled to reach a state of intelligence, and thus by the divine mercy of God-Messiah, to serve as an instrument for opening those things which are hidden interiorly in the Word of God-Messiah".

But to his mind the preparation must consist not only in a special training of the intellectual faculties, but, at the time of the opening of his spiritual sight, in a peculiar discipline of the will. In the *Spiritual Diary*, October 12-13, 1744, he writes:



"The Lord Himself will instruct me, as soon as I have attained that state in which I shall know nothing, and in which all my preconceived notions shall be removed from me; which is the first state of learning; or, in other words, that I must first become a child, and that then I shall be able to be nurtured in knowledge".

(37, Vol. II, pp. 214-215)

Quite literally, from a psychological point of view, he was returning to childhood. The intellect, the critical faculties, were declining, leaving unguided the impulses of the mass of intimately associated tendencies and impulses which arose from the underlying emotional side of his nature,- the joint product of his original endowment and of the influences that had borne upon him for the preceding fifty years.

In the Diary he notes repeatedly the struggles which took place before his will was properly subdued and made to act merely as an "instrument" in the hands of God. This discipline of the will manifestly means nothing more nor less than a suppression of the critical faculties of the intellect, to give opportunity for that play of the other psychic faculties which shows clearly in all his later writings. The "struggles", then, were the dying efforts of the inductive scientist and philosopher to hold the day against those new-born to the mystic and seer. In September, 1744, he makes the following statement in the *Regnum Animale* (Part III, no. 135), which at the time was about to go to the publishers: "Henceforth

speculation, which has hitherto been a posteriori, will be changed to a priori", that is, he is now to turn from analytical philosophy and to adopt the synthetic method.

In order that he should fully accomplish his mission, the interpretation of the Scriptures on the basis of true correspondences, it was necessary, finally, that he should be able to introduce himself into the spiritual world, and associate and speak with the angels, for, as he says in the *Arcana Coelestia* (no. 67):

"The hidden things of the internal sense of the Word can never be known, unless the nature of the things in the other world be known, because so many of the things contained in the internal sense have respect to them, and describe and involve them".

To Swedenborg. the opening of his spiritual sight meant a certain separation from the body, "but only as to the intellectual part of my mind, and not as to the will part". (37, Vol. II, pp. 142-143) How this separation was effected is shown in the following passages:

"Man has an internal and an external respiration; his external respiration is from the world, but the internal is from heaven. When man dies, external respiration ceases, but internal respiration, which is tacit and imperceptible during the life in the body, continues. This respiration is altogether according to the affection for the truth, thus according to the life of one's faith. Those, however, who are in no faith, which is the case of those in hell, derive their respiration, not from the interior, but from the exterior; they thus breathe in a contrary way, where for on approaching an angelic society where respiration from the inter-

ior prevails, they begin to be suffocated, and become as if dead; they therefore cast themselves down into their hell, where they receive their former respiration which is opposed to the respiration in heaven". (37, Vol. II, p. 143)

Consequently one who wishes to communicate with heaven must possess this internal respiration. Further,

"I was first accustomed to this (internal) respiration in infancy while saying my morning and evening prayers, and also sometimes afterwards while examining the concordant action of the heart and lungs, and especially while in the act of composing those works which I have published. (He refers to the Economy of the Animal Kingdom, the Animal Kingdom, and The Worship and Love of God) I then noticed for several years that there was a tacit respiration which is scarcely perceptible; about this it was also granted me afterwards to think and speak. In this wise I was introduced from my youth into such respiration, especially by intense speculations, in which (external) respiration is quiescent; for otherwise no intense speculation of the truth is possible. Afterwards also, when heaven had been opened to me, so that I could speak with spirits, I was fully introduced into this respiration, that for the space of almost an hour I did not draw my breath: there was only so much air inhaled that I was enabled to think. In this manner I was introduced by the Lord into internal respiration. Perhaps also in my dreams; for I noticed again and again that after falling asleep, (external) respiration was almost entirely withdrawn from me, so that on awakening I gasped for breath. This kind of respiration, however, ceases when I do not observe, write, or think on any (spiritual) subject, and reflect only upon this, that I believe these facts, and that they take place in innumerable ways". (37, Vol. II, pp.143-4)

This peculiarity of respiration is by no means a unique one. In hypnotism, clairvoyance, and religious ecstasy, states occur similar to those experienced by

Swedenborg, but here they seem to have been natural and continuous, and not sought or induced by himself.

Upon being asked at one time to communicate with some of the dead whom he had not known, Swedenborg replied:

"I cannot converse with all, but with such as I have known in this world; with all royal and princely persons, renowned heroes, and great and learned men, whom I have either known personally, or from their actions or writings; consequently with all of whom I can form an idea; for it may be supposed that a person whom I have never known, nor of whom I could form any idea, I neither could nor would wish to speak with". (25,

The obvious meaning of this is that his visionary communications with the spirits of the dead were the products of a most astonishingly fertile imagination constructing upon the basis of facts furnished by the memory.

Had Swedenborg fought these visions and sought to get away from them, they would, doubtless, have been permanently discontinued. He writes in December, 1747:

"When I have been walking about in the heavens, and allowed my thoughts to lapse into worldly anxiety, heaven instantly disappeared".  
 Again, in March, 1748: "I have now been nearly three years, or thirty-three months, with my mind withdrawn from corporeal things, and in society with spiritual and celestial spirits as a man with men, at which the spirits wonder. When, however, I am intensely absorbed in worldly things, as when concerned about necessary expenses - I today wrote a letter - the spirits could not speak to me; they were as if absent from me. This has happened before. Hence I know that spirits cannot converse with a man who is much devoted to worldly or corporeal cares. Such cares draw the mind down, and immerse it in nature". (25, p. 62)

Instead of opposing these visions he cherished them, gave up his scientific studies, and occupied himself with his writing and with the reading of the Bible and a few religious books.

Those who accept the reality of Swedenborg's spiritual sight and of his mission will, of course, look no further, but to those who dissent from this view an explanation has doubtless already suggested itself. It is possible that, through the influence of his father, who, we recall, believed in spiritual manifestations, he became more or less credulous in matter of this nature, and it is also very probable that he inherited a somewhat neurotic tendency. During the practical pursuits of his early life and the philosophical speculations which came in his more mature years, the neurotic tendency did not appear. But, after he had passed his fiftieth year, when in a condition of excessive mental and physical fatigue, and when, we believe, his organism was undergoing a deep change, he became decidedly neurotic. The flashes of light in his eyes, the dull sounds in his ears, and the strange feelings throughout his body may have been in part the result of marked hyperaesthesia of the senses and increased sensitiveness of the whole nervous system, and probably were in part wholly subjective. With these

there were hallucinations of smell, taste and touch, and occasionally motor disturbances - the tremors which to him were indications that the spirits had entered his body, and the swoons and trances which seemed to have a relation to his respiratory functioning. There are no records, however, of his ever having an epileptic fit.

These elementary hallucinations, following the impulsion of a nature now become intensely imaginative and deeply religious, were gradually elaborated into spiritual forms and heavenly voices which, while in reality projected outwards from within, he believed that he received through the senses. Thenceforth his constant companions were these beings, ethereal but for him most real; his conversations were conducted in that inner speech which he alone of all men knew, and which revealed to him the hidden things that satisfied the deeper cravings of his heart. He could now pass the veil and view for himself the things of the great Beyond.

The following passage illustrates the way in which his visual hallucinations were elaborated into spiritual manifestations. In *The True Christian Religion* (no.335) he writes:

"Awaking one morning out of sleep, I saw, as it were, several apparitions in various forms, floating before my eyes; and presently, as the morning advanced, I observed false lights in different forms, some like sheets of paper writ-

ten all over, which, being folded over and over, at last appeared like falling stars, which in their descent through the atmosphere vanished; and others again like open books, some of which shone like little moons, while some flamed like lighted candles. Among the latter were some books which were carried aloft, and lost when they arrived at their highest altitude, and others which fell down to the ground, and were there reduced to dust. From these appearances I conjectured that, in the region below these meteors, there were some spirits disputing on matters of speculation, which they reckoned of great importance; for in the spiritual world such phenomena appear in the atmospheres, in consequence of the reasonings of those who are beneath. Presently my spiritual sight was opened, and I observed a number of spirits whose heads were encompassed with leaves of laurel, and who were clothed in flowered robes, which indicated that they were spirits who in the natural world had been distinguished for their great learning....."

On a very few occasions Swedenborg was in a state which differed from ordinary somnambulism only in that he was able afterwards to recall what he had been doing. In Heaven and Hell (no. 441) he gives this account:

"Walking through the streets of a city, and through fields, and being at the time in conversation with spirits, I was not aware but that I was awake, and in the use of my sight, as at other times. I thus walked on without mistaking the way, being, at the same time, in vision, beholding groves, rivers, palaces, houses, men, and other objects. But after walking thus for hours, I suddenly returned to my bodily sight, and discovered that I was in a different place. Being exceedingly astonished at this, I perceived that I had been in the state experienced by those, of whom it is said, that they were carried by the spirit to another place".

Dr. Bernheim observes that previously-hypnotized patients,

while in the normal state, are extremely susceptible to the suggestive phenomena made use of in the hypnotic state. Now since the somnambulistic state differs from the hypnotic only in that it is not artificially produced, one might expect that here in the case of Swedenborg the delusions to which he was subject while in the state just described would recur readily in the waking state. The facts seem to show that this whole spiritualistic experience was the result of auto-suggestion, which gave free rein to a strong and vivid imagination. Its wanderings, however, were determined by his decided predisposition to things spiritual.

After his introduction to the new world, Swedenborg had left London for Stockholm in 1745. The succeeding year was spent largely in the pursuit of his official duties, but in 1747 he asked permission to retire from his position with the continuation of one half of his salary. Not only was the request granted, but his full salary was allowed him for the rest of his life. Having learned Hebrew in the meantime, he had now read the Bible through several times in the original languages, and published his *Adversaria* - notes on the historical books of the Old Testament and several of the prophets. At the time of his retirement from office the *Adversaria* was



dropped and he began his Spiritual Diary, which gives a detailed account of his spiritualistic experiences for twenty years. The quiet earnestness and consistency of the account stand as convincing evidence of the sincerity of Swedenborg's belief in his new powers.

In 1749 the first volume of the Arcana Coelestia, whose eight quarto volumes were completed in 1756, was published in London. Primarily an interpretation of Genesis and Exodus, it introduces occasional chapters on the future life. Swedenborg accepts the Bible as literally the word of God, written by inspired penmen at His dictation. It has three senses: the first celestial, and suited only to the comprehension of the highest angels; the second spiritual, suited to the lower angels; and the third natural and within the comprehension of the most common man. The genesis of the Bible was as follows. The first primitive race of men was able to read the spiritual significances of God's other volume, the open book of nature, but as the original purity and integrity of man declined, their powers of celestial perception were lost, and they were given a written Word, which in turn, after man had become still more sensualized, was taken away. Now the Jewish Scriptures were given, and these were made to suit the worldly mind of man, while still bearing a sufficient amount of spiritual significance to

keep him in touch with heaven. Since the first decline, the intellectual life of man has advanced until now we find science disputing the truth of the Scriptures. But God in person has revealed to His prophet the true meaning that lies behind the patent text of the Word, and the rest of Swedenborg's life is devoted to the interpretation of the Bible on the basis of the correspondences revealed to him by the Divine Author. In spite of the hidden significance, however, the literal sense of the Word is not to be undervalued, for it is the basis of the spiritual and celestial senses, and from it all doctrines and creeds of the church must be drawn.

The limits of space make it impossible here to summarize Swedenborg's religious tenets, but a word or two will suggest their nature. When we turn from the extreme mysticism of his method and blind ourselves to the world of spirits into which his wandering fancy led him, we find at bottom rationalistic doctrines - the repudiation of the doctrine of justification by faith alone, and of the doctrine of the Trinity, the emphasis on conduct and morality as the true marks of a regenerate man. An attempt will be made later to explain this combination of irrational spirit-seeing with rationalistic doctrines.

From 1747 to 1758, Swedenborg spent most of his time in London, constantly writing and publishing. His prin-

inciple works during this time were the Arcana Coelestia, The Last Judgement, and Heaven and Hell. In 1763 he went again to Holland for the publication of six other works, and from there within a year he returned home. Through the rest of his life his publishing made it necessary for him much of the time to be away from home, but he was always busy with his writing.

At Stockholm he lived in a modest home furnished comfortably but very simply. The house, and the garden, in which Swedenborg took great delight, were cared for by an old servant and her husband, who were his only companions, and who fairly worshipped him. He worked without apparent regard for night and day, going to bed, as he said, when he was sleepy. At times he would work incessantly for days, and again at times he would spend several days in bed. His food was bread and milk, except on occasions when he was invited out to dinner, when he ate freely, and even indulged moderately in a social glass. At home he drank coffee, immoderately, day and night, and the kettle was always on the fire in readiness for its preparation. He was much addicted to the use of snuff. He seldom received visitors, and when he did, it was always in the presence of his servants. He enjoyed the company of women, and was remarkably fond of children, whom he sought outside of his home and encouraged to visit him.

He led a temperate and rather secluded life, but by no means that of an ascetic. In his early years he had been fond of social pleasures, but he had now become much more retiring.

Remarkable powers of clairvoyance are credited to Swedenborg during the later part of his life. At one time while at the home of a friend at Gottenburg, he announced with great excitement that a dangerous fire had broken out in Stockholm, three hundred miles away, and that the home of one of his friends was burned down and his own was in danger. A little later he stated that the fire was extinguished. Two days afterwards a messenger from Stockholm arrived and told of a fire which had actually taken place there exactly as described by Swedenborg. The Queen, hearing of this event, called him to the court and asked him if he could speak with her brother who had recently died. A few days later Swedenborg returned to the court with a message from the dead brother, which concerned matters so secret that the Queen exclaimed, "No one but God and my brother knows this secret". The communication seems to have had reference to certain matters of state, and Swedenborg's message, there is evidence to show, may be explained on the basis of an intercepted letter from the brother written before his death, and an intrigue among certain members of the court, who wished to

express their mind to the Queen in this indirect manner. The third remarkable event of this nature was that of the lost receipt. After the death of a certain M. de Martville, his widow was asked to remit payment for a purchase made by him before his death. Believing that he had already paid the bill, she asked the assistance of Swedenborg. Some days later he informed her that he had spoken with the spirit of her husband, and had been told by him that the receipt was in a secret drawer of a writing table. There it was actually found. An account in the *Berlinische Monatschrift* for 1783 explains this affair in the following way. Swedenborg had one day borrowed from M. de Martville a private book which was kept in this secret drawer, and in it had noticed the receipt in question. The book was afterwards returned to its secret locker, and thus Swedenborg was enabled to give the desired information to Mme. de Martville. One must note, after observing these three incidents, that Swedenborg did not make a practice of clairvoyance, or seek notoriety by utilizing his "spiritual sight" in this way.

For a period of a year or more, ending in 1770, Swedenborg suffered a great deal from persecution resulting from his variance with the Lutheran faith. He appealed to the king and received assurance that nothing further of the kind would happen, but the end of the matter was

that a year later the importation of his writings into Sweden was forbidden.

In 1770 he went to Amsterdam, where early the next year he published his True Christian Religion, a summary of his spiritual and theological doctrines. From Amsterdam he sailed to London in the summer of the same year, and at Christmas time he had a severe stroke of apoplexy. After a temporary partial recovery he began to decline again, and on March 29th, 1772, he died, with his faculties clear to the last.

\* \* \*

In our closer examination of his life from the psychological side, turning first to heredity, we are struck by the significant fact that from his father he undoubtedly inherited a neurotic tendency. Of this, however, there was no decided manifestation until the beginning of mental decline and the approach of his physiological crisis.

The influence of his early training and of the home atmosphere are not to be underestimated. His father was industrious and of a practical turn of mind, with unusually broad interests and wide information. Under his influence Swedenborg's mind early unfolded to a wide world of interests, and was at the same time impregnated with the doctrines of a sincere and decidedly liberal Lutheran pastor. In a liberal but very religious environment Swed-

enberg continued to live through his university days, and the same religious influences continued to bear upon him throughout his life, as a result of his family and social ties. His father's spiritualistic beliefs also impressed themselves upon his mind at an early age, and as long as he lived he was a firm believer in revelation.

His university work served to set his interests in a practical direction, and these interests were further broadened and intensified by his early travels and his introduction to the leading scientists of the time. Maturing years brought a greater comprehensiveness and deeper thought. When his geological interests led him on to cosmogonical speculations, we find these bearing, in their mechanical interpretations, the manifest marks of his early education and of the methods of procedure which his professional life had stamped upon his mind. But his broadening interests and his search for the relation of the inner life to the outer world led some years later to his anatomical studies. Here appears for the first time his doctrine of correspondences, of a hidden meaning in manifest things, a symbolic relationship between corporeal and spiritual life. With all his belief in inductive procedure, he had a resolute faith in a spiritual world. This faith his mechanical principles failed to support and even repudiated, so the principles were discarded.

While still proceeding, at least professedly, in a critical manner and towards a scientific end, he was searching for further light, endeavoring to find a significance deeper than the obvious, to penetrate the veil that separates us from the world beyond, in which he so firmly believed.

His book *The Worship and Love of God* further shows the change which was taking place. Upon the groundwork of scientific speculations are erected the bottom structures of his temple of fancy, within which dwells the Creator and Prime Mover of all things. The voice of nature speaks to him the language of the Divine Author; through the finite the way is opening to the infinite. This is the theosophic form of belief, of which Weber writes:

"Theosophy shares theology's belief in the supernatural and philosophy's belief in nature. It forms an intermediate stage, a kind of transition, between theology and pure philosophy. It does not attain to the dignity of modern experimental science; for it rests upon an inner revelation, which is superior to sensible experience and reasoning. It does not study nature for nature's sake, but in order to discover the traces of the mysterious Being which nature hides as well as reveals. Now, in order to discover it, theosophy needs a key of Sesame, a no less mysterious instrument than the object of its studies. It therefore enters upon the search for secret doctrines, and greedily seizes and utilizes whatever is offered in this line".  
(Weber, *History of Philosophy*, pp. 265-266.)

Swedenborg's secret doctrines have been already shown in this paper.



In addition to his doctrine of correspondences one further definite idea at which he had arrived before his final change suggests what form his later beliefs were to take. His conception of the soul, already adapted to his spiritualistic beliefs, formed the basis of his later ideas of the spirit world. His conception was of a subtle, all-pervading, ethereal form, similar in appearance to the body, which at death leaves the body and seeks its own realm. It was to this supra-sensible world of souls and spirits that Swedenborg sought entrance.

The change which took place when he had reached the age of fifty-five may, perhaps, be best illustrated by borrowing Dr. Hall's metaphor of the iceberg for an inapt reapplication. Within the great mass - mental life as a whole - there had been a displacement of the centre of equilibrium, which here resulted in a complete shift of position, bringing to the sunlit world of reality those parts formerly submerged in the realms of pure fancy. The centre of equilibrium - the mental attitude or general method of mental procedure - had changed, and the former a posteriori method of the scientist and philosopher is supplanted by the a priori method of the mystic and seer.

At this time there were many conditions which favored the turning of his thoughts inward upon themselves.

His physiological crisis must inevitably emphasize the subjective as over against the objective. The exhausted and excitable condition of his nervous system led him to dwell upon his dreams and unconsciously to elaborate his illusions into the visions that accorded with his spiritualistic beliefs. His peculiarity of respiration further favored the states of ecstasy during which his revelations appeared. During the somewhat extended period of his crisis, his visions and ecstasies became an integral part of his mental life. Constantly occupying the focal field of his attention, and always colored with an intensely emotional tone, they were knit up with his former spiritualistic beliefs in an intricate web of associations which the return of normal mental and physiological conditions failed to unravel. These vivid and satisfying experiences, almost with a sudden wrench, had established a fixed habit and had turned the whole stream of consciousness into a new channel. He cherished his visions, retired from active life, and lived for the greater part in seclusion, where there was little to divert his attention from the strange new world in which he lived.

We have remarked the rather surprising juxtaposition of his spirit-seeing with rationalistic theological and moral tenets. These rationalistic views, however, are not to be regarded as in any way essential to his spirit-

ualism, or as an immediate product of his change. They are the perfectly natural outgrowths of his early training and of the maturing and liberalizing effects of the following years of his life. His crisis turned his mind inward, and his longing for spiritual insight found satisfaction in the objectifying of purely subjective ideas with which early influences had furnished him. These visions, through quite natural associations, led to the formulation of his previously ill-defined religious and moral doctrines, and the old beliefs and the new revelations were combined to form a consistent whole.

His spiritualistic beliefs had at no time before the crisis led to any visions, though before that time many of the favoring conditions had been present. Previously, his desire to transcend the material things of the visible world had been partially satisfied by his purely intellectual search for the unity of all things, his attempt to find the harmony of the universe. His educational and professional training had turned his mind to inductive and logical procedure, but this had left some of his beliefs unsatisfied. As long as he had continued in the height of mental vigor, those beliefs and tendencies lay dormant - they did not fit into the grooves of scientific procedure - but with the beginnings of mental decline, they asserted themselves. With the critical intellectual

opposition removed, under favoring conditions they fully vindicated themselves and became the pivot on which mental life revolved.

### LEO TOLSTOY

The ancestry of Leo Tolstoy may be traced on his father's side, and still more on his mother's, through a series of aristocratic families who were more or less passively opposed to the government, and who showed decidedly humanitarian tendencies. His father, after a few years' service in the army at the time of Napoleon's invasion, returned home, disillusioned with military service, and a short time after, at the age of twenty-five, entered upon the life which occupied the rest of his years - the somewhat inexpert administration of his estate. In this he manifested the virtue, rare to Russian proprietors of those days, of restraint from cruelty, with which, however, was united a certain lack of firmness. His mother was well educated and clever, but shy; and self-restrained, though hot tempered. The homes of his parents and his grandparents were united in a strong family love, which, even after the death of his mother and his father, continued to exert its influence upon him.

He was born, the fourth son of the family, at Yas-

naya Polyana, August 28th, 1828. He was destined to live without remembrance of his mother, for a year and a half after his birth she died, leaving a fifth child, a sister to the four boys. After this loss a distant relative, who had been brought up in the family of his father, devoted to the children, with a remarkable affection, the care and guidance of a mother, and to her influence, as well as to family tendencies, are to be traced many of his most firmly rooted principles, and of his sympathies and antipathies.

Along with the boyish interests in the hunt and the games in which all the household indulged, Tolstoy was possessed of an unusually sensitive and reflective nature. The following words from Boyhood, written at the age of twenty-four in description of a period some ten years earlier, very definitely forecast the painful years of doubt which came to him long afterwards:

"During the course of the year, when I led an isolated moral life, concentrated within myself, all the abstract questions concerning the destination of man, the future life, the immortality of the soul, already presented themselves to me; and with all the fervor of inexperience, my weak childish mind endeavored to solve these questions, the presentation of which represents the highest stage to which the mind of man can attain, but the solution of which is not granted to him". (59a, p. 178)

His life at this time shows many rapidly succeeding vacillations between meditation and self-denial on the one

hand, and pride and self-gratification on the other.

For all the sensitiveness and tendency to self-analysis that we have seen in it, Tolstoy's childhood was a remarkably happy one, to which he always looked back with pleasure. He believed that childish impressions are preserved in some depth of the soul, there to germinate and finally to reappear in later years in their full maturity.

Up to his eighth year he had lived on the family estate, where for generations his ancestors had been the only people of importance, and this may have been the source of much of the self-confidence which always characterized him, in spite of the humility which he later boasted, anomalous as such an expression may sound.

When Tolstoy had reached the age of eight, the family moved to Moscow, that the eldest son might receive his education, and the next summer the father died. Though he did not attend the funeral, and at first could not realize that his father was dead, the boy soon began to feel the significance of the event, and this was still further impressed upon him less than a year later by the death of his grandmother, which he witnessed. The horror that he tells of experiencing then recurs again and again throughout his first fifty years, and is depicted in many scenes of his works. This feeling appears later as one

of the significant factors in his life.

Throughout his life, from early childhood, we find evidences, together with those of a great delight in his own physical body, of a passionate love of nature. The following passage from Youth remarkably foreshadows his future mysticism:

"I stretched myself out upon the grass in the shade and read, raising my eyes now and then from my book to glance at the surface of the river, which purpled in the shadows as it began to undulate in the morning breeze; at the field of yellowing grain; at the opposite shore; at the bright red morning rays of light, that tinged lower and ever lower the trunks of the beeches, which, hiding one behind the other, retreated from me toward the fresh depths of the wood: and I enjoyed the consciousness of the same fresh young force of life within myself which breathed forth from nature all about me".  
(59a, p. 319)

And again in a later paragraph: "And still I was alone, and still it seemed to me that this mysteriously magnificent nature, the bright sphere of the moon which draws one to her, and hangs in a lofty but uncertain spot in the pale blue heavens, and yet seems to stand everywhere as though filling with itself all immeasurable space, and I, an insignificant worm, already stained with all poor earthly passions, but endowed also with a boundlessly compelling power of imagination and love, - it seemed to me at such moments as though nature and the moon and I were all one and the same". (59a, p. 325)

In the stories of his childhood told by Tolstoy and the members of his family, he figures as impulsive, imaginative, and erratic. One incident of this period deserves mention. When Leo was about twelve years old, a gymnasium pupil, visiting at his home, told him and his

brothers of the latest discovery at the school, namely that there is no God, and that all that is taught about Him is an invention. With the eagerness of youth they all accepted the news. This childish affair developed in a few years into a thorough-going nihilism, a term which, as Tolstoy uses it here, of course, bears its literal meaning - a believer in nothing. As we shall see, Tolstoy's attitude during the next period of his life is described by the two words realism and cynicism; yet this we are not to accept as all, for even during this period of self-gratification, the many doubts and the spiritual problems which he found himself facing at times, evidence the existence of a second weaker self, which constantly despised the pride and vice of the stronger, undisciplined self with its primitive instincts and its intense vitality. These "two selves" here referred to in such unpsychological terms, we shall attempt to explain later.

Entering in his fifteenth year, he spent a little less than two years at the University of Kazan, one of which he devoted to the study of oriental languages, and the other to law. Though possessed of no real inclination towards an academic life, he had entered the university resolved to make the best of himself and to realize his dreams for the future, which his somewhat exalted egotism



had permitted to assume large proportions. Though he was fortunate in having the affectionate family circle of his aunt in which to live, and though he made many efforts which gave him satisfaction in retrospect, yet there was much in his life of which he later gravely disapproved. Considering his personal equation, it is not a matter for wonder that he met with many failures in carrying out his repeated good resolutions, and that he permitted himself to enjoy to the full the constant amusements that were going on about him, and indulged in the vices which in his circle met with general approval. Towards the end of his stay at the university, the scepticism which had begun to appear several years earlier was turned upon the university, and his increasing dissatisfaction finally led him to leave and to return to the estate.

His diary shows that the time of his departure was one of strenuous resolutions for the future. The plans which he made for his life and for the studies to be pursued are staggering, and after each of his many failures we see him again repeating the attempt with a new plan.

In regard to his religious beliefs at this time, he writes in the Confession:

"I was baptized and brought up in the Orthodox Christian faith. I was taught it in childhood and all through my boyhood and youth. But before I left the university, in my second year,

at the age of eighteen, I no longer believed any thing I had been taught". (59b, p. 1)

Nevertheless, though as a result of the crisis of religious doubt which comes to so many at that age, he had intellectually discarded the Orthodox Russo-Greek Church, his Diary shows that in times of trouble he instinctively resorted to prayer. He himself writes that his opinions were at this time wavering and immature.

"I believed in a God, or rather I did not deny God; but I could not have said what sort of a God. Neither did I deny Christ and his teaching, but what his teaching consisted in I could also not have said. Looking back on that time now I see clearly that my faith - my only real faith, that which apart from my animal instincts gave impulse to my life - was a belief in perfecting oneself. But in what this perfecting consisted and what its object was, I could not have said. I tried to perfect myself mentally.....I tried to perfect my will.....I perfected myself physically.....The beginning of it all was, of course, moral perfecting; but that was soon replaced by perfecting in general: by the desire to be better, not in one's own eyes or those of God, but in the eyes of other people. And very soon this effort again changed into a desire to be stronger than others: to be more famous, more important and richer than others". (59b, p. 4)

The teachings instilled in his childhood we see undergoing the successive and combined influences of a natural tendency to scepticism, and the intellectualizing and morally degrading influence of his academic life, and at the time of his doubt crisis being practically abandoned in favor of his self-interest and egoism.

One of his aims when he left the university had been that of bettering the condition of his serfs, but he found that his sincere efforts to this end accomplished but little of what he wished. Through his own inexperience on the one hand, and on the other the peasants' suspicion of any new interference on the part of the master, his good intentions were foredoomed to failure in execution. Recognizing the uselessness of his attempts, he soon gave them up and went to the University of St. Petersburg to resume his studies, but this resulted much as had his former experience at Kaza, and in the course of a year he was back again at Yasnaya Polyana. Here and at Moscow he spent the next few years of his life, and here again we find the periods during which he indulged in all sorts of dissipation alternating with those of penitence and self-reproach, at which times his life was that of an ascetic. Finally, partly with a view to economizing and paying off his gambling debts, he left the estate to accompany his elder brother to the Caucasus.

In considering this part of his life, the wildest and most wasted of his years, one should note the extraordinary freedom of the young men of Tolstoy's class, and the ill-defined standards of morality to which society recognized them as subject. Whatever efforts he made towards moral perfecting must be of his own initiative, and

without incitement or encouragement from the members of his social group.

During the years 1851-1853 Russia was engaged in subduing certain tribes which separated her from a newly-acquired dependency south of the Caucasian Mountains, and it was to this army of the Caucasus that Tolstoy went, now in his twenty-third year. The typical young Russian nobleman, rich and care-free, without ideals or beliefs, entirely and consciously egotistic, found here a new life, compared to which the past was ridiculous and disgusting. Primitive and elemental, he delighted in his battles, and most of all in the wonders of living nature about him.

"He begins to glorify the perennial functions of nature and man, perpetual death and perpetual reproduction, the beauty of men and women and the beauty of animals, the joy of life and the joy of living". (45, p. 6)

Again, as in childhood, there came the realization of his identity with nature, and with it the same overwhelming emotion. But here again he experienced the spiritual conflicts, and in the midst of the sheer delight of tasting what life had to offer, he realized the tragedy that must come to a life whose pleasure, purely egotistic, depends upon circumstance. He felt that happiness is to be found only in living for others, in the satisfaction of a love wholly altruistic. But, as before, these ideas

passed, and now the feeling from which they rose was lost in his attraction to the physical beauties of a Cossack woman. Again his other self conquered; life ran too freely in his veins, his pagan instincts were too strong.

But the attractions of a barbaric life finally faded, and he returned to civilization. Soon afterwards, however, when the Crimean war broke out, he rejoined the army, and during his campaigns showed both bravery and healthy ambition. At the end of his military career, Tolstoy's views in regard to war had changed; his delight in it was giving way to as strong a disapproval, to a realization of the horror, not so much of the violence and bloodshed as of the spirit which prompts it and allows people to inflict suffering and death.

A further step at this time in the evolution of his religious ideas appears in the following passage, written while he was recovering from a fit of depression during which he had taken again to gambling, and had suffered large losses.

"A conversation about Divinity and Faith has suggested to me a great, a stupendous idea, to the realization of which I feel myself capable of devoting my life. This idea is the founding of a new religion corresponding to the present state of mankind: the religion of Christianity, but purged of dogmas and mysticism: a practical religion, not promising future bliss, but giving bliss on earth.....Deliberately to promote the union of mankind by religion - that is the basic thought which, I hope, will dominate me".  
(52, p. 130)

This passage, written at the age of twenty-seven, states with perfect clearness the main idea and motive of his life from his fiftieth year on.

Tolstoy now went to St. Petersburg, and found immediate recognition, both in society and in the best literary circles. During his military service he had begun his writing - Childhood, Boyhood and Youth, Sevastopol, and several minor works being the products of these years - and the fame which they had won him was far from mediocre. Comment on his works as literary productions would be out of place here, but we may be permitted to recall the supreme knowledge of human nature which we find expressed in them; the directness and simplicity with which he portrays the experiences of his characters, especially their emotional experiences, for "as soon as his persons begin to philosophize, to analyze their thoughts, (his language) becomes clumsy, lame, and obscure". (45, p.27) His minutely detailed realism and his abounding joy in the life of men and animals, which he could not view objectively, but in which he was lost and absorbed - these constitute much of his charm.

His works are all autobiographical, though not, of course, strictly so, and in those which he has completed at this time, as well as in those that follow, we find the tales of his own joys and sorrows, his own conflicts

and struggles, and, from beginning to end, throughout the pages which he gave us in his sixty years of authorship, we find the one thread, the constant striving for self-realization and for the self-knowledge to which he seems never to have attained.

Upon his return from the Crimea, Tolstoy became a member of the literary fraternity which supported the most progressive Russian periodical of the time. Though liberalism was the talk of the day, yet Tolstoy seems not to have entered with a whole heart into the spirit of co-operation and mutual toleration which bound together the leaders of the movement. This was probably due in part to the fact that he was essentially an aristocrat and they democrats, and possibly more to the fact that his strong tendency towards anarchy made him hesitate to compromise with their less radical views.

As regards his personal life, during his two or three years at St. Petersburg, it was self-centred and dissipated, much the same as that which had preceded his service in the army. But he was never satisfied. The talk of progress and culture, the faith in the uplifting of Russia and of all mankind which he had accepted as the keynote of a new religion, ended in dissatisfaction. The heroic side of the peasantry, which he had just seen in the Crimea, contrasted sharply with what he had come to

feel were the idle words of the "leaders of progress", and finally in disgust he left.

With the serious object of questioning the great thinkers of England and the Continent on the real meaning of life, he made the tour of Europe. His trip served to convince him still more of the universal injustice of the rich to the poor, and of the futility of science. To him it seemed that, beyond a general ill-defined belief in the perfectibility of the world and the progress of the race, they saw no meaning in life, and that view failed to satisfy him.

An incident which occurred during his stay in Paris serves to illustrate his attitude. The passage is a significant one.

"The sight of a public execution revealed to me the weakness of my superstitious belief in progress. When I saw the head divided from the body and heard the sound with which they fell separately into the box, I understood, not with my reason, but with my whole being, that no theory of the wisdom of all established things, nor of progress, could justify such an act; and that if all the men in the world from the day of creation, by whatever theory, had found this thing necessary, it was a bad thing, and that therefore I must judge of what was right and necessary, not by what men said and did, not by progress, but by what I felt to be true in my heart". (59b, pp. 9-10)

The fact that he was peculiarly lacking in historical perspective and in any comprehensive view of human progress, was largely the cause, both of his dissatisfaction and of some of the beliefs to which he came.



Grown disgusted with mankind and with himself, he now felt that his faith in the value of what he wrote was an illusion, and in his search for the real meaning of life the answers of science had failed to satisfy him. He stood face to face with his great problem. Yet, with all his loss of faith in himself and his work, he continued to delight in the fame he had won. Though he felt the uselessness of it all, yet he made himself believe that he could teach men what he himself did not know. He says later that he continued to write out of pure self-interest, in order to gratify the pride which his literary success had aroused in him.

While abroad on a second journey, he received the news of the liberation of the serfs, and with the conviction of the necessity of popular education, he returned to aid in fitting them for their new freedom. He became the head of the school which he organized at his estate, and the publisher of an educational journal. His first principle was that all coercion is foreign to the idea of education, that the school atmosphere should be one of absolute freedom. He was most firmly opposed to "the right of one man, or of a small group of men, to shape other people as they like" - an attitude obviously analogous to that shown in his later social views. Aylmer Maude right-

ly says that "Tolstoy appears as the evangelist of an educational system founded on the free play of youthful instincts which, speaking merely the language of animal life, call for sympathetic discipline". (52, pp. 252-253)

The system, after once the suspicion of the peasants had been allayed, seems to have met with decided success, and, in spite of their absolute freedom, the pupils attended with great regularity, and displayed such interest that the work lasted at times inconveniently late in the evening.

At this time he had also accepted the office of county magistrate, and the result of all his unaccustomed duties and his mental status together appears in the following words in My Confession:

"The struggle over the arbitration was so hard for me, my activity in the schools was so dubious to me, my shuffling in the newspaper became so repugnant to me, consisting as it did in forever the same thing, - in the desire to teach all people and to hide the fact that I did not know how or what to teach, - that I fell ill, more from mental than from physical sickness, gave up everything, and started for the Steppes to the Bashkirs to breathe a fresher air, to drink kumiss, and to live an animal life". (59b, p. 11)

He was ill at ease because of his lack of an ideal, of any knowledge of a real purpose in life. His agnosticism had been deepened two years earlier by the death of his older brother Nicholas. Struck deep by the tragedy

of it, he had said; "Why should one work and strive when of all that was Nicholas Tolstoy nothing remains?" This question had pursued him constantly ever since the time of the death. Now he sought to forget it.

Before setting out, he had made the acquaintance of the Behr family at Moscow, and upon his return a few months later much improved in health, he visited their home more and more frequently, became attached to the second daughter, and in the fall of the same year - 1862 - was married to her. Tolstoy at this time was thirty-four years old, and his wife a girl of eighteen. For him this was an event of perhaps greater importance even than to most persons. Most if not all of his life up to this time had been simply play; the motive of the greater part of what had preceded was manifestly a selfish one - the perfectly natural desire to live, to taste the fruit of life - and what had appeared of spiritual aspiration, of the landlord's philanthropy, had come by way of reaction, when the intensity of his instincts, of his sheer joy of living, had led to the excesses from which he reverted with the instinctive temperance of a beast of the forest. Now perfectly sincerely and devotedly he entered upon a new life, which, with its new responsibilities and its new happiness, worked a great change upon him.

For the next twenty years, the most contented and it seems the best years of his life, he and his wife lived on the estate in perfect happiness, and brought up their thirteen children. He lived a complete and patriarchal life, surrounded by all the comforts which his wealth could secure for him, and with his happiness fostered by a devoted wife and attractive children. The tremendous literary fame which he enjoyed added to his satisfaction, and with real pleasure he now devoted himself to his writing. During this time he produced two of his best works - War and Peace, and Anna Karenina. His literary work and the care of his estate kept him constantly occupied. His careful investments and the excellent management of his affairs show the presence of a new motive; his interest has turned to the consolidation of his fortune and to the comfort and well-being of his family.

With all his occupations, Tolstoy found time for many amusements, and the life of the home, a very pleasant one, centred in him. The heavy work which he did in the fields was not done in a spirit of self-sacrifice or humility, but, like his play, it was prompted by good common sense, and it gave him the excellent health which he always possessed. As recreation, his labour gave him the rest which he needed from his writing, and furnished him with pleasures new and fresh, and quite in accord with his new and

intense domestic interests. It was under these conditions that the peasant life became dear to him.

These new and vital interests, his constant employment, the many conditions which are conducive to a happy and contented life, all served largely to turn his mind from the lack of faith and of a satisfying view of life and its purpose, which before had troubled him so frequently. In his Confession he writes of this time:

"The new circumstances of a happy family life completely led me away from the search after the meaning of life as a whole. My life was concentrated at this time in my family, my wife and children, and consequently in the care for increasing the means of life. The effort to effect my own individual perfection, already replaced by the striving after general progress, was again changed into an effort to secure the particular happiness of my family. In this way fifteen years passed". (59b, pp. 11-12)

By his writing also, he says, he was able to stifle all questions regarding his own life and life in general. In it he taught what was for him the only truth - "that the object of life should be our own highest happiness and that of our family".

Yet he was not completely at rest. His new circumstances became more commonplace, and again at times the realities of life as he had seen forced themselves upon him - suffering, constant strife, and pursuit of selfish desires, all bringing but little enjoyment and ending in death. The characters of his novels at this time come at

the end only to a realization of the irony and bitterness of a life which centres in self. The thought of all this to one whose love of life was so intense and deep-rooted, presented a problem which seemed insoluble. But an anticipation of his later views, the foreshadowings of which we have seen repeatedly before this, appears in Pierre's words in War and Peace:

"To live and avoid evil so as to escape remorse, that is too little. I have lived that way and my life was lost in uselessness. It is only now that I really live - that I try to live for others - that I understand the blessing of it".

With all his apparent absorption in his round of activities, his heart was constantly working, his great problem was still before him, and finally it rose with such insistence that he could no longer avoid it. The question which confronted him, now nearly in his fiftieth year, is best told in his own words.

"What if I should be more famous than Gogol, Pushkin, Shakespeare, Moliere - than all the writers of the world - well, and what then?.... I could find no reply. Such questions will not wait; they demand an immediate answer; without one it is impossible to live; but answer there was none. I felt that the ground on which I stood was crumbling, that there was nothing for me to stand on, that what I had been living for was nothing, that I had no reason for living... ..I was able to breathe, to eat, to drink, to sleep, and I could not help breathing, eating, drinking, sleeping; but there was no real life in me because I had not a single desire, the fulfillment of which I could feel to be reasonable.....The truth was, that life was meaning-

less. Every day of life, every step in it, brought me, as it were, nearer the precipice, and I saw clearly that before me there was nothing but ruin. And to stop was impossible; to go back was impossible; and it was impossible to shut my eyes so as not to see that there was nothing before me but suffering and actual death, absolute annihilation. Thus I, a healthy man, was brought to feel that I could live no longer, - some irresistible force was dragging me onward to escape from life.....The idea of suicide came as naturally to me as formerly that of bettering my life. This thought was so attractive to me that I was compelled to practise upon myself a species of self-deception in order to avoid carrying it out too hastily". (59b, pp.13-14)

Realizing that this path of escape was always open to him, and wishing first to clear away the confusion of his thoughts, he did not come to actual suicide. Perhaps, even now that he had been led into the wilderness, some of the fire still burned in his veins; perhaps, after all, in his inmost heart, life was still dear to him. Yet, above his pagan love of life, there came overwhelmingly the feeling that existence is really bearable only under the intoxication of youth's illusions. That had passed, and now he felt that never again could he be deceived. The whole delusion of life he finds summed up in the Eastern fable of the traveler who is attacked by a wild beast and attempts to escape by letting himself down into a dried-up well. At the bottom of the well, however, there is a dragon, so he is forced to cling to a wild plant which grows in the wall. Suddenly he sees two mice nibbling at

the stem of the plant from which he hangs, and in despair he looks about, still with a faint hope of escape. On the leaves of the wild plant he sees a few drops of honey, and, even with the fear at his heart, he stretches out his tongue and licks them.

"Thus", he says, "do I cling to the branch of life, knowing that the dragon of death inevitably awaits me, ready to tear me to pieces, and I cannot understand why such tortures have fallen to my lot. I also strive to suck the honey which once comforted me, but this honey no longer rejoices me, while the white mouse and the black, day and night, gnaw through the branch to which I cling. I see the dragon plainly, and the honey is no longer sweet. I see the dragon, from which there is no escape, and the mice, and I cannot turn my eyes away from them. It is no fable, but a living, undeniable truth, to be understood of all men. The former delusions of happiness in life which hid from me the horror of the dragon can no longer deceive me".

(59b, p. 17)

The fear of death which before had come to haunt him at times, now rose to the exclusion of all else. Despair and bitterness came upon him, and in his gropings for the real meaning of life he turned again to every branch of human learning. The natural sciences ignored the greater questions, and philosophy, while admitting them, have no answer that satisfied. Turning from books to the men of his own society, he found that those who did remain blindly ignorant of the problem met it in three equally unsatisfactory ways,- by seeking to forget it in selfish pleasures, by suicide, or by living on in hopeless misery.



His peculiar instinctive affection for the working class, nourished and ripened under the influences which had borne upon him for the last fifteen years, now suggested a new possibility of solution. He began seriously to study these people, and it seemed to him that they differed from his class in that for them life was not unreasonable, even though its great problem presented itself to them, too. In them he found an unreasoning consciousness of life which gave to it a meaning. The knowledge of the learned, resulting from intellectual activity, leaves them ignorant of life's meaning, which to the peasant is supplied by a simple faith that bridges the gulf between the finite and the infinite. This faith which relates one to the whole world is their true solution of the great problem.

He was now ready to accept any faith which did not require of him a direct denial of reason. He studied Buddhism and Mahomedanism, and especially Christianity. He sought instruction from the Orthodox of his own class, but found that they were no more than deceiving themselves, that they, like himself, had failed to allay their fears or to find peace in life. But among the poor he found lives consistent with the faith they professed, though here too he found the beliefs that his reason could not accept. Now the thought came clearly to him that life

acquires new meaning in proportion as one discards what is false and artificial and shares in the common life of humanity, accepting "the meaning given to it by the combined lives of those that really form the great human whole".

In his Confession he writes, with at least partial insight:

"During the whole of that year, when I was asking myself almost every minute whether I should or should not put an end to it all with a cord or a pistol, during the time when my mind was occupied with the thoughts which I have just described, my heart was oppressed by a tormenting feeling. This feeling I cannot describe otherwise than as a searching after God. This search after God was not an act of my reason, but a feeling, and I say this advisedly, because it was opposed to my way of thinking; it came from the heart". (59b, pp.54-55)

This passage is particularly significant, as showing the essentially emotional nature of the crisis.

Kant and Schopenhauer had shown to his satisfaction the impossibility of proving the existence of a God, but still he sought Him. At times when it seemed that he had found Him, and when life and its joy rose again within him, he sought to define his relation towards God. But when he considered the triune God, quite apart, it seemed, from himself and the world, his reason rebelled, his temporary faith dissolved before his eyes; again "the source of life dried up", and despair returned. But more and more he came to feel that a life spent in the search for

God is not without God; imperceptibly his doubt was replaced by faith. He says:

"Gradually and imperceptibly I felt the glow and strength of life return to me. And strangely enough this power of life which came back to me was not new; it was old enough, for I had been led away by it in the earlier part of my life. I returned, as it were, to the past, to childhood and youth. I returned to a belief in God, in moral perfectibility, and in the tradition which gives a meaning to life. The difference was that formerly I had unconsciously accepted all this, whereas now I knew that without it I could not live". (59b, p. 58)

This figurative suggestion of a return to childhood bears more meaning for the psychologist than it seems to have had in the mind of the writer. He had passed the summit, and was starting on the downward path that leads to "second childhood". Mental decline was already under way; the higher structures of the psychic architecture were crumbling.

He now renounced the life of his own class, gave up his luxuries, and lived the simple life of the Russian peasantry. Though he felt that their faith was bound up with much superstition that he could not accept, he tried to ignore this, and became a member of the church at Yasnaya Polyana. Notwithstanding his doubts and suffering, he clung to Orthodoxy for three years, but at the end of that time he severed his connection with it on two immediate grounds. The first was the spirit that prompted the

believers in the Orthodox faith to regard all others as heretics. If two faiths mutually discard each other, he argued, is there not some higher truth which should be common to both, and which would appear if the minor differences were to be removed? The second and more urgent ground for his change of faith was a purely practical and ethical matter. From the lips of the very priests who had read before him the command to love your enemies and do good to those who despitefully use you, he heard prayers for the destruction of the Turks in the Russo-Turkish war of 1878. It was and other disparities between Orthodox belief and the conduct of Orthodox believers that finally led him away from the church. Unable to truly understand the symbolism of the church, he was led now to discard its ritual.

Now that the Church had failed him, he turned to the Gospels, for upon them the Church was founded, and in them must be contained what truth the Church possesses. He revived his knowledge of Greek, and set to work thoroughly and patiently to study the Gospels for himself. The fact which most impressed him during this study was that those passages upon which the dogmas of the Church are founded are all obscure, while he found particularly clear those that teach us how to live. After repeated readings of the Gospel, he felt that the plain and definite precepts of

the Sermon on the Mount contain the teachings of Christ, and in these at last he found the solution of his problem. Here he found, not new theories about God, but new knowledge about men. Approaching these words of Christ as a child, and seeing that Christ not only spoke them repeatedly, but lived them, he felt that these passages, taken literally, give a new conception of life which might become our own and mark the beginning of a new existence for all of humanity.

Our very brief review of Tolstoy's new beliefs may well begin with his philosophy of life, as given in his treatise *On Life*, which sets forth his central point of view. It is, in a word, as follows. The greater part of humanity lives only the animal life, and of these great numbers a few attempt to teach the others the meaning of life, which they themselves fail to understand. One group, the scientists, hold that life proceeds merely from mechanical forces, that beyond these there is nothing; the other group upholds the dogmas and forms of the religion in which they grew up, though wholly without comprehension of the real meaning which underlies it. Both fail to define the real life which resides in every living being. The life within tells each that his own individual good and his own happiness are the supreme end, that that alone

constitutes life. But each soon finds that all others are bent upon the same selfish end, that the desires of each conflict with those of his neighbor, that satisfaction is impossible under these conditions, that all the world is against him. And if his desires are gratified for the time, as he grows older his pleasures decrease, old age, suffering and death come to him, and in the end he dies while the world lives on. This individual life, then, is not the real one; it is the life outside that is real. As long as we regard our animal life as the real life, just so long will real life be foreign to us. True life is the subjection of the animal nature to reason, and reason tells us that a life centred in self, with each man striving for self against every other man cannot bring happiness; that only Love whose object is the good of others can end the strife. The preference for those who are especially dear to us and the striving for their well-being is a higher form of the selfish love, but still selfish, - we seek their welfare because it brings direct pleasure to ourselves. True love comes only with the entire surrender of selfish interests; it is the preference of others over ourselves. Unlike the passion which dims our reason, this love is the highest manifestation of reason, known only to the child and the wise. Only those who know this love know life.

Now we see the scope of his "religion" of self-perfecting expanded beyond the limits of self to infinity. It pivots now, not upon the extreme of self-interest, but upon an all-embracing, supremely altruistic love.

Here the mystic element enters in. When one first learns this love, he becomes newly possessor of and newly conscious of the life within him, the life which at birth he received from the great infinite Life which transcends time and space. That which loves, the "I", is the relationship of a man's being to the world.

"For the man who measures his life by the growth of his relation of love with the world, the disappearance at death of the limitations of time and space is only the mark of a higher degree of light". (43, p. 40)

No doubt of immortality can come to any man who renounces his individual happiness.

"He passes in this life into a new relation with the world for which there is no death; on one side he sees the new light, on the other he witnesses its actions on his fellows after being reflected through himself; and this experience gives him an immovable faith in the stability, immortality, and eternal growth of life".  
(43, p. 41)

Mysticism this is, to be sure, but different from that of most mystics, free from their visions and hysterical excesses. Admission to the inner shrine of these mysteries is not by mere quietism and retirement into self, but by an active love for all of humanity,- in fact,

for every living thing, for love in Tolstoy's sense is all-embracing. This mysticism is an eminently practical one, in purpose at least. Were its tenets true, implicit accord with them in the life and conduct of every human being would accomplish two great ends - the complete solution of all the doubts and questionings that come at times to every man, and secondly the alleviation of the ills of the world and the ultimate unifying of all mankind. This stands in direct contrast to such mysticism as removes man's interest from this world, and it is this practical side that gives greater balance to Tolstoy's system.

He whose reason refused to accept the Divine Trinity with all the symbolism of the Church, has found for his divinity, instead of a God who seemed to him quite apart from the affairs of the world, an unending Life, supra-temporal and supra-spatial, a great World Soul, who, through His organ, Love, is approaching self-realization. The final goal of perfection is more nearly attained, the evils of the world disappear, in proportion as this self-realization advances, as Love becomes universal. The evils of the animal nature blind man to the great Life within him and all about him, but once cast off these evils and the knowledge of the great essence and end of all dawns clear, dispelling doubt.

The relationship between Tolstoy's philosophy and that of Schopenhauer, whom he studied much and with great



interest, is manifest. As for Schopenhauer "die Welt als Vorstellung" is an illusion, so for Tolstoy the sensible world is not the true one; the conditions in time and space do not touch the true nature of man. Tolstoy, like Schopenhauer, assumes a supra-sensible unconditioned being. For Tolstoy, as for Schopenhauer, the world consists in a preponderance of suffering, vain strife and constant misery. With equal insistence both contest egoism and demand the renunciation of the struggle for selfish happiness. Tolstoy's views on marriage and sexual love, as we shall see, bear a marked resemblance to those of Schopenhauer. Yet, with these points in common with his favorite philosopher, Tolstoy shows in his ethical and social code much more indebtedness to biblical teachings than to Schopenhauer. The highest form of altruism, Tolstoy's universal love, for him removes the poison from Schopenhauer's pessimism, and promises, not mere negative well-being, but the highest, most perfect happiness, infinitely above any selfish pleasure.

We should recall also Tolstoy's indebtedness to Rousseau and Voltaire, whom he began to read sympathetically and with great pleasure during his university days, and whose influence, while less than that of Schopenhauer, is not negligible.

The source of Tolstoy's ethical code, we have seen, is the Sermon on the Mount. In the fifth chapter of Matthew are found the five injunctions of Christ which in Tolstoy's system take the place of the decalogue. The first of these reads as follows:

"Ye have heard that it was said to them of old time, Thou shalt not kill; and whosoever shall kill shall be danger of the judgement; but I say unto you, that every one who is angry with his brother shall be in danger of the judgement; and whosoever shall say to his brother, Raca, shall be in danger of the council; and whosoever shall say, Thou fool, shall be in danger of the hell of fire".

The meaning that these words should convey is the literal one. Do not be angry; let your motto be brotherly love; use no expressions of contempt for others. This contempt of others - class distinctions - is the chief enemy of brotherly love and the cause of disunion and ill-feeling among men. Seek, instead of separating yourself from the great masses, to draw nearer to them, to become one of them; humble yourself.

"Ye have heard that it was said, Thou shalt not commit adultery: but I say unto you that every one that looketh on a woman to lust after her hath committed adultery with her already in his heart".

This is the second commandment. Purity of mind, and between husband and wife, perfect fidelity of thought and act - these are the true relations of the sexes. "Monogamy is the natural law of mankind". The passage goes on

to condemn divorce and second marriage, and this Tolstoy accepts fully - under no conditions is divorce permissible. Later, in the Kreutzer Sonata, he writes that physical marriage is merely a manifestation of our animal natures, and not consistent with our truer selves, - "the ideal of the Christian is not marriage, but the love of God and one's neighbor". Apparently he failed to see the purifying effect of a true spiritual marriage upon the physical relations. The analogy of this view of marriage with that of Schopenhauer is apparent, and it is eminently consistent with Tolstoy's own philosophy. With the attainment of the ideal, the substitution of universal love for all selfish and physical love, the human race, as far as the animal life is concerned, will of necessity cease, and human existence will continue only in the great World Life where all are one, where all will join those whose bodies are now dead, but who still live, in the most true sense of the word. We should recall, as a psychological consideration, that this belief in total sexual abstinence was a much later development, coming many years after his crisis at fifty.

As opposed to the view of Nordau, which regards Tolstoy as an erotomaniac, we raise the following consideration. Tolstoy's ideas of the relations of the sexes was the only logical consequence of the ethical code the assum-

ption of which had restored his mental poise, and the advocacy of which was requisite to continued poise. Coming late in his life, it doubtless met with no violent opposition from his own instincts, and while, like many of his ethical tenets, it probably came partly as a reaction, yet in view of the facts the justice of terming him an erotomanic seems questionable.

The third commandment is found in the following words:

"Again, ye have heard that it was said to them of old times, Thou shalt not forswear thyself: but I say unto you, Swear not at all; neither by the heaven, for it is the throne of God; nor by the earth, for it is the footstool of His feet; nor by Jerusalem, for it is the city of the great King. Neither shalt thou swear by thy head, for thou canst not make one hair white or black. But let your speech be, Yea, yea; Nay, nay: and whatsoever is more than these is of the evil one".

This Tolstoy applies with particular emphasis to the oath of allegiance, which is required of every subject in Russia. No man shall bind himself by oath to perform commands which he may find, and so many times does find, in direct opposition to the commands of God and the dictates of his own conscience. The oath of allegiance to the state must inevitably repress the personal sense of right and wrong, taking from us, as citizens, officials or soldiers, the freedom to pursue what we ourselves believe to be the right course of conduct.

The fourth law sounds the fundamental note of the

whole ethical system:

"Ye have heard that it was said, An eye for an eye and a tooth for a tooth: but I say unto you, Resist not him that is evil: but whosoever smiteth thee on thy right cheek, turn to him the other also. And if any man would go to law with thee, and take away thy coat, let him have thy cloak also. And whosoever shall compel thee to go one mile, go with him twain. Give to him that asketh thee, and from him that would borrow of thee trun not away".

This precept of the non-resistance of evil Tolstoy accepts without reservation. We cannot do better than quote his own words:

"Christian scholars and fr<sup>e</sup>-thinkers are equally embarrassed by the meaning of Christ's words, and they correct it. They say the sentiments here expressed are very noble, but are completely inapplucable to life; for if we practised to the letter the command 'Resist not evil' we should destroy the entire social fabric which we have arranged so beautifully.....If, however, we take Christ's words as we would take the words of any one who speaks to us, and admit that He says exactly what He does say, the necessity for all these profound circumlocutions is done away with. Christ says, 'I find your social system absurd and wrong. I propose to you another'. And then he utters the teachings reported by Matthew. It would seem that before correcting them one ought to understand them; now that is exactly what no one wishes to do. We decide in advance that the social order in which we live, and which is abolished by these words, is the sacred law of humanity. I do not understand our social order either wise or sacred; and that is why I have understood this command when others have not. And when I had understood these words just as they are written, I was struck with their truth, their lucidity, and their precision.....  
...This fourth command of christ was the one I first understood; and it revealed to me the meaning of all the others". (59c, pp. 147-148)

The basis of Tolstoy's fifth precept is the following passage:

"Ye have heard that it was said, Thou shalt love thy neighbor, and hate thine enemy: but I say unto you, Love your enemies, and pray for them that persecute you; that ye may be sons of your Father which is in heaven: for He maketh his sun to rise on the evil and the good, and sendeth rain on the just and the unjust. For if ye love them that love you, what reward have ye? do not even the publicans the same? Ye therefore shall be perfect, as your heavenly Father is perfect".

This passage he interprets in a narrower sense than those which have preceded. With somewhat of inconsistency - in this very limitation - he says:

"It is impossible to love one's personal enemies; but it is perfectly possible to love the citizens of a foreign nation equally with one's compatriots". (59c, p. 152)

What at first he regarded as a mere continuation, almost an exaggeration, of the words, "Resist not evil", he came to regard as

"a clear, precise, important, and practical rule. To make no distinctions between compatriots and foreigners and to abstain from all the results of such distinction, - from hostility towards foreigners, from war, from all participation in war, from all preparations for war; to establish with all men of whatever nationality, the same relations granted to compatriots". (59c, p. 153)

The original passages from the Bible have been cited in connection with these five precepts of Tolstoy's code, partly for the reason that they present in substance all of his system, and partly for the purpose of showing his

method of procedure in interpreting the Gospels. Those parts which accord with his own tenets he accepts, and those which he dislikes are quite arbitrarily omitted. His lack of scholarship is in part responsible for the particular nature of his interpretation, but to a large degree it results from the fact that the meaning of the passages is filtered through the medium of his own essentially pre-formed beliefs.

Now, turning to a somewhat more detailed view of Tolstoy's criticism of society, we find the essence of it excellently summarized by Redfern as follows:

"The modern State, as Tolstoy sees it, may be pictured as a pyramid. At the base is the unskilled labor of the world; above, in living tier upon tier, are the classes and ranks of men, rising to the monarchs and rulers in their lonely majesty. That which finally keeps the whole in position is the aspiration of each unit to rise toward the pinnacle, each having the naive idea that it is possible for all to occupy the narrow lofty regions, and that it is above all things desirable to come nearer to them by at least one step. And the revolution that Tolstoy desires is that each, realizing the burden thus imposed upon the basic masses, and the pitiable dehumanizing of the upper classes, who are the more cramped by convention the nearer they approach to the summit, shall voluntarily descend to common earth and brotherhood". (56, p.75)

As the Church, with its schisms and hostile doctrines, prevents the free exercise of man's reason and love, so the armed State makes impossible that free intercourse between men which should be the mark of an ideal social com-

munity. Free communism is the social order that Tolstoy proposes. In criticism of his outlook on the present status of society, one would say that his writings too often convey only the idea of absolute error without the thought of progress underlying relative error.

The reformation of existing evils is to be attained by the improvement of the inward life. This is the essential, and for the attaining of this, true religion should be assisted by science, which is the organ of practical thought, and by art, through which man consciously expresses his feelings. Science has erred in turning to pure objective knowledge, often utterly removed from the activities of man. Art aims too much to please the false tastes of the upper classes. Having degenerated to sensuousness and superficiality, it ignores its true end - that of educating the true feelings that are essential to the best life. There can be no such thing as art for art's sake. The value of an artistic production lies not in its aesthetic beauty of form, color and content, but in its spiritual beauty. By way of parenthesis, we might recall that after his change Tolstoy disowns all of his former life and wholly denies the value of his earlier products, regarded purely as literary works.

As further aids to the attainment of the goal, Tolstoy urges, first, contact with nature and acquaintance



with manual labor; and second, as we have seen, the ennobling of marriage, with absolute celibacy as the ideal. As the perfecting of humanity, however, is not the work for a generation, education is to lend further aid. Quite free from all coercion, it is to instill into the mind of the child a vital spirit of comradeship, of common striving towards a common end. Finally, money, which in the hands of the rich serves only as an instrument for enslaving the poor, is to be wholly abolished, and each is to render service and receive, according to his ability or his need.

In conclusion of a sketch of Tolstoy's teachings, it is perhaps well to consider that probably, like most reformers, while most whole-heartedly a believer, he was led by his enthusiasm to somewhat overstate his own ideas.

Now that we have reviewed in outline Tolstoy's philosophical, ethical and social tenets, let us return and glance briefly at the second part of his life. The conclusion of his long questionings came in about his fifty-second year, and shortly after, in 1881, he moved to Moscow, where he undertook to execute certain philanthropical schemes. In a short time his attempts revealed to him the impracticability of any plan for the immediate alleviation of the suffering of the poor, and he began to feel that true almsgiving consists only in giving that which requires

self-denial. Giving money in ordinary charity, he found, separates the giver and the recipient, rather than unites them. Before the poor can be effectually helped, the barriers which society places between them and the rich must be broken down. Formerly he had regarded his money and the peasant's as the same; now he felt the difference. The peasant's money represents work, the landlord's money force.

At this time he returned to Yasnaya Polyana to live with his peasants, and to spread his teachings by means of his writing. These teachings and his radical criticisms of Orthodoxy led in 1901 to his excommunication by the Synod of the Russian Church. Though his excommunication disturbed him but little, the severe censorship of his writings brought limitations that galled him.

Upon his return to his estate, he gave up wines and tobacco, became a vegetarian, and, with the purpose of suiting his conduct to his beliefs, assumed the peasants' dress and made it his custom to work in the fields with them. He went so far as to begin distributing his property to his serfs, but his wife was not in sympathy with his new views and insisted that proper provision be made for the children. She protested strongly against the distribution of the property. The situation was an extremely unhappy one for Tolstoy, - this conflict between his own

sincere efforts to be loyal to his principles, on the one hand, and on the other the intimate ties of family affection. With a checkered career behind him, he had come at thirty-four to a late marriage with a girl of eighteen. She had married, not the "Christina anarchist", but Tolstoy the man, and the two had found new happiness, life had acquired new meaning for him. The twenty years that had intervened had drawn the closest ties between them. The result was that the property, instead of being distributed, was turned over to the Countess, and all affairs were left in her hands. She soon became reconciled to the new regime, and family life became serene again.

Throughout his life we have seen in Tolstoy an unmistakable passion for simplicity. This was the feeling that drew him to the barbaric life in the Caucasus, that first made the peasants dear to him, that made him enjoy their food and drink, that appeared in the very ordering of his household. Now, devotedly cared for by his wife, living in constant touch with nature in his quiet country home with its simple comforts, the picture he presents is not one of self-denial. Though in all sincerity and with all his heart a believer in his own tenets, he obviously fails to order his life quite accordingly. A life better fitted than this to satisfy all the wishes of such a nature, now past the fire of youth and settling into the quiet of de-

clining years, is hard to imagine.

In spite, however, of the genial atmosphere of the home with all its perennial pleasures, Tolstoy was possessed at times of a spirit of unrest - the manifestation of another of those primitive instincts that lived so strongly in his heart. At times he told his bachelor friends that he envied them their freedom, remarking in all seriousness that no woman can be a man's true friend. His wife tried, in the interests of herself and the children, to keep him at home, and her constant devotion and untiring service proved successful until a few months before his death, when he left the home and went to a monastery.

\* \* \*

A study of Tolstoy's second life shows us, not a new Tolstoy, an ascetic, but the same Tolstoy whom we have followed through the first fifty years, with the same joy in living, with the same pagan heart, the same loves and interests, with the addition only of the superstructure of beliefs that came to still his doubts. His early purely selfish delight in mere physical existence, in tasting the fruit of life, met, at the time of his marriage, with a knowledge of new and better happiness. The flare of youth's vitality became the steady flame of mature manhood. Under the influence of new happiness and new know-

ledge his interests broadened and extended beyond himself to include the members of his family circle. But life with its newly-acquired meaning was to present to him yet another side. When he began to feel the approach of old age, when he realized that the delights of physical power, of vital activity and mature life in a living world, were waning, and looked ahead to what he believed would be the gradual loss and the final absolute end of the pleasures that had become so dear to him, a panic of questioning came upon him. What meaning can all this have if, after the constant suffering and strife which follow the whole course, it is to end in utter loss? His solution of the problem, fitted into the mold of his own instincts, ended his doubts, but the beliefs that came to him are not new ones. They run in a continuous thread throughout the fabric of his life, and now appear in a harmonious pattern, adding the touch of Christian spirit to the pagan essence of his life. Throughout his life there were the same doubts and the same instinctive feelings which found expression, when his doubts had reached their climax, in his later tenets. The stream which before had flowed for the greater part underground now broke free and came to light.

In conclusion, certain facts which have largely affected his development deserve consideration once more

from the psychological point of view. Without doubt, home influences and heredity played a large part - heredity in the sense of certain ill-defined tendencies whose direction and form of expression were determined by environmental conditions. The long lines of ancestry on both sides had been passively opposed to the government, and had shown unusual leniency and sympathy towards their serfs. Precept and example in his early years fixed in his mind the germs of his anarchy and of his love of the peasantry. Further, largely to his life on the estate, and again in part, perhaps, to the generations of country landowners behind him, he owes the intense love of life, which found two forms of expression - first, the passionate love of nature which follows to the end of his years and appears finally in his pantheism; and second, a love of his body, a joy in physical existence. He was a child of nature, and it was this joy of living that was so strong in him, which, in the face of physical decline and death, was so largely responsible for the doubt crisis that preceded the adoption of his later tenets.

We have seen, too, that from childhood he showed a tendency towards reflection and introspection. In early years he was of a retiring disposition, which with some seriousness he attributes in part, especially during adolescence, to the conflict between his self-love and the

knowledge of his unpleasing physical appearance. With this retiring disposition, whether as result or cause we cannot say, was united a tendency to meditation, and this appears in the frequent \*eriods of doubt and questioning that arise during all his life, even after the crisis had been passed. Especially in his youth he was imaginative and very erratic, vacillating between the extreme of self-gratification to the opposite one of self-abasement. Between the two feelings of self-love and, on the other hand, what might almost be called hatred of self, he seems to have been unable to maintain a proper balance. The self-hatred almost invariably followed upon excesses of self-gratification, and was always accompanied by doubts. These doubts coincided, moreover, particularly in his later years, with periods of mental depression or exhaustion. At the time of his great crisis the Countess writes that he had rapidly grown gray and less robust, that he had become quieter and addicted to melancholy. The relation of his physiological to his psychological changes is significant.

An important consideration is Tolstoy's social position. Not restrained by any public duties, he grew up in an irresponsible and somewhat isolated position. The result seems to have been that he had but an incomplete sense of the complex relations of a practical social com-

munity, and that he came to place peculiar emphasis upon the personal duty which his own mind and heart dictated to him. Further, there were no checks of social restraint to inhibit the promptings of his egoism and of his intensely vital elemental instincts. Any degree of license was permitted, and his early self-centred life was viewed with approval by those of his class, whereas any effort at self-betterment met only with ridicule. His religious scepticism also resulted largely from the social influences that bore upon him from his very childhood. Later, his social status may well be assumed as one of the factors that indirectly caused his "conversion". The two conflicting sides of his nature had come to the final struggle. For the maintenance of mental equilibrium, in the absence of any necessity or restraint imposed from without, there came the nominal restraint from within in the form of his ethical code.

The logic and consistency of this system met the demands of his reason and stilled his doubts, and the assumption of a definite code which centred not in self but in others, satisfied his intensified tendency to self-mortification, without, as we have attempted to show, involving any material self-denial. The relative self-satisfaction which followed was the result more of the mere expressing of his views than of any effect that they may



have had upon his conduct. That which was superimposed to calm his troubles of mind and heart he believed to be the very essence of his nature, while in reality the same old self lived on, only with the two factions more nearly in harmony. Neville Forbes, in a lecture of Tolstoy, writes:

"Tolstoy has said himself that the spiritual contradictions of which his life is so full were the result of his unnaturally highly developed consciousness. It certainly was highly, but very unequally developed. As the critic Merezhkovski has said, it shone not like the light of the sun on the world, universally diffused, but like that of a lighthouse into the sea. Although it illuminated the surface of his nature it did not penetrate it; its strength was never such that it could dominate his elemental instincts. Tolstoy himself never realized the fact that his soul and his instincts were pagan, his Christianity intellectual and superimposed. In the first half of his life, as long as youth and strength lasted, he managed not to be ashamed of his soul and subjected it to his mind. In the second half of his life, under the influence of decay, he gave way to fear which his propensity to exaggeration turned to terror, affirmed that he himself and the civilization to which he belonged were loathsome, tried to mortify his soul and disown his instincts, but was never really successful in the attempt". (45, pp. 11-12)

We may be pardoned once more for stressing the fact that his doubts always came by way of reaction from self-indulgence, that, in fact, his "conversion" appears as a culminating reaction from a self-centred life in the face of a great fear and a great disillusionment.

In addition to the importance of heredity, of certain instinctive tendencies which were a part of his original

endowment, and of the environmental influences of home and society, two particular chapters of his life demand particular attention - his service in the army, which first stirred to intensity his realization of the bitter side of individual and national life, and his marriage, which temporarily quieted his doubts and further endeared to him the peasantry and the simple life "on the land".

A sympathetic view of Tolstoy's life impresses one with his friendlessness. While happy in an affectionate home circle, and enjoying the frequent visits of acquaintances, he was really friendless. His wife had no time for philosophical studies and had but little real sympathy with his views. As for the other great minds of the time, he never really sought to know them. His acquaintance with Turgenev was a rather stormy one and led to no intimate connections, while Dostoiewski he never took the trouble to meet. Essentially an egotist, it seems that he could never become sufficiently interested in others to establish the relations of real friendship with them. What significance this may have had is doubtful, but the question arises if it may not have affected the form of his mysticism. A world united by a common Life, striving towards a great common end, constantly approaching harmony through the growth of universal love and sympathy - is not this the haven of a lonely soul attempting to relate it-

self to what is outside of itself, but prevented from the intimate bonds of true mutual sympathy with any one other by the self-centred interests that nature gave him? In the Confession he writes in regard to the feeling which prompted his search after God:

"It was a feeling of dread, of orphanhood, of isolation amid things all apart from me, and of hope of help I knew not from whom". (59b, p.55)

Tolstoy was of the emotional type. His sometimes mystic attraction to all of living nature, which so completely absorbed him into itself, attests this. Again, in his writings we find further evidence.

"It is in his description of the impulses and instincts of human beings and of the intelligence of animals that Tolstoy reaches his highest level, in his portrayal of the emotions as manifested by the movements of the body, that he especially excelled. Whenever he left the study of these, either for the province of apparently inanimate nature, whose terrible complacency he never felt, or for that of pure thought, to which he was never equal, his pen played him false". (45, pp. 26-27)

It is that for which he has sympathetic appreciation that gives the strength to his writing. Further, his early erratic, impulsive nature is characteristic of the emotional type. The heightened emotional tone of his later life is sufficiently manifest. His doubt crisis was a purely emotional one. As we have seen, he says himself that it was not an act of the reason, but a feeling, quite opposed to his conscious way of thinking. His interpretation of

the Bible was not a product of his intellect, but of his heart, of the partly hidden stream of tendencies and impulses now broken through the barrier of intellectual restraints to take its course in the open light of consciousness. His mysticism and his appeal for universal love bear further evidence of heightened emotivity.

One final consideration throws further light on Tolstoy's life. Emotions demand expression, and his found vent not only through the immediate and most instinctive channels, but also through his writings. This is particularly suggestive with reference to the questions that arose with increasing insistence through his early years and culminated in his crisis. In his works, which up to the crisis were most frankly autobiographical, it is possible to trace the full course of these doubts and questionings. And their expression doubtless brought a certain amount of relief. He had no sympathetic personal listeners, but the other outlet served its purpose. The effect of the catharsis followed, and the tension of internal struggle was more or less relieved. But when the climax came, and the new ideas and feelings connected with the thought of death were added to the old affective centre, the former catharsis was inadequate, and full and complete confession followed (59b), together with the self-imposed injunctions that at least partly harmonized the conflict-

ing tendencies of his nature.

GUSTAV THEODOR FECHNER

The line of Fechner's antecedents follows through several generations, on both his father's and his mother's side, the path of the Lutheran faith. The unbroken series of country pastors, open-minded, cheerful and of humanistic tendencies, furnish the background of the earlier and the later part of Fechner's life. His father's liberality, rather extreme for one in his position, made him the subject of more or less criticism from the members of his parish, but, loyal to his convictions, he remained open to the growing liberality that prevailed outside of his little circle.

Our Fechner was born on the nineteenth of April, 1801, in the parish home at Grossfärchen. Five years later his father died and his mother was left with the care of the five children, of whom Theodor was the second eldest. Within the next half year the mother moved to the little town of Triebel, where the father was to have become pastor at the time, had he lived. Eduard and Theodor, the two sons, found a friendly welcome in the town of Ranis at the home of an uncle, also a pastor, where the spiritual influence of their own home was continued. The estate at Ranis was a valuable and extensive one, given over

to orchards and grain fields and meadows. The two boys took the greatest delight in all this; plants and animals, fields and forests, all possessed the greatest charm for them. For a time, as with most boys, young Fechner's interests centred in collections and classifications of specimens, but Nature's glowing pages had from the first even greater attractions for him than for the usual country boy. Fechner's nephew, Kuntze finds here the time when the poetic side of life made its first appeal to both boys.

At the age of thirteen Theodor went to the gymnasium at Sorau, and at sixteen to the University of Leipzig for the study of surgery and medicine. Here at Leipzig he spent the rest of his life. A rapidly growing city, it boasted the greatest breadth of culture, and always mirrored within its narrow limits the most recent advances in the world without. He grew more and more into his little circle of friends, and his visits to his mother and his sisters showed them the change that was taking place. He was constantly busied with the plans for his literary work, which at this time he expected to make his calling; his accustomed gaiety was turning to thoughtfulness. Financial difficulties, in the meantime, had made it necessary for him to undertake some tutoring, translating and other means of support. At the university he had early become an atheist, but chancing to read Oken's Naturphilosophie,

though really understanding but little of it at the time, he obtained the view-point of "a great all-embracing Weltanschauung", and was drawn into the new field where he found and delighted in the philosophy of Schelling. The first glimpse of a world-unity, all thrilling with life from the pebble to the highest living creature, of a great World-Soul back of all things, was opening to him. His poetic temperament gave the heartiest welcome to this glow of warmth in the growing chill of his former mechanistic beliefs. This new outlook was received with added zest, breaking in, as it did, upon the mental apathy which would be the only outcome - at least for such a spirit - of a course in medicine, then so dry and even extremely unscientific.

At the age of twenty-one Fechner passed his Doctor's examination, but instead of going on in medicine he turned to experimental physics. The Schelling-Oken background of his thought gave a speculative turn to his earlier work in this field, though later he dropped this, and assumed the more usual mechanistic view-point of physics.

During the first decade of his literary activity, Fechner's works touch upon rather divergent subjects. During the later part of this time he translated two French works: Thenard's six volume Text Book of Theoretical and Practical Chemistry, and Biot's Text Book of Experimental

Physics in five parts. In the years 1829-1834 he published a number of other original works in the field of Physics, and in 1833 he was appointed ordinarius in Physics at Leipzig.

Before going on, we must glance first at his humorous writings, which not only possess considerable value as literary works, but also serve as sign posts in the course of his life. His humor had always a satirical turn, directed now against the older natural philosophy, and again at times against the study of medicine. These lighter works had invariably the background of deeper thoughts.

In 1821, before he had completed his work at the university, he published, under his literary nom de plume, Dr. Mises, a fifty page pamphlet entitled, "Proof That the Moon is Made of Iodine", satirizing the then current belief in iodine as a panacea. His attitude towards the study of medicine is shown in a passage where he contrasts its methods with those of the Egyptians in the construction of the pyramids. In medicine the attempt is made to balance the whole structure on the tip, instead of laying first a wide basis in experience. He directs the most biting sarcasm against the tendency to erect a system upon the ground of general laws arrived at without long and painstaking induction. His satire is turned also in the same spirit against Oken.



This pamphlet was followed in the next year by a second, the "Panegyric on Current Medicine and Natural Philosophy", which still more bitterly ridiculed medicine. Every disease may be healed by more than one drug, and, on the other hand, every drug heals many diseases. The result, he says, will be that in the course of a few years, as medicine follows its present trend, medical texts will come to consist of but the one sentence, "All disease is healed by every medicament".

His next article of this nature was the "Means of Protection Against Cholera", in which cholera is treated not as a terrible guest, but as a beneficent ministrant, depopulating the country, and making room for all kinds of activities, showing the vanity of pride and wealth, and enriching the doctor and druggist. This sketch was rather a bold venture, in view of the recent outbreak of cholera, and the prevalent fear of a second outbreak.

In his "Stapelia Mixta", a little book named from a neatly colored flower with carrion-like odor, contains humorous discussions of various literary and aesthetic subjects. The contents, as "too unripe products of an earlier time", are wholly omitted from Fechner's later volume, "Little Writings of Dr. Mises", and they may be omitted here as of no special significance.

His "Comparative Anatomy of the Angels", written at the age of twenty-four, is a more serious work. In it he describes real, living angels, standing in the organic world a little higher than man. Here and there in this work we find the first hints of his later Nanna and Zend-Avesta, to which we shall turn in the proper place. The angels are the inhabitants of the sun. The earth is a subordinate and imperfect body as compared with the sun, and human forms, accordingly, are but imperfect. The sphere, the most beautiful of all forms, appears in the human body only in the eye, while the angels are all eye, free and independent, the perfect eye type. Since the eye is the organ of light, they live in light, which is their element, as air is man's. In man the eye is bounded and limited by the face, and needs the body for its service, but the angels need no body. Their communication is in the language of light and colors, to which mortals approach nearest in the eye language of love.

"In themselves the angels are transparent, yet they can give themselves color at will. That which an angel wishes to tell to another he paints upon his surface; the other sees the picture and knows what is in his soul". (70, p.62)

Later the planets are called angels:-

"Their sensation is the feeling of the general gravitation or *Schwerkraft*, which relates all bodies to each other. Gravitation unites immediately the most distant world spheres; the

angels sense the slightest change in the world structure". (70/ p. 62)

Their dancing is in the figures whose harmony is the harmony of the spheres. The planets, then, are angels, but less refined than the sun-dwellers.

The last writing of any importance under the name of Dr. Mises was the "Four Paradoxes", which was written much later (1846), after his "change", and which satirizes pure speculative thought. It shows not only better form than his earlier works of the kind, but also greater ripeness of thought. The first of the four paradoxes, entitled "The Shadow is Alive", shows the attitude of the writer.

"Why should not the shadow be alive? The things that distinguish it from other living creatures are for the greater part advantages. We live in three dimensions, it must satisfy itself with two. The third dimension, making one thick and stiff, is the worst kind of hindrance.

When we turn, the hair remains always behind and the nose before. But the shadow, if displeased with its hair, takes it back within itself and it is gone;.....now the arms grow long, again they are withdrawn into the body as in a pocket.....Now it goes upright along a wall, now it glides flat along the ground, now it breaks itself upon a corner.....

But, you object, to live one must exist; a shadow, however, is only an appearance, not only nothing, but less than nothing. The shadow, says Mises, answers man on the same grounds, it does not need to believe in the life of man. It may regard itself as soul, and man as merely its body, existing only to form a link between its own immaterial existence and the material world.....Why should not the shadow, as a soul, go about as well beside the body, as the soul we assume within its body?.....

The shadow could be conceived as saying perhaps; "Without the body I could not exist here; hence it exists for me, to fetter me in this veil of tears. Yet I hope not always to be obliged to carry about this heavy mass which hangs to my heels; not always to wander about in a world where there is more evil, - that is, more light, - than good. If I only strive to be as dark as possible, then hereafter I shall certainly be taken up into a higher realm of shadows, a kingdom of pure night, where, blessed, I shall wander with all good shadows, without body and without light. Evidently it is only my body which prevents me from seeing the great First Shadow in heaven, which created me and all other shadows. Like a partition, my body stands between Him and me, but it will soon fall." (71, p.33-4)

So the shadow is made to regard man in detail as his shadow and servant, existing only through him, and dying as a natural consequence when he - the shadow - died.

In Fechner's soul the humorist and philosopher warred with the scientist, and it is often difficult to tell how seriously his work is to be taken. The poetic and literary tendency was strong in him, constantly turning his gaze to the twilight realm of the imagination, where fact and fancy are so intimately mingled. In the Comparative Anatomy of the Angels and the Four Paradoxes we see how Fechner's mystic conception of the world dominates the word-play of Mises. The literary works with which we have introduced his more serious productions have shown his early dissatisfaction with medicine and his poetic nature, his later dissatisfaction with Oken's and Schelling's views, and his later mysticism. In art criticism he

possessed considerable ability, perhaps more, in fact, than in poetry, and his sympathies were all for naturalism, while conventionalism attracted his greatest ridicule.

Fechner, we recall, had begun lecturing on Physics in 1824, and in 1833 had been appointed ordinarius without salary at Leipzig. In this latter year he married a Miss Clara Polkmann. Their long wedded life, though childless, was a very happy one. For the four years following his appointment much of his time was given to the editing of Breitkopf and Härtel's Hauslexicon, which was necessitated by his scanty means and his new needs. In 1838 he turned to his more psychological studies in color sensation - the transition from his physical to his psychological interests and activities. He experimented constantly upon himself, straining and overworking his eyes until the crisis finally came which marked the turning point in his life

For this particularly interesting chapter in his life we find the material in an account from his own hand, with notes added by his wife. Fechner had overworked. His work on the Hauslexicon, together with his editorship of the Pharmaceutisches Centralblatt had demanded constant attention, and his own experimental work, not only had been generally fatiguing, but had also very decidedly injured

his vision. He began to be troubled with insomnia; at times he had periods of total inability for work; he had to give up all mathematical tasks, and his lectures became purely popular in nature. His eyesight, which had been exceptionally good, began to fail. He avoided light, was unable to read or write, and was obliged to retire to a room with blue-shaded windows. It was impossible for him to go out except with bandaged eyes, and the constant confinement in his room brought the deadliest tedium. He cared little to be read to, and was unable to continue his work, for his method had required constant writing and correcting, and he accomplished but little without his pen in hand. Hence dictation proved unsatisfactory. His health constantly declined until he seemed about to die, and wished to do so. His eyes pained him constantly, he was wholly without appetite, and for a time it seemed that if he did live he would be hopelessly blind and insane. One of the principal symptoms of his illness was his inability to control his thoughts.

"If a subject but occurred to me, my thoughts began constantly to turn about it, reverted incessantly to it, bored and burrowed into my brain.....until I had the feeling that my mind was irrevocably lost if I did not summon all my strength to save it". (70, p. 114)

Finally, in October, 1843, he began to suffer less from his head, and shortly after that there came a decided im-

provement in the condition of his eyes, and at the same time a great advance in general health.

"The sudden betterment came in a peculiar tense psychic state and he felt that he was called by God to do extraordinary things, and prepared therefor by his sufferings; that he had extraordinary psychical and physical powers. The whole world began to appear to him in a new light. Its riddle was revealed. The old being was gone and "this crisis seemed a new birth'. His former inclination to philosophical speculation had come to the foreground. It was a case of prophesying by convalescence. He turned away from physical investigation to that of general problems of the world". (69)

He had early believed that he was on the way to win the secret of the universe and its creation, science had failed him, and he had now returned to his old faith in insight as the key to all mysteries. The philosophical side of his nature held the stage from this time on.

After his recovery, instead of accepting a new position in Physics, he turned to philosophy, delivering, as a means of support, two lectures a week on the highest good, anthropology, psychophysics, aesthetics, and related subjects. We now turn to his philosophy.

"Although born under the reign of the great speculative systems, interest in them was steadily declining, so that during his mature years the philosophic point of view reached, perhaps its very lowest ebb in the German reaction to science and mechanism. This was one reason why the works that Fechner put his heart most into fell dead from the press. The philosophic spirit that always and everywhere presses on from

every sense and phenomenon to the transcendentally true, good and beautiful was perhaps never, in the modern world, so near extinction as in the three middle decades of the last century in the Fatherland, just when Fechner was most active. But he felt that the higher life of thought could be vindicated, not by any critique of the faculty of knowledge like Kant's, and still less by any a priori regimentation of the sciences like that of Hegel, Fechner's pet aversion, who, he said, "unlearned men to think", nor yet by turning away from the study of nature, but only by accepting everything the sciences could tell us and pressing through them to the soul that inheres in all things. Vogt, Büchner, Moleschott and even Hegel to Fechner stood for the night side over against what he called the day side of things. They courted darkness to develop their eyes, like owls. His pet word was not reason or idea, but insight, and it was this led him to hold that all things, even atoms, crystals, heavenly bodies, the earth, plants/ all are besouled if we see them truly from within. His animism thus makes all akin. All things express in different ways the same anima mundi or cosmic soul which is God, who came into existence with the world, is its conscience and will, and will die when and if the world dies, but which every process, object, species or new scientific thought and good deed helps to fuller and larger existence .....

Fechner had been a very diligent reader in his early years, when his interests were chiefly in physics, but his crisis left his eyes too weak to read much, although many friends helped him out, so that his new philosophic insights developed with only a general knowledge of Kant, Schelling, Fichte and Hegel. Kant was one pet abomination, whose invention of the Ding-an-sich he termed a fell plot to banish joy from the world. For Fechner epistemology did not exist. Things were just as they seemed to sense and the inductions based upon it, and there was nothing noumenal or transcendent within or behind them. To teach distrust of the senses or to call our experience with nature merely phenomenal is to make true knowledge impossible, to cheapen life and to bring discontent, unhappiness and disenchantment into the world. We meet and know



the ipsissimal God himself in the universe, not merely the effects of which he is the cause. In our daily experience with the world we are up against substance itself, not merely its attributes or modes. Matter and mind are two objectively different modes of immediate contact with reality. The psychic element, when it appears above the threshold in its own time and way as its stimulus increases logarithmically, is a real phenomenon. It is all there with nothing behind it. It is all its Wirklichkeit. The night view of life is that which designates all this beautiful world as only phenomenal, or as a passing subjective illusion, and puts reality more or less out of reach behind in some noumenal Ding-an-sich or transcendentality, both for cells and atoms. It sacrifices the Diesseits to a hellish Jenseits, which is a fetish, though made warp and woof of imagination. In fact, it means that science, though its growth is phenomenal, can never truly understand life or consciousness." (69)

To DR. Hall's review of Fechner's general philosophical position let us add a word on some of the more important of his philosophical works. The little Book of Life After Death, completed in 1835, five years before the crisis, best introduces these works. The first chapter begins with these words:

"Man lives upon the earth not once, but three times. His first stage of life is a continuous sleep; the second is an alternation between sleeping and waking; the third is an eternal waking. - In the first stage man lives alone in the darkness; in the second he lives with companions, near and among others, but detached and in a light which pictures for him the exterior; in the third his life is merged with that of other souls into the higher life of the Supreme Spirit, and he discerns the reality of ultimate things.....  
The passing from the first to the second stage

is called birth; the transition from the second to the third is called death. The way upon which we pass from the second to the third stage is not darker than that by which we reach the second from the first. The one leads to the outer, the other to the inner aspect of the world." (61, pp. 1-3)

What we call death but brings a second birth, not alone into the life of light and nature, of joys and sorrows, but into a higher life.

"The spirit will no longer wander over mountain and field, or be surrounded by the delights of spring, only to mourn that it all seems exterior to him; but, transcending earthly limitations, he will feel new strength and joy in growing. He will no longer struggle by persuasive words to produce a thought in others, but in the immediate influence of souls upon each other, no longer separated by the body, but united spiritually, he will experience the joy of creative thought; he will not outwardly appear to the loved ones left behind, but will dwell in their inmost souls, and think and act in and through them". (61, pp. 4-5)

As Christ lives in his followers, so the dead live on and grow in us, adding their strength and seeking perfection through our moral life.

"Each great dead soul extends itself into many and unites them in a spiritual organism. Thus, the dead converse with each other in us. They also fight the good and the bad in each other in us, causing st5ife in our souls". (69)

While we can never find the dead in objective form, they are always with us when we think of them; it is in our thoughts they live.

"The dead play upon our present life as upon a lute even when we think we play upon ourselves". (69)

The longing to meet after death those who are dear in life is fully satisfied. Those united here by the common bond of love at death become one; when the body drops away the consciousness of actual union comes.

"Freed from matter, the disembodied soul will be able to pervade the animal and vegetable world as a diffusive power and may even reach the planets. Possibly the earth itself will one day return its soul to the sun, and a sun life of all earthly creatures will begin. Each soul will have its share in a transcendent body, for we are now in the ground like seeds of a giant tree which intersects with all the other trees of the forest and yet maintains its identity. The divine comes to consciousness in us, and thus we never die." (69)

Visible fancies, if such there be, are degenerate spirits, fallen so low as to come within the range of our senses.

"The individual soul may mount on the collective souls of the dead as a sparrow is carried up on an eagle's back to heights it never could attain, but when there can fly off and even a little higher.....Just as attention moves about from point to point in the human body, so after death the soul moves around the world". (69)

The substance of this little book, as given above, is that of the third and last edition, appearing near the close of his life and bearing the definite mark of his whole philosophical thought. The first edition was published under the name of Dr. Mises and was in much lighter vein, but after his crisis it was revised and published under his own name.

In *The Highest Good*, the first important one of his philosophical productions, Fechner draws his whole moral system from a eudaemonistic principle - the search for the greatest happiness, not for the individual, but for all. Our wills are harmonized with God's in that God, too, will happiness for all.

After *The Highest Good*, the next important publication, under the name of Dr. Mises, was the *Four Paradoxes*, already referred to in connection with his lighter literary works. Two years later, in 1848, he published his *Nanna, or the Soul Life of Plants*, where we find his philosophy without the mingling of sophistry which makes the evaluation of his earlier works of this nature so difficult. His new mode of thought and his new views are analogous to those adopted at the time when Schelling first attracted him, but more inductive; he seeks to rise from observations of the real life of nature and the soul to general deeper truths, but now rather by the way of more exact scientific knowledge.

The two principle philosophical works to which we are now to turn, the *Nanna* and the *Zend-Avesta*, express the poetic side of Fechner's nature far better than any of the actual poems written during his literary activity. Seeking to relate the soul to nature, he reverts to a primitive *Weltanschauung*, like that of the old Greeks or of all

primitive minds. consciousness is not, as science is prone to believe, limited to the individual, fettered to a transient body, but is universal, common to all of Nature. Our souls are but a little part of the great World Soul which lives not only in every plant and animal, but also in that part of Nature which is apparently inanimate. In the Nanna he is concerned with the soul life of plants. Plants not only have part in the cosmic soul life, but have also individual souls themselves - quite of their own. Sensation and instinct form the greater part of the psychic life of plants, with only a dim kind of feeling. What grounds have we for denying souls to plants? Following down the animal scale from man to the lowest animals, we find beings less and less highly organized and differentiated, with a psychic life which departs constantly from that of man, until we finally arrive at those minute creatures which occupy the borderland between the plant and the animal kingdoms. Ascending from this point on the plant scale, we find an increase in organization and function along much the same line as the advance in the animal kingdom, though not so high a stage is attained. While nervous system and brain are lacking in even the highest plants, what right have we to assume that the nervous system is necessary to consciousness? Do not the many movements of plants, so perfect and so beautifully adapted to needs and

the desired result - or to their purpose - bespeak a degree of psychic life, though differing, to be sure, from ours? Their souls are diffused throughout their whole organisms and their reactions are slow, but nevertheless these reactions are more than mechanical; each plant has an individual soul.

In the scale of Nature there are no breaks - the whole is a vast unbroken chain, with consciousness increasing as we ascend; but back of every individual consciousness is the great cosmic soul. The basic idea of his besouling of plants is the correspondence between psychic and physical processes. Later, in the Zend-Avesta, he develops the idea that material processes, to become conscious, or self-conscious, must reach a certain intensity, must pass a threshold. In the Nanna he has shown that to a certain degree plants have an individual consciousness, but resting upon a higher and general one.

The Zend-Avesta, following the Nanna three years later in 1851, sums up his animism and represents the best of his mystical thought. "Zend-Avesta" signifies "living word", and Fechner's system is for him a new "living word", a philosophy of nature which can be reconciled with the fundamental doctrines of Christianity and satisfies religious needs, and at the same time does not conflict with natural science. The work begins with the words:

"I have previously maintained, in contradiction to the customary opinion, that plants are besouled. Now I maintain that the stars likewise are, with the difference only, that they are a higher type of besouled beings than we, while plants are lower". (68, p. 1)

The earth is "an exalted spiritual being, the bearer of human consciousness". (69) This conception would be much more readily understood, Fechner holds, if it were not for the deplorable error of "so strictly opposing to each other the organic and inorganic kingdoms,.....as if there were no bridge between them".(68, p. 14) We should regard man with his organized body as a living member of the whole earth organism, as a pillar in the earth temple. In the structure of the earth - its unity though composed of so many different materials -; in its development - its birth from the mother sphere, its subsequent reorganization and differentiation through inherent forces, and its complete evolution up to the present time -; and in innumerable processes that are constantly going on - its assimilation of materials, its movements, the rhythm of its pulse and its blood stream (the floods and winds) whose relative irregularity results only from the greater freedom of the earth as compared with man - in these and in many other processes we recognize the analogy between the earth organism and our own; then why should we deny the soul of the earth when all its physical prerequisites are admitted?

The earth is the mother of man. The ether sea of the heavens is inhabited by many other living beings - the stars or angels. Men, animals and plants upon the earth are the sensory and motor organs of the earth-soul, and in this are interrelated and fused to a higher self-conscious unity. (68, I, pp. 182-3) The earth as consciousness is thus possessed of a total sensorium, a total will and a total intellect, and stands midway between the individual soul of man and the universal soul of God. (195-6) In the living world, above man is the earth, beyond which stands the sun with its planets; above, a whole milky way of such suns and systems - system upon system, rising farther and farther above man's paltry mind, and all united in one vast all-embracing system - thus the whole world of systems is a unity, all sprung from the original One, and still bound together through this One; the physical world related to the body of God through a bond of law, the spiritual world to the soul of God through law. All spirits exist within his spirit, all bodies within his body. God is both His own creator and His own creature. The sun with its following of planets is a greater, fuller image of God than is man, or yet the earth, - with a greater range of activity, which subordinates even the earth itself with all men. When man thinks it is the higher spirit thinking through him and in him, and God through and



in the higher spirit. From God, who in himself is invisible, the world first came into existence as a visible material being. God as spirit is so closely bound up with his material world, and this in turn to God, that each exists only in and through the other. (p. 289)

Dr. Hall summarizes Fechner's theological views as follows:

"There is one God, eternal, infinite, omnipresent, omnipotent, omniscient, good, just, pitiful, through whom all that is arises and ceases, who lives and works in all energy, Nature and knowledge, who loves all things as a part of his self-love, who would bring everything to perfect goodness, and punishes the bad only to reform it. Men, animals and plants are alike God's children. They participate in his spirit, which he imparts to them all. Through this they are united to him in complete organic and genetic unity, although only man can attain knowledge of this." (69)

Fechner's position in regard to Christianity is clear from the following passages:

"I remain a Christian, and the thought of this work is not to loosen the bond that links Christ's followers, but rather to draw it closer and to bring more within its influence". (68, I, 314)

"Christ's teachings are sacred; more than his teachings, his life was sacred, and was one with no saving conception in a higher or more inclusive sense, than that brought into the world by Christ, and brought on to us in the Bible". (I, 327)

Dr. Hall writes further:

"Christ was God's child only in a higher degree than are plants, animals and other men, and he knew this, his inner divinity, better

than they. So he is the prime mediator, but neither he nor any of his deeds or thoughts are extra-, anti- or supra-natural. Indeed, nothing can be so as he is only the culmination and exemplar of the highest point yet reached by man. His life is only a series of natural psychic phenomena of a higher order. Thus it is wrong to conceive him as having been born or died, for he is only the eternal representative of the divine soul of the cosmos, which has here found its highest organ of expression in human consciousness. The eternal way of salvation is to penetrate to and love the inmost divine soul of things, to work with it, to help on the creative impulse, which we can now best do by helping our fellowmen and coming habitually to feel a supernal impulsion behind us in all that we do, think, or feel. Those who best do this advance the kingdom of God, which is the good, the true and the beautiful in both themselves and others. They constitute the church, now militant, but sure to be ultimately triumphant. The body of Christ consists of the souls of these saints in communion. Our membership in the church, baptism, and the sacrament of communion, rightly interpreted, may well remain the best symbols. Resurrection and eternal life are true in the sense that this life is only the seed in the dark, cold ground that must die to grow, blossom and bear fruit, for thus we make the larger, truer life beyond out of the material of experience in this - a life which depends upon how we order our mundane existence. When we attain it, we shall see face to face, know and be known with clairvoyant minds, and that state is heaven. God's ordinances and commands are designed to promote the greatest possible happiness of the individual and his fellow beings and to impel him to subordinate himself to the common weal. Evil always punishes and virtue always rewards itself (here he skirts on familiar Kantian grounds). These rewards and punishments are not commonly attained in this world and so virtue and happiness must unite in the Jenseits. Ultimately, however, the bad will perish and the good survive eternally. The good and the true are ultimately one and inseparable, and no knowledge can stand that is not helpful to good

(which suggest a pragmatic sanction for these beliefs). All that seems new is only the transformed revelation of the world (Nietzsche's eternal recurrence)" (69)

In the second main division, following the view point of the preceding part of the work, Fechner presents again the contents of his earlier Book of Life After Death, basing it upon wider principles and drawing more weighty consequences. The attempt is to bring the Jenseits of Christian belief within the field of scientific thought. The future life resembles the phenomenon of memory in the present life, except that in the future life the past will persist in clearer form than it actually possessed in experience, rather than less clearly, as in memory. The future life, however, will be not mere memory, but continued development. Moreover, at death the soul passes over to the memory realm of the higher spirit to meet with all the souls of all the past. Although each soul becomes at death a part of the universal soul, yet the unity and individuality of his own soul remain unaltered.

"The identical preservation of the ego in the Diesseits, notwithstanding all inner and outer change, depends upon the preservation of the causal interrelationship between our mental phenomena" (II, p. 352) "To deny the continuation of our soul in the Jenseits is nothing more than to deny the continued validity of causal relationship beyond the Diesseits. Nothing in the whole, world, however, gives evidence that causes ever cease to produce their appropriate effects" (II, p. 353)

Fechner remarks in his concluding section:

"Our doctrine (of the things of the heavens and of the future life) is nothing other than an attempt to assist, on scientific grounds, the beliefs of the Christian doctrine, to open to the understanding the shrine of its mysteries, to develop the germ which still lies dormant in it, and to combine its scattered fragments to a unity. Not, to be sure, that the development of our system found its point of departure in a conscious way in Christianity; but with astonishment we have observed that, after it had followed its course for some time, we believed quite independently, that which we believed quite won fresh from Nature is to be found in substance in the mysteries of the Christian doctrine". (II, p 405)

In regard to the method of philosophy, Fechner expressed himself as follows: "The first naturalchildish ideas are always those to which the most complete philosophy returns at last, only with a fully developed consciousness". (Kleine Schriften, p.207)

The child, in the presence of a new person, first gets an idea of the person as a whole, unembarrassed by details. From the facial expression, the voice, bearing and gesture, the child receives his first naive impression, and upon that basis makes his conscious or unconscious judgments, derives his sympathies or antipathies and the norm for the evaluation of definite actions. In just this way the philosopher should proceed. This, to a large extent, is true of Fechner's own philosophy, though he sought to place it upon firmer ground by wide observation and, through it, verification. Yet he admits that the conclusions

arrived at in the Zend-avesta cannot be proven.

Teleological considerations played a large part in Fechner's thought, without, however, forming the basis of his system. He did not stop at the goal or end, but sought beyond for the initial cause of the teleological processes - in other words, for God. Attempting to mediate between philosophy and science, his mind was well adapted to teleological thought, which serves idealism and naturalism equally well. He criticized Darwinism as tending too much toward indeterminateness. It would be an extremely unsatisfying building which an unskilled laborer would construct without plans from a mere pile of materials.

For the first thirteen years after his crisis, Fechner had turned almost entirely to philosophy; at the end of this time, during the years 1853-1864, his interests were mainly in scientific investigation, though always with a view to his philosophical thought, which motivated and colored all his later work.

Anthropology drew his attention for a number of years and he conducted long series of anthropological investigations. Since his first work in Physics he had been always impressed with the importance of mathematical accuracy in all such work as this that was now occupying him. The mathematical side of his thought played a peculiar role

in his inner life, contrasting so sharply with its other dominant tendencies.

In 1864 he published his work, Ueber die Physikalische und Philosophische Atomenlehre, the second edition of his Atomenlehre, of 1855. The work discusses much less the existence or non-existence of atoms than it does the question of the empirical as contrasted with the speculative view point of philosophy. Fechner's atoms are as difficult to comprehend sympathetically as is his Weltanschauung. They are bodies and yet points, not outside of, but within the world of space and time. Mathematical points are not realities; the atoms, however, are the ultimate realities by whose combinations all real things are produced.

"Atoms are not transcendental but ideal structures by which a metaphysical image of the world is freed from ethical, aesthetic and religious questions. Atoms have nothing to do, he says, with the materialistic point of view, but are dynamic or "plerotic", and there is nothing in the theory to effect what the Gemüth needs. The historical fact that atomism was associated with Democritus and Epicurus and is favored by the mechanistic theorists gave it the reputation of being atheistic. This he denies. In the chapters on the idea of matter, substance and force his view culminates. Atoms, then, are not matter but laws of force, and gravity and molecularity have an organic principle at their root. Toward this the newer vitalism now tends".

(69)

In this work Fechner acknowledged the indebtedness for his view point to Schelling and Hegel, and especially to Her-

bart, yet he insisted still that empirical philosophy can never rest upon a speculative foundation.

In the second principle work of this period, the Elements of Psychophysics, he admits again his indebtedness to Herbart, who first maintained the possibility of a mathematical treatment of psychological processes and relations, and who made early investigations in the field. Weber, of course, he gives full credit to, and refers to him as "the father of psychophysics". Psychophysics he understands as "an exact science of the functional relation between soul and body". The first part, which is largely empirical, deals with the fundamentals of psychophysics - psychic measurement, methods, laws, etc. - and the second treats in detail of psychophysics relations and is of more mathematical and philosophical interest. He proceeds from the physical series rather than the psychical because only the physical is subject to immediate measurement. Techner excluded at this time from the realm of psychophysics the higher psychic processes - the aesthetic feelings, will and thought.

Outer psychophysics is concerned with the relations of the psychic life to the world outside of the body, and inner psychophysics with the relation between individual body and soul, - or body and mind, for he draws here no close distinction between Geist and Seele.

Fechner's outer psychophysics rest upon the law, as stated by Weber, that absolute increase of sensation corresponds to like relative increase of stimulus. Fechner's formulation of the law was that the sensation is proportionate to the logarithm of the stimulus. Here his definite contribution to the science of Psychology was in his conception of the threshold, or of the point where "the awareness of a stimulus or of a change in stimulus begins or ends". In the part on inner psychophysics he discusses the seat of the soul, the significance of the threshold, sleep and waking, after images and memory images, hallucinations and dreams.

A review of this work would be wholly impossible, and quite unnecessary here, and with this mere hint at the contents we shall be obliged to leave it. Its relation to his philosophical thought is not far to seek. All processes of consciousness are immediately connected with psychophysical movements. These movements, as for instance those correlated with memory, are preserved forever, though they may not pass the threshold and come to consciousness. Though it cannot be proved, yet it may be that psychic elements survive death, through new physical elements entering into the psychophysical movements. Just as the many sensory impressions and all the contents of the mind are associated to form a unity in the individual mind, so the



world soul unifies all living creatures. So, running throughout the work, are the concepts of his animistic Weltanschauung. For him the spiritual and animistic must explain the mechanical, rather than the reverse. Fechner's new and lasting interest in psychophysics, from 1860, and especially after 1877, to the time of his death, is only an offshoot from the central interest that inspired the Zend-Avesta; in the earlier he sought the Diesseits from the Jenseits, and in the latter the Jenseits from the Diesseits. This is the aim of all his later works.

Fechner's interest in aesthetics and his work in the field gave a new turn to the subject. The former purely theoretical aesthetics he called aesthetics "von oben"; his own, based upon empirical and inductive knowledge, he called aesthetics "von unten". Observation and analytical study are needed - such study must be experimental. In his investigations, he made use of three methods. The first was that of choice - the subject being given a number of angles, crosses, etc., from which he was to choose the most beautiful. The second was the method of reproduction - the construction of forms according to the taste of the individual. The third was that of taking measurements of a great number of common articles actually in use - ornaments, boxes, books, paper, doors, and so on.

Certain of the more important principles stated in his *Vorschule der Aesthetik* are as follows. The quantitative factor enters into aesthetic enjoyment as well as the qualitative. There is a pleasure threshold which is passed usually by summation of impressions. That this summation may take place it is necessary that all the diverse factors involved in the form be in harmonious relation to each other. Fechner's emphasis on the associative factor is the distinguishing point in his aesthetics. Though Lotze had drawn the distinction before, Fechner gives it far greater significance than he.

In the midst of his work, Fechner was overtaken by his last illness. Most of his friends had died before him, but his home life had always been a very happy one, and his wife lived to attend him to the end. His last two years were probably the most contented and most comfortable of his life, though his eyes had troubled him and he was obliged to have several operations for cataract. Until two weeks before his death he kept regularly at work, and after a short illness died, on November 18th, 1887.

\* \* \*

One of the most significant considerations in a review of Fechner's life is his poetic tendency, which expressed itself far better in the general trend of his

thought than it did in any concrete form. His tastes were all for Nature, for the poetic side of Nature, and his extremely vivid imagination was the key to all her mysteries. Aside from his delight, as a boy, in Nature, this tendency found its first expression in his early attraction to the natural philosophies of Schelling and of Oken. It was this side of his nature, again, which in his later years gave birth to, or newly formulated, his animistic beliefs.

It was no more than natural that, with such inclinations, he reverted from the study of medicine as it was conducted then, and directed against it the bitter satire that he did. Whether he had a natural scientific bent or whether it had its birth under the adverse conditions of his medical studies, one cannot say, but at the end of this time, it appeared for the first when he turned to experimental physics. Now he began to evidence the disinclination to accept any conception or system which rested upon purely speculative grounds, and this feeling kept him in the field of inductive science during all the first part of his life. During this time the only evidence we have of the other, the philosophical side of his nature, is in his humorous writings, which, however, offer ample evidence of its presence, though it is plainly dominated by the scientific, inductive tendency. These two tendencies, one towards physical science and the other towards

seerdom, coexisted throughout, but he was essentially a philosopher and this side dominated the greater part of his life.

His crisis marked the turning point. With his eyesight gone, his health broken, unable to continue his work, confined to his room and almost constantly alone, his thoughts turned inward upon themselves. Questions arose that he could not answer, even in part, by his investigations. He was cut off from a life of incessant activity. Before he had kept his mind constantly employed in the solution of his definite problems, but now it was suddenly freed to wander wherever it would. At the same time he had drawn close to the threshold beyond which is the great Mystery. The result was an insistent desire to know these things, a "curiosity to examine the veil for every pinhole through which light from the beyond could come".(69) The motive for his former sympathy for Schelling and Oken now appeared in new form in a more mature Einstellung for the Jenseits. It is possible that a knowledge of biology would have partially satisfied his cravings. He had no children to turn his thoughts to the future of man on this earth. He had drawn near to the other world and he felt that he must know the mysteries that before had troubled him so little.

Two things came to his rescue - the Christian teach-

ings of his childhood, and the natural philosophies of Oken and Schelling, together with his own animistic tendency. His mind, now matured, could accept neither as it stood, but revised both - all doubtless nearly unconsciously - in the spirit of his scientific training, and combined them to a unitary system that satisfied his cravings.

\* \* \*

### CONCLUSIONS

The few remarks which are to conclude this paper should, perhaps, be introduced by a very brief review of some of the available literature on the subject of senescence. In regard to the physiological basis for mental decline there seems to be little agreement. Metschnikoff attributes it to the action of "devouring cells", or neuronophags. Minot explains death and old age on the basis of cytomorphosis, or progressive changes in the structure of the cells, involving, first, diminution of nuclear matter and corresponding increase of protoplasm, and, second, increased differentiation of the cells. Lorand specially emphasizes the part played by the ductless glands, especially the thyroid, and believes that senility is largely caused by chang-

es in its structure, with corresponding changes in function. The definite correlation which he assumes between the functioning of the thyroid and that of other organs of the body especially of the sexual organs and the kidneys, indicates for him the importance of moderate normal functioning of all parts of the body. Other theories explain it on the grounds of loss of the power of reproduction by the cells, of arterial changes, etc. These theories have but little to do with this study, for it is the mental correlates of these physiological changes that particularly concern us.

In 1896, Colin Scott made a questionnaire study, the object of which was to obtain "a general picture of the common notions on the subject of old age, death and the future life". The following paragraph is from an introductory section of the paper:

"With the beginning of the grand climacteric and the increase of age, the individual qualities per se assert themselves, with of course only a relatively greater strength. These qualities are, however, formed in the earlier periods of life and in contact with the great passions that underly them, the brain, as the highest work-product of assimilation, offering the means of irradiation. In these periods it has been necessary in the course of natural selection for the individual to be held under by the race. But with the age of descent he passes out to a certain extent from the protecting shadow of the phylogenetic life and becomes more ontogenetic and individual. Old age is a period of distinction. It is in line with this that it is a period of extremes among individuals". (87, p. 85)

Scott's returns showed emphatically that the idea of death arises usually not in connection with an individual consciousness, but at the motivation of altruistic feelings, with the personal feelings only in the background.

"The disinclination to quit life seems to be the greatest when the deep altruistic tendencies arising from the sexual life are at their strongest.....Old men who still desire to live, are those who have preserved the upper irradiations of the reproductive life in love and sympathy for their fellows. As the late Lord Shaftesbury said of himself, the ceasing of the opportunity to do good for others is the principle motive for fearing death in many old people of the best type". (87, p. 119)

The reader will recall the striking instance of the fear of death in the case of Tolstoy. It is, of course, wholly impossible to generalize from the one case in question.

Dr. Sanford writes concerning old age:

"The mental marks are too great fixity of habit in thought, too little power of origination, and too little courage for new undertakings, a tendency (partly enforced by the exclusion of the aged from participation in current affairs) to revert to the affairs of youth and early manhood, defective memory, defective powers of sustained effort. In many ways the old man is like the child (what the child has yet to acquire the old man has lost) and needs much the same sort of attention. A natural timidity and sometimes decreased powers of judgment, lead to suspiciousness and sensitiveness". (86, p. 448)

Dr. Russel, of the Willard State Hospital, N. Y., refers to the impairment of the special senses, especially those of sight and hearing, and also of the activity of the whole nervous system. Sensibility becomes less acute

and reaction is retarded. Retardation, which is the characteristic physiological manifestation of senility, appears also on the mental side is slowness of apprehension of sensory impressions, greater deliberation in judgment, and in hesitation and lack of energy in speech and action. There is failure of memory for recent events, proper names and the less frequently used nouns, whereas remote events persist with great vividness. This dependence upon the past results in a conservative attitude, stereotyped habits, and less and less interest in current events. With these changes there come frequently alterations in the ethical sense and moral tone, deterioration in manners, and loss of enthusiasm and self control.

An experimental study of senility by means of the reaction method, made by Ranschenburg and Balint, gave the following results. All reactions were decidedly retarded, especially simple judgment, discrimination and free association reactions, where the retardation was extremely marked. The percentage of errors was roughly proportionate to the retardation, and was very greatly in excess of the percentage for the normal adult. The quality of the free associations revealed an impoverishment of ideas. It is rather surprising to note that associations were almost invariably determined by the sense of the words rather than by rhythms or similarities of sound.



DeFursac gives as the fundamentals of "normal" senile dementia: (1) Impairment of attention and sluggishness of association of ideas; (2) Inaccurate and incomplete perception of the external world, resulting in illusions and disorientation of place; (3) Disorders of memory, involving disorientations of time, retrograde amnesia and pseudoreminiscences; (4) Impoverishment of ideas; (5) Loss of judgment; (6) Diminution of affectivity and morbid irritability, finding expression in indifference, outbursts of anger and occasional emotionalism; (7) Automatic character of the reactions. From this last point of view, senile dementias may be classified as either turbulent or apathetic. Those of the former group are either depressed or elated. Those of the apathetic group need no characterization further than the term used to designate the group. In the excited forms, sleep is often very greatly diminished, and the apathetic subjects show the opposite extreme of constant somnolence. The delusions which distinguish the extreme cases from the "normal" may take the form of ideas of persecution, melancholy ideas, or ideas of grandeur. In some cases complete disorientation and hallucinations may occur. The period of onset varies widely, as a result of various predisposing factors. "Heredity, the intoxications (alcoholism), overwork, violent and painful emotions, traumatisms, etc., by diminishing the vitality

of the cerebral cells render them more susceptible to the influence of senility". (78, p. 334) Only rarely does it occur before the age of sixty years, though it does appear in exceptional cases towards fifty or fifty-five years. "The onset follows some strong emotional shock, financial troubles, or a somatic affection". (78, p. 334)

While it is somewhat out of place to introduce the conclusions of such a study as this with the results of detailed experimental and clinical studies, yet it serves the purpose of giving us a general orientation and of permitting a more critical view of the material in hand. It should be borne in mind that only in the case of Swedenborg has this study been concerned with the extreme delusional form of senile dementia. The others, the writer believes, follow the usual course of mental decline, except that the process begins somewhat prematurely, as a result in each case of definite predisposing and immediate causes, especially heredity, overwork, emotional shock, or somatic affection.

The method pursued in this study has precluded the obtaining of precise data as to the mental functions, attention, association, etc., but certain facts do stand out and indicate in the rough the change that occurred. With these rough facts or indications in mind it is possible to obtain considerable insight into the psychic mechanism

and the modifications which it has undergone.

The fact which has been borne in emphatically upon the mind of the writer as perhaps the most significant factor in the change is related to the retrograde amnesia which is commonly considered one of the most characteristic marks of senility, but here it seems to have involved very much more than mere alterations of memory. The striking significance, for the later years of these men, of the old beliefs adopted in early youth appears in every case. Acquired during the early plastic years and accepted with the ready credulity of youth, they have persisted, many of them in the outer fringe of consciousness, until the beginning of decline, when they shift to the focal field and dominate the whole psychic activity. They form largely that part of mental life which Ames, while considering as marginally conscious, calls the subconscious, and defines as "the massive encircling milieu of custom, tradition, sympathies and tastes within which any kind of clear consciousness exists". (74, pp. 294-5)

There can be little doubt that, persisting as they do - though in many cases only in the margin of consciousness - some of these beliefs or attitudes, unless extremely puerile and insignificant, place their obvious stamp upon the mental products. But in cases where they fail to accord with the activities or methods of procedure of maturity,

which so often brings new points of view and a more critical attitude, in such cases they are excluded from the inner focal circle, and if they become effective it is only by imperceptibly modifying our envisagement of the contents of consciousness. In such cases, at the time when senescence begins, and these old persistent beliefs assert themselves, corresponding changes of judgment, of method, of general point of view appear, resulting in a mental status exceedingly like that which existed at the time when these beliefs first made their marks upon the mind. Whereas we have mentioned the alterations in judgment, method, etc., only after our reference to this re-adoption of old beliefs, it is without doubt true that the actual causal relation is the reverse - that the return to a bygone stage of mental development, to old and less critical methods and view points, tends to revive the actual contents of the youthful mind, and especially old superstitions and beliefs which possessed a decided emotional toning, or had in youth occupied a prominent place in mental life. What the actual mechanism of all this is, we cannot, of course, say.

In other cases, where the persistent beliefs do not conflict with those of later development, where they are not forced out in more mature years by new antagonistic or disharmonious factors, in other words, where they continue

to flow along smoothly with the whole stream of consciousness, no such manifest change occurs. So long as the mental life of maturity has been consonant with that of youth, the return to youth does not involve such an apparent change. But if older years have erected upon the modest foundations an elaborate structure whose style of architecture by its very excellence diverts the attention from the rude foundation, in such cases, when the years have in turn removed the superstructure, the bare groundwork stands out in striking contrast. Such cases have provided the material for this study.

The actual process of this change it is of course impossible to treat of in detail without experimental investigation or introspective material, but these cases seem to throw some light upon the general course of the decline. The tendency to depart from inductive procedure and to place greater reliance upon and derive greater satisfaction from a priori speculation seems in these cases to mark the beginning of the change. While the desire for logical consistency remains, the individual becomes more prone to accept as criteria his own feelings and beliefs. His thoughts turn more inward and seek their justification subjectively rather than objectively. The relative isolation from the world of activity, which is frequently a consequence of the approach of old age, gives further strength

to this tendency to "Introjektion".

This is still further enhanced, at least in many cases, by the knowledge of the approach of old age and death, whose terrors, for those of the type of Tolstoy, are so great, and exert so marked an influence upon the whole mental life. In such cases there is an irresistible tendency to dwell upon the idea of death and the Hereafter, a desire to "peer over the great threshold which they are approaching", to find, if there is none before, a satisfying faith to calm their fears and solve their questions. A marked somatic affection, as that of Swedenborg, or a decided decline in vitality and physical strength, as in the case of Tolstoy, coinciding with the beginning of the decline, tend, it would seem, to give still further strength to this feeling. The soul requires readjustment to new conditions and to new ideas and feelings, and if these be added to old feelings and ideas that are similar, the motivation is still greater. The large role that this factor played in the case of Tolstoy indicates the proportions that it may assume in the after life of an individual.

In the case of Fechner we have seen how an impairment of the special senses, especially of vision, coinciding with a decline in health, may turn the gaze inward and lead to introspection and reflection and speculation - isolated from the world, thoughts turn upon themselves. A-

bove all, this isolation leads to a desire for orientation, for relating oneself to the world, for finding a real undercurrent of life in all things, as appears in both Fechner and Tolstoy.

In cases, such as that of Comte, where the persistent beliefs or feelings are not directly associated with the emotional crisis with which the decline began, their expression, nevertheless, bears the marks of this crisis. As we have seen, not only did Comte's personal life show the effects of his connection with Mme. de Vaux, but these effects speak to the deafest ears from every page of his writings.

In all these cases the essentially affective tone of the later years is evident. Before the final loss of affectivity, there seems to come a period of greater affectivity, which should rather be spoken of as a time of less control, when old feelings, and the beliefs grounded in them, rise unrestrained and dominate thought, rather than submit to its rule. The discipline of calmer and more critical judgment is removed, and a deeper feeling-consciousness holds sway. It seems a reversion to a more primitive type, to an earlier stage of mentality. We should say, not with Scott, that in old age one passes "from the protecting shadow of the phylogenetic life and becomes more ontogenetic and individual", but rather that one de-

ascends the phyletic ladder - it is a dissolution downwards to a deeper stratum.

The theory of emotional retrogression, of this dissolution downwards in the emotions, seems to meet with an obstacle when we consider the extremely altruistic ideas of Comte and Tolstoy, and the beautiful sublimation of Comte's feelings towards Mme de Vaux. The law of retrogression would lead one to expect in any case that the intellectual side of mental life, being without doubt the latest acquisition, would be the first to decline. But even in the emotional life there are some suggestions of retrogression - especially in Tolstoy's crisis of fear at the thought of death. His moral code we have regarded, if we may use the phrase, as a salve to heal the wounds which his egoistic feelings and instincts had suffered. The egoistic feelings we regard as the dominant ones here. Doubtless if we had a more intimate knowledge of the personal life of these individuals, the emotional retrogression would likewise appear in the later part of the period.

In the case of Swedenborg we find the inwardly-directed attention to an exceptional degree, doubtless induced largely by his physiological peculiarities - his respiratory affection, his trances, etc. This, together with his hallucinations, and his reinforced spiritualistic beliefs, led him off into his fanciful world, placing him in



the class of delusional senile demented.

In a word, the points which this study has emphasized in the mind of the writer are, first, that senescence involves a decline of judgment, of the critical intellectual factors, and a re-adoption of old feelings and beliefs, with perhaps a complete change of mental procedure. Secondly, that attention tends to turn from without inwards, upon these very beliefs and feelings, and to give them the focal field, elaborating them, and in a certain type of mind tending to give them a consistent logical background. Thirdly, that in certain cases the thought, or rather the affective background of the thought, of death may come in with the greatest insistence, introducing new factors that tend to take form in the adoption of definite religious or philosophical beliefs which restore mental equilibrium. These beliefs with their consequent moral injunctions, one would conclude from this study, superimpose upon the essentially egoistic emotional basis certain simulacra of feelings of a decidedly altruistic nature.

These conclusions are only observations in the rough and the inner mechanism of the changing life remains as much of a problem as before. The aim of an introductory study such as this can be no more than to discover some of the significant features of mental decline in these concrete cases and to show what factors have had direct bearing on the process.

BIBLIOGRAPHY

## COMTE

1. Comte, A. Appeal to Conservatives. Trübner, London. 1889. 194 pp.
2. ----- Catechism of Positive Religion. Trans. by Congreve. Trubner, London, 1863. 315pp
3. ----- Early Essays on Social Philosophy. Routledge, London. 352 pp.
4. ----- System of Positive Polity. Trans. by Bridges, et al. Mathias, Paris. 1851. 4 Vols.
5. Croley, J. The Love Life of Auguste Comte. Modern Thinker, 2d ed., 1870. pp. 185-200.
6. Euken Philosophische Aufsätze, pp. 55-82. Reisland, Leipzig. 1887.
7. Fiske, J. Darwinism and Other Essays, pp. 131-142. Houghton, Mifflin, N.Y. 1900. 370 pp.
8. Harrison, F. (ed.) The New Calendar of Great Men. Macmillan, London. 1892. xviii + 644 pp.
9. ----- The Positivist Problem. Modern Thinker, 2d ed., 1870. pp. 49-72.
10. Ingram, J. Human Nature and Morals, according to Auguste Comte. Black, London, 1901. ix + 115 pp.
11. ----- Practical Morals. Black, London. 1904 x + 164 pp.
12. Levy-Bruhl, L. The Philosophy of Auguste Comte. Sonnenschein, London. 1903. xiv + 363 pp.
13. Littré, E. Auguste Comte et la Philosophie Positive. Bur. de la Phil. Pos., Paris. 1877. xi + 675p

14. Martineau, H. *The Positive Philosophy of Auguste Comte*. Kegan Paul, London. 1893. 2 Vols.
15. Martineau, J. *Essays, Reviews and Addresses*, pp. 331-380. Longmans, Green, London. 1901. 527p
16. Mill, J. *Auguste Comte and Positivism*. Kegan Paul, London. 1907. (5th ed.) 200 pp.
17. Morley *Auguste Comte*. In *Encyclopedia Britannica*.
18. Poey, A. *The Three Mental Crises of Auguste Comte Modern Thinker*. 2d ed., 1870. pp. 163-168.
19. Robinet, *Notice sur l' Oeuvre et sur la Vie d' Auguste Comte*. Libraire Richelieu, Paris. 1864. xvi + 658 pp.
20. Schoff, W. *A Neglected Chapter in the Life of Auguste Comte*. Pub. of Amer. Acad. Pol. and Soc. Sci., No. 186, Nov., 1896. pp. 59-76

## SWEDENBORG

21. Bigelow, J. *Emanuel Swedenborg, servus domini*. Putnam, N.Y. 1888. lxxxvi pp.
22. Emerson, R. *Representative Men*. Houghton Mifflin, N.Y. 1903. iv + 378 pp.
23. Hazeltine, M. *A Great Thinker*. The Rotch Trustees, Boston. 1909. 40 pp.
24. Herder, J. *Gesämmtliche Werke*, Vol. 30, pp. 110-125 Cotta, Stuttgart. 1829.
25. Ireland, W. *Through the Ivory Gate*, pp. 1-129. Putnam, N.Y. 1889, viii + 311 pp.
26. Janet, P. *Les Maitres de la Pensee Moderne*, pp. 305-331. Levy, Paris. 1888. 405 pp.
27. Kant, I. *Dreams of a Spirit Seer, Illustrated by Dreams of Metaphysics*. Macmillan, N.Y. 1900. xi + 161 pp.

28. Mahan, A. Modern Mystics Explained and Exposed. Jewett, Boston. 1855. xv + 466 pp.
29. Swedenborg, E. The Apocalypse Explained. Am. Swedenborg Printing and Publishing Society, N.Y. 1905. 6 Vols.
30. ----- The Apocalypse Revealed. Am. S. Pt'g. & Pub. S'y., N.Y. 1908. 2 Vols.
31. ----- Arcana Caelestia. Am. S. Pt'g. & Pub. S'y. N.Y. 1909. 6 Vols.
32. ----- Concerning Heaven and its Wonders and Concerning Hell. Gen. Con. of the New Jerusalem C'ch of U.S. N.Y., 1868. iv + 379 pp.
33. ----- Delights of Wisdom Concerning Conjugal Love. Allen, Boston. 1833. 438 pp.
34. ----- Economy of the Animal Kingdom. Carter, Boston. 1868. 2 Vols.
35. ----- Miscellaneous Theological Works. Am. S Pt'g & Pub. S'y, N.Y. 1871. 526 pp.
36. ----- The Soul, or Rational Psychology. New C'ch. B'd of Pub., N.Y. 1887. 526 pp.
37. Tafel, R. Documents Concerning the Life and Character of Emanuel Swedenborg. Swedish S'y, Brit. & Foreign. London. 1875. 3 Parts in 2 Vols.
38. ----- Emanuel Swedenborg as a Philosopher and Man of Science. Myers & Chandler, Chicago. 1867. ix + 333 pp.
39. Trobridge, G. Emanuel Swedenborg, His Life, Teachings and Influence. Warne, London. viii + 140p
40. White, B. and Barrett, B. Life and Writings of Emanuel Swedenborg. Colby, Portland. 1876. 272 pp.
41. Wilkinson, J. Emanuel Swedenborg; a Biography. Boston. 1849. 270 pp.

## TOLSTOY

42. Birukoff, P. Leo Tolstoy, his Life and Work. Heinemann, London. 1906. 2 Vols.
43. Crosby, E. Tolstoy and his Message. Funk & Wagnall N.Y., 1904. 93 pp.
44. Ellis, H. The New Spirit. Scott, London. 3rd ed., 1892. pp. 174-227.
45. Forbes, N. Tolstoy, a Lecture. Frowde, N.Y. 1912. 30 pp.
46. Freimark, H. Tolstoi als Charakter. Grenzfragen d. Nerven- u. Seelenlebens, Vol. 10, 1909. pp 1-33.
47. Giessler, W. Das Mitleid in der neueren Ethik. Kaemmerer, Halle. 1904. pp. 107-116.
48. Grotthuss, J. Probleme und Charakterköpfe. Greiner u. Pfeiffer, Stuttgart. 1897. pp. 333-359
49. Hall, B. (ed.) What Tolstoy Taught. Huebsch, N.Y. 1911. 275 pp.
50. Liomet, J. L' Evolution des Idees. Perrin, Paris. 1903. pp. 39-82.
51. Lloyd, J. Two Russian Reformers. Stanley Paul, London. 1908. pp. 221-331.
52. Maude, A. The Life of Tolstoy. Constable, London. 1908. 457 pp.
53. Merejkowski, D. Tolstoy as Man and Artist. Constable London. 1902. 310 pp.
54. More, P. Shelburne Essays, pp. 193-224. Putnam, N.Y. 1909.
55. Ossip-Lourie La Psychologie des Romanciers Russes. Alcan, Paris. 1905. pp. 197-306.
56. Redfern, P. Tolstoy, a Study. Fifield, London. 1907. 124 pp.

57. Rod, E. Les Idees Morales. Perrin, Paris. 3rd ed. 1892. pp. 235-261.
58. Strannik, I. La Pensee Russe contemporaine. Colin, Paris. 1903. pp. 175-220.
59. Tolstoy, L. Complete Works. Edited by N. H. Dole. 24 Vols. in 12. Crowell, N.Y. 1898-1899.
- (Of Tolstoy's works the following have proved particularly valuable in this study.)
- 59a. ----- Childhood, Boyhood, Youth. Part 10. x + 379 pp. (See above)
- 59b. ----- My Confession. Part 17, pp. 1-75.
- 59c. ----- My Religion. Part 17, pp. 76-278.
- 59d. ----- What is to be Done? Part 18, pp. 1-283.
- 59e. ----- Life. Part 18, pp. 286-441.
- 59f. ----- What is Art? Part 20, pp 1-184.
- 59g. ----- What is Religion? Part 20, pp. 207-254.

## FECHNER

60. Brasch, M. Leipziger Philosophen. Weigel, Leipzig. 1894. pp. 1-13.
61. Fechner, G. The Little Book of Life after Death. Little, Brown, Boston. 1904. xxviii + 108 pp. (Trans. by M. Wadsworth)
62. ----- Nanna, oder über das Seelenleben der Pflanzen. Voss, Hamburg. 1903. xvii + 303 pp.
63. ----- Elemente der Psychophysik. Breitkopf & Härtel, Leipzig. 1889. 2 Vols.

64. Fechner, G. Die Tagesansicht gegenüber der Nachtansicht. Breitkopf & Härtel, Leipzig. 1904. vi + 274 pp.
65. ----- Ueber das höchste Gut. Breitkopf & Härtel, Leipzig. 1846. 67 pp.
66. ----- Ueber die Seelenfrage. Voss, Hamburg. 1907. xvi + 239 pp.
67. ----- Vorschule der Aesthetik. Breitkopf & Härtel, Leipzig. 1897. viii + 319 pp.
68. ----- Zend-Avesta, oder über die Dinge des Himmels und des Jenseits. Voss, Hamburg. 1906. 2 Vols.
69. Hall, G. Founders of Modern Psychology. (Dr. Hall very kindly permitted the writer to make use of the proofs of this work. It is not yet in publication, however, so the complete reference cannot be given.)
70. Kuntze, J. Gustav Theodor Fechner (Dr. Mises), ein deutsches Gelehrtenleben. Breitkopf & Härtel, Leipzig. 1892. x + 361 pp.
71. Lasswitz, K. Gustav Theodor Fechner. Frommann, Stuttgart. 1896. viii + 207 pp.
72. Liebe, R. Fechners Metaphysik. Weicher, Leipzig. 1903. 89 pp.
73. Wundt, W. Gustav Theodor Fechner. Engelmann, Leipzig. 1901. 90 pp.

## GENERAL REFERENCES

74. Ames, E. The Psychology of Religious Experience. Houghton Mifflin, Boston. 1910. xii + 428 pp.
75. Coe, G. The Spiritual Life. Eaton & Mains, N.Y. 1900. 279 pp.

76. Colvin, S. The Psychological Necessity of Religion. *Am. Jour. Psy.*, 1902. Vol. 13, pp. 80-87.
77. Cutten, G. The Psychological Phenomena of Christianity. Scribners, N.Y. 1908, xviii + 497 pp.
78. De Fursac, J. Manual of Psychiatry. Wiley, N.Y. 1911. xvi + 484. Pp 333-340.
79. James, W. The Varieties of Religious Experience. Longmans, N.Y. 1902. xii + 534 pp.
80. Lorand, A. Old Age Deferred. Davis, Phila., 1911 xi + 473 pp.
81. Metchnikoff, E. The Prolongation of Life. Putnam, N.Y. 1907. xx + 343 pp.
82. Minot, C. The Problem of Age, Growth, and Death. Putnam, N.Y. 1908. xxii + 280 pp.
83. Ranschburg and Balint Ueber Quantitative und Qualitative Veränderungen...im Hohen Greisenalter. *Allgem. Zeitsch. für Psychiat.*, 1900. Vol. 57, No. 5, pp. 689-718.
84. Ribot, Th. The Psychology of the Emotions. Scribners, N.Y. 1911. xix + 455 pp.
85. Russell, W. Senility and Senile Dementia. *Am. Jour. Insan.* 1902, Vol. 58, No. 4, pp. 625-633.
86. Sanford, E. Mental Growth and Decay. *Am. Jour. Psy.* 1902. Vol. 13, No. 1. pp. 426-445.
87. Scott, C. Old Age and Death. *Am. Jour. Psy.* 1896. Vol. 8, No. 1. pp. 67-122.
88. Starbuck, E. The Psychology of Religion. Scribner, N.Y. 1899. xx + 423 pp.
89. Woolston, H. Religious Emotion. *Am. Jour. Psy.* 1902. Vol. 13, No. 1. pp. 62-79.