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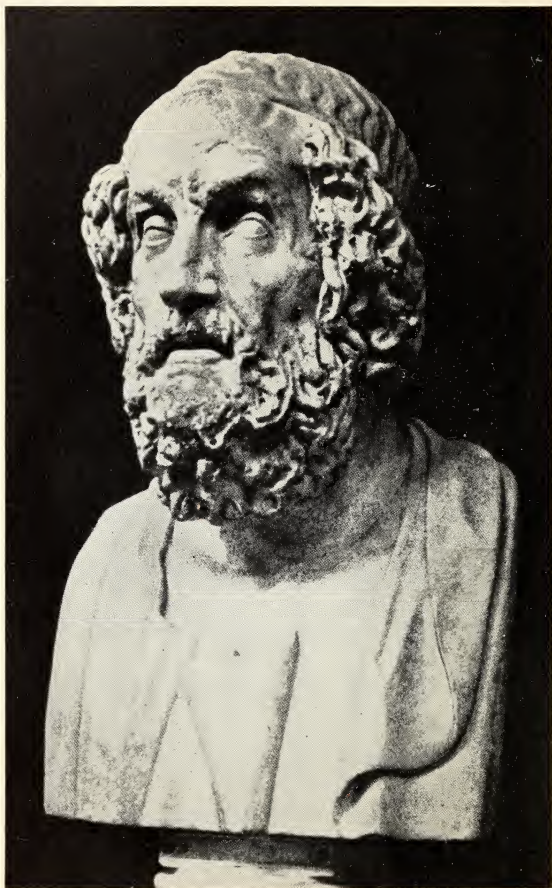
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FROM HOMER  
TO  
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FROM HOMER  
TO  
HELEN KELLER

*A Social and Educational Study of the Blind*

by

RICHARD SLAYTON FRENCH, Ph.D.  
Principal, California School for the Blind; Lec-  
turer in Education, University of California

NEW YORK, 1932  
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THESE PAGES ARE DEDICATED  
TO MY WIFE

*whose self-sacrificing devo-  
tion has made possible the  
completion of the studies  
here presented.*



## PREFACE

THE studies here presented in revised and enlarged form were first printed in two parts, in March, 1924, and February, 1925, under a title no longer fitting. Many friends and critics almost immediately urged publication of a new and revised edition in more suitable type and binding. After seeing how great a demand there was for the copies as originally printed, the writer became convinced that an enlarged and somewhat popularized edition was really in demand, and after a talk with Robert B. Irwin, Executive Director of the American Foundation for the Blind, New York City, he began the recasting and revision of materials with a view to early publication. Much in the earlier studies was found to have such permanent value that it has been included with only slight alteration. Other parts are wholly rewritten, with the addition of material unavailable at the first writing.

The earliest interest of the writer arose when, as a novice teacher of the blind in the year 1907, he turned for help, in vain, to the literature then extant in English and found chiefly controversial pamphlets and biographical studies, mostly "opinion" with little or no science, much of it interesting enough in its way but practically useless. Copies of Mell's *Encyklopädisches Handbuch des Blindenwesens* and Heller's *Studien zur Blindenpsychologie* brought the first gleams of light into a dark subject, and a premature ambition arose to make at least the substance of these great works available to readers of English. Eleven years passed, with experience in both a school for the blind and in public high schools, when the opportunity came to complete studies always kept in mind but temporarily side-

tracked by pressure of duties. Largely through the kindly encouragement of Alexis F. Lange, late Dean of the School of Education of the University of California, and William W. Kemp, present Dean, the studies took book form, and then their publication was made possible through the generous cooperation of Dr. William A. Caldwell, at that time Principal of the California School for the Deaf.

The present revision would not have been undertaken had it not been for the interest of certain officers of the American Foundation for the Blind. It is to them, therefore, and to Mr. Irwin in particular, that I am indebted for the opportunity of offering these studies to our profession and to such laymen as may be interested. I trust that in this new and less mutilated form they will prove more attractive.

In connection with the printing of this work I desire to express special thanks to Eber L. Palmer and to Margaret H. Jacobsen of the American Foundation for the Blind. They have been untiring in their efforts to produce a real book and whatever is excellent in the way of typography and make-up is due to their energy and good judgment.

I trust, also, that those who read will forgive passages that seem overfrank, even a bit harsh. It is my conviction that nothing is gained by mincing words or calling spades by more attractive names. My expression is as frank as my studies have been thorough and painstaking; and a glance at the Bibliography will show how exhaustive (and exhausting for the writer) my searches have been, a great part of them in German and French. Through twenty-four years I have worked over the available material, running down original sources, sometimes through the most obscure references, and checking every alleged fact by getting at the nearest possible approach to the most reliable source. Errors these studies undoubtedly contain but not the errors

of careless or uncritical acceptance of loosely written secondary sources or of failure to observe the canons of critical historical research. Facts have been stated rather baldly as facts, surmises as such, and reams of irrelevant material consigned to the waste-basket.

Most recently I have carefully gone through Herr Kretschmer's excellent *Geschichte des Blindenwesens* and, with such verifications as were possible, used the substance of some of his earlier chapters, together with my older sources, in Chapters I to III of Part I. Some more recent publications have so little influenced the work either in parts or as a whole, that I have felt their inclusion in the Bibliography unjustifiable, as it is strictly a Bibliography of works actually consulted and used—sometimes by way of rejection!—in the preparation of these studies.

I am vitally indebted to Dr. Edward E. Allen, Director Emeritus, Perkins Institution and Massachusetts School for the Blind, Watertown, Massachusetts, for constant encouragement and constructive criticism. I am similarly indebted to Dr. Olin H. Burritt, Principal, Pennsylvania Institution for the Instruction of the Blind, Overbrook, Pennsylvania. I have previously indicated my indebtedness to Dean William W. Kemp. Last but far from least, I owe much to my secretary, Mrs. Marie M. Clisham, for work on previous manuscripts, and to my wife for both the preparation of the original manuscript copies and the final preparation of the manuscript of this revision.

Just a word is due in regard to the title, *From Homer to Helen Keller*. Homer stands for the greatest achievement of the blind in the times antecedent to their systematic education. He stands for all those bards, many of them blind or blinded, creators of literature and makers of our language, who through ballads, always of great vigor and sometimes of surpassing beauty, have handed down to

us the glorious traditions of far-off heroic times. Miss Keller stands for the supreme achievement of education. The blind claim her, but the deaf can claim her, too, and modern education can claim her more than either—and all humanity claims her with the best claim of all. For she is the epitome of all that is best in humanity, all that is most spiritual; and all this through conscious aim and directed effort, through education in its best sense.

BERKELEY, CALIFORNIA

*January 15, 1932.*



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INTRODUCTION:

*DEFINITIONS AND GENERAL SURVEY*

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## INTRODUCTION :

### *Definitions and General Survey*

**T**HE blind rarely constitute more than a small fraction of one per cent of the total population of any country. Egypt is reported to exceed one per cent in blind population, and one or two other restricted areas may have as much as one per cent of sufficient visual disability to be called blind. The blind are, therefore, numerically inconsiderable, but they form a conspicuous element in any society and are, therefore, of a social importance wholly disproportionate to their actual numbers. This social importance is due chiefly to two factors, to the outstanding ability of a goodly company of distinguished blind persons on the one side and to the sympathetic appeal of the vast majority of blind or blinded persons on the other.

However, to generalize about the blind without first determining certain limits of usage of the terms *blind* and *blindness*, as far as those limits are pertinent to the study here undertaken, is as dangerous as are bold generalizations about any really heterogeneous group. There is first of all no "blind as a class," and to speak of the blind as such is to miss at the start one of the most fundamental characteristics of the group—their outstanding and sometimes overweening individualism. We must think, then, of blind individuals of all degrees and of small and generally transient societies of blind or partially blind persons, nearly always grouped by some compulsion rather than by choice, but never of vast homogeneous groupings. At best, "the blind as a class" may be a convenient collective term.

Second, with regard to the physical or physiological defect, there are all degrees of blindness from total blindness to nearly normal vision. The degree of blindness will in many cases be a major factor in determining the possibilities of intellectual attainment and the social and economic possibilities as well. In the third place, the age at which blindness begins is a determinant even more important than degree of visual defect. Those born blind either from hereditary defect or early infection and the early blinded—those losing their sight before it has had time to produce effects of importance on mentality or habits—are really very different from the Miltons, Fawcetts, or Pulitzers, or even those children and youths who lose their sight after years of visual experience of incalculable formative and educative value.

Lastly, the cause of blindness is exceedingly important: not the mere disease or accident producing the specific physiological result, but the deep and far-reaching results of that cause on the central nervous system, on the remaining senses, and on general health. Not submitting itself to tabular treatment so easily as the above but of great importance, nevertheless, is the nature and the speed of the onset of blindness—whether it came as from a sudden blow or explosion, putting out the light at once and forever, whether it came slowly and permitted slow readjustments, or whether, being congenital, it just *was* and the person in question never knew the readjustment problem but only one of adjustment and is, therefore, in a rather strict sense, “normally blind.”

Thus, considering the condition called *blindness* as indefinitely variant, we find three chief lines of differentiation, with the possible fourth factor entering to produce still further complications. The three major categories are

degree of blindness, age of becoming blind and the collateral effects of the cause of blindness. Measuring the varying degrees, not by percentages of totality but rather roughly by the extent of useful vision, and designating these degrees by the capital Roman letters, we have:

A. The totally blind—those unable to distinguish light from darkness by vision, whose eyes are removed or their functioning for visual purposes wholly destroyed.

B. Those able to distinguish light from darkness by vision, to whom the presence of objects may accordingly be made known by shadows or by direct or reflected light.

C. Those with sufficient vision to distinguish differences of light and shade, or even color, to the extent of perceiving the form and motion of objects, for whom very large print, as in headlines or titles, is legible.

D. Those to whom blindness implies little more than conspicuously defective vision, necessitating the supplementing of visual experience with special aids other than the merely corrective, such as eye-glasses.

E. The color-blind, whose blindness simply produces certain esthetic deprivations, perhaps some embarrassment, and exclusion from a few—some of them dangerous—trades or occupations.

Using the Arabic numerals, we may distinguish as educationally and socially significant the ages of becoming blind, as follows:

1. The born-blind or early blinded—those who have never had useful visual experience.

2. Those with a dim residual knowledge of the

phenomena of light and color, in whose mental experience visual imagery may still play a part.

3. Those in whose education and general mental development sight has played an important part, but whose blindness began at an age so early as seriously to affect mental development, notably those cut off in early adolescence from the normal means of learning and of expanding experience.

4. Those to whom blindness has come in comparative maturity, with little effect, therefore, on general development but with a train of readjustment problems of the utmost seriousness.

5. Those becoming blind in late middle life or old age, with readjustment problems of a serious nature but whose reeducation cannot have much more than a personal significance.

It is obvious that these two series present almost limitless possibilities of combination. Thus one may become totally blind (A) in old age (5), or one may have only a slight degree of blindness (D) from birth (1) and so on. The one factor cannot be separated from the other in any given case, which is to say that a person called *blind* must be blind in a certain degree and must have been born blind or become blind at one or another age, but what a difference between being born totally blind, for instance, and losing sight totally at seventy-five! What a difference between going all through life with even the degree of visual disability expressed as "slight" and having perfect sight to sixty, then losing it gradually over a period of years! Yet the casual citizen is inclined to class all the blind together.

With regard to the collateral effects of the cause of blind-

ness, using the small Roman letters, we may distinguish those which:

a. Seriously impair general health and vigor, as in the degenerative diseases and some acute diseases producing degenerative effects.

b. Cause a very decided dulling of hearing and even some impairing of smell and taste.

c. Affect adversely the general mentality, producing varying degrees of feeble-mindedness or special mental disabilities.

d. Result in tics or in general nervousness of a pathological type.

e. Produce any combination of the above, sometimes all four together; for example, general enfeeblement, hardness of hearing, mental disability and pathological nervousness.

In the last category there have not been included certain external sequelae which may in an individual case be very important; for instance, the bleared eyes that are so repulsive in some cases of conjunctivitis. These outward marks of blindness or of the causes of blindness may be so important, especially in social relationships, as largely to determine the success or failure of a given person, undertaking salesmanship, for instance, but they are not readily classified and their treatment is too technical for this study.

It is to be noted further that the last series makes almost unlimited combinations with the two former. Taking A2 and b, we have, let us say, a boy of fourteen totally blind, with some formative visual experience in his earliest years, his hearing badly impaired from the same cause that produced his blindness. An extreme case would be A2bc, totally blind from early childhood, partially deaf and

feeble-minded—and this is not such an extremely rare case. Remembering that our second and third series permit of great variation within each given class, and that our first series permits of variation in all but A, and further that the possible combinations taking all three series together reach almost to mathematical infinity, one begins to wonder what constitutes *blindness*. A few moments of contemplation even of the mathematical “permutations and combinations” will preclude the possibility of ever treating any blind person and especially any blind or partially blind child as *just blind*.

In the following discussions only the more serious degrees of visual defect will be considered, and for the greater part those becoming blind late in life will be excluded. Color blindness, and the loss of vision in one eye only, will obviously not enter into this study. In fact, the *norm* from which most of the discussion will start and to which it will constantly recur will be that of total blindness from birth, for that is the kind of blindness that the word itself connotes, the kind of blindness generally discussed in psychological monographs and treatises, and the kind of blindness which, though incidentally rather rare, is to both the lay and the expert mind most vitally interesting.

With these distinctions and differentiations in mind, we may safely venture a few generalizations on the effects of blindness, first with regard to the nervous system and general mentality.

The blind person is cut off from the larger part of sense impressions which in the normal person are predominantly visual. There is no need to quibble over percentages. The totality of sense impressions is so very large and in adult life these impressions are themselves so colored by experience that it is a vain effort to try to segre-

gate and classify them with a view to ascertaining percentages. Some psychologists have tried to estimate the ratio of visual impressions to the totality of sense life, and in any estimate this ratio must be very large. The fact holds that in the conscious and subconscious life of the normal person there is an infinitude of impressions coming all through the hours of light, natural or artificial, by means of the eyes—direct impressions of light and shadow and of color, secondary or inferred impressions of form, distance, movement, emotion, and so on; and, in sleep, the dreams are predominantly visual.

The greatest deprivation of the blind, of which the early blinded are only indirectly aware but to which those becoming blind at more mature ages are keenly alive, lies just in this realm of the copious and varied impressions of vision. Let one but glance out of the window on the rich beauty of the landscape, the houses and trees and gardens, the undulating hills just turning green, the blue bay, and the great city with its commerce, the hum of which is too distant to be heard. Let him imagine all these gone but for limited sounds and immediate tactual impressions, and he will realize in a very vivid way the meaning of the loss of sight in the world of sense impressions.

Sight is, too, the chief sense of *orientation* and to be deprived of it is to be lost in the objective world. If one will try to think of finding his way blinded and without a guide over the rough paths to the dimly seen, distant mountain peak, there will be borne upon his mind with irresistible force the meaning of almost complete loss of the power of orientation that would result from the destruction of sight. A vivid realization of the meaning of this power comes to one suddenly losing his vision, as in the case of the blind story-writer and poet, Clarence Hawkes.

A third important quality of the sense impressions re-

ceived through sight is that of clarity. Visual impressions are in their very physiological nature clean-cut, as compared with the impressions of sound and touch. Vision, too, gives a larger conception of wholes, and as Dr. Thomas H. Haines of the Cornell University Clinic points out, visual imagery is extremely important in the synthesizing process involved in organizing experience.

The common opinion that the loss of one sense renders the others keener has now rather definitely been put to rest. Fairly conclusive experiments and the reliable testimony of blind persons all tend toward the reverse conclusion, namely, that the loss of sight is accompanied by more or less impairment of the remaining senses and not by increased sensitivity. One cannot argue a priori either way. There is actual need of a great deal more of strictly scientific psychological investigation in regard not only to distinctions of differences but also to absolute threshold of perception, before conclusions approaching finality can be announced. Opinion in the past has gone to the limit of attributing to the blind the power to distinguish colors by touch. Any apparent power to work such a miracle must be due in a given case either to differences in texture because of the use of different dyes, to slight differences in the absorption of heat, or to a hoax—probably the latter. Many supposedly blind have considerable sight and are willing enough at times to take advantage of the credulity of the public because of a petty personal vanity or from a sense of humor.

It has been suggested that, because of increased sense acuteness, the blind would make superior tasters in coffee-, tea- and spice-packing establishments. A trial in one of the great importing houses demonstrated that while the blind may become equal to seeing tasters, the process is one of education, not of increased acuteness. Data regarding the



trial of blind tasters were secured directly from members of the firm by the writer. The testimony of 1908 was to the effect that two blind persons had been taken on trial and were not proving satisfactory; seeing tasters were very superior, the best being an inveterate "boozer" and smoker, the implication being that not acuteness of the senses of smell and taste, but their education, was the most important factor. After a lapse of over ten years, another member of the firm reported (1919) that the blind tasters had "made good" and that, he thought, one factor of their success lay in their complete reliance on taste and smell, with no effort to judge quality by sight, aroma being the quality par excellence whereby coffee and tea must be judged.

Those educators who credit the blind with increased keenness of sense perception, whether in the perception of *differences* or in the lowering of *absolute threshold*, undoubtedly follow an unfounded tradition. The educator of the future will count not on greater sensitivity in his charges but upon lessened acuteness of the remaining senses as well as the impoverishment of sense impressions as a whole.

In the balancing of accounts we fail once more to record a gain in a hypothetical sixth—or, some will have it—seventh sense. By this is meant the power to *sense* such objects as posts, trees, closed doors, and the like, on approaching them. The popular mind dearly loves mystery; but this power, which actually does exist, is not at all mysterious and yields itself readily to rational explanation. It is possessed by many persons of normal sense endowment, who experience, when advancing in total darkness, a feeling of nearness of objects. This power is explained as being due (1) to the perception of slight differences of sound, or (2) to the feeling of a return rush of air, especially on the sensitive skin of the face, or possibly (3) to the percep-

tion of certain radiations, notably heat waves. This awareness is conceivably due to the operation of different causes or combinations of causes under different circumstances.

Though the sixth sense and the belief in increased acuteness of the senses are thus disposed of, there still remains the question, "Is there after all no *compensation* in the sense life for the loss or absence of sight, no vicariate of the senses?" And the answer to this question is affirmative, being based on the fact of the prodigality of Nature in the sense endowment of the human child. There are two chief phases of sense life in which some compensation is made to the blind for the impairment or absence of sight; the first, in what may be termed "survivals of the more primitive senses," recalling in some respects the sense life of lower organisms; the second, in an *increased attentiveness to the data of the remaining senses*, causing their seeming poverty to give place to a certain riches through attention to their immediate impressions, but even more through new interpretations which are partly the result of experience. The first is well illustrated in the ability of the totally blind to follow a trail or path. The sighted person can do the same thing in total darkness; and one remarkable feature of the phenomenon is that he can accomplish his end much better if he entirely ceases to attempt to use his eyes. To the observant teacher of the blind there is apparent, often in startling instances, what may not inappropriately be termed a "recrudescence" of the primitive sense life.

This naturally merges into the second factor in compensation, that of increased attention to the impressions of the remaining senses. An example of this latter may be seen in the ability of the blind to tell the materials out of which a new house is being built. Anyone familiar with building materials can tell by smell the difference between pine and oak; fresh mortar has, too, its characteristic

odor. Here again there is no mystery in what is open to all; the seeing person has a surer guide in vision and so neglects what the inferior senses offer him and is guided but little by them. No definite limit can be set to the powers of the senses because the factor of *educated attention* has no such limit. What the blind person lacks, first, in totality of impressions and, secondly, in the acuteness of those impressions that he has, he may make good to a very great extent by attentiveness, conscious or unconscious, to what is given. This applies particularly to the sounds, the interpretation of which is of so much more vital importance to the blind person than to one who can rely on sight. Thus, intonation, tricks of speech, and the like, become exceedingly meaningful; the *well* and the *sick* voice betray to the blind man the physical condition of one talking to him; and so on through a vast number of gradations, insignificant, because practically useless, to the one with sight. There is increased significance, too, in the texture of a glove, the feel of a handshake, and in personal odors to one who dwells in darkness and must from these very things build up or reconstruct his objective world and his world of social life.

With the chief means of orientation gone, the blind find themselves in a bewildering world. The hesitation and timidity so marked in those becoming blind in adult life, but present to a greater or lesser degree in all blind persons, are the direct result of the loss or absence of the sense of orientation. The confidence that the eyes give may be tested by anyone very simply by trying to walk blindfolded and then by carefully observing what he does when walking with the eyes open. He will note at once that the eyes are used chiefly to see ahead and that he pays very little attention indeed to the actual placing of his feet: the latter process has become almost wholly a matter of muscu-

lar reflexes. Nervous timidity may become excessive in the presence of some sudden noise, like that of the passage of a train, and is likely to appear at any moment when a blind person is confronted with an untried or novel situation. This timidity may well be conceived of as carrying over into the mental life, though its presence is likely to be hidden under a bold front of conventional usage, particularly verbal usage. Though the blind become really at ease in familiar surroundings, that ease is more marked always in the presence of other persons. I have frequently observed the sudden starting of a blind person, when, on reaching out his hand, he found emptiness instead of a supposedly near companion. This and similar data go to confirm the view that the timidity of the blind is due very largely to the marked absence of the orienting faculty.

There is in the blind a strong inclination toward an extreme sedentary habit of life. This is partly a direct result of their physical condition. It gives rise in turn to what may be called a sedentary habit of thinking and a sedentary outlook on life. It is much more comfortable to sit, bent over, by the steam radiator than it is to venture out into the world of frost where one may trip and fall. The cozy porch and deep shade are more seductive in summer than the tangled wildwood, with its brambles and briars. The comfortable, inactive existence, where one is cared for and forgets care, is more luring than the rush and noise and struggle of competitive commercial life. Why risk a venture when no venture is demanded?

Dr. Haines, in his study of the children of the Ohio State School, states the case as follows: "Because they lack the guidance of visual control of their movement, the blind person is less resourceful in dealing with his environment. To a certain extent he lacks initiative as compared with the seeing. By virtue of his sense deficiency, the environ-

ment makes fewer appeals to the activity of the blind child, than to a no more talented seeing child. The blind child sits and reads or talks while the seeing child is trying out his powers, physical and mental, upon problems that have been thrust upon him."

Sedentary life leads to introspection, and introspection is aided by language. Language the blind have, fully developed in all its syntactical forms, with a copious vocabulary, lacking for the most part in concrete values, in significant denotations. Language may, as the instrument of introspection, become the curse of the blind. Contemplation, as the antidote of a too objective life amidst the stirring realities of a commercialized world, is a practice too little indulged in in our times; but that kind of contemplation which springs from a life of inactivity can be only morbid.

In the blind there is frequently a type of mental congestion, the correlative of a physical congestion, growing out of inactivity and fostered by it. In the young adult, despair may result, and insanity, even suicide, may follow, to say nothing of the train of bad habits that spring up. Rarely do we find in the blind child that "wild beating at the bars," displayed by the child Helen Keller. Such a manifestation is a sign of hope and may well be the precursor of a rich mental and physical development because denotative of *activity* that needs only to be controlled and directed. The introspective blind need to be spurred to activity; they need, too, the corrective of concreteness, of objectivity. With them helplessness frequently leads to hopelessness. An example is offered by the case of Clarence Hawkes. Speaking of his boyish despair, he says that, when once he was away from his mother, his desire was to creep away into a dark corner and die. He was fully determined to be brought back home in a pine box. The reaction brought by the new interests and the companionships formed in the

Perkins Institution and Massachusetts School for the Blind in Boston entirely transformed the outlook of the lad.

On the whole, the changed mental and physical states due to blindness may lead to a lowered moral tone, especially where the untrained blind are left in free and unrestrained interassociation. The popular belief that the blind have a tendency toward moral speculation is as little founded on fact as the belief that the blind can tell color by touch. While the extreme view that the blind as a class incline to immoral practices has no foundation in fact, and while it may safely be stated that the morality of the average cultivated blind person is as high as that of his seeing compeer, *ceteris paribus*, it is true that the sedentary habit and general resultant congestion of mind and body, in all persons, blind and seeing, *tend* toward immoral practices, more particularly the "solitary vice" and sexual immorality. Craving for stimulation may also enter as an important factor and doubtless does lead to numerous petty indulgences that become morally important as fixed habits. Social environment is always an important factor, and particularly baneful is the frequently expressed opinion that the blind ought to be allowed to get, in the way of the comforts that petty vices bring, some compensation for the deprivations of their darkened lives. After all, the most important point in the moral life of the blind is that incentive is generally lacking. Again, morality is *social* and the blind person is perforce largely solitary. Morality does not grow out of thinking about it but out of practicing it, putting it into action.

The worst curse of the world of darkness is inactivity, coupled with solitariness, a feeling of aloneness in the world, that clutches at anything that offers either creature comfort or stimulation. Similar factors may combine in the normally endowed person to produce similar results.

The blind are not any more innately immoral than are other people, but causes operative in the production of immorality are more largely present, sometimes with disastrous consequences. On one point we must be very careful before trusting to generalizations, namely, where the cause of blindness may operate toward moral perversion. In such cases the immorality is no more a result of blindness than its cause: it is simply a correlate with blindness and as much a physiological defect as the blindness itself.

Bad habits of mind are even worse than physical vices and spring largely from the same causes. Craving for stimulation is as much the occasioning cause for the telling of "spicy" stories as it is for correlated physical vices. General hardness of character and moral imperviousness may, on the other hand, grow out of a feeling of economic hopelessness. A contemplation of repeated rebuffs is likely to drive the victim to the extreme of *laissez-faire*, or the type of mind being different, to that cringing servility that goes with beggary. The cynicism of many uncultured adult blind persons is a sin of society, not of the blind; and its cure lies in the cultivation of that self-respect which grows out of normal success in the normal activities of life.

Ungraciousness in receiving favors and ingratitude in acknowledging them are also sins of society rather than of the blind. When one is so constantly the recipient of small favors, as well as large, he cannot be expected to receive them all with gracious courtliness of speech and manner; the fault lies with the giver who expects such return for what is often an officious interference with the blind man's right to help himself. An attitude, expressed or implied, of lofty condescension on the part of the bestower of favors may meet with the verbal expression of thanks, but the self-respect of the blind person compels him inwardly at least to fortify his soul against subserviency. What appears

as ingratitude or ungraciousness is, often enough, a crudely expressed self-defense. Among the cultured blind, a feeling of deep gratitude exists toward those who have helped and are helping them toward a more complete self-realization in a world of recognized equals. Toward all other types of educators—and impostors—ingratitude is a just due.

A hopeful moral reaction in the blind prior to a more or less complete process of education or *reeducation* is not to be expected. Only in the case of exceptionally gifted natures is this reaction otherwise possible. Stimulation toward great and good ends comes from without the individual soul. With the blind, and especially with the young blind, the right stimulus finds as ready a response as with normally endowed individuals. Indeed, much of the tragedy of the so-called education of the blind is due to a *too ready response* to conceptions and plans that are chimerical, and to others that are unrealizable without both a complete reconstruction of the education of the blind and as complete a revolution of public opinion and public attitude.

In this connection it must always be remembered that in the endowment of the instincts blind persons differ scarcely at all from those that see. The ripening of passions and the development of powers call for active expression, and the denial of activity in one line enforces a release in another. To a very large extent the requisite normal activity is denied the blind in one way or another, and the resultant moral reaction is a thing not pleasant to contemplate. The wonder is that one meets so much sweetness and graciousness of character among them; so many fine manly and womanly qualities, in a world that must at times appear as one great big, "You can't do it!"

Concomitant with the mental and moral results of blindness, and inseparably linked to them in either causal or



parallel relationship, are certain physical results due either to the blindness or to the cause of the blindness. Of these the most commonly observed and widespread is a striking physical lassitude, a greatly lowered vitality and decreased resistance to disease, shown in the rather large percentage of tubercular cases as well as in the very frequent anemia. These cases are doubtless much more common among the uneducated than among the cultured blind, but statistics are very hard to obtain from places and countries where the blind exist in considerable numbers in an uneducated state. In addition to the above, it has been stated that few of the early blinded reach mature middle age; almost all old blind people have become blind at a rather advanced age. This early decline and death points unmistakably to a greatly lowered physical vigor.

Dr. Harvey Carr, Chairman of the Department of Psychology at the University of Chicago, in his maze experiments with blinded rats, found that "Blind rats are rather difficult to keep in good physical condition." They are more inclined than the normal to sluggishness in behavior; their appetites are poor; their hair dry and rough, and their flesh flabby and cold to the touch. Breakdown is common, followed by a refusal to make any trial of the maze, even after a complete mastery of the maze in their blinded condition. Recovery from breakdown is rare.

Dr. Carr suggests that "Decreased activity and vitality resulting from loss of vision may interact . . ."; that lack of exercise lowers the vital tonus, and lowered vitality produces in turn sluggish behavior; further, that light exerts a tonic and stimulative effect upon activity, while on the other hand the removal of the eyeballs is to be regarded as a disturbing or distracting factor.

Physical awkwardness is perhaps best attributed directly to the lack of sight; it is doubtless cultivated by frequent

stumbling and falling. A shambling gait and bad carriage are very common among the uneducated blind. A blind person of correct gait and good carriage is none too common even among the educated; usually he either has some vision left or became blind at a mature age, or else has been exceptionally well trained. Erect head, squared shoulders, and a correct method of progressing should not seem out of place in a blind person, yet no doubt their absence is due in great measure to the fact that they are not expected of the blind. Thus social environment conspires with direct physical causes to produce a by-no-means-necessary result.

Physical markings such as enlarged or protruding eyeballs, drooping and inflamed lids, and watery eyes, frequently are found, and are the cause of a natural repulsion in the seeing. Surgical and medical remedies alone apply in such cases. The same may be said of all involuntary movements of the eyes.

There are a number of common physical manifestations of nervousness and of a desire for stimulation which one superintendent of a school for the blind has named "blindisms." The most frequently noted are an inane swaying of the head, often accompanied by a vacant and meaningless smile; rubbing the eyes or even gouging them for considerable periods of time; shaking the hands before the eyes (in the case of those with some vision); nervously twitching the hands or other parts of the body; rubbing the hands together; swaying or reeling the body; and a restless pacing back and forth in a limited area. The list might be considerably increased, but the above will serve to indicate the type of physical habit which arises from the desire for stimulation or from such innervation as cannot find a healthy outlet in unrepulsive forms of physical

activity. The cure is to a great measure indicated in the cause.

A habit partly of physical origin, but springing also from mental curiosity, is that of constantly running the hands over objects, a habit that may serve useful educational ends when directed, but which is uncouth and repulsive when allowed to take an unchecked course. This exploring habit is so likely to degenerate into a mere display of nervousness and to serve no useful end, that it calls for educative direction from the beginning in the life of blind children. When applied to strange persons it is likely to produce loathing; and, applied to unknown objects in nature or even in artificial surroundings, it may become physically dangerous.

The social results of blindness are not so much the outgrowth of the condition itself as of the attitude of the families of blind persons and of the public. So little do parents know how to treat their own blind children that school authorities have felt it incumbent upon themselves to issue lengthy instructions to parents, which are, of course, rarely read and more rarely followed. Parents alternate between coddling and neglect. Shame frequently prevents their consulting the proper authorities. Their pity for the unfortunate ones all too frequently is coupled with repulsion. In families where a degree of culture prevails, the blind child is likely to become a pampered and helpless creature whose most outstanding quality is extreme perversity and selfishness; in other families he becomes more or less an outcast, but the effect on personality is not actually any worse.

In practically all cases, the blind child comes to be looked upon and to look upon himself as something apart from the rest of humanity, not capable of entering into the normal course of life. There is but little difference be-

tween being a coddled and pampered nonentity and being an outcast in reality. The child grows up in ignorance of the world he lives in though he has acquired the heritage of language in accordance with his social surroundings. He is fitted by speech to be a member of society and is in this respect far more fortunate than the deaf, but combined pity and repulsion make his life intolerable, and without education he can grow up to be only one of two things—a helpless dependent, often fed by another's hand, making his way on another's arm, about as useful to himself and others as an automaton; or else a beggar in one guise or another—and better an honest beggar than a disguised beggar; better any kind of beggar than a social jelly-fish.

Beggary is yet in many countries the common lot of the blind. In the Orient and in the African desert regions blind beggars are particularly numerous. In Egypt, they congregate in bands and move from place to place together. So numerous do they become at times in the narrow streets that they must be whipped from the way to allow the passage of some person of rank. More typical, however, is the solitary beggar, as common yet in the streets and by the wayside as he was when the Christ walked through the streets of Jericho and was accosted by the blind Bartimeus, asking for sight and not alms. Such beggars sit in their filthy rags and expose their defects without shame to the passers-by, holding out their hands and appealing with a whine for the pittance that a misguiding religion makes it incumbent to give.

Under these conditions the blind are at once a pest and a fixed institution; they are allowed to sit on the temple steps and may appear in the throng at public banquets; they are unbidden guests at merrymakings and are ever ready to eat of the crumbs that fall from some master's table. Toleration alone makes such abysmal beggary pos-

sible, and rarely does the blind man rise above it. If gifted with unusual intelligence, he may become an oracle of wisdom and win his way with a species of quackery, combining some real knowledge with second sight or sooth-saying. In Mohammedan countries he may learn the Koran by heart and live as a teacher of its sacred contents or as a reciter of prayers in the mosques. More rarely he is a minstrel, contributing to the social life and receiving in return a bare subsistence. Skill in some simple handicraft or the sale of petty wares may sometimes bring a living. In Japan there are many blind masseurs who form a guild. But very, very rarely in an uncultured state do the blind men rise above the most abject forms of beggary, and the women and children are even more unhappily placed.

Blind girls in China are often sold into a life of sin and shame by their parents, as the only apparent recourse, death alone releasing them from it. When we consider the state of morals common in the Orient, it is not to be doubted that prostitution is a common means of livelihood amongst blind women. Blind children, even in European cities, are frequently driven by selfish parents into the streets to beg. Few can resist the appeal of a blind child, and the parents profit by the pity aroused.

Often what are considered ways of making a living are simply disguised beggary. Survivals of this are very common in civilized countries where education is supposed to have done away with the more patent evils of blindness. These survivals take the form of the selling of small wares at unreasonable prices, producing execrable music for the delectation of the passing crowd and manufacturing utterly trivial and worthless articles to be sold as the work of the blind. Real beggary, open and unashamed, is but little worse, if not actually better, in its effects, both on the blind and on the public.

This leads at once to a fundamental distinction—that between charity, so-called, and education. However excellent the motive out of which charity may grow, as commonly applied it is the bane of the blind and not only offers no fundamental solutions of their problems but actually keeps such solutions from being made. In the education of the blind, two aims have always been of paramount importance—the first, that of giving them to the fullest possible extent the heritage of culture which would tend to draw them closer into the great society of men and to break down the barriers incident to their physical condition; the second, to render them as nearly as possible economically independent.

Charity, in the narrower sense in which that word is applied, seeks primarily to remove the blind from the economic struggle, not to fit them for it, and to render them physically comfortable at the smallest possible outlay of cash and energy; secondarily, it may seek to help them to bear a part of the burden imposed. Too frequently one has presented to him the picture of the blind in utter idleness in their asylums, whiling away the tedium of a uniformly monotonous and dreary life in vegetative comfort, but suffering from an inward dry-rot and alike useless to themselves and society. Even their modicum of handwork is looked upon rather as a pastime than a vital economic contribution.

Genuine education has sought to make the blind truly independent in thought and deed, to remove their queer-ness, mental and physical, in manner and habit, and to render them thoroughly human. This aim has been actually accomplished in very numerous instances with groups, but in this field of education, as in all other fields of education, no one can pretend to have found all the ultimate desirables. On the whole, however, the outlook may well

occasion great optimism. Though we must ever face the fact that at best education can do no more than reduce the charitable activities to a rather uncertain minimum, it can and will remove the stigmata of condescending pity and officious interference in the guise of helpfulness.

In the education of the blind, mental, moral, and intellectual problems are so inextricably bound together in one that their separation is impossible in practice. A theoretical analysis can, however, serve the useful purpose of showing the moral, intellectual and physical phases of what is really one problem or set of problems, the solution of which works toward the desired ends of socio-economic efficiency, through individual culture and self-helpfulness.

The chief moral problem is that of supplying incentive and arousing ambition. The chief intellectual problems are those of securing concreteness in the thinking processes and thought products of the blind and of orienting the mind, that is, of giving it its location and directions both in the world of thought and in the world of objective reality. Closely bound with this is the important problem of immediate physical orientation. Both the physical and mental condition of the blind demands vastly increased activity, which means far more than a mere physical or mental gymnastic. Those who sever emotion from mentality may want a statement of the problems of emotional education; but whatever strictly emotional problems there may be, they merge naturally into the larger problems of soul, mind, and body, and lead over into what is the greatest of all problems, the social problem. This latter resolves itself into showing the blind person that he may become a contributing factor, as well as a recipient, in the democratic society wherein the school is to make a real place for him; that he is no longer to be a parasite tolerated by society,

but a member whose welcome in society is secured and measured by his utility.

With the problems of education thus stated it will be seen that curricula, appliances and apparatus, and even schools, are matters of secondary importance, mere means to an end. These have always taken first place in historical treatments of the subject and, of course, they are of exceedingly great importance; but when they are looked upon as more important than blind boys and girls and the ends to be achieved in their education, that dead formalism results, the ultimate product of which consists in human wrecks—youths in whose minds run high the hope that they may escape the shame and servility that are the dread of the ambitious blind, but whose cloistered and antediluvian training fits them only for asylums and industrial homes, not for a life of competition in the real world.

Thus we see that *blindness* is not a specific term, but covers a wide range of visual conditions, with resultant variations in the mentality and physical condition of the blind and in their moral, social and economic relations. Allowing for these variations, we note a number of fairly definite results of blindness, though some of these results may be considered parallel to the blindness, i.e., growing out of the same causes that produced the blindness itself. Among the results are a great impoverishment of the life of sense impressions, and an almost complete loss of the power of physical orientation, without adequate compensation save through educated attention. Timidity and the sedentary habit, introspectiveness, and the substitution of verbal symbols for concrete realities, form well-defined groups of resultant phenomena. Lowered vitality, lassitude, congestion, and slight resistance to disease are less general and less a result of blindness than parallel with it. Nervousness and nervous habits, with certain types of moral per-



version, are related to the previous groups, though standing by themselves in some respects and in others passing over into the more purely physical stigmata of external markings—rolling eyes and the like.

Socially the blind in an uneducated state suffer either from neglect or from coddling. Left to their own resources they almost inevitably become parasites—either beggars or dependents of some other sort. Education, and not charity, offers fundamental solutions of the problem of improving the condition of the blind; but there will always be a place for true charity in the solution of the socio-economic problem as a whole.

With this brief summary we must pass to a critique of the historical solutions offered by charity and by education, with a view to gaining a broadened viewpoint from which to consider possible present solutions. Neither history nor criticism has any value unless it indicates improvements in practice and thus serves as a guide in the securing of results.



PART I  
*CHIEFLY HISTORICAL*



## CHAPTER I

### *The Blind in Ancient and Medieval Times*

**I**T IS commonly thought that blindness was much less prevalent in ancient and primitive times than at present. While we have no statistical basis for the contrary assertion, numerous mentions in ancient literature and the very common existence of blindness in surviving primitive groups point to the fact that eye diseases and accidents resulting in total or partial blindness are as old as humanity. The history of the last hundred years shows to how great an extent blindness, and especially blindness from birth or early infancy, is subject to control and hence to gradual reduction. On the whole, then, the advance of civilization coincides with a decrease rather than an increase of blindness, except for sporadic increases from time to time, due to industrial changes, misuse of drugs, epidemics, or other accidental or temporary factors.

It is certainly no accident that the oldest accounts of eye diseases were found in the land which Hesiod called "the country of the blind," namely Egypt. They are contained in the Ebers Papyrus which was written 1553-1550 B.C. and discovered in 1872 in the Necropolis of Thebes. This book is the oldest book of healing in general, giving in detail a collection of recipes but only listing the diseases. Twenty eye diseases are named. Some thousand years after the writing of this manuscript Herodotus traveled through Egypt and found there specialists in eye diseases. At this time Egyptian oculists must have been very famous, for Herodotus tells how Cyrus sent to Amasis (560 B.C.) for an oculist, demanding the best in the whole land of Egypt.

The Greek physician, Hippocrates, father of scientific medicine, was acquainted with some thirty diseases of the eye. An ancient Hindu medical work lists seventy-six eye disorders. Hebrew literature abounds in references to blindness, there being in prose not less than five terms for this condition and at least nine poetical equivalents. In rabbinical literature euphemism is employed in speaking of the blind and blindness. The prevalence of blindness among the Jews is further indicated by early legislation.

In both barbarous and civilized countries in ancient times, blindness was treated by the magic use of drugs or by exorcism. In Greece, for instance, the priests of Asclepios cured eye diseases through the temple-sleep, or incubation. First the afflicted person took a bath and was anointed. Then amidst prayers and hymns, the priests would burn incense, in which narcotic herbs were probably included, to put the patient to sleep. While he slept there was supposed to appear a vision. On awakening healed, the patient would usually in addition to paying fees, set up a votive tablet. A number of such tablets, discovered at the shrine of Asclepios at Epidaurus and dating back into the third century B.C., describe the healing of blindness. Similar magic methods were used among Hebrews and Babylonians. Greek and Roman empiricism was but little better. The remedies were often of the most fanciful sort, but with the blending of Egyptian practice with Greco-Roman science, some real advance was made, though the eye itself was but little understood and successful treatment and operation, therefore, almost impossible before the development of modern methods of examination and diagnosis. The greatest progress has come, of course, with the ophthalmoscope and other recent advances and inventions in optics, eye anatomy, and related sciences.

Turning to the social side, we find that in ancient society

the child blind from birth was subject to the same practice of exposure as any other afflicted offspring. Among the Greeks, the destruction of imperfect children, theoretically approved by Plato and Aristotle, was in actual practice in Sparta under the laws of Lycurgus and in the Athens of Solon. In Sparta each new-born child had to be brought before the elders of the phyle, who examined it as to its possible fitness for citizenship. Imperfect or weak children were exposed in a gorge of the Taygetus mountains or left in the wilderness. In Athens, children to be exposed were put in clay vessels and left by the wayside. Romulus made the law that any misshapen or monstrous child should be exposed only after it had been shown to five neighbors and their consent secured. The Law of the Twelve Tables empowered fathers to act as sole arbiters of the fate of defective and crippled children. Seneca disapproved as little of the drowning of defective children as he did of the drowning of mad dogs or sick cattle. People saw in Rome without squeamishness the open sale in the markets of baskets designed for the holding of little children, whose infirmities caused their consignment to the waves of the Tiber.

The humane laws of the Egyptians early restricted parental disposal of unwanted children. Among the Jews, exposure was forbidden on the ground that the child was the gift of the Lord and belonged to Him. This rule held at Thebes also. The poor Theban was allowed to dispose of the new-born child to anyone who wished to pay him a small price. The child became the slave of the one who reared him.

In the general widespread practice of exposure among ancient and primitive peoples, not only the monstrous and crippled were destroyed but many infant blind must also have suffered a like fate. Their rearing was a matter of great care and people did not know what to do with them.

Want and suffering were the rule rather than the exception and the blind were an economic liability. Therefore, when by chance the blind child did grow up, he had little hope of being cared for. In Rome, for example, blind boys were trained to become beggars or sold as rowers and girls were made prostitutes. Even so, the exposure of those blind from birth must have been somewhat restricted by the fact that the defect might not have been clearly apparent at birth. After being received into the family circle, the child was regarded as a rightful member and the later discovery of his condition did not make him forfeit his rights.

Among the more primitive peoples the right to live must have been denied the later blinded almost equally with those born blind. Objectives being almost wholly materialistic, the chief concern would be for food, clothing and shelter. The individual man was valued for his fitness for practical life and his availability for war. Old, sick and crippled persons were a drag upon free movement and a burden to society. They were disposed of in various ways, even buried alive and on occasion eaten. These gruesome customs which have been practiced in recent times by the Battas of Sumatra and were common among the Bushmen and Polynesians, are to be met with among our own heathen ancestors. In Wagria and other Wendish lands it was considered honorable for children to kill, cook and eat, or else bury alive, their aged parents and other relatives, especially all who were no longer useful for either work or war. Praetorius relates of the heathen Prussians: "Old and weak parents were killed by the son; blind, squinting and deformed children were disposed of by the father either by the sword, drowning or burning; lame and blind servants were hanged to trees by their masters, the trees being bent forcibly to earth and then released quickly."

In the classic period, men were valued chiefly as citizens.



There occurred, however, a gradual growth of the consciousness of individual worth and of respect for personality. This recognition of values that were non-civic and non-economic came with the growth of culture and naturally occurred sooner in some countries, later in others. Both China and India early showed signs of this changed valuation, and in both, some worthwhile occupations were early found for blind persons, for example, that of soothsayer in China and that of transmitter of oral tradition in India, some blind becoming veritable walking libraries. Buddha, in particular, preached and exemplified in practice pity toward all the weak and deformed. He declared that it was his wish to save suffering creatures and to be a light and healer to those who lived in blindness. The Buddhist kings of India, especially Asoka, extensively practiced charity, causing the erection of hospitals and sanatoria at public cost, and among those cared for there must have been considerable numbers of the blind.

Egypt closely rivals India in having built up in ancient times a more or less systematic type of welfare work. A social policy on the part of the state developed coincidentally with the rise of feudalism. The king, as overlord, sought support from the masses, in order to keep in check the power of the great nobles. The priesthood attained a dominating influence in the public welfare work of the rulers and finally usurped the whole field of what was originally a patriarchal function, but because of their theoretic studies and the solidarity of their organization, these priests not only firmly established the work of charity but evolved also an ethics of benefaction. The care of the blind, among other groups, was firmly established by the time of the Greco-Egyptian and Greco-Syrian kingdoms, and these latter as well as their successor Rome, copied their benefactions from the Egyptian and other early oriental

kingdoms. Thus the care of blind veterans passed over into the Roman armies. The great Hadrian noted the general condition of Egypt with respect to industry and mentioned the blind as among those gainfully employed.

At best we can only be relatively sure of the treatment of the blind in Israel. Old Jewish literature—the Bible, Talmud, Midrash—speaks chiefly of four infirmities, deafness, dumbness, blindness, lameness. Among these infirmities blindness is considered the greatest evil. It alone is named in the Sinaitic and Arboth-Moabite curses, along with insanity and madness, and the Midrash, commenting on the verse of the psalm, "The Lord opens the eyes of the blind," says: "There is no greater pain nor more bitter suffering than that which blindness brings." It likens the blind person to the overloaded camel or ass, concerning which the driver commands: "Be careful with him, for he is not loaded with light straw; I know the burden that he has to bear," and arrived at their destination, he says: "Before all others free this beast of his burden, for I have loaded him more heavily than any other!" Among the rabbins the infirmity of blindness is characterized in the frequently recurring sentence: "The blind man is as one dead." The Talmud gives the command that on encountering a blind person one must pronounce the same benediction as is customary on the death of a near relative. It also appears that among the Hebrews the hand of a blind person was regarded as insalutary. Although a legal protection of the blind had already developed, we may assume that, especially in the lower strata of society, there was a certain thoughtless neglect.

We hear of no public care of the blind in Israel. It was not absolutely necessary, as private obligation toward the needy was amply expressed in law. Neither did the Jews think of educating the blind. Many blind persons sought

suitable employment of their own accord. Such an occupation was the grinding of the hand-mill. This labor served as a kind of standard in determining the time value of a blind person's efforts. The educated blind were employed as private tutors or they became members of that learned class known under the names "Shone-halachoth," "Sadran" or "Thana." These Sadranim were required to have a comprehensive and true memory, and accumulated, without critical examination, a rich mass of learned material which they displayed to their scholars as occasion offered. Thus they became living libraries and got the nickname of "baskets of books."

Among the Greeks, the blind were sometimes honored as seers and prophets. Although this assumption rests chiefly on the advent of the Theban prophet, Tiresias, it is probable that the conviction that the blind were especially fitted for the calling of prophet was widespread among the people and this finds its explanation in certain peculiarities of the blind person. The extraordinary development of the remaining senses, the lessened contact with the outer world, the more marked development of introspection which renders the blind person more finely sensitive—phenomena which are readily subject to explanation—all tended to arouse in the simple folk the belief that the blind person could enter into union with the supernatural powers and be chosen for the prediction of coming events. For a deep insight into the secrets of the future one must be gifted by nature with that strange refinement of spirit which people naturally connect with progressive failure of sight.

The traditional account of the honorable position of certain blind men as seers and prophets has given rise to the false assumption that the word "honored" might be applied generally to the blind in the ancient period. This assumption surely does not hold for the blind among the

Greeks, on whose traditions it depends. Had the Greeks really honored the blind, they would have looked upon blindness as something of an advantage. This was not the case, for the Greek gods deprived some of eyesight because of their wicked deeds, and in the case of Oedipus, self-blinding appears as the symbol of the deepest remorse. According to Euripides, one expected suicide of the blinded. Eighty-year-old Eratosthenes, the great scholar, starved himself to death rather than face oncoming blindness. Blindness was not then considered by the Greeks as in any sense advantageous, but rather, as among all other peoples, so far the worst of misfortunes, that without some compensating gift of the gods, one could only be overwhelmed by it. To this divine compensation Tiresias and Phineus owed their gift of prophecy, Demodocus his gift of song, and with Homer, too, the supreme poetic gift was attributed to the motive of compassion for his blindness.

Although we must accept with a certain degree of scepticism any conclusions, based upon mythology or folklore, as to the treatment by the Greeks of their blind, the value of such conclusions is not to be wholly discounted. We find, indeed, some confirmation of them in reliable historical accounts, where we note, in Greece as in India and Egypt, a tendency toward public charity for defectives of all classes. Although Plato in his ideal state made no provision for welfare work—weaklings being banished—actually in Athens those who, through bodily weakness or defect, were unable to support themselves received a daily dole, at first of one, later of two obols. As the average wages was between two and three obols, this sum covered the barest necessities. This law applied only to those whose possessions amounted to less than three minae. The grant depended upon popular decision; the examination of the individual cases was the function of the Council of the

Five Hundred. The right to maintain one's existence at public expense was acknowledged only in the case of a citizen, so that the allowance must be looked upon rather as a pension than as a charity to the poor.

Rome took over much from the Greek state which finally became a Roman province, but not its humanity toward the weak and the defective. Neither cult nor philosophy gave the Romans any inclination toward deeds of charity. Gifts devoted to the gods were thrown into holy wells or lakes; the innumerable acts of atonement never consisted in alms; feasts connected with the cult, extravagant though they might be, were shared only by the priests, never fed the poor. Finally the Stoic philosophy, which was more popular with the Romans than either the easy-going Academic or the self-indulgent Epicurean creed, awakened a sense of well-doing. The Stoic system offered the highest and purest ethics of antiquity, placing special emphasis on individual worth or the worth of personality at the same time that it stressed the general welfare and the responsibility of each for all, from lowest to highest. But despite such a foundation and despite the fine rhetoric of the Roman Stoic, Seneca, who wrote seven books on well-doing, Stoicism did not enkindle or arouse that mercy which has its roots in the contemplation of personality in the light of its eternal worth.

Nevertheless, many things in Rome worked out much the same as charity to the poor. There was the free public distribution of grain, oil, salt, meat and clothing. In addition there were the money allowances of the emperor, donatives, public meals given by popularity-seeking "patriots," and the perquisites of the rich and of the "colleges." But all this was hardly a true care of the poor. The public distributions serve to keep the goodwill of the masses, while the scattered "crumbs" of the wealthy served as an

antidote to their own ennui or to heighten the pomp of some great house. The Romans were liberal but not charitable. The masses profited, but no attention was accorded the individual sufferer. "Can you remove yourself so far that you will escape loathsome contact with the poor?" once asked Quintilian, and Plautus in one of his comedies gives him what is surely the popular answer: "One only does an ill service to the beggar when he gives him to eat and to drink; for what he gives is lost and he only helps to prolong for the poor man his life of misery."

From the above one can form some judgment of the place of the blind among the Romans. They eked out their lives as suffering, despised beggars and gathered the crumbs as they fell from the tables of the state or of the rich. Led by dogs, they plodded through the streets and sought to awaken pity through their defect. "Their refuge was perhaps an open vault, their dog the only companion of their misery, their nourishment bread fit only for dogs, their sole possessions a staff and a coverlet or mat, and a knapsack, their relief death in some lonely corner." (Martial *Epigrams* XIV 81.) Frequently they were in the service of conscienceless speculators, and were by them shamelessly exploited and terribly mistreated, as Seneca informs us in the following lines, "These slave-masters gainfully employ the blind who totter around, leaning on their staves. . . . The master counts the gain of the beggar's daily round and if it is not enough, he turns on the unfortunate one and berates him thus: 'Too little have you brought; bring the whip here, now you can whine and beg for pity; if you had talked that way to the passers-by, you would have received more gifts and might have delivered more to me.'"

An exact survey of the literature of the peoples of antiquity and of others as well would no doubt bring to

light many interesting facts. Yet we believe that we have presented an approximately correct picture of the condition of the blind in the pre-Christian period. Doubtless blindness was looked upon as the worst evil that could befall man, and often as a punishment. Though certain blind persons attained a sort of spiritual preeminence, inspiring even a superstitious awe, the great mass was looked upon as practically useless, and some were at times given over for destruction. While feelings of humanity afforded some a tolerable existence, the majority led the wretched life of beggars. No one had thought of systematically educating them for useful employment. The life of the blind passed without love as well as without light.

In the Christian communities of the first century which had much the character of large family groups, the blind were under the care of the deacons and were guests at the Agapai and, as it were, receivers of the oblations from the altars of the congregation. Wealthy Christians offered them dwelling places in their houses, as when Narcissus took in the blind Crescentio, who was mentioned as one of the believers, among whom the Deacon Laurentius was to distribute the church treasures entrusted to him by Pope Sixtus II.

In the Patristic Age the church fathers did not fail to keep awake interest in the blind. In that famous sermon of St. John Chrysostom on the poor, occur the following words: "As I went through the market and through the narrow streets, hastening to a meeting, I saw a crowd of beggars in the middle of the way. Some were deprived of their hands, others of their eyes, while yet others were full of incurable sores and wounds. . . . Then it seemed to me that I should be guilty of great hardness of heart, if I did not speak to you of this solicitude."

St. Jerome in a letter exhorts the charitable Senator

Pammachius to seek out the huts of the poor and to make himself eyes to the blind, hands to the weak and feet to the lame.

How successful the admonitions of the church fathers could be we learn from another letter of St. Jerome addressed to the same Pammachius after the death of his noble wife, Paulina. Jerome praises his fine spirit of charity toward the suffering and especially toward the blind. "That blind man," he writes, "who stretches out his hand and often cries out where no one is, is now the heir of Paulina and joint heir with Pammachius."

Gregory of Nazianzus says of his sister: "She was eyes to the blind, feet to the lame, a mother to the orphans. Her house was a common refuge for all the suffering."

As the Christian Church changed into the national church and the range of its charities was restricted, the blind remained an object of the churchly care of the poor. The blind now belonged to that group unfitted for work, who were listed as a matter of course among the poor and provided food in special houses erected in each bishop's seat and near the larger churches. As the means of caring for the poor were taken from the resources of the church, the blind became definite charges on those resources, being specifically so named by St. Ambrose in his famous address to Auxentius. When the Emperor looked with covetous eyes upon the possessions of the church, the Bishop of Milan told him he might confiscate them. No one would offer him opposition. For himself he wanted neither silver nor gold; he was ambitious only to share everything with the poor, and he would rejoice if this were thrown up to him as a reproach. He would not even defend himself against the proposed act of injustice; the poor would undertake the defense—the weak, the blind, the lame and the old, not with weapons but by the might of their prayers.



As long as the church possessions remained intact, the bishops were always worthy fathers of the poor. Even when they attained the rank of "Princes of the Empire," they did not consider it beneath their dignity to eat at the same table with the needy and defective, to seek them out in their habitations and to bring them comfort and help. This fact is illustrated by the example of Bishop Bardo of Mayence, whose biographer relates of him that, daily, hundreds of blind, lame and needy followed in his train and that among them there was not one whose name and circumstances were not personally known by that great friend of the poor. As the general churchly charities for the poor declined, the parishes did not wholly evade their care. The priest bestowed alms upon the needy of every kind, the source of alms being offerings, collections and the fees paid at the supreme religious events in the lives of men. Charitable gifts at burials and on the anniversaries of benevolent "founders" richly filled the tables of the blind, the lame and crippled. In a speech of the blind in his *Eulenspiegel* Hans Sachs shows the nature of the care of the blind at that time: "We have been in the city where a rich man died, and they held a mass for his soul's welfare and dispensed charities."

In the older form of Christianity, the church as such looked after all matters of charity and saw to it that none of the needy lived in want. But this custom had largely disappeared before the end of the Middle Ages. The church itself was no longer the chief agency for the care of the poor. These functions, more particularly the care of those continuously unfit for making their own living, had long since been taken over by the asylums and cloisters.

In the old-Christian time, every Christian house was an hospice for strangers, every table set for the poor, and there were beds for the sick brothers. The expansion of the

church after the victory of Constantine and the great afflux of sufferers introduced a new agency into Christian charities—the asylums and the hospitals. One must think of these as institutions of the most general type, intended to minister to every kind of need. Especially such needy were taken in as were permanently disabled or could not be effectively cared for in their own homes. And among these were the blind.

The most famous of the asylums was that founded by St. Basil in Caesarea-in-Cappadocia in the year 369. It was like a city in miniature and provided special apartments for each kind of need. There is no doubt that this well-directed institution received the blind. One author has, however, gone too far in concluding that the word "leaders" used in the description of this and similar institutions applied particularly to the blind. These leaders may well have accompanied some of the blind inmates on their walks, but their name was a general term and was derived from their function of hunting out the sick and defective of every kind and "leading" them into the hospital where they might be cared for.

Fabiola, of the famous Fabian clan, determined after open penance to devote her life entirely to the poor and the suffering. She established the first hospital in Rome and received therein, as we learn from a letter of St. Jerome to Oceanus, men "with mutilated noses, with their eyes put out, with maimed feet and withered hands" and cared for them in such a motherly and loving way that poor people wanted to be sick in order to come under her care.

After the rise of the great cities in the twelfth and thirteenth centuries, the founding of hospitals by benevolent individuals became less frequent and the cities themselves undertook their establishment. Thus, in 1256, the citizens of Hanover, "under the inspiration of the Holy Ghost,"

undertook the founding of a hospital wherein pilgrims and other poor wanderers might find refuge and where the blind, the lame and those afflicted with other illness might be received and cared for.

The care of the blind was also undertaken in the hospitals of endowed churches, canonical foundations and the hospital orders. After the hospitals, during the Middle Ages, the cloisters were next in importance in the care of the poor, and especially in looking after the blind. At the very beginning of monasticism, the care of the blind was undertaken as one of the prime aims of the monastic groups. St. John Chrysostom says of them: "They deal with beggars and cripples, who come to them at meals as guests; . . . one (brother) looks after wounds of a mutilated person, another leads in a blind man, while a third supports one who has lost a leg."

The cloisteral care of the blind even extended to the saving of blind children, who because of their defect were in danger of death or degradation, as well as to the adult blind.

The blind were not usually received directly in the dwelling places of the members of the order, or even in the infirmary, but in the "hospital of the poor" (*hospitale pauperum*) or as it was also called, the "*eleemosynaria*" or almshouse. Here a specified number of the needy, at most twelve, were continuously cared for. It is revealed in the records of the most widely separated convents that the blind were constantly appearing among their inmates. In the Benedictine monastery at Cluny in Burgundy, daily provision was made for widows, orphans, the lame, the blind and the aged.

In the hospitals and convents the blind did not as a rule form a specially segregated group, but they lived, as we learn from the foundation charters, together with other

defective and needy persons. Their community life was as far as possible under conventual regulation. Their care in hospitals had the character of a subvention. Nothing was done for the rehabilitation of the blind, since none knew then of any means either of enhancing their personal worth or of alleviating their condition. Yet truly the life of the blind inmates of the hospitals was not wholly confined to eating the bread of charity. Through minor employments suitable to their condition, they not only rendered some real service to their benefactors but escaped thus, to a certain extent, the ennui of their existence.

The private benefactions of the Middle Ages created finally a series of hospices exclusively devoted to the blind. The founders were activated by the desire to remove the sightless from the streets and relieve their misery by placing them under such conditions as both fitted their affliction and added productivity to their otherwise empty lives. They thought that they could accomplish this end best by putting the blind in asylums and organizing them along the lines of the conventual orders without actually admitting them to membership in any orders. The blind brothers and sisters formed then only a kind of lay congregation, stamped with the character of the ordered cloisteral life.

The beginnings of the hospital brotherhoods of the blind date back into the fifth century. At that time St. Lymnæus, who lived in the mountains near Cyr in Syria, gathered together the neighboring blind beggars and built for them small dwellings in the vicinity of his own hermitage. He taught them to sing religious songs and cared for them with the alms supplied by pious benefactors who were moved by the example of his own good deeds.

One of the most significant of the blind brotherhoods of the Middle Ages existed in Paris under the name of the "Congregation and House of the Three Hundred." The

hospital of the congregation, the *Quinze-Vingts*, was built in 1254 by St. Louis. The tradition is that it was originally intended for three hundred crusaders blinded by the order of the Turkish Sultan—twenty each day for fifteen days—while he awaited the ransom money for Louis IX who, on his first crusade, fell into the hands of the Saracens. Joinville, Louis' companion and chronicler, says nothing about this alleged happening but only that the humane housing of the blind was undertaken in Paris. It would seem then that Louis, moved probably by the misery caused by the fearful loss of sight among his crusaders in Egypt, directed his attention to the blind at home and founded the institution for the amelioration of the condition of the sightless, irrespective of the origin of their affliction.

The *Quinze-Vingts* was, as the name implies, intended for three hundred blind persons, a number that was not to be lessened or increased. The inmates formed a lay congregation and called each other brothers and sisters. Every blind person entering brought with him whatever he possessed, and when he died his belongings became the property of the institution. On entering, he must promise to submit himself to the statutes of the house, to guard the secrets of the institution, to offer, daily, certain specified prayers, to participate in the mass, to observe the common sacraments and obediently to fulfil assigned tasks. As a distinctive dress, both men and women wore a long blue gown with a lily on the breast. The members were allowed to marry and might even have their children, up to a specified age, live with them. The conduct of the house lay in the hands of a "master," who, as well as the attendant priest, was named by the king. He had as his aides a "minister," a sort of business manager; and five "assistants under oath." Important questions were decided by the "chapter" or full assembly of the asylum inmates.

Both the administration and the statutes of the congregation underwent in the course of time a number of changes, with a considerable loss to the blind of their original rights and a corresponding increase of the influence of the sighted.

The French kings accorded the *Quinze-Vingts* important privileges such as freedom from taxation and the right of asylum. The Popes, earliest among them Clement IV, commended the institution to the attention of Christendom and permitted the institution's church far-reaching rights of indulgences. Through the prestige of its founder and the fostering care of the Popes, the church of the blind brotherhood attained great eminence. The king attended it every year, and high society followed his example. Famous pulpit orators preached there from time to time in order to increase the sums given in alms by wealthy people. Well-to-do citizens acquired burial sites in the churchyard of the *Quinze-Vingts*. In return for endowments the blind undertook to pray for the souls of their benefactors.

Since the privileges of the institution were extended to the sighted who lived in the precincts of the *Quinze-Vingts*, new edifices were erected from time to time, to be leased at a good profit. In this manner as well as through the rich bequests and the profits from collections which were systematically raised throughout the land, the property of the blind brothers and sisters was considerably increased. Rohan, the Grand Almoner of Louis XVI, took from the blind their inheritance and property. He inveigled the King into the sale of the institution by representing to him how the care of a much larger number of blind might be undertaken through using the proceeds of the sale. In reality he was a secret part purchaser and paid his immense debts from his profits. The blind had to give up their spacious

home for cramped and unsuitable quarters. Later the state made good their loss in part and so the Quinze-Vingts still exists in Paris, though under greatly changed conditions.

This institution founded by St. Louis found imitators. In the year 1292 a citizen of Chartres named Renaud Barboult founded in that city the Six-Vingts. Yet this institution did not fulfil its purpose in quite the same way as the Quinze-Vingts. Toward the end of the seventeenth century the congregation of the Six-Vingts had only *twenty* members! The blind asylum was later united with the city hospital.

The free brotherhoods of the blind grew out of that general social movement of the Middle Ages which expressed itself in the merchant and trade guilds, and they constitute a parallel phenomenon to the guilds, brotherhoods or corporations—both religious and worldly “unions”—which toward the end of the Middle Ages embraced nearly all ranks of society. The aim of such organizations was reciprocal aid and improvement among the members and included a social obligation for the care of the poor. Each brotherhood was connected with some specified church and was under the patronage of a saint. The rights and duties of the members were set by statute. The organizations of the blind were not necessarily confined to those of like fate but might include other defectives, more particularly the crippled and lame.

While the hospital brotherhoods (like the Quinze-Vingts) arose chiefly in France, the free brotherhoods of the blind flourished, because of certain social conditions, in Italy, Spain and Germany.

In Italy in 1377 the blind at Padua founded the Congregation Santa Maria dei Ciechi. They united under a “master” with the object of carrying out diverse works of piety and were pledged to utter no blasphemy and to

observe in their gatherings certain definite rules. A small sum was taken from the treasury for the care of the sick and for the dowry of members' daughters.

In the year 1661 the blind of Palermo formed a similar congregation. Sympathetic citizens of Palermo assured this organization a yearly subsidy, and the Jesuit general, Tirso Gonzales, in 1690 granted permission for the use of the entrance hall of a building belonging to the order as a meeting place. When the Jesuits were banished, the blind continued to use the meeting place previously assigned to them. After the restoration of the order, the King assigned it one-third of the incomes of all the congregations using its edifice. The blind refused to meet this obligation, and when the Order of the Society of Jesus denied them entry, they started a suit which they continuously renewed. On their persisting in this course, Ferdinand IV in the year 1815 finally granted them a yearly rental, and the Duke di Lorenzana of Sicily granted them the right of perpetual use of the Jesuit hall. The blind locked away in their documentary chest the decree of the government which served as evidence in the establishment of their rights on their arrival.

The blind brotherhood of Palermo cultivated music almost exclusively and developed a sort of musical academy. The Italian authority on esthetics, Vigo, as quoted by Gregorovius, depicts this group in his account of Sicilian folksongs, as follows: The congregation consists of thirty members, all musicians and singers. Some are inventors of new rhymes, others rhapsodists, and they both sing and publish abroad their new songs. They are pledged not to sing in houses of ill repute nor to recite or sing profane poetry on the streets, to recite the rosary each day, each year on the second of November to pay toward a mass for deceased blind, and also to contribute to the Feast of



the Immaculate Conception on December 8th. They have a chaplain who reads the mass daily for them. This chaplain is a Jesuit, to whom they must confess the first Sunday of each month and to whose censorship they must submit their poetical compositions. Otherwise they are governed by their own officers, a superior with two "conjuncts" and six "consultators." They are proud of their organization and especially proud of being comrades of the Congregation of Mary Magdalene at Rome, and their secret chest contains the gracious permission of the Archbishop Mormile, who grants an indulgence of forty days to every person who has a blind man recite to him a spiritual poem.

Every member was formerly under obligation to submit to the congregation on the eighth of December a new poem in praise of the Virgin, but this custom has passed away. At the time of their meeting it is an inspiration to see these blind men with their strange demeanor, sitting about in a circle like so many blind Homers. They endeavor to arouse emulation in winning the general approval, each one in turn bringing forth his new contribution in verse or music, while the children, their leaders, temporarily released from their duties, crouch all together on the ground and engage in childish games.

It is characteristic of the medieval care of the poor, and of that branch concerned with the care of the blind, that it was carried out exclusively through the church. The result was that the state considered its duty toward the poor best fulfilled when it supported the efforts of the church and protected the various charities from squandering and misappropriation. The only late Roman emperor who attempted to organize state charities in opposition to the church was Julian. The fact that he borrowed the very form of his charities from the church shows the complete inability of the state to create anything better.

Among the social and economic reforms in his empire, Charlemagne endeavored to create a suitable charitable organization. He not only held the church responsible for the proper distribution of its tithes in benevolences, but imposed also on his lay vassals the assistance of their dependents. In the disastrous year 779 he levied on the bishops, abbots, counts and other vassals an express contribution for the poor, and in a capitulary of 802 he exhorted his subjects to love their neighbors as themselves and to contribute alms as largely as possible. Each ecclesiastic was placed under obligation to distribute alms openly four times a year. The Emperor himself was very charitable. In his court he assembled such a crowd of sufferers that, as Einhard says in his *Vita Caroli*, Cap. 21, it grew burdensome not only to the palace but also to the entire realm. Certain overseers were appointed to look after the needy and to see that no hypocrites or impostors were allowed to slip in.

The decline of church charities, the need of those unfit for work and the terrible increase in beggary tended to produce toward the close of the Middle Ages a more practical organization of the care of the poor. Such charities naturally became the undertaking of the flourishing cities. As in earlier times, the agencies of the church were entrusted with carrying out poor relief, now the city authorities were increasingly charged with these duties. The city council assumed oversight of the too frequently neglected hospitals and itself began to found others. As early as 1437 Frankfurt-am-Main had established its poor relief. Cologne from 1450 distributed alms through its city officials, and in Antwerp after 1458 there was a "Master of the Poor." The council of the latter city assumed guardianship of the blind, the deaf, the insane, and orphans. But all the ordinances of the fourteenth and fifteenth centuries

had to do rather with beggary than with poverty. None had yet reached the conclusion that it is the duty of the community to care for all persons unfit for work.

When Luther, in his address to the nobility of the German nation, declared that it was the greatest necessity of all to do away entirely with beggary in all Christendom and foster a universal charity for all the really needy, he united the already present tendency toward the abolition of beggary with the combined religious and social impulse inspired by the Reformation, and so what might be called a policing of poverty was displaced by a genuine poor relief. The reform proceeded from the cities. They suffered most from the plague of beggars, and as they themselves constituted a community, it was in them that the community care of the poor reached its most important development. Of the poor ordinances which sprang up in response to the reform spirit, those of Nuremberg (1522), and Strassbourg (1523), are especially worthy of note. The former specifies that all the really poor shall be provided with actually necessary food, and the latter provides for every needy person a weekly dole according to his need.

A similar goal was set by the "chest ordinances" of the time of the Reformation. These were in a certain sense revivals of the old churchly care of the poor, with this difference, that the chest ordinances organized charities that were not exclusively under the control of the church but had a mixed churchly and civic character. The essential thought of the chest movement was that all the individual means of poor relief known at that time should be pooled in a single chest, out of which the really poor were to be cared for. Although the chest ordinances involved what are today recognized as the sound principles of poor relief, they did not accomplish any far-reaching result. Only a small part of the possessions of the church actually got into

the central treasury, and there were not enough institutions to carry on the practical work of relieving those unfit for work or the defective. That some states did, however, strive to erect a sufficient number of such institutions is shown in the case of Hesse in Germany, where there were hospitals at Hayna, Merrhausen, Gronau and Hofheim. In these "the shelterless, the defective and the needy" were cared for. There were special apartments for all kinds of needy and infirm persons, the blind among them.

Also in the lands not influenced by the Reformation, the cities took upon themselves a thoroughgoing organization of charities. Especially significant was the "New Ordinance" relative to the care of the poor of the city of Ypres of the year 1525. This, following closely on the inclusion of Belgium in the Hapsburg Empire, may be taken as characteristic of Germany and Spain also. The author was the great Spanish humanist, Juan Luis Vives, and the ordinance arose from his studies in the charities undertaken at the request of the city of Bruges and embodied in 1526 in his famous work, *On the Subvention of the Poor*. This book has unusual significance in a history of the blind, in that it strikes the keynote of blind relief, the author maintaining that the blind must not be allowed to sit around unemployed but must be put at some useful employment as a contribution toward their support.

The regulation of charities in the cities made necessary a similar movement in the country. This happened as a rule through a dole fixed by law. In Germany the Emperor Charles V undertook this task. Through his famous pragmatic of 7.10.1531, upon every community was imposed the duty to feed its poor. If the means were not sufficient, needy individuals were to be granted permission to collect alms. Charles V had drawn up in 1548 a new constitution relative to the poor. On this foundation and the delibera-

tions of the Council of Trent, the German synods continued to build. Most of the prince-bishops drew up special poor ordinances for their cities of residence.

Everywhere attempts, at least, were being made toward the abolition of oppressive need, so that the state before the mid-eighteenth century was wont to interfere with local autonomy only on rare occasions. By that time, however, beggary had again assumed such unaccustomed proportions that the eighteenth century, for at least its first seventy years, must really be called the "beggars' century." This circumstance, as well as the idea of humanity which animated the semi-religious nationalism of the "Enlightenment," led to new state statutes regulating the affairs of the poor. In Prussia the edict of 28.4.1748 decreed that in all districts the district magistrate in cooperation with the pastor should create a poor chest, the administration of which was to be looked after by the president of the provincial court and the superintendent, acting in common. The Bavarian beggar ordinances of 27.7.1770 and 3.3.1780 specify that every jurisdiction, every market and every city shall in the future look after its own poor and shall concurrently raise the means for such purpose. The obligation extended at first only to the helpless old and the bodily infirm poor. Those communities which found themselves overburdened with the care of the poor might get additional aid from the whole juridical district; and the state itself in order to meet the cost of general poor relief started its own poor fund. With respect to the new regulation of charities in Austria we find in enactments of the years 1754 and 1787 that every person had a claim for relief if he had acquired citizenship in a given community or had resided there for ten years. Institutions for the poor were called into being, with the local priest at the head of each. Under his direction the "Fathers of the

Poor" carried out their charity duties. Relief was granted only on the basis of a documentary statement of need.

In England the state had to assume the duty of caring for the poor after the Reformation had brought about the confiscation of church and monastic properties, as well as diminished the powers of the religious brotherhoods and guilds to administer relief. In the year 1573 a tax was levied on real property for the care of those incapacitated for work, and in 1601 Queen Elizabeth had a law passed on which English poor relief has continued to be based down to the present time. According to this law the justices of the peace must in each parish name from two to four respected residents as overseers of the poor. These overseers had among other duties to make a levy on the parishioners to supply the means necessary for the relief of the old, the sick, *the blind* and the crippled poor.

In contrast to England, where the care of the poor took on its most distinctly Protestant form, in France all matters of poor relief continued longest in the hands of the Catholic Church. Still, even there, state-enacted provisions were not wholly lacking. As early as 1254 St. Louis had decreed that in all parishes of France a register of the helpless poor should be kept and measures undertaken for their relief. Harking back to this provision, in 1536 Francis I decreed that every community should provide relief for its indigent poor and, further, that in case they lacked shelter they should be lodged in the hospitals. Leadership in the relief of the poor was imposed upon the parish priest and a district committee. Further decrees of Henry II carried these provisions toward fulfilment. In Paris in 1544 a "General Bureau of the Poor" was created and along with this, provision was made for the levy of a poor rate. The ordinance of Moulins of 1566 extended this levy to all communities. Louis XIV renewed the old edicts and founded

hospitals for all kinds of needy persons, putting them under the direction of laymen.

In addition to those already named, there were under the *ancien régime* numerous other attempts which had as their goal the more nearly complete care of the indigent, gradually bringing the old foundations and hospitals under the control of the state. The Revolution broke with all traditions. The successive regimes acknowledged civic obligation toward the poor and coined the shibboleth of "the holy duty of the state" toward its needy ones. The constitution of June 24, 1793, proclaimed, "Society owes to its unfortunate members the duty of support, whether they lack work to do or are unable to work." Those unfit to work were enrolled in the "Book of Public Benevolences" and received a pension which was presented to them at an annual national holiday dedicated to the consideration of misfortune.

As in Germany, England and France, the opening of the modern age saw in other lands the beginning of communal and civic provisions for poor relief. All decrees and ordinances agreed with the traditional practice of the church in classifying the blind among the disabled and acknowledging the duty of caring for them. When in the sixteenth century Vives, in the work previously mentioned, proposed using the abilities of the blind for their own welfare and the benefit of society, he anticipated at that early date what later came to fruition (in the effort at least) when Valentin Haüy, a philanthropist and member of the circle of revolutionary thinkers, founded the Parisian institution. His idea, in turn, was taken up by the philanthropists and philanthropic societies of that enlightened age and by them spread abroad.

## CHAPTER II

### *Gropings Toward the Light*

**T**HE blind continued well into the modern period without any systematic training of their mental abilities or bodily skills. They were helpless and therefore poor. Pressing need drove them to efforts at self-help, which meant beggary almost solely. The beggar's staff is from earliest times the symbol of the blind. Ancient heathendom gave them the right to beg in places where it was forbidden others—on the palace steps and in the vicinity of temples. The care of the blind among the Israelites is indicated in the oft-recurring phrase, "There sat a blind beggar by the way and begged." The success of blind beggars among the Jews is significantly shown in the fact that many feigned blindness in order to collect alms. To fight effectively against this fraud, the rabbis felt constrained to threaten genuine blindness as a punishment from God. As the Talmud says, "Whoever feigns blindness shall not depart this life without actually being so afflicted." And further, "Whoever puts patches over his eyes and cries out 'Help the Blind!' shall sometime have to make that cry in real earnest."

The fundamental law of Christendom gave the blind a moral claim to assistance. The efforts of the Christian church to give everyone afflicted with blindness an existence free from care, were thwarted by the lack of adequate means. Because of this and in order not to restrict private benevolence, church fathers, among them St. Ambrose, permitted the begging of the blind and others unfit for work and gave them a place at the entrances of the churches.



St. Thomas, too, who treats of the question of beggary and distinguishes the completely and partially indigent, advocated the same view. In view of the attitude of the church toward beggary, hospitals and cloisters frequently avoided any continuous care of the blind, as blindness was actually an asset in the collection of alms. The very asylums for the blind were under the necessity of collecting part of their support through beggary. The French satirist, Rutebeuf, says in reference to the members of the congregation of the *Quinze-Vingts*: "I don't know why the King has gathered together three hundred blind in one house only to go trooping through the streets of Paris the livelong day crying ceaselessly (for alms). They keep running into one another and bruising each other, since no one leads them."

We must add to those naturally blind a rather large number punished with blindness, who as a part of their penalty were forbidden as a rule to enter charitable institutions and hence driven to beggary, or at least lost their legal rights. There was a case in Frankfurt-am-Main of a man who in 1550 was punished by blinding and "as an example to others" driven forth into the streets to beg. In that city, exile usually followed blinding as a punishment, the criminal first being allowed to enter the Hospital of the Holy Ghost until he was healed.

The picture of the care of the blind at the very acme of churchly charities displays to us, then, a few blind persons cared for in hospitals and cloisters but perhaps the greatest part beggars. At the doors of private dwellings and at the portals of cloisters, in busy streets and in the public plazas they demanded alms. At the churches and in consecrated places, they enjoyed special privileges. They were to be found at fairs and festivals of all sorts. The blind wandered in crowds to places of pilgrimage in order to prey upon the pity of the pilgrims.

Great indeed must have been the need of the blind beggars as the churchly charities broke down and public aid established by law was not fully developed. The occasional recipient of alms gave place to organized and militant beggary, and the sporadic beggar of fixed habitat yielded place to wandering and obtrusively clamorous throngs. The mass was still further augmented by "leaders" and impostors. The massing of blind beggars frequently resulted in a regular vagabond life. They lived and slept under the most unworthy conditions and grew demoralized along with their companions. Instead of awakening pity and gathering in alms, they became a pest, drew upon themselves the hatred of the people and found themselves in open conflict with the public order. Hans Sachs has pictured for us the need and the neglect of the swarms of blind beggars in his time in his play, *Eulenspiegel and the Three Blind Men*. It is not poetry but bitter truth that we learn from him with regard to the then social condition of the blind.

Eulenspiegel speaks:

"Where, where go ye, blind men three?  
The day's as cold as day can be.  
Though wrapt in furs till almost lost  
One still can feel this dev'lish frost.  
And you will freeze if forth you fare,  
So ragged are the clothes you wear.  
You should, then, stay at home today."

Loerl, the first blind man, speaks:

"But, master, we must get away  
And seek our food where't may be found,  
With wife and children make our round,  
Winter or summer, cold or hot."

Luedel, the second blind man, speaks:

"For such is ever the beggar's lot.  
Where'er we go we are disdained:  
The uncouth farmers feel constrained  
To drive us from their homes away;  
The very farm dogs at us bay.

Our clothes are always full of lice,  
Our bread is shared by gnawing mice;  
When we find at night a bed of hay  
With gratitude our hearts are gay."

Eulenspiegel speaks:

"Go, then, and try the city or town."

Lindel, the third blind man, speaks:

"There even worse they 'turn us down':  
There even more than the country boors  
They hold us traitors and evil-doers,  
House-burners, thieves and base, low men;  
They hale us to the judge and then  
He claps us in the beggars' stocks,  
Takes our clothes and at us mocks.  
They all hard plague the helpless blind."

Eulenspiegel speaks:

"For you I've some relief in mind.  
A taler is all I can give at this time,  
But take it and go to Engelsheim;  
There get some food and plenty of stout,  
To drive even the thought of frost all out;  
Then with better heart you can wander forth,  
To seek your bread, east, south or north."

Quarrels over the division of booty and strife with other crowds of beggars led to the foundation of organizations on a statutory basis. The free brotherhoods of the blind, founded as corporations toward the close of the Middle Ages, are chiefly to be looked upon as organized beggary. While the religious motive was present in the earlier times, it was lacking in the later organizations. As an example of the societies formed purely and simply for self-help, certain companies of Russian blind may be cited. Their members assumed the names of "the earnest or never-laughing," "pilgrims" or "friends." At the head stood an ataman ordinarily called "lord" or "father." A congress of the blind elected this chief for an indefinite period and his power and influence were really significant. He settled disputes among the blind, imposed penalties, laid out the

routes of the beggars and gave permits to members of other companies to beg in the territory of his "union." In his absence the assembly of the blind made decisions according to the laws of custom.

It is noteworthy that these blind companies had a special language which spread from group to group and was understood only by the blind and their leaders. The vocabulary of this jargon was not very large, and was confined chiefly to matters of food, clothing, shelter, money and various activities. In this speech of the blind there were many words of Greek origin. A similar language was found among the South Slavs, this latter jargon being a mixture of now unknown Slavic words with others of Sanskrit origin. It was called "*Gegawatsche*," from *gega*, a kind of violin which the blind used as an accompaniment to their songs.

As to methods of begging and the relation between the blind beggar and his guide, we receive enlightenment from certain literary passages, pictures which are probably true to their times. In the old French fable, "The Boy and the Blind Man," a thirteenth-century story, both blind man and guide sing at the approach of a passer-by. After the latter has made his contribution and passed on, they revert to the ordinary modes of conversation in place of the cant they have just used. Finally the boy runs away with the spoils.

In the picaresque novel of the Spaniard, Diego de Mendoza, the blind man does not trust his guide so naively. In this sixteenth-century story, *Lazarillo de Tormes*, the guide, Lazarillo, is mistreated by his master and held strictly to account but manages by cunning to exact his fees. He rips open the ever-closed beggar's sack and helps himself to the contents; he drinks the wine out of the flask through a straw even when the untrusting blind man is

holding it in his hands; he steals the sausage and eats it and puts a turnip in its place. With the intention of running away from the blind man in revenge for his frequent mistreatments, when summoned to help him across a brook he makes him jump with all his might against a pier-stone.

Lazarillo delineates the craft of the blind beggar as follows:

He was a veritable hero in his profession. A hundred or more prayers he knew by heart. When he prayed the church rang with his sonorous, soothing, God-given voice: he put on a modest and pious face, but without lifting up his eyes after the manner of other worshippers. He knew a thousand and one ways of extracting money. He knew prayers for all possible afflictions and diseases: for women who got no progeny, for those who lay suffering in childbirth, for those who had married badly and were not loved by their husbands, showing the latter how to win back the lost love. He foretold for pregnant women whether they would bring forth son or daughter; in the matter of medicine the blind man actually knew less than half of what he pretended to know, particularly with regard to bad teeth and female diseases. In short, no one ever made a complaint to him but that he would say offhand: "Do this, do that, boil up those herbs, gather such-and-such roots!" He was never lacking in a crafty device, especially when ladies were concerned, for he had a way with women that made him trusted and he was consulted more by them in a single month than a hundred other blind men would be in a year.

The two arts most directly dependent for their enjoyment on the sense of hearing, namely, poetry and music, have always been a special source of pleasure to the blind. For the blind gifted with skill in music or recitation, song and drama, whether their own or the production of others, have been from the earliest times a means seized upon to escape dependence upon the help of others.

Both very ancient China and Egypt as early as the middle of the second millennium B.C. offer examples of blind singers or blind court minstrels, and in ancient Greece we find the blind man as rhapsodist, going around with his

guide and reciting the cycles of hero poems to the accompaniment of his lyre. Homer pictures him in the person of the Phaeacian singer, Demodocus, in the following passage (*Odyssey* VIII, verses 38-46).

Now came the herald along, leading the much revered singer,  
The Muse's beloved to whom both evil and good had been granted,  
For she took the sight from his eyes but gave him the gift of sweet  
music.

And Pantonous seats him in a chair bedizened with silver  
In the very midst of the guests near the base of a stately column:  
Hanging there on a nail is his harp, the heavenly sounding,  
Up over the singer's head, and he reaches his hand up to find it.  
Before him the herald places a beautiful table with viands  
And a full beaker of wine to drink whenever he wants it.

Among the ancient Celts the Druidic cult was in the hands of bards who in their songs celebrated the gods, extolled the deeds of their heroes fallen in battle and stirred up hatred against the foreign oppressor. Since the Druidic religion forbade the use of any kind of writing, the blind man could hold the office of bard just as well as the seeing.

The most distinguished of all blind bards is Ossian, son of the Caledonian hero-king, Fingal. He lived about the year 300 A.D. and became blind after having played a hero's part on many a field of battle.

"Oft have I fought,  
Oft won victory in the battle of spears.  
But blind, weeping and forsaken  
I can only wander with lowly men.  
O Fingal, I see you no longer,  
I see not your kind in the battle."

Ossian was a true bard. He made up poems and to the accompaniment of his harp sang not out of a desire for glory but from a full enthusiasm for the heroes of his race and for the freedom of his native land with its fog-draped mountains and its moss-grown bogs.

As Christianity developed, the blind bards had to find

from their own ranks a patron saint. This was St. Hervaeus, who was born blind, the son of a bard and of a pious mother, and who later was converted to Christianity. Numerous legends have gathered about his youth and his whole life. Sometimes he is pictured as a boy who, led by a white dog, goes about seeking his father's grave or listens for the whisperings of his dead ones at their grave mounds; sometimes a lonely hermit, who in the depths of the woods calls up the wild beasts by his soft melodies and tames them; still others picture him as he goes out into the villages where the children gather round him and he teaches them through his ravishing songs to love God and their neighbors and their daily work. After his death he was canonized. Judges administered the oath in important matters over his remains in the Cathedral of Nantes up to the time of the Revolution and the princes there confirmed their agreements. To this very day singing beggars come to the little village of lower Brittany in order to secure a blessing on their shabby instruments at the birthplace of this saint.

The increase in printed literature had the effect, sooner or later, of displacing wandering entertainers in successive countries, according to their degree of culture. The professional musician succeeded the seeing players, while the blind minstrels sank to the level of street musicians and beggars. Sometimes they played for dances, weddings and other festivities, peddled printed ballads, or improvised and told picaresque stories. They protected their privileges from competition. In Spain, up to the Revolution of 1868, the blind alone were allowed to sing and recite in public places. Blind musicians, like blind beggars, were present at church feasts and celebrations. Their behavior in sacred precincts was not always as edifying as it might have been, as witness the fact that the blind singers at Chartres were

more addicted to the famous wines of that city than to service at the "mercy-seat" of the place of pilgrimage. That on the other hand blind musicians could direct their activities into more idealistic forms we have shown in the case of the Italian blind brotherhood of Palermo.

Cases of famous blind persons have been reported from earliest recorded times. The first important instance of the education of a blind person is that of Didymus of Alexandria, who lived during the fourth century of the Christian era. Didymus won some reputation both as a theologian and as a teacher. He became blind in his fourth or fifth year. He seems to have displayed an indomitable spirit, and the affliction which meant beggary to most people of the time, only spurred him to more strenuous efforts. By means of an alphabet carved in wood, he learned to read. With separately carved letters he constructed words and sentences, but most of his study was gained through hearing others read. For this purpose he employed special "readers." So great was his zeal and endurance that he frequently tired his readers out. He meditated much on what he heard read and thus gained a clear idea of the meaning of passages. In this way he amassed not only a prodigious amount of learning in the field of theology and Biblical literature, but became one of the great expositors of the day. His scholarship led to his appointment as a professor in the "University" of Alexandria. His range of knowledge was not confined to religious subjects, but covered pagan philosophy, mathematics, music, and even astronomy.

There is a story connected with the life of Didymus which is of more than passing interest. Once when visited by the hermit saint, Antony, who made inquiries concerning his affliction, Didymus at first remained silent, but on being pressed to answer, he broke into a bitter complaint. This drew from the saint the following words: "I wonder that



a man so wise as you are should mourn the loss of what flies, ants, and the most insignificant animals possess in as great a degree as man, and that you should not rejoice in a gift which we have in common with the saints and apostles. It is better to possess wisdom than eyes, which, with a single glance, can make us forever unhappy."

The gap between Didymus and the next educated blind person of real importance is some fourteen hundred years. This long period has, as we have shown, a fairly creditable history of charitable activities; but its history of beggary is more instructive than inspiring. However, the collective care of blind adults would call the attention of the thoughtful sooner or later to the necessity of training blind children. While apparently little or nothing was done toward making the blind in any degree self-supporting, there is an indication of a spirit of helpfulness on which a wiser care might be built. (It remained for blind individuals to point the way toward the form which that care should take, by showing in their persons and achievements that their greatest need was that of education, and these blind persons showed that the education they needed was not one of cramming with studies, but the education of directed self-helpfulness.)

The most famous case of the education of a blind person up to the close of the eighteenth century was that of the blind mathematician, Nicholas Saunderson, sometime professor at Cambridge. Saunderson plays an important part in the history of mechanical devices for the blind. Born in 1682, in England, he received a careful education, and showed a special aptitude for mathematics. Because of the brilliance and clearness of his mind, he became a very able teacher, expounding particularly the new theories of Sir Isaac Newton, among others Newton's theory of light and color. Saunderson led an extremely sedentary and

studious life, which contrasts strongly with that of his younger contemporary, John Metcalf, perhaps the most remarkable blind man of the eighteenth century.

Born of poor parents in 1717, in the north of England, Metcalf became blind in his sixth year, after having had some elementary schooling. Whatever the cause of his blindness, it seems not to have interrupted to any great extent the normal course of his physical development. In contrast with many blind children, he enjoyed perfect health. He learned to ride and to swim. He went about with such ease that he was not thought of as blind. An inclination toward trade and shrewd sense in bargaining led him into various business ventures which necessitated considerable traveling. He was, too, a skillful musician, and as such joined the royal troops and saw campaign service in Scotland in the expedition to Culloden.

Around his home in the north of England, the highways were in such wretched condition that Metcalf conceived plans for their betterment. Roads that were unspeakably bad for people of normal sight were, of course, still worse for a blind traveling tradesman. Metcalf began to take contracts for road construction and soon built up a reputation as an engineer. He even planned and built bridges. He seems to have been one of the first to use crushed stone for making road-beds.

4 An analysis of the success of Metcalf shows that he instinctively "hit the right trail" in refusing to let blindness interfere with the normal course of his life. An interesting anecdote throws light on his independence of attitude as well as his great success in helping himself and others. Once an acquaintance, an innkeeper, asked Metcalf to accompany a stranger to Harrowgate. As the town lay on his way, he undertook the task, but on condition that the stranger should not be apprised of his defect. On his

way, all went well until darkness overtook the travelers in a forest where the highway became a mere ungraded track. Metcalf then kept asking his companion if he saw lights in a certain direction. Guided by the answers, he finally brought the journey to a successful close in the inn where they were to seek refreshments. The stranger then noticed that Metcalf had difficulty in locating the glass from which he drank, and when the latter departed from the room, asked the innkeeper if he did not think his companion had had too much brandy.

"Don't you know that the man is blind?" asked the innkeeper.

"Blind!" exclaimed the stranger. "Why, that is impossible: he was my guide!"

"I can assure you that he is stone blind," said the host. "Just wait and judge for yourself."

Metcalf was recalled to the room, and when his fellow-traveler saw that he was indeed stone blind, he cried out, trembling with excitement, "If I had known your condition, I would not have trusted myself to you for a hundred pounds!"

More instructive than the life of Saunderson or even that of Metcalf is that of the Blind Jacob of Netra, a village of Hesse in Germany. Jacob lived about the middle of the eighteenth century. He was not born blind, but lost his sight at a very early age. He was sent to the village school that he might gain the elements of religion and was also given simple tasks. With apparently an unusual mental inheritance, he displayed great keenness both in inference and invention. Thus, noting that normal children had a means of written communication and record, he set about to devise one of his own. This he did by means of a system of notches cut with his knife in small sticks similar to the system of "tallies" kept by primitive and uncultured

people. With the aid of playmates, Jacob directed his own education, making use of his special method of recording, until he finally aroused the interest of the village pastor, who undertook his more complete training.

Before his death, Jacob had accumulated a small library, his books being bundles of notched sticks. He had gained, too, a not undeserved reputation as a man of wisdom. He made his living as an herb doctor, distinguishing his various preparations by labels made of notched sticks similar to those in his "library." Jacob had little more than an elementary education, but the amount of his education is insignificant compared with the *manner*. In this, his case resembles that of Metcalf. The really significant feature in both cases is that the blind person did so much for himself, making a place in the social and economic world by his self-directed efforts. In the case of Jacob, the invention of a system of symbols in relief is especially significant.

There is a common belief that the blind are musically gifted by nature. A great deal of hard effort is frequently employed in making finished musicians of blind persons of very little talent. This belief probably grows out of the fact that the first really intelligent efforts toward the education of the blind took the direction largely of musical training. A large number of blind men and women have made places for themselves in music, a few having achieved real distinction as performers, teachers, or composers. Even before the founding of the first school for the blind, there were cases of very successful musical education. One typical case may serve as an example, namely, that of Maria Theresia von Paradis. Born in 1759, in Vienna, Maria lost her sight at the age of three. Up to her seventh year she received no special attention, but about the beginning of her seventh year, her parents discovered that the child possessed an ardent love for music and a natural apti-

tude for learning. They at once provided a skillful master for the child, and by her twelfth year she achieved the distinction of playing in the court church of Vienna. There she aroused such enthusiasm that she was called to play before the Empress, Maria Theresia. The Empress was so pleased with the performance that she settled a pension upon the girl to enable her to secure a more complete education in music. Maria not only followed music as a study and profession, but took up other studies as well, and through her social contact acquired an even more valuable education.

On a tour of Europe, this talented blind woman appeared in Paris, where she stayed for some months, probably in 1784. There she met Valentin Haüy. Haüy was considering the organization of a school for the blind, and Maria seems to have had a marked influence both on the founding of the school and in the selection of materials for the education of the blind. In particular, she called Haüy's attention to the systematic study of another blind person, one Weisenburg, a German, whose case Haüy proceeded to investigate. Thus Maria's real importance lay not so much in her own education as in the interest which she stirred up in the condition of the blind and the possibilities of their education. She was herself a living object lesson; the very contrast of her culture and refinement with the wretched condition of the numerous blind beggars of Paris, Vienna, and the other great cities of Europe, was a source of inspiration to men like Haüy and Wilhelm Klein of Vienna, who were struggling to better the lot of the blind. If one blind person could successfully overcome the limitations of her narrowed sense life, others could do the same in proportion to their native abilities.

A few other isolated but significant attempts to educate the blind previous to 1784 remain to be noted very briefly.

When the Spaniards conquered Peru, they found among the Indian tribes of the Andes a system of communication and record by means of knotted cords, the knots varying in size, shape, and distance of placing. These were doubtless used by the numerous blind population as well as by those of normal sight. The system, called "quippos," closely resembled a comparatively recent device employed in teaching the blind in Europe, although there is probably no historical connection between the two. Rampazetto in Rome (1575), and Franciscus Lucas in Madrid (1580), taught some blind persons to read by means of letters cut in wooden blocks. Harsdörffer, in his *Deliciae Mathematicae et Physicae*, published in Nuremberg in 1651, described a method of teaching the blind to write on wax-covered tablets by means of a stylus. In 1676, Jacob Bernouilli, of the great family of Swiss mathematicians, taught his blind pupil, Elizabeth Waldkirck, to write by means of tracing the outlines of the letters cut in wood. Bernouilli had such success that his pupil learned to write freely with a pencil, the paper being held in a frame and the hand guided by a cross-piece.

More notable still was the education of the above-mentioned Weissenburg, born in 1756 at Mannheim in Germany. His teacher, Christian Niesen, carried on his education with great success, using a number of devices, among them the peg-board invented by Saunderson. Weissenburg learned not only reading, writing, and mathematics, but geography and physics. We note in his education, the first use by the blind of relief maps. As previously indicated, on the advice of Maria von Paradis, Haüy investigated the education of Weissenburg. In the choice of means of education, this case probably influenced Haüy more than any other.

In a letter to Maria von Paradis, dated Mannheim, the

27th of July, 1779, Weissenburg exhorts this "*gnädiges Fräulein*" to persist in her educational efforts, saying:

One must overcome all difficulties with patience and graciousness, though many hold them to be insuperable. . . . *Increase the little group of educated blind people.* You yourself belong to that group.

After citing Saunderson and a number of other cases of educated blind people, Weissenburg continues:

I sympathize with you, having suffered the same fate. Yes, when I was seven years of age, the measles robbed me of my sight and I remained in inner as well as outer blindness until I was twenty, namely until 1771, when a man with both a head and a heart came forward and kindled in me the light of learning. Heavens, how indebted I am to that enquiring spirit! He has enriched me with such goods as cannot be taken from me, and if I possessed a principality, I should not be able to pay back my indebtedness. A grateful heart beats in my breast and prayers for his welfare constantly arise in my soul. And in him, too, there must be a somewhat similar feeling of gratitude when he thinks on what he has done. The memory of having rendered an unfortunate person happy must always renew in us feelings of joy and gratification; indeed, such a memory must bring us to the threshold of a higher existence.

This philanthropist taught me mathematics, both reckoning, geometry, measurement and trigonometry, hydraulics, hydrostatics, pneumatics, optics, reflection (should I not say with some pride that I have a clearer conception of this branch of physics than many a man with all his senses?), dioptrics, gnomonics, chronology, and the science of projectiles; algebra, differential and integral calculus, not excepting conic sections. To architecture and military science I have as yet given no time. On maps I can point out cities, islands and rivers. Divers of the sciences have I myself taught in turn; in fact, I took an untrained blind boy nine years of age and in three months I had taught him the five branches of arithmetic. . . .

I have also had the favor granted me of giving a flute recital in the open Academy meeting before that best of princes (Kurfürst Karl Theodor v. d. Pfalz.) I play piquet, also chess, a very difficult game. I have been writing for seven months. I have the honor of sending you herewith a sample. Time and practice will make my writing better.

A short time ago I ventured an experiment; namely, I had made twenty-six woolen patches, the colors of which I can say off, as often as I am asked. I had a gray one divided into six pieces, five

of which were then colored, and I can tell those too, but with more difficulty. It is a mistake to say that the totally blind can distinguish colors (as such); Saunderson considered this impossible and so do I. . . .

Philosophy, medicine, natural history and the like should also not be passed by. Studies seem to clarify themselves and stick better when I expound them to another person; but what I am telling you here is merely to show you what we blind are capable of doing. . . . If I am able to add to your happiness, it will give me inexpressible gratification. . . . If you care to enter into correspondence with me (a correspondence between blind persons is really a new phenomenon!) I shall gladly answer minutely in every particular and with all my ability. Have the kindness at least of sending me your address. . . .

I have spoken with Prior Joachim Wrabez of Buchsal and he assured me that he had the honor of knowing you well. He told me many creditable things about you; accordingly I hardly had the patience to delay for one moment getting in touch with you.

In the hope of having an answer from you, I have the honor to remain in all respect, honored Miss,

Your obedient servant,

Weizenbourg, the Blind.

Thus five years before Haüy tried his great experiment two educated blind persons were carrying on a correspondence—in legible but intangible writing it is true—and discussing fundamental points of their own education and suggesting the more general education of the blind. Surely the time was ripe for undertaking class and school work in addition to the training of single individuals; and the blind themselves, together with their devoted friends, were pointing the way. There was lacking, however, a conviction on the part of the sighted public that it could be done and that it was worth while. It remained for a succession of philosophers to supply a theoretic basis, grounded on psychology and social studies, and on this theoretic basis Haüy finally built.



### CHAPTER III

#### *Valentin Haüy and the First School for the Blind*

**T**HE universal education of the blind either as youths or adults had apparently occurred to no one before 1784, if we may except the great French encyclopaedist, Diderot. He was the first to make a careful analysis of the thought processes of the blind, and to drop certain suggestions for a basis for their complete education. These were mere suggestions, incidental to his attack on orthodox religion, and may or may not have exercised influence over his contemporaries and successors, among them Haüy. Diderot's interest in the blind was purely theoretical, arising from his reading of Locke's "Essay Concerning Human Understanding." In that famous essay Locke had set forth the so-called problem of Molyneux. In brief this problem is: "Given a man born blind, let him learn by touch alone the form of a cube and a sphere. After he has attained maturity, grant him sudden acquisition of sight, as through an operation for congenital cataract, will he be able through sight alone, without reference to his touch experience, to distinguish the forms of a cube and sphere?" Molyneux's answer is that he will not be able to do so. Bishop Berkeley further elaborated this problem in his "Essay Toward a New Theory of Vision."

Diderot was well acquainted with English thought, especially as represented by Locke and Berkeley. Besides, he had been attracted through his mathematical studies to the blind Saunderson, of whose accomplishments he entertained a very high opinion. In his "Letter on the Blind," published

in 1749, Diderot discusses the theories of Locke and Berkeley, and adds thoughts of his own on the condition and educational possibilities of blind persons.

In three bold guesses he anticipates truths that have since become more and more firmly established; first, that the senses of the blind are not especially sharpened by the loss of sight, but that the loss of one sense compels *increased attention* to what remains in the impressions of other senses; secondly, that we ought rather to build education on what the blind person has, than what he has not, namely, upon his possible contacts with the objective world; and, thirdly, that even a blind deaf-mute could be educated through the touch sensations by patient and insistent connection of tangible signs with objects touched. Diderot's letter is very brilliant and in some places contains profound reasoning. It is seriously marred by his bitter attack upon the established religion. The only thoughts in which we are interested are the following.

Diderot's interest in the blind was awakened by a desire to arrive at a correct theory of the origin of ideas. He wished to watch an operation for congenital cataract in order to test out by experiment the theories of Locke and Berkeley. Being disappointed in his desire, he did the next best thing, that is, made an investigation of the thought processes and emotional life of a blind man. This man was an inhabitant of the little village of Puisaux, the son of a well-known gentleman. He had been compelled through loss of his fortune to leave Paris and make his own living. Apparently he was well educated, particularly in the use of language. Like all of the blind, he used the conventional speech, without any special choice of vocabulary, the word "sight" and similar words occupying a very large place. He showed, however, that he attached little or no real meaning to words with a strong visual content. Thus he

thought the image in a mirror was set in relief, that the air striking the eyes produced in them the same effect as objects which his finger-tips touched. He even said that aside from curiosity as to what sight was, he would be just as well pleased at having long arms; that with sufficient length of arm he could gain a better idea of the moon, for instance, than could be secured through a telescope.

This blind man was able to do a number of useful things exceedingly well, and both in working and in getting about he displayed an extraordinary use of the senses which remained intact. Diderot even attributes to him clearer impressions in certain fields than people of normal vision are able to gain. This clearness of impression he attributes to the lack of distraction. He is surely not correct in saying that sight is confusing in this respect.

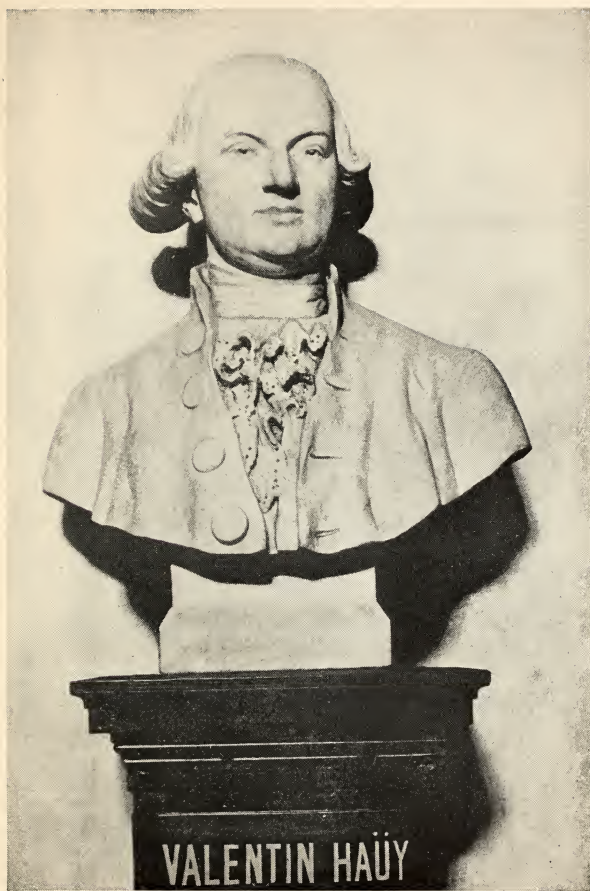
Passing to the morals of the blind, Diderot makes the inference that morals, particularly shame, are largely matters of sense. He leaves out of consideration social development and the intrinsic work of such conventions as lead to modesty. In spite of his careful reasoning and brilliant insight, he fails to distinguish between the simplicity of sense impressions and the immense complexity of the matured mind and of human life as a whole. In fact the value of his "Letter" is to be found not so much in the justness and completeness of its thought, as in the interest which it stirred up. We know that Haüy moved to some extent in the same circle as Diderot, and are bound to infer that he was influenced by the thought of the great philosopher.

As an indication, then, of a growing interest in the condition and education of the blind, the "Letter on the Blind" is a very important historical document. We may doubt that it had any great influence on actual practice; and the fact that the bulk of the letter has to do with religion and

religious problems lessens its importance with reference to the actual work of educating the blind. Had Diderot turned his great energy and intelligence seriously to the problem of instructing the blind, he might well have anticipated the work of Haüy by thirty years or more.

The first school for the blind, later the Institution Nationale des Jeunes Aveugles, was founded in Paris by Valentin Haüy. In order to understand the man and his work we must take into consideration the moral, intellectual, and social forces of the eighteenth century in France. Haüy was a younger contemporary of the three men who did most to shape the thought of the eighteenth century. In his earlier years Voltaire, Diderot, and Rousseau were the outstanding figures of French intellectual life. All were revolutionary in their thought and all undoubtedly exercised great influence on the plastic mind of the young Haüy. His brother, the great mineralogist, was a leader in intellectual circles, and it is only fair to assume that Valentin was strongly influenced not only by the great Revolutionary thinkers, but also by the rising science of the second half of the eighteenth century. It is to be remembered that Voltaire, Diderot, and Rousseau had been in their turn strongly influenced by preceding English thought, particularly the writings of Locke, Shaftesbury, and Berkeley. We can trace then in Haüy a definite succession of influences coming down from the first intimation of a social revolution in the thinkers of the seventeenth century.

Perhaps the social contrasts of the eighteenth century in France have been somewhat exaggerated. The general thought concerning that century has been shaped by extremists such as Dickens and Carlyle. There can be little question, however, that along with the rise of invention and increase in general wealth, there was in France up to the time of the French Revolution a growing sharpness of



VALENTIN HAÜY



contrast between the condition of the wealthy and that of the poor. It is equally true, however, that people were stirred as never before on social questions, and that from the time of Louis XIV more serious efforts were being put forth by both nobility and church toward the alleviation of poverty and the betterment of conditions among the poorer classes.

Thus the number of hospitals began to increase, and such social leaders as Madame Necker, wife of the great financier, gave their direct personal attention to the care of the unfortunate. Nothing speaks better for the good intentions of the age than the popularity of such writings as Rousseau's treatise on education, *The Émile*. Perhaps no word better applies to the social thinking of the century than "ferment." Rousseau, himself, the greatest forerunner of the Revolution, is to be considered chiefly as leaven. He more than any other one person emotionalized the thinking of the eighteenth century and directed it toward forms of concrete activity. In general, it may be said, however, that up to the actual opening of the Revolution, fine sentiments and good intentions too frequently took the place of activity. The condition of the poor must have been very wretched. Paris and the other great cities were swarming with beggars and there was really very little intelligent effort at meeting this and other serious social problems.

Valentin Haüy was born at St. Just les Marais in Picardy, France, November 13, 1745. His parents were poor and his earliest education was received free from the Premonstrant monks. He went while still young to Paris to complete his education, and remained there practically the whole of his life. He was a minor employee of the government and privately devoted himself to the study of language.

When he came to Paris, that city still retained its prestige as the intellectual center of Europe. As indicated before, he himself came into contact with great philosophical and scientific groups, and, according to his own account, was particularly impressed by the Abbé de l'Épée. He was sympathetic and early turned his attention to the condition of the neglected poor of the city. In 1771 he began to consider plans for the betterment of the blind, being inspired by the work done by De l'Épée for the deaf and by an incident which so influenced him that it practically marks the beginning of his great work.

In the year 1771 at the market of Sainte Ovide, in the month of September, Haüy witnessed a scene that to his sensitive nature conveyed a meaning lost upon his well-intentioned contemporaries. A group of blind men, grotesquely dressed and wearing high, pointed caps, were placed in front of a long desk carrying lights. Each man had some sort of a musical instrument. All wore huge cardboard spectacles and had sheets of music placed before them on the desk. They made a burlesque attempt at playing various tunes and caused great amusement and laughter in the crowd that witnessed their performances. This spectacle continued for weeks. Haüy was touched not only by the utter misery of the exploited men, but quite as much by the heartlessness of the exploitation and of the public that could be amused rather than shocked. The venture in the end must have proved unprofitable, for the musicians went back to the ordinary forms of beggary. But the train of thought started in the mind of the philanthropist continued through more than ten years while he waited in poverty his opportunity to do something definite for the betterment of the blind.

Another incident that deeply touched Haüy and gave him some clue to his future work was a display of simple hon-



esty on the part of a blind beggar. Given a coin larger than he was accustomed to receive, the beggar called the donor back and asked if he had not made a mistake. Haüy was impressed not only by the honesty of the man, but by his acuteness of touch. He began to consider the possibilities of a sense that could so readily distinguish the difference between two small coins.

Meantime he was witnessing with ever-growing admiration the work carried on by the Abbé de l'Épée in the education of the deaf. He took occasion later to express his debt to the genius and patience of his great predecessor in the following words:

However surprising to the eyes of the public the result of our procedure may appear, we are far from implicitly joining in that rash admiration of some persons who are very willing to give this result a preference to the art of instructing the deaf and dumb: an art, we dare say, incredible to those who have never been witnesses of the success to which it has been conducted by the virtuous ecclesiastic, who is the original author; and with regard to which, several, even of those who have seen the proofs of this art, neither know how to estimate its merits or to feel its difficulties. Let any person in reality follow them step by step: let him take the Abbé in the first instance of time, when he begins to wish to make his first signs understood by his pupil. Let such a one explain to us by what enchanting and magical talents he teaches the deaf to distinguish the moods of a verb; its tenses and inflections of its persons. . . . It is a long time since we have been anxious to pay this tribute to M. l'Abbé de l'Épée; and we congratulate ourselves on having this task to perform in such favorable circumstances, and we flatter ourselves that our readers will feel all the justice of the deference we pay him.

According to Haüy's own account, the misery of the blind appealed to him not in any general way, but through specific instances, and the work of De l'Épée inspired his thought to take the more and more concrete turn; first, of teaching the blind how to read, and second, of giving them employment. He assumed that profitable employment

could be given to a large number who might be made capable of self-support. Employment should be also given to those who could not be rendered self-supporting, for the sake of relieving the monotony of their existence and lessening the burden upon their relatives and friends. In addition, he proposed musical training for such as could profit by it.

As we have seen, Maria von Paradis arrived in Paris about the time that Haüy's plans began to take tangible form. She conferred with him, telling about her own education and that of Weissenburg. Haüy seems to have made a careful investigation of all the apparatus used in the education of blind individuals in the cases where he could either secure the materials or read accounts of them. He concluded that most of the efforts were clumsy and that new and more refined apparatus was needed.

A first pupil was found in the person of François Lesueur. When Haüy came in contact with him the boy was seventeen years of age, having been blind from the age of six weeks. Because of the poverty and large size of his family, Lesueur felt obliged to contribute to its support and took the only means then open for a blind youth. He frequented the church doors where he begged for alms. Haüy had no difficulty in securing the boy's consent to become the subject of his educational experiment. Alternating his hours of begging with short periods of study, Lesueur soon became more interested in the study and made such progress that Haüy felt confident of the ultimate result and even ventured an exhibition of his pupil's skill before a learned assembly, when he read a paper upon the subject. He thus secured the interest of a few influential men, and then sought to interest government officials, including the Comptroller General and the Keeper of the Seals.

After a second exhibition of Lesueur's abilities, Haüy

gained not only interest but substantial aid. At this time the Société Philanthropique, which had undertaken the care of twelve blind children, turned them over to Haüy in order that he might continue his educational experiments. The aid already given was continued and Haüy hoped to add to this the earnings of his pupils. Thus was formed the first class for the education of the blind. There was no regular school building, but the teaching was regular and systematic. Haüy discarded one by one the inventions of his predecessors. He concluded that the apparatus previously devised might have served its purpose in the individual case, but was too primitive and unwieldy for general use. Something must be done to make the arts and sciences more accessible to the blind. Haüy's claim for fame and gratitude rests chiefly upon the invention which followed.

For the invention of embossed printing may safely be said to be the greatest single step in the improvement of the condition of the blind. Credit for the invention belongs wholly to Haüy. He had observed that in ordinary printing the wet sheet issuing from the press showed the letters, on the opposite side of the sheet from the print, in slight relief and reversed. He had type cast so as to show the relief form in the same order as common print. A trial showed that the letters must be greatly enlarged in order to be readily perceived by touch. The characters used closely resembled the italic in form. Out of fourteen pupils who were tested on the new method of reading, only three failed to learn to read, their failure being attributed by Haüy to the fact that they retained some sight. Haüy supposed that the retention of sight affected their acuteness of touch.

At this stage in the progress of his work, Haüy felt it necessary to secure government approval and aid. Accordingly, he exhibited his pupils before the Academy of

Sciences and displayed samples of his embossed literature. A majority of the Academy were convinced and gave their enthusiastic approval. On the 16th of February, 1785, the Duc de la Rochefoucauld read before the Academy a favorable report, a few significant lines of which are here given :

No one had yet dreamed of assembling those different means and of canvassing them in an effort to form a method coherent and complete for facilitating for an unhappy portion of humanity the acquisition of that knowledge which the lack of the most necessary sense kept from them, and to open for them, if one may be permitted so to speak, the entrée to the society of other men. This is what M. Haüy has attempted. As we are permitted to render homage to the talents and zeal of M. l'Abbé de l'Epée, who has opened to deafmutes the career of instruction, M. Haüy becomes, following his example, the benefactor of the blind, and that suffering part of humanity will owe to him the means of happiness which one did not believe it possible to hope for them.

Haüy's small class grew into a school, and this first school for the blind was located in the beginning in the Rue Coquiller and later in the Rue Notre-Dame des Victoires. The number of pupils soon reached fifty. The approval of the Academy and patronage of nobles combined to popularize the movement. Contributions poured in from many quarters. Benefit performances were given, notably by the Royal Academy of Music early in 1786. Further exhibitions of the accomplishments of the blind were held before various learned societies. The early popularity of this movement culminated at the time of the Christmas festivities in 1786, less than three years from the time that the instruction of Lesueur began. Haüy then presented twenty-four of his pupils before the King at the Palace of Versailles. The court was delighted with the novelty of the performance. A new thrill was added to existence by seeing the blind read, write, solve arithmetical problems and work with their hands on such tasks as had been given in

the school. At the time of this exhibition one of Haüy's pupils, by name Huard, read an original poem, the translation of which by Thomas Blacklock, the blind Scotch poet, follows:

Sweet Harmony, from heav'n descend.  
Inspire and tune my languid strain;  
To me thy kind assistance lend,  
My genius in its flight sustain.  
O deign, delightful God of day,  
To guide and animate my way;  
I seek the sacred vale alone;  
My Muse, alas! too apt to fear,  
When no bright beams her journey cheer,  
Trembling, approaches Helicon.

To barren idleness our days,  
By cruel fate were once confined;  
Our woes kind Industry allays,  
Once more to social life consign'd;  
The various useful tasks and arts,  
Which she to us with ease imparts,  
Shall soon our ling'ring hours console;  
To cheerful hope once more we rise;  
Our being, erst consum'd in sighs,  
Grows less oppressive to the soul.

Typographies, by which imprest,  
The learned's thoughts embodied shine,  
Their immortality attest:  
Treasures, O France, which now are thine,  
Eyeless, thank heav'n's supreme decree,  
We can to late posterity,  
Transmit the light of every sage;  
Though blind, we can in open day,  
Truth's venerable form display,  
And show the glories of our age.

Greece, fruitful source of arts refin'd,  
To mortals raptur'd and surpriz'd,  
Gave perfect masters of each kind,  
At once beheld and idoliz'd;  
Yet though their times we justly praise,

Illum'd by such effulgent rays,  
 Did then the dumb articulate?  
 Or had the hopeless blind been taught  
 From tactile signs to construe thought,  
 To read, to write, and calculate?

Though Nature from our darken'd eyes,  
 Forever veils her charms sublime,  
 The form of earth and ev'n of skies,  
 By Fancy's aid we figuring climb;  
 We trace the rivers to their source,  
 Of stars we calculate the course;  
 From Europe to th'Atlantic shore,  
 Successive journeys we pursue,  
 Thanks to the hand, whose prudence due,  
 Guides us in Geographic lore.

Dear brethren of affliction, aid  
 My songs, th'auspicious days to bless,  
 Which wrap our fate in softer shade,  
 And tend to make its horrors less.  
 And while my Muse, with grateful lays,  
 To sing the virtues all essays,  
 Which in our zealous patrons glow;  
 The gratitude their worth inspires,  
 Shall burn with unextinguish'd fires,  
 And in our bosoms ever grow.

An orchestra of blind musicians added to the entertainment.

Almost coincident with the exhibition before the court there appeared Haüy's *Essai sur l'Education des Aveugles*, dedicated to the King in flattering language. In this work Haüy describes his method of printing and answers possible objections. The objection that the books would be too voluminous and the printing easily rubbed down, he meets by modestly disclaiming perfection in his work, saying that he hopes that his system is but a beginning of improvements in the education of the blind. He then describes the methods used in arithmetic, geography, music,

and the other branches, showing how he had to discard the apparatus of his predecessors and adopt simpler devices, more in accord with the processes used in the teaching of normal children.

This last point gives us a clue to the fundamental fallacy of Haüy's system, a fallacy existing in the work of his successors and only partially perceived at the present time. He would have the teaching of blind children conform to that of the seeing not only in method but in material appliances as well. The fallacy lay, of course, in thinking that touch became a substitute for sight, when the fact was that the touch senses remained just what they had always been. The assumption was made that what looks well to the eye must appeal equally to the finger-tips. This erroneous assumption extended to all but one of the departments of teaching, the exception being in the industrial department, where the false analogy between touch and sight could not do much harm.

In reading, as before stated, Haüy used an embossed print, closely resembling the italic. The pupils set the type and printed the sheets of heavy paper. Very little literature was actually supplied in this way, the first considerable piece being Haüy's own *Essai*. Reading remained, because of meagerness of material, little more than a rare "accomplishment" for more than a generation. In fact it was not until after the braille system was invented that any considerable body of literature existed in tangible print. Statistics gathered later show that a very large percentage of the blind remained non-readers as long as the old "line" systems of printing were in vogue. The approval of the Academy of Sciences tended to fix upon the blind the system of Haüy, or other systems modeled upon it, efforts for many years being directed toward the "perfection" of line letters. The only real advantage of the system was

that claimed by its inventor, namely, that it could be read by seeing persons as easily as by the blind, and that thus the blind could teach children with sight how to read or be readily aided themselves by seeing teachers or companions.

In writing, Haüy used the writing frame and hand-guide of Bernouilli at first but soon decided to make the writing legible to the blind. Accordingly he invented frames provided with heavy paper over cardboard or leather and blunt pens made of iron. In writing, the lines were kept even by means of a cross-piece. The pupils made heavy impressions with the pens in making their letters. They learned to write in reverse form, writing to the left, so that when the sheet was taken from the frame, the writing appeared on the opposite side in relief from left to right.

In arithmetic Haüy discarded at once the apparatus of Saunderson and Weissenburg and had type cast with the arithmetical signs in relief. The type could be placed in a pigeonhole frame and practically all arithmetical combinations produced. Haüy claimed for this system two advantages: "(1.) A father of a family or a tutor can easily direct a blind child in the study of arithmetic. (2.) This blind child when once instructed may also conduct, in his turn, the arithmetical operations performed by a child who sees." In this department the least improvement has been made over the apparatus of Haüy. The common signs have been discarded for simpler ones more readily perceived by touch, but the frame remains nearly the same, and the present method of performing operations is nearly identical with that of 1786. Of recent years the tendency to discard all aids except the "point" notation has become marked in a number of American schools.

In geography Haüy made an improvement over the maps



made for Maria von Paradis and Weissenburg by marking boundaries with fine wire. They had used some viscid substance covered with a mixture of sand and powdered glass. Towns they had indicated by small grains of glass. Haüy claimed superiority for his maps on the ground that they could be easily multiplied by the press. No indication was given in his essay of the use of larger relief maps. Apparently, aside from purely informational and verbal knowledge, the blind learned only to identify the representations of countries by size and shape and the location of cities, towns, rivers and mountains. In the teaching of geography vast improvement has been made since Haüy's day, especially in the schools of Germany and Austria, where the value of orientation over mere class work and learning by rote has been fully recognized. The use of models and maps is carried out more extensively in those countries than elsewhere.

In music, again Haüy followed the tradition of sight but in practice relied more on the reading of music than his predecessors. Any kind of music in relief was to be preferred to the parrotlike imitation previously in vogue. Blind children were no longer absolutely dependent upon the constant presence of a master. Haüy, like many of his successors, tended to overdo musical education. He gave his school this unfortunate bent, and as years passed, its tendency was to become little more than a conservatory of music for the blind.

In industrial training Haüy attempted too much at one time. Several trades were taught to practically all pupils. Under this system no one occupation could be learned with sufficient thoroughness to make it a paying vocation; but the fact that vocational training both in music and the handicrafts was a recognized aim of the institution is of prime importance. Indeed so clearly did Haüy recognize

the vocational aim that it guided even the purely literary instruction, one of the hopes expressed in the *Essai* being that the pupils might become teachers of the seeing. This hope was not to be realized, though when one considers the appalling illiteracy of an age when reading was a rare accomplishment, the scheme seems not to have been wholly a wild dream.

In the *Essai* there is little indication that Haüy ventured anything more than a hit and miss experimentation in the work with his pupils. Even the imperfect psychology propounded by Locke, Berkeley and Diderot was apparently ignored. Far from fitting education to the condition and limits of the blind, he tried to fit his pupils to the conventions and traditions of sight. He was content when they showed an aptitude in imitation in a very narrow and wholly traditional curriculum. It is true that vocational ends were consciously sought, but sought through wholly inadequate means. There was no extended study of what was actually in demand that could be produced skillfully and on an effective scale by the blind. There was no thorough training in selected lines and no attempt at developing business sense or skill.

Haüy was fitted by his enthusiasm, moral courage, and sympathetic insight to be a pioneer in a great movement: he lacked the stability of character, the spirit of scientific research, and the executive ability needed to carry his work to a successful issue. He accepted too literally the praises showered upon him from all sides and became very smugly content with mediocre accomplishments. It was not to be expected, of course, that he should apply to his institution the science of a century succeeding, but he did not live up to the light of his own age.

With royal patronage secured and with his system sanctioned by the most learned body of France, Haüy seem-

ingly had no obstacle before him in the carrying out of his plans, and for a while the institution flourished. As music made the most direct popular appeal, the orchestra was further enlarged and a choir organized. This choir made frequent appearances in neighboring churches. Sympathy and funds were not lacking, more especially the former. But even when the royal favor was being bestowed amidst the rejoicings of the blind pupils at Versailles, the throne was already tottering and all the genius of the old regime could not long bolster it up.

Within three years the storm of the Revolution broke and continued with increased fury until the whole edifice of kingship, with its shelter of royal patronage for the weak and the oppressed, had fallen into everlasting ruin. Like all institutions previously under royal protection, that for the blind fared badly. The nobles were scattered and even had they desired to aid, their means were gone. Haüy had, however, an accommodating nature. His pupils became thoroughgoing Revolutionists, and the head of the school appealed directly to the Constituent Assembly. This body, carrying out a revolution in the name of justice, could not refuse its aid to the weak and the needy. In fact its aid came in a fairly overwhelming manner. By a decree of July 1, 1791, the Assembly set aside the Convent of the Célestines for the use of the blind and also of the deaf-mutes.

Thus was created the first dual school for sense defectives. This school was placed under the administration of the Minister of the Interior. A later decree, that of September 28, 1791, completed the organization of the "Institution of Those Born Blind." The decree wisely determined that in the institution itself, the blind should be admitted to such employment as their infirmity and their

talents permitted them to fill. In its organization the institution had at its head a "First Instituteur," who must have sight. There was also a Second Instituteur (with sight) and a complete hierarchy of minor officials, nineteen in all. In the official personnel there were places for eighteen blind men and women. Haüy was made the First Instituteur, the second in command being Gobert, a teacher of music. A young blind poet, Avisse, was given a minor position.

The pupils of the school now ceased to sing in the churches, taking part instead in the Revolutionary festivals. They figured in a fête on August 10, 1793, and played rôles in a Revolutionary drama of five acts in June, 1794. These Revolutionary activities did not, however, prevent Haüy's falling under suspicion and being arrested.

The union of the blind and the deaf-mutes in one school lasted only three years and was never resumed. On account of the requisition of the building of the Célestines for military purposes, the school for the blind was moved to a new location in 1794. This was in the Rue des Lombards, and was the fourth in less than ten years. For over a year the school existed without a workshop. Then came a radical change to what was practically an industrial school and asylum combined. Through the action of the Convention, July 28, 1795, the name was changed to the Institution of Blind Workers. As the support of the institution was voted in worthless currency, its very existence was threatened.

Moral decadence also marked this low ebb in the condition of the school. In two plays given at this time the pupils of the school, both boys and girls, took part. One of these plays, by the blind Avisse, not only lacked literary merit but displayed bad taste and was overloaded with vulgarities, made all the worse because certain parts were taken by blind men and women. As a further mark of de-

cadence, there are to be cited numerous instances of intermarriage between the blind, notably that of the same blind Avisse, poet and teacher of language and logic, to a woman in the workshop. Such conditions tended to fix the stigmata of asylum procedure upon the institution. Haüy seems to have encouraged the intermarriage of the blind.

The founder of the school, though proved unfit for executive leadership, continued to give all his time and energy to the welfare of the blind. He not only gave public exhibitions to awaken and keep alive interest but he worked steadily upon the improvement of tangible apparatus and appliances, bringing out a new kind of type in 1797, and making new attempts at improving the embossed musical signs. On the whole Haüy must be accredited with sincerity, honesty of purpose, untiring effort and freedom from the charlatanism with which he has been charged.

A letter of the German educationist, Joachim Campe, to one of his pupils, published at Hanover, shows the impression produced by Haüy's public exhibitions:

On a day long to be remembered I was introduced to the creator and director of the establishment, M. Haüy, in a large hall where his pupils were gathered to the number of from thirty to forty. M. Haüy demonstrated first of all the finished manual work, in which the pupils were given training and which consisted principally of knitted goods, thread and twine, girths, reseatd chairs, or woven goods. Then the pupils showed us the talents which they had acquired, some in music in a concert on different instruments, others in printing, in which arts they showed an astonishing degree of skill.

Then the actual class work had its turn. The children and youth were examined in reading, writing, and geography. And all displayed an ability that would have done credit to a class of seeing persons of the same age. For the teaching of geography, they had maps where the frontiers, the mountains, the rivers, and the cities were marked by figures and points in relief. All these signs were impressed upon their memory in a manner so precise and so sure that I have never yet seen the equal of it.

M. Haüy has been accused of charlatanism and I have no intention of undertaking his defense. But if the exhibitions which I have just mentioned had been prepared beforehand, the man must have been very able in the art of deception (and of this there was not the least appearance). For my part, with my whole attention directed to that end, I could not see anything to make me suspect either fraud or trickery.

Chiefly for purposes of economy, Napoleon Bonaparte, in October, 1800, caused the "Blind of the Second Class" to be united with the *Quinze-Vingts*, who formed the "Blind of the First Class." An Agent General under the Minister of the Interior had the direction of the new establishment. Haüy had the direction only of the education of the blind children. The new institution numbered four hundred and twenty blind persons; three hundred of the First and one hundred and twenty of the Second Class. Children had to be totally blind to be admitted. The age of admission was fixed at seven years and the duration of instruction at eight years. Improvements were made in the more complete separation of the sexes and in an effort to make the blind help themselves as much as possible, particularly in the care of their rooms.

Haüy soon fell into disfavor with Napoleon, probably on account of his connection with the Society of Theophilanthropy. Napoleon looked askance at the activities of this society, and early in 1802 he dismissed Haüy from his service. But Haüy refused to give up his life's work. He started a little private day school, rather unhappily called "*Musée des Aveugles*." A manufacturing venture in connection with this private institution proved its undoing, and in 1805 it was closed. The year following, Haüy went to St. Petersburg via Berlin.

From the founding and early history of the *Institution Nationale des Jeunes Aveugles* there are to be learned a

number of lessons of importance. First, both the venture and the whole philanthropic movement that entered into the early spirit of the school were distinctly products of the time. If Haüy lacked the ability to make dreams come true, he shared the quality with no less distinguished contemporaries than Rousseau, Diderot, Turgot, Necker and Mirabeau. If he had more of noble sentiments than executive ability, he at least made an honest effort. His mistakes arose naturally from a lack of sound psychology, from an inability to secure means sufficient for the carrying out of his plans, and from the constant meddling of outside authorities. The premature decline of the school was caused by the unsettled conditions brought about by the Revolution. A greater man than Haüy might have secured the confidence of the "First Consul" and saved the school, but even that is doubtful. So truly do our institutions lag behind the thought of the time, save where directed by genius, that only gradually is the best and most advanced thinking forced upon them. It is even remarkable, then, that a man of Haüy's mediocre ability did so well.

The mistakes in organization, curriculum and method arose, too, from the inadequate and often purely speculative knowledge of the eighteenth century. The psychology in vogue assumed a simple unity of mind or of faculty, making possible the training of the whole through a selected number of activities. The curriculum in all schools was narrow. Mere information was highly prized and to be well read passed for being educated. Hence the "exhibition" of pupils and the popular wonder at Haüy's success, whether the knowledge gained had any connection with utility in life or not. The assumption of a simple unity of mind led to the mistake of thinking that the unimpaired or only slightly impaired senses could take the place of the

lost sight. Hence for nearly fifty years efforts were made to produce tactual appliances and devices in conformity with those traditional in the schools for normal children. There is also a gross overestimation of the value of literary education. Rousseau had, it is true, raised his voice in condemnation of the futility of the literary education of the times, but his protestations had had very little effect upon practice.

We should give great credit to Haüy for what he achieved. In fact his emphasis upon vocational education was far in advance of general educational thought. The occupations introduced not only were valuable as preparation for the future but offered an excellent means of securing discipline in the school. They also meant increased activity on the part of the blind, and tended to do away with or decrease the general lassitude and lack of physical activity. While there is no mention of physical education in Haüy's own account, Dr. Samuel G. Howe speaks, in the report of 1832 of Perkins Institution, of the happiness and general activity of the children in the Paris school which he visited among other institutions in Europe as preparation for his duties as secretary of the Boston school.

I cannot close this chapter better than with a brief quotation from the history of the Paris institution, by Edgar Charles Guilbeau, an instructor in the school:

"Those beings deprived of the most indispensable and commonly used sense, have, in accordance with their particular psychology, always benefited, sometimes slowly it is true, by the outcome of revolutions, which, transforming humanity little by little, have led men from step to step to their present stage of evolution. That is why the history of the blind, like all histories, like the history of man-



kind in general, comprises three phases: that of legends, wherein individuals gropingly and painfully find their way; that of invention and application; and that of development in accordance with predetermined laws. The first phase was scarcely finished by 1784; the second lasted about a century: we ourselves stand at the beginning of the third."

## CHAPTER IV

### *Early Schools of England and Germany*

IT WAS but natural that the work of Haüy should awaken immediate and widespread interest in England. As the homeland of Milton and of Saunderson, England could not fail to respond at once to a movement that meant the emancipation of her numerous blind population. The intellectual contact between England and France was, despite the wars and bickerings of kings and governments, very real and very intimate. If the Encyclopaedic Movement rose in France largely through the influence of the great English thinkers of the late seventeenth century, just as truly the great intellectual achievement of the Encyclopaedists found a sympathetic welcome among the more enlightened scholars across the Channel. The Revolution itself did not wholly estrange the really liberal Englishman, and only Napoleon's advent could completely unite the English against France. But before Napoleon appeared, Haüy's *Essai* had found its way to England, and its translation had been completed by the blind poet, Thomas Blacklock.

Just how great the influence of the essay was in shaping the course of the movement in behalf of the blind, it is hard to say. As early as 1774, there had been a letter in the *Edinburgh Magazine and Review* proposing a system of education for the blind. This would seem, however, to have had no important influence. There is every indication, on the other hand, that in England, as in France, the "time was ripe" for the beginning of the various specific philanthropies which were but parts of a larger whole. Un-

doubtedly the work of Blacklock in Scotland and the tradition of such successful blind men as Saunderson and Metcalf were important factors in starting the work. That Haüy's *Essai* was the great determining factor is more than doubtful for it did not appear in print in Great Britain until nearly three years after the founding of the first institution for the blind. It is much more likely that reports of Haüy's success and samples of his embossed print made their way to England through travelers, and that these gave a tendency toward concrete form to a movement already in its incipency.

At any rate the first institution for the education of the blind in England was started at Liverpool in 1790 or 1791. Its two most prominent founders were the Rev. Henry Dannel and the Rev. John Smyth. The object stated was "to render the blind happy in themselves and useful to society." The Edinburgh "Blind Asylum" followed in 1793, its founders being the Rev. Dr. Robert Johnston and David Miller, a teacher. The school functions were subordinated to those of an asylum. At Bristol in the same year there was founded an "Asylum or Industrial School for the Blind," its object being, "not to employ the blind after being educated, but to teach them the means of getting a living by work." In 1799 the Southwark School for the Indigent Blind was founded with a similar purpose. The Richmond National Institution of Dublin was founded in 1810.

The founders of English institutions seem to have had no clear insight into the vital distinction between the ends of charity and those of education. The asylum idea was uppermost. Only in the case of Bristol is there a clear recognition of distinctly educational aims. The whole early history of English institutions for the blind is, however, so uncertain that generalizations are likely to be untrust-

worthy. For a much more complete and satisfactory account and one on the whole much more enlightening, we must turn to the early institutions of Germany and Austria. One tendency that we may note in the British institutions, especially prominent in Scotland, is the emphasis on industrial training. This was more likely due to the fact that the blind came chiefly from the laboring classes than to any clear insight into their needs. W. H. Illingworth of Henshaw's Blind Asylum in Manchester, may well deplore the mistakes made in "blind education" in Great Britain, but we must at least accredit to certain British institutions, on the testimony of Dr. Howe, some really excellent results as early as 1831.

The founding and early history of the two most important pioneer German institutions is so full of instructive interest that it will be well to consider them at some length. The first of these was that at Vienna, founded by Klein in 1804; the second at Berlin, founded under the immediate direction of Valentin Haüy in 1806.

Johann Wilhelm Klein, born in 1765 at Allerheim near Nördlingen in Bavaria, received his earlier education in the gymnasium at Stuttgart and then studied law at the nearby Karlsschule, made famous through its connection with Schiller. In 1799, Klein went to Vienna. There, abandoning the pursuit of the legal profession, he found his true vocation at the age of nearly forty in charitable undertakings. He held the office of "District Director of the Poor," without remuneration, from 1803 to 1826.

In this new calling, Klein had ample opportunity to see how by far the largest number of blind children grew up without any adequate training or education. Most of them were driven to beggary. As he observed them, there matured in Klein, as in Haüy, a resolution to help in a more

effective way these poor outcasts who came to him seeking the aid of charity.

A second time the influence of Maria von Paradis made itself felt. She was now in Vienna, conducting a school of music. She showed in her personal attainments and abilities what the blind could accomplish. She had helped to inaugurate Haüy's experiment and had doubtless watched its growing success with interest and satisfaction. Acquaintance with the blind poet, Anton Berghofer, was an additional inspiration to Klein. There had appeared, also, in the year 1802, a little pamphlet by a Viennese magistrate named Gaheis, demanding the erection of an institution for the sightless. Thus a combination of direct interest and external influences wrought upon Klein. In 1804, he began the first systematic instruction of the blind in Germany.

Like Haüy, Klein began with the education of one individual, a blind boy named Jacob Braun. This was the starting point of the now famous Vienna Institute for the Education of the Blind, though the organization of the institution itself was not fully accomplished until 1808. Beginning with a true educational experiment, this institute was founded on the broad principles of general education. From the beginning there was a clear distinction between the ends of education and those of charity, and to this day Klein's remains one of the most truly educational of all institutions for the blind. It has accomplished perhaps the best results of any European institution. It has done more than any other in the world to forward a scholarly study of the condition and education of the blind. Klein wrought well, then, when he started his institution as a school, *not an asylum*.

In the face of almost overwhelming difficulties, Klein undertook his first work. He knew little enough of the methods of his predecessors. Almost all who heard of

the undertaking prophesied its early failure. Yet in a little over a year he felt sufficiently secure to exhibit the work of his pupil who was a clever lad and an apt learner. A contemporary account from the *Wiener Zeitung* of August 24, 1805, shows not only the nature of Klein's undertaking but speaks volumes for his good sense and practical educational insight:

District Director of the Poor, William Klein, has made a happy, praiseworthy, serviceable attempt to educate blind children to become useful citizens. A year ago he took under his care a nine-year-old boy who had lost the sight of both eyes in his third year through smallpox and had remained up to that time without occupation or training. In this short time Klein has taught him to write a legible hand-writing; by means of raised letters made for him, he also reads; he has learned the four mathematical processes by means of a so-called reckoning string, the beginnings of geography by means of maps on which the boundaries of the lands and the capital cities appear in relief, and in a similar way he knows the musical signs and notes both for playing the harp and singing. In practical handcraft, which will earn him at least a part of his living in the future, he has learned so far the preparation of bird and fish nets, lacemaking, and knitting; he makes with cleanliness and speed letter pockets, needle holders, writing articles, boxes and baskets from paper, cardboard, and leather, and he covers these with paper of different colors which he has learned to distinguish by a very simple device. With this readiness the lad combines a pleasing bearing, an unexceptionable industry, and contentment and joyousness of spirit.

The immediate outcome of the awakened interest was the much needed royal patronage of Franz I. Klein became the recipient of funds and of equally needed mechanical appliances. His practical good sense and business judgment won for the work a confidence on the part of the patrons and public that it seems never to have lost in Austria.

As early as 1805, Klein gave the results of his first experiment to the world in the form of a pamphlet entitled,

*Description of an Attempt to Educate Blind Children for Useful Citizenship.* The influence of this small publication was immense. Blind people flocked to Klein to be educated. The wealthy and powerful, as well as those interested from an educational point of view, came to his aid. In spite of some remaining skepticism as to aims and results, Klein made steady progress. In 1816 he had the satisfaction of seeing his institution raised to the status of a state institution with royal and imperial support.

Klein's story is so fascinating that one feels inclined to give it in full. We must, however, dismiss the story of the founder of the Vienna institution with a brief summary of his later work. Seeing that he could not gather all the blind children and youths into the institution, he early tried to make provision for their education in the common schools. He made a careful and systematic study of the problems of education, psychology, and economics as related to the welfare of the blind, giving out his results in such books as *Teacher's Manual for the Education of the Blind* and *Institutions for the Blind in Germany*. Those studies still possess great interest and value. Besides the interest of an investigator and teacher, Klein possessed the insight of a practical man of affairs, and many of his best efforts were directed toward the partial or complete self-support of blind adults. While the interests of the blind absorbed the greater portion of his time, Klein remained always a broad-minded friend of the poor and a practical philanthropist in the best sense of the word.

Haüy's influence has already been noted in connection with the founding of the Berlin institution, but previous to Haüy's advent in Prussia there had been an attempt to found an industrial training school for the blind at Königsberg. The conception seems to have been a most excellent

one, but circumstances conspired to cause the failure of the undertaking.

While on his way to St. Petersburg, Haüy stopped over for a few days in Berlin. There he met the famous oculist, Dr. Grapengiesser. They had some conversations about the blind. Haüy gave an exhibition of his work through Alexander Fournier, one of his pupils. Grapengiesser was impressed. He persuaded Haüy to remain in Berlin for a few days and to give an exhibition before the King, Friedrich Wilhelm III. The King was so impressed, in turn, that he took steps at once to found an institution for the education of the blind in his capital. Of course, Haüy supplied the plans. He selected August Zeune, a well-known teacher, whom he had met at Grapengiesser's, as head of the school. The plans of Haüy were too elaborate and far-reaching for those troubled times. The school, when founded, followed much more modest lines. Under the able leadership of Zeune, who has left one of the earliest accounts of the education of the blind, the school prospered, despite the Napoleonic Wars. It grew eventually into one of the best in Europe.

Haüy continued his journey toward St. Petersburg, stopping again at Königsberg. His reception by the Czar was cordial. He enjoyed ample patronage and great popularity, but his work in the Russian capital was not successful. After more than a decade of intermittent effort, Haüy returned to Paris, where he lived in obscurity at the home of his more fortunate brother. Both his health and his spirits seem to have been broken and he died in 1822. After a few years, interest in the personality of the founder of the Paris institution reawakened, and a tablet in marble was erected to his memory in the school that he founded.

The numerous European institutions that sprang up in rapid succession followed largely the tradition of Haüy



and Klein. Fortunately we have the record of the observations of one who went from one of the first American institutions to visit those of Europe.

Howe states that he visited all the principal institutions for the blind in Europe and found in them all much to admire and copy, but also much to avoid. He first divides those established and supported by the various governments from those that owed their foundation and support to the charitable efforts of individuals. He considers the latter by far the more useful. The institutions founded and supported by governments "labored under the disadvantages necessarily attendant upon such a system," especially that of regarding shows and exhibitions that redounded to the honor of the state more important than the welfare of the blind children. "Hence," Howe says, "so much of useless parade and show . . . hence so much time and patience spent upon learning to perform surprising but useless things." Private institutions were, on the other hand, too prone to fall into the error of considering their pupils merely as objects of charity, and of petting and caressing them rather than training them for useful lives.

On the whole, Howe considered that both sorts of establishments offered a most delightful spectacle as compared with the previous condition of indigent blind youths. He speaks feelingly of the "hundred blind youths changed from listless, inactive, helpless beings into intelligent, active, and happy ones; they run about and pursue their different kinds of work with eager industry and surprising success; when engaged in the intellectual pursuits, the awakened mind is painted in their intelligent countenances; and when the whole unite in sacred music, there is a display of deep-felt interest, of fervid zeal, and animated enthusiasm that I have never seen equalled."

Howe speaks specifically of the school of Haüy as follows:

The Institution for the Education of the Blind at Paris, as it is the oldest, and as there is about it more of show and parade than any other in Europe, has also the reputation of being the best; but if one judges the tree by its fruits, and not by its flowers and foliage, this will not be his conclusion.

Its founder and the great benefactor of the blind, the Abbé Haüy, invented and put into practice many contrivances for the education of the blind; and otherwise rendered the institution excellent for the age, and the time it had existed; but as he left it so it has remained. It receives, supports, and educates about a hundred blind youths; and there being no other in France, it follows there are one in three hundred of their blind who receive an education. The great fault in the Parisian Institution, is the diversity of employment to which the pupils are put; and the effort made to enable them to perform surprising but useless tricks. The same degree of intellectual education is given to all, without reference to their destination in life; and a poor boy who is to get his livelihood by weaving or whip-making, is as well instructed in mathematics and polite literature, as he who is to pursue a literary career. Now there is no reason why a shoe-maker or a basket-weaver should not be well educated; provided he can learn his profession thoroughly, and find the necessary leisure for study. But if this would be difficult for a seeing person, how much more is it so for a blind one, who, to attain any degree of excellence in a trade, must apply himself most intensely and most patiently. The necessity of this is made apparent by the situation of those youths, who come out from the Institution at the end of seven years passed there; they have devoted five hours a day to mechanical employment, but in so many different ones, that they know but little of any. Weaving, whip-making, mat and net-making, and spinning, etc., etc., have so effectually divided their attention that at the end of the year devoted to the learning of one, they have almost entirely forgotten that which they have acquired the year before.

It has however with all its faults been productive of great good, and has sent out many pupils who are not only well educated and happy men, but most useful members of society; among others may be cited Mr. Paignon, the celebrated Professor of Mathematics at the University of Angiers.

Howe on the whole had no very high praise for the German institutions, except that at Berlin. He considered

Dr. Zeune a most excellent and intelligent director but felt that he was hampered in his work by government interference, particularly in the choice of teachers. Zeune wanted a large proportion of blind teachers, feeling that they would understand best the needs and intellectual processes of their charges, but the government forced him to accept teachers with sight.

It is of interest to note that Howe reports Zeune as experimenting with types *filled with pin points*. Thus originated the attempt to make the common printed letters more legible by outlining them in points, an attempt doomed to failure; or, better, doomed to give way to the true punctographic system of braille in which the conventional letter signs were wholly abandoned.

Howe notes a dominance of intellectual training in the German schools, an observation contrary to the condition indicated in the earlier German literature on the subject. As Howe did not visit the institution at Vienna, he missed the best that Germany had accomplished to that date.

Struck with the vocational training given in the British institutions, the American observer inclined to accord them high praise for the results accomplished, although he deplored the overemphasis on trades to the exclusion of intellectual pursuits.

Speaking of the Edinburgh institution, Howe says that it is "on the whole the best I saw in Europe; it comes nearer than any other to the attainment of the great object of blind schools, viz., enabling the pupils to support themselves by their own efforts in after life. The establishment is not so showy as that at Paris, nor has it the same means which the latter possesses, and which receives an allowance of 60,000 francs, or \$12,000 per annum from Government; nor has it printed books for their use; still they receive most excellent education and learn some most useful

trades. The mattress and mat-making business are carried on by the pupils with great skill and success, and many are enabled to earn per diem nearly enough for their subsistence. They are mostly day scholars, and receive a sum of money in proportion to the work they do."

With the eye of a physician, Dr. Howe noted a neglect in controlling those mannerisms that are so repulsive in the young and untrained blind. He mentions as particularly repulsive the nervous movement of hands and the swaying and reeling of bodies. He attributes the origin of these habits to the filling of those moments of void which seeing persons pass in listlessly gazing about. This is, of course, only a partial explanation, but one that indicates the corrective of physical education, which Howe demanded.

In summarizing, Howe concluded that, aside from the mere "curiosities" of the education of the blind, "*the general principle . . . is to combine intellectual and physical education in such a way, as to qualify the Blind for the performance of a useful part in the world and of storing the mind with knowledge, so that they may have a fund within themselves from which to draw in after life.*"

The impression gained from Dr. Howe's report is that very little advance had been made in the education of the blind up to 1832, that institutions were largely following the lines laid down by Haüy, and that only minor improvements had been made. With all his critical keenness, the American seems to have been overimpressed by the outward show of success. There is nothing in his report to indicate any success worthy of the name in the after-life of graduates of the schools. The success, of which he seemed so sanguine, was observed wholly within schools and asylums.

## CHAPTER V

### *Earlier Phases of the Education of the Blind in America*

**N**UMEROUS visitors from America to the Old World had brought home reports of the wonderful things done for the blind in the institutions and asylums founded in the various great cities of Britain and of the continent. These recitals led to curious interest, and, in a land where charities were carried to a degree of munificence unknown in Europe, it was but natural that there should be from the first a desire to help the blind. Vague and unformed at the beginning, this desire was destined to assume tangible form as soon as the directive genius of one man or the concerted efforts of a small group could turn the general impulses of the charitably inclined toward some definite end, such as the founding of a school, the erection of a home or the institution of workshops and salesrooms. The crystallization of vague sentiment about such a core of definite ends occurred almost simultaneously in three great American cities between 1825 and 1835; in Boston, from which have emanated, as from Paris, so many great movements for human emancipation; in New York, showing signs even then of the destiny of future metropolitan greatness; and in Philadelphia, the home of Franklin and practical philanthropies.

The histories of the inception of institutions for the blind are almost identical in the three cases. First there was the period of rumor, of vague report, of slowly shaping sentiment; next the period of personal leadership, of

agitation, of propaganda; then the collection of funds, the formation of a corporation and a period of experiment. There followed naturally the time of demonstration of results, of further agitation and lastly the actual founding of a school or asylum; a more or less precarious early history of such an institution; a gradual differentiation of aims, an improvement of methods and groping toward right procedure; and, very gradually, the stabilizing of both institution and aims, followed by a long period of conservative and steady advancement.

Of the three institutions founded approximately in the year 1832, that at Boston, Perkins Institution and Massachusetts School for the Blind, by reason of the voluminous reports of its first superintendent and because of the great publicity given it, has by far the most complete and satisfactory records. Without intentional slight to the institutions in Philadelphia and New York, it may be best to follow the history of the New England Institution for the Education of the Blind, as it was originally called, with a view to seeing what was typical in its early growth and also in order to understand certain movements on behalf of the blind that had their beginnings in this more than in any other single institution. In Boston, too, and later in Watertown, there has always been a very clear conception of educational ends, which, coupled with the long tenure of the superintendents and the unbroken continuity of effort toward those ends, makes the institution in large measure the norm for the judgment of the work of other institutions.

Among those who had visited the Paris Institution for the Young Blind was a certain John D. Fisher of Boston, a student of medicine, later a practitioner in his home city. Fisher's visits to the school of Haüy, then under the direction of Dr. Guillié, seem to have meant far more than a

mere cursory and curious examination of an interesting and entertaining show. He became so deeply sympathetic with the movement, that, before his return to Boston in 1826 he had conceived the plan of starting a similar institution in New England. Fisher began his work very quietly at first. He broached his plan to friends, who, one after the other, so fell in with the scheme that a nucleus of enthusiastic workers was gradually formed. In order to secure definite plans he opened a correspondence with Dr. Robert Johnston, Secretary of the Asylum for the Blind in Edinburgh. Early in 1828, Fisher's friends urged the calling of a meeting of such gentlemen of influence as would be likely to favor the proposed institution. The meeting was called, February 10, 1829, at the Exchange Coffee House. Fortunately the Legislature was in session, and a number of its members attended the meeting.

At this memorable meeting Robert Rantoul, of Beverly, a member of the House, was appointed chairman, and Charles H. Locke, of Boston, secretary. Dr. Fisher gave a detailed and careful account of the education of the blind, described their employments and industries, and exhibited specimens of embossed literature. His statements produced a feeling of deep interest. Many of the most influential men present expressed their warm approbation of the plan.

"On motion of Dr. Fisher, it was then *Voted*: That a Committee be appointed to consider what measures should be adopted to promote the establishment of an Institution for the Blind of New England; and the following gentlemen were accordingly appointed: Hon. Jonathan Phillips, Theodore Sedgwick, Esq., Richard D. Tucker, Esq., Edward Brooks, Esq., and Dr. John D. Fisher."

An adjourned meeting, held nine days later, heard the report of these gentlemen, adopted unanimously a resolution calling for the establishment of such an institution

as Dr. Fisher proposed and appointed a committee to effect the necessary organization. This committee, in pursuance of their duty, applied immediately to the Legislature for an act of incorporation, which was granted unanimously by both Houses without debate. The name chosen for the corporation was, "The New England Asylum for the Blind, *for the purpose of educating blind persons.*"\* The incongruity of name and purpose apparently struck none at the time. Here English precedents were followed rather than continental, and those who finally recognized the stigmata attaching to such a name had to labor for many years to secure a change.

The Act of Incorporation authorized the corporation to receive grants, bequests, donations and subscriptions and to hold and administer the same, provided that the income from endowments and similar resources should not exceed \$30,000 per annum. The Legislature reserved the right to send to the asylum such blind persons as they might think proper, not exceeding thirty, paying for their maintenance from the Treasury such sum for each as might be charged for other persons residing in the asylum. A board of twelve trustees was provided for, to be chosen annually, eight by the corporation and four by the Board of Visitors, which latter was to consist of the Governor, Lieutenant-Governor, President of the Senate, Speaker of the House of Representatives and Chaplains of the Legislature. The Board of Visitors had large supervisory powers. Jonathan Phillips, Esq., of Boston, was authorized to call the first meeting of the corporation by giving three weeks' notice in three Boston newspapers.

The Legislature likewise passed a Resolve, directing the Secretary of State to circularize the several towns,

\* The italics are the author's.



to ascertain the number and condition of the blind in the Commonwealth.

Thus the first school for the blind in the United States was constituted by law a quasi-public body, not dissimilar to many of the state universities in plan of organization, and capable, under right management, of a great degree of independence. Legislative encouragement would be essential to its continued growth, but the possibility of a large private endowment must have been in the thought of the founders, for, with the closing paragraph of the first report, an appeal was made in the words:

“We conjure the philanthropist and the patriot to assist in adding an Asylum for the Blind to the many charitable and humane establishments that ennoble and beautify our land. We cannot hope to emulate the old world in the splendor of her palaces and the magnificence of her cathedrals. But we may try, we ought to try, to imitate her noble endowments for alleviating the woes of mankind. Let our Hospitals, our Asylums, and our Infirmaries be cherished and venerated by us in place of mouldering ruins and relics of ancient art. Let these be the monuments by which our age and country shall be distinguished. They are the infallible evidence of an enlightened, refined and Christian community.”

The splendid beginning did not lead to immediate results. Dr. Fisher was apparently too busy to give adequate time to the work. For more than two years nothing was accomplished. At length he and other members of the corporation began to look about for some young and enthusiastic man of philanthropic inclinations, to whom might be entrusted the work of organization, and whose whole time might be devoted to that work. In 1831, the search ended in the selection of Dr. Howe as secretary.

Samuel Gridley Howe was born in Boston, November

10, 1801. After finishing the course of the Boston Latin School, he entered Brown University at seventeen years of age. The course at the University completed, young Howe took up the study of medicine under the old semi-apprentice system. After devoting himself with zeal to his medical course, he was admitted to practice only to find an entirely new and different field of endeavor. The life of a practitioner seems to have made little appeal to him, but the Greek Revolution did. With all the ardor of a Byron and not a little of the poetic romance that caused Byron to find his true fatherland in classic Greece, Howe devoted himself to the cause of independence.

Into this period of Howe's life we need not enter. Suffice it to say that he returned to Boston in 1831, a recognized knight-errant of Christian Chivalry, the glamour of romance clinging to his handsome person, to devote himself with equal fervor to new causes, adding a strain of poetry to the most prosaic commonplaces, trusting to the intuitions of the poet and succeeding where others had failed. One so far removed to all appearances from the actual business of the world's work would scarcely seem to have been the man to be entrusted with great enterprises, but events proved otherwise.

One day Dr. Fisher and other members of the Corporation Committee were walking along Boylston Street and chanced to meet Dr. Howe, fresh from his experience in Greece. "Here is Howe," said Dr. Fisher to his companions, "the very man we have been looking for all this time."

Dr. Fisher was not mistaken in hailing his friend as the man for whom the new enterprise had been waiting. From the day he accepted the proposal made to him by the committee, his energy and genius were devoted to the cause of the weakest of the human race. As he had fought

with the Greeks in their struggle for national existence, he now fought for the unfortunates, and from that hour he made his own the cause of the blind, the deaf, the idiot, the insane, and the slave.

Howe was without preliminary training for his task, yet he so combined poetic insight, the fiery zeal of the prophet, sound scholarship and business acumen, that any philanthropic enterprise was bound to prosper in his hands, if indeed there was any possibility of its success. Not willing, however, to pass over the experience which had now been accumulating for nearly a half century, the new secretary spent some months in a preliminary survey of his field, visiting nearly all the then existing institutions for the blind in Europe. A small sum was wisely set aside by the corporation to defray the expenses of the trip. In a report, previously quoted in part, Howe set forth the "findings" of his European tour, showing soundness of judgment and a rare discrimination of the ends of education and charity.

On his return in June, 1832, Howe brought with him more than ideas and apparatus. He had secured for his proposed school the services of two assistants, Pierre Trensnerie, a graduate of the Paris institute, for the literary studies, and John Pringle of Edinburgh, for the handicrafts.

The school was first opened in the home of Howe's father, 140 Pleasant St., Boston, in July, 1832. Like Haüy, Howe found his first pupils in the streets, but under vastly different circumstances. In his last report, that of 1874, he tells of finding two little blind girls, Abby and Sophie Carter, playing near "the tall house close to Andover," whither he had driven with Dr. Fisher on hearing of the possibility of securing pupils there. The little girls were attractive and neatly dressed but were shy at first. After gaining their confidence, the two friends approached their house, found the mother an intelligent

woman and at once interested her "in the novel plan for educating the Blind." Convinced of the honesty of purpose of her two visitors the mother consented to have her children taken to Boston. A few days later they were received in the elder Howe's home "as the first pupils of the first American school for the Blind."

A total of six pupils was gathered for the preliminary educational experiment. For six months the work of their education was carried on quietly. By January, 1833, funds were exhausted, and the infant institution was several hundred dollars in debt. Accordingly, the secretary decided to show the results of his earliest attempts in order to stir up interest and secure sufficient funds to continue the work. An exhibit of the progress of the pupils before the Legislature met with an enthusiastic response, \$6,000 being voted as an annual stipend, provided that the institution take and support twenty poor blind from the state gratuitously. Public exhibitions were also given, and in Salem certain women proposed a fair as a means of raising funds. With the assistance of women from Marblehead and Newburyport, the fair was given and resulted in a net profit of \$2,980. Not to be outdone, the women of Boston held a similar fair the first day of May, 1833, with net profits amounting to \$1,400. This was followed by an offer from Colonel Thomas H. Perkins of his mansion and grounds on Pearl Street, on the condition that an endowment of \$50,000 be raised.

With the financial status of the institution firmly established, through state aid and the generosity of the public, and with adequate quarters secured through Colonel Perkins' gift, Howe turned his attention more completely to the educational side of his task. His first report showed a grasp of educational essentials rare in his day, a grasp that can be explained only on the grounds of great native

intelligence and insight and a readiness to profit by the experience of others. The nature of his intimacy with Horace Mann, one of the original trustees, would seem to point to a reciprocal relation of intellectual profit rather than to a derivation of ideas by Howe from his great colleague. In the case of Longfellow and Charles Sumner, too, Howe seems to have been the inspirer rather than the inspired.

Howe would not follow "the old and beaten track" of the charities. He would strike at the roots of the evil and "seek for the means of enabling the Blind to become, in spite of their infirmity, active and happy members of society." He placed the greatest emphasis on the effects of education upon the blind themselves, on the "intelligence, cheerfulness and animation which it gives the Blind," supplying them "with resources which make their existence no longer a burden to themselves and others," enabling them "to fill a place in society and to take part in the pleasures and duties of life," to feel "that they have something worth living for, and that they are no longer drones in a hive of busy bees."

But while thinking primarily of the blind themselves, Howe maintained that their education should be undertaken as a matter of economy to the community. In the report of 1833, he says that the second object of the institution "is to take from society so many *deadweights* and enable them to get their own livelihood: and society ought to consider any capital so invested as a *sinking fund for the redemption of its charitable debt*; as a provision for preventing the Blind from becoming taxes to the community." This twofold object of personal happiness and culture and of civic and economic worth was to be obtained through literary education, with as much *science* as possible, through music and through the manual arts and crafts. Howe, in

his enthusiasm, perhaps overestimated the educational possibilities of the blind, drawing a rather rosy picture of their future as professors of music and teachers both of the blind and of the seeing, as well as craftsmen.

That Howe greatly prized self-activity and initiative is apparent in two notable passages from his writings of 1833. In one of these he speaks of "blind persons who have been properly neglected . . . for neglect is better for the Blind child than the excessive attention which they generally receive, and which prevents the development of their faculties. . . ." In the other, after describing the delight with which he had watched the boys from the Paris institution "frolic and play together with all the zest and enjoyment of seeing children," he continues: "They know every tree and shrub, they career it up one alley and down another, they chase, catch, overthrow and knock each other about, exactly like seeing boys; and to judge by their laughing faces, their wild and unrestrained gestures, and their loud and hearty shouts, they partake equally the delightful excitement of boyish play." Howe was thirty-two years of age when he wrote this.

Howe, with the eye of a physician, attributed the delicacy of health so often the lot of the blind to want of proper circulation of the blood, "they being much of the time in a state of physical and mental rest." He deplores all forms of coddling, saying, "Parents absolutely smother the faculties of a blind child in kindness; 'The poor dear thing is blind,' they say, 'it cannot feed itself; it is blind and cannot dress itself'; and if it venture across the floor alone, the anxious mother runs and silently removes every obstacle, instead of teaching it a lesson by letting it run against them. . . . Then the Blind are continually addressed in a strain of pity . . . they are reminded every moment of

their misfortune. . . . Now nothing can be more injurious than such treatment of blind children. . . .”

Here was, indeed, sound psychology and sociology, long before these sciences had reached that stage of development that would justify their being called “sciences,” which simply shows that, as in the case of Diderot, keen observation and insight may anticipate the findings of science. Unfortunately Howe was too soon immersed in routine; too soon he turned his attention to other fields of effort. One may safely venture the assertion that the high ideals of his first report and of the *New England Magazine* articles were never realized in practice during his own lifetime. It is a matter of great regret that this is true. If all Howe’s magnificent energies had been centered on fewer and more definite problems, what might not have been accomplished for the blind a half century or more ago!

From 1833 to 1835, the growth of the Boston institution was so rapid that in the latter year the quarters had to be greatly enlarged. Howe urged the segregation of pupils according to sex and talent. With new buildings this could be better accomplished. By 1839, the site in Pearl Street had, however, become altogether too restricted: a new site was secured and, under the name of “Perkins Institution and Massachusetts Asylum for the Blind,” the school was removed to South Boston. In 1840, a workshop for the adult blind was added, an unwise step, which in 1850 was corrected by the severance of the school from the adult industrial department, adults being denied residence within the institution. Another and wholly unsatisfactory industrial venture fairly convinced the management that the school must be run as a school. As such, it had by 1870 outgrown the old quarters. A new group of buildings was added, which permitted an even stricter segregation of the sexes.

By the addition of a new schoolhouse, a greater emphasis on differentiated training was made possible.

In these busy years, Howe had found time to experiment with tactual appliances. In 1833, he had greatly improved the maps in use, but he considered printing of more vital importance still. After a careful search and comparative study of all the then existing forms of embossed letters or sound signs, Howe invented the historically famous "Boston Line Letter," for many years dominant in the field of literature for the blind in America. With characteristic thoroughness and industry he raised a fund for a printing press, secured the cooperation of the powerful American Bible Society in the production of plates for the issuance of the Bible, and began to turn out additional literature at a rate astonishing to the slow-creeping institutions of Europe. Within a few years the whole Bible was in the hands of the blind besides such a wealth of books as Haüy and his earlier successors had only dreamed of.

Also, Dr. Howe conducted through many years one of the most famous educational experiments in all history, the instruction of the deaf-blind Laura Bridgman, the forerunner of Helen Keller. It was this experiment that established Howe's fame as an educator and caused Charles Dickens to write in his *American Notes* in 1843, "The name of Laura Bridgman's great benefactor and friend is Doctor Howe. There are not many persons, I hope and believe, who, after reading her story, can ever hear that name with indifference." An energy that could not exhaust itself in the seemingly hopeless task of educating one almost devoid of the normal channels of sense, and in the routine of operating a great institution, found further vent in the education of idiots, in the care of prisoners and of the insane, and above all in an ardent espousal of the anti-slavery cause, wherein his distinguished wife, Julia



Ward Howe, figures so largely. Scarcely ever was there a charity advocated in New England or any philanthropy set in motion that the militant personality of Dr. Howe was not called in for a mighty "boost." Despite an aversion for public speaking and a complete absence of boastfulness, he was found everywhere in the thick of the fight for human emancipation, now in South Carolina, urging a school for the blind, now in Kentucky where he brought enthusiasm to the ten-thousand-dollar pitch in the same cause, again in Ohio on a similar mission, or, once more, in "God-forsaken" New Orleans.

The great organizer of Perkins Institution was, however, but one of a group of splendid men and women whose devotion has forwarded the work for the blind in America to its present degree of efficiency. The New York Institute for the Education of the Blind has a history no less instructive than that of Perkins, but since that history is chiefly interwoven with the improvement of tactual appliances, particularly embossed literature, it will be best noted in a later connection. It is sufficient here to say that the institution owes its existence largely to the efforts of Dr. John D. Russ, who became its first superintendent in 1832. The subsequent history is fairly uneventful up to 1863, when William B. Wait became its superintendent. From that date on it figures as one of the most influential of American institutions.

The Pennsylvania Institution for the Instruction of the Blind was founded in 1833, opening its doors to pupils the following year. A German, Dr. Julius B. Friedlander, who had had previous experience in the instruction of the blind in France and England as well as in his homeland, arrived in Philadelphia in 1832. He at once proceeded to consolidate a previously existent vague sentiment into concrete form. He at first undertook the instruction of two blind chil-

dren, with such success that his public exhibition led to the subscription of funds and the founding of the new institution. The aims of the institution were, at the start, predominantly industrial. An unfortunate experiment in caring for the adult blind tended to handicap the school as such. Its usefulness was still further impaired by the adoption of a peculiar system of embossing which tended toward the isolation of the school. In 1869, the first encumbrance was removed by the founding of a separate asylum for the adult blind, and ten years later the nationalizing of the American Printing House for the Blind at Louisville, Kentucky, consolidated for the time being all the embossing interests of the United States.

The later progress of the three great pioneer institutions will be noted in its proper place. It is to be clearly understood that, although chartered or incorporated under their respective state governments, they were essentially private foundations, kept alive and fairly prosperous by individual initiative and personal philanthropy. They have escaped to a great extent the harrowing experiences of political control and legislative or executive interference, while the long incumbencies of superintendents and teachers have given continuity to their histories and steadiness to their progress. On the other hand these and similar institutions may actually have suffered a hampering influence in a certain immunity to public opinion and an overabundance of one-man control.

Twenty additional institutions followed the three pioneers in quick succession between 1837 and 1860, nearly one a year. The first of these was that of Ohio, founded under the inspiration of Howe, as were also those of Kentucky, South Carolina, and a number of other states. In every case the actual founding of the institution was preceded by a period of active propaganda, in which ex-

hibitions of the work of pupils from the older schools were made and in which instructors from the older schools frequently took an active part. Private support was solicited and in a few instances considerable endowments secured, but state aid was usually obtained at an early date, and practically all these schools attained the status of state schools either at the beginning or else very early in their careers. With the founding of the California school we take leave of the earlier group of American schools and enter an era less marked by the founding of new institutions than by the growth of associations and other more general agencies, by educational controversy, ending in a gradual consolidation of opinion, by the "battle of the points," by vast improvements in organization, methods and means, culminating in those scientific studies of the education of the blind and of the prevention and alleviation of blindness itself, that mark the immediate present. In other words we come through the early groping, the age of invention and application, the era of empiricism, down to the age of psychological, physiological and social investigation, to be followed, we hope, by the new age of logical deduction and scientific application.

To understand the present status and possible future progress of the education of the blind we must now go back and recover, so to speak, some of the strands that have been dropped, follow these each in turn to the present, then summarize all progress and look carefully at a few of the collateral bearings of the general topic. Then may we safely venture to draw important conclusions or prophesy possible developments.

The first "lost strand" is that of embossed literature and tactual appliances, to be covered in three general phases; the earlier, that of the "braille system," and the Braille-New York Point controversy in America. The sec-

ond is that of special method in the education of the blind, historically considered. There will then remain to be considered more recent institutional progress, present-day practices and movements and the collateral issues of the prevention of blindness, the early training of infants, and the care and housing of adults. The latter are so closely interwoven sociologically with the general questions of education that one cannot understand the whole of the education of the blind without considering them.

## CHAPTER VI

### *Tactual Education to the Coming of Braille*

ONLY recently has an attempt been made to study the reading of the blind from a psychological point of view. Almost purely empirical studies have been made and in two notable instances records of results were kept, the significance of which was such as directly to influence and modify practice. The chief question on which definite knowledge is still lacking is the extent to which tactual and muscular "images" are formed and the part they play in reading. The mechanics of reading, too, is not completely understood. This lack of knowledge has undoubtedly been the one great stumbling block in the way of progress.

Diderot in 1749 rather clearly conceived the idea that the processes and results involved in touch were of a different order from those involved in sight, and the discovery of the definite brain centers goes far toward confirming that view. That the final product in education of the blind need be radically different from that attained in the case of the individual of normal vision is not to be inferred from this premise; but the means used in the securing of the final product may be as different as the peculiar psychology of the blind and the exigencies of material means make imperative. The following brief account will show to some extent the blundering due to empiricism and preconceptions, and the next chapter will add to the force of whatever conclusions may be drawn regarding the true bases for the tactual education of the blind.

Haüy has the same claim to the invention of embossed

printing for the blind that Watt has to the invention of the steam engine. The wooden letters of Rampazetto and Lucas and the other earliest systems are of little more significance to the education of the blind than Hero's engine to the later development of the steam engine. They are, in fact, mere curiosities of history. Haüy, as noted in Chapter III, discovered his method of embossing accidentally while watching the work of the ordinary printing press. Sheets fresh from the press and printed on one side show the letters in rather strong relief but in reverse, i.e., turned from right to left. What more natural, then, than that Haüy should in his first experiment simply have had the types made the reverse of the usual types, thus causing the resultant embossed letters to read from left to right on the sheet?

To those looking back over more than a century of improvements it is very easy to see Haüy's mistake, namely that of thinking that what looked good to the eye must of necessity be acceptable to the fingers of the blind. It was natural that one considering means of enabling the blind to read should start from the known, namely that the embossed letters could be felt. It would require little experiment to prove that embossed letters the size of common print could not actually be read by even the most sensitive finger-tips. Accordingly, the first modification of the invention lay in the direction of the enlargement of the type used. Actual test would show which size was most legible by touch, and accordingly the limit of improvement in this direction would very soon be reached. Among the various forms of the Latin alphabet there would arise a second set of problems, and a new series of experiments must be undertaken to determine the most legible *form*. The common printing type, Gothic, Old English, italics, and the

various forms of script, along with the less common forms of the letters, might all be tried in turn.

Haüy did, in fact, experiment with various forms of letters as well as various sizes, but there is no record to the effect that he conducted his experiments with any degree of scientific accuracy or that he kept any written records of observations. Had he done so he would have noted that the more complicated the form of the letter, the less easily it is recognized. He would also have noted that sharp angles are much more perceptible than curves and that relatively sharp points, as in the case of the period, are perceived with great clearness. Haüy's apparent failure to secure an ideal system must not be taken as indicative of mental obtuseness. He must rather be given full credit for having in actual practice made some improvements over his first attempts. He was, perhaps, too harassed by a multitude of administrative problems to give more than a minimum of time to printing.

Another set of problems arose in choosing type materials. Following the lead of Rampazetto, Haüy first tried wooden types (in teaching, not in embossing). In the publication, in 1786, of his first considerable embossed work, he used types cast from type metal.

In all modifications of letters subsequent to 1786, Haüy used curved and not angular forms. The letters were of necessity so large that he tried various methods for saving space, the more important being abbreviations and signs for double letters. Haüy used abbreviations in 1788 in the publication of De Wailly's French grammar. He took great care to insure exact reference to the corresponding page and line of the printed original. This is indicative of his anxiety to keep a close connection between embossed literature and that in normal type.

After Haüy's departure from Paris in 1806, his pupil,

Lesueur, employed the italic capitals in embossing. In 1817, Dr. Guillié had type cast in large italics, but soon after returned to Haüy's older type. The books thus printed, twenty volumes in folio and five in quarto, though small in actual content, were very voluminous and extremely expensive, costing an average of fifty francs each, in an age when labor was cheap. Many additional volumes were published both at the Paris school and at the Quinze-Vingts hospital in Paris. In 1840, Pierre Armand Dufau, Director of the School, changed to a modified Roman type, which was certainly an improvement over the rounded forms. Later Dufau modified his system, using the Roman capitals with the small letters in vertical form. In 1854 the Paris institute abandoned this unfruitful attempt to make the blind use the forms of letters used by the seeing and adopted instead the system of arbitrarily formed point characters invented by Charles Barbier, the Frenchman, in 1819 and rendered of practical utility by his famous compatriot, Louis Braille.

Meanwhile line letter had spread to all the countries of Europe where the blind were educated. In England there was an unquestioned but very limited use for many years of systems based on that of Haüy. The obvious failure of any system led, however, in 1832, to the offering of a prize by the Scottish Art Society for the best and most practical system of embossing for the blind. Twelve arbitrary sign systems and eighteen systems based on ordinary type, of which three were only slight modifications, made their appearance at the time of this contest, though the actual number submitted was only nineteen.

The chief point to be settled by the jury of awards was whether an arbitrary system of signs should be adopted on its merits from a tactual point of view or the alphabetic form must be adhered to. Among the systems submitted



were all degrees of departure from the Latin alphabet, even to the extent of using purely arbitrary sound symbols. A practical test was submitted to all the institutions for the blind in Great Britain. Alston, Director of the Glasgow institute, set as the criterion of judgment that a purely arbitrary system must not be adopted nor too wide a departure from the Roman accepted, as the tendency would be in either case to isolate the blind. Ill-considered as this dictum is, both psychologically and socially, it nevertheless dominated the jury of award. Alston's own slight modification of the system of Dr. Edmund Fry, a slightly modified Roman form, was adopted and in May, 1837, the golden medal offered was awarded Dr. Fry.

A glance at the systems submitted shows a prevalence of angular forms, while *one* approaches the present day punctographic systems. Barbier's work may have been known in Great Britain to some extent, but its merits surely could not have been recognized. Adherence to the Roman "intangibles," as they were wittily called by Mr. Wait, resulted in setting back the production of an adequate literature for the blind in Great Britain for many years. A recognition of the defects of the Alston system led to repeated experiments on the part of printers and others interested in the blind. The triangular system of James Gall, of Edinburgh, dating from 1826, was variously modified, while numerous stenographic systems were advocated and in some instances tested. A typical British chaos resulted, but out of the chaos emerged one of the two dominant systems still in use, that of Moon.

William Moon was born in England in 1817. In his fourth year he lost the sight of one eye through scarlet fever, and through the overstrain of the uninjured eye he became totally blind while a student, at the age of twenty-one. In spite of his blindness he continued his studies and

attained some reputation as a scholar. About 1840 Moon learned the system of Frere, which was stenographic in nature, largely angular in form, and rather sharply defined to the touch. With the zeal of a new convert, young Moon spread the gospel to his fellows in affliction. He soon perceived, however, the faults, both of the phonetic system and of the forms of the symbols used. By actual experiment he worked out a very "tangible" modification, using alphabetic signs somewhat remotely resembling the Roman. The symbols were wholly linear, one of their virtues being that they could easily be printed from bits of wire affixed to metal plates.

In spite of their linear forms, because of their simplicity and large size, the tangibility of the Moon letters is so great that they can be easily read even by those becoming blind at an advanced age. Thus in one field, that of literature for blinded adults, the Moon system is very excellent. It requires considerable space and can be embossed to advantage only on one side of the paper, although interlining has been attempted. As, however, any highly tangible system is of necessity bulky as it appears in book form, the mere question of more or less space is after all rather trivial. The Moon system may therefore be looked upon as the "last word" in systems using line symbols.

The vogue of the Moon system shows its practical utility. It was in truth forwarded by an apostle. Moon's zeal carried him into strange lands. With unflagging energy he adapted his system to every important language of the world. Moon's children caught the spirit of their father. A large number of supporters rallied to the cause of embossed literature for the blind. Societies were formed to forward the Moon cult. Through an active propagandism of considerably over half a century, the system has come practically to share the world of the blind with the punc-

tographic system of Braille. Its place, however, is decidedly secondary.

Into the British chaos of systems, braille at last came. Its virtues were slowly acknowledged, and finally all competitors were driven from the field, save Moon. Thus in a second populous European country, the punctographic principle ultimately triumphed. Aside from the Moon books, line-letter literature has been relegated to the museum.

The oldest type used in Germany was a slightly modified Roman, with both capital and small letters. The same groping after something more easily recognizable by the sense of touch seems to have occurred in Germany and Austria as in France and England. It is perhaps a reflection of the political conditions of the time that no concerted effort of any importance was made to secure the best possible system, as was done in Britain. Each separate institution brought forth from time to time some modification. The only type that was apparently not considered at all was the common German type. Zeune at Berlin at one time used "type filled with pin points" for embossed impressions. There is nothing to show that the letters thus produced had any great advantage over the line type. Another similar letter was called the "pearl type" from the resemblance of the raised letters to strings of pearls.

Of all the German experiments those of Lachmann of Brunswick are the most interesting. Lachman brought forth three systems in 1832 and the years following. His arbitrary line system is very remarkable in its resemblance to that of Moon, while his "point square" approaches the braille system in tactual qualities though altogether too clumsy for use. The underlying principle came from Saunderson's peg-board. In this instance there was a fixed square cell of nine holes, the central one of which was fitted with the master point, which appeared in all combinations and

differed from all the rest in size and shape. The placing of the other points in various combinations of one, two, three and up, gave a vast number of signs. The full cell appears thus:

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    . . .
    . * .
    . . .
  
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The points are numbered, the one directly over the master point being 2, the others succeeding in clockwise order up to 9 in the upper left-hand corner of the square. The master point plus 2 and 3 make the letter *a*, thus:

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    . .
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In logical completeness and sign possibilities no system ever excelled that of Lachmann. Its chief fault was that it did not work.

Any further details concerning the pre-braille systems in Europe would be but the accumulation of useless material. There are, however, a few phases of the American situation that are full of instructive interest.

The first system introduced into America was that of Friedlander in Philadelphia, though the first embossing for the blind in Boston followed very soon thereafter. Friedlander's system was one of beautifully clear Roman capitals; beautifully clear, that is, to the eye.

The Boston Line Letter was, however, the dominant American type until the almost universal adoption of punctographic systems. Dr. Howe on his European tour made a study of the systems of writing and embossing, along with other devices and instrumentalities for teaching the blind, and he seems to have concluded that the Gall system of Edinburgh possessed higher tangibility than the

others, though too "arbitrary," i.e., departing too far from the norm of the Roman. Howe's experiments led to the adoption of a rather angular form of Roman letter. Letters of very similar form were modified to emphasize their difference. As the system was altered, a fairly high degree of legibility was secured. Thus Roman *e* was replaced by the Greek *epsilon*, and the extremely difficult *g* assumed an almost entirely new form. On the whole, Howe's system must be considered the best and most satisfactory of all the systems based directly on the Roman or any other "seeing" type and far superior to the embossed letters of Haüy. Only one line system has excelled it and that is Moon's, but Moon's letters are almost entirely divergent from the Roman, though retaining the character of an alphabetic system. The merits of the more improved Boston type were recognized abroad. In 1853, a meeting of American instructors of the blind, held at the New York Institute, formally endorsed the Boston system, which from that time until the coming of point, held the field practically unchallenged.

Howe's greatest service to the blind in America lay in the enlistment of powerful interests in their general education, and in the raising of sums of money, very considerable for those days, for the carrying out of specific enterprises. His greatest single work in the field of literature for the blind was that of establishing on a permanent basis the Boston printing press for the blind. The Boston institution was from the first the greatest factor in the work of publication for the blind. As early as 1840 it could boast a list of thirty volumes, largely parts of the Bible. The work so nobly forwarded during Howe's own life, continued after his death under the able directorship of his son-in-law, Michael Anagnos. The work of embossing was, in fact, greatly expanded through the establishing of the

Howe Memorial Press, in 1880, and the amount of literature sent out from Boston is amazingly voluminous.

One event is of paramount importance in the history of literature for the blind in America. That is the subsidizing by Congress of the American Printing House for the Blind at Louisville, Kentucky. This was preceded by a period of intense agitation on behalf of the blind, which culminated in the Act of Congress of March, 1879, granting the sum of \$10,000 annually, to be expended in the publication of embossed books, and the manufacture of tangible apparatus for the general benefit of all the institutions for the blind in the United States. The passage of this act was largely due to the unfaltering efforts of the American Association of Instructors of the Blind. By this time both the braille system of point characters and the recently invented "New York Point" had won recognition in America and were beginning to displace all the older forms. Boston Line Letter continued in use, however, a certain conservatism keeping it alive in spite of the superior merits of its rivals; but at the present time it may be said that of all the line systems, Moon alone has any place of importance in actual usage in America. The teaching of line systems, except to show the form of the letters, has ceased in all schools.

The failure of the line systems, as is now thoroughly apparent, arose chiefly from what Mr. Wait has termed "intangibility." The term is not altogether happily chosen, as the letters in any of the line systems are surely tangible. They are not, however, *clearly defined* to the touch. The thought that they could be easily recognized by the fingers because so very easily *seen* undoubtedly rested on the two psychological errors previously noted: the first, that the remaining senses of the blind are rendered keener through the absence of vision (the so-called "vicariate of

the senses"); the second, that there *is a sense* of touch, when as a matter of fact there are several distinct skin senses. Had the sense of pressure as such been known to the earlier embossers, they might have paused before giving an unbroken line, or series of lines, to the finger-tips of the blind. The superior legibility of the point systems lies psychologically in the fact that fairly sharp points are much more readily discernible than lines. Lachmann may have recognized this fact, though it is not probable that Zeune did. And the average blind pupil could scarcely be expected to do more than take with some show of gratitude what was given him.

A most interesting investigation of the tactual qualities of line letter was conducted by Mr. Wait, teacher at the New York Institute for the Education of the Blind from 1859 to 1863 and superintendent of the same institution for nearly half a century. One of the first questions to which Wait turned his attention was that of reading and writing, including the embossing of books. He found by correspondence and visitation of institutions, that fully one third of the pupils attending the principal schools for the blind in the United States were unable to read and that tangible writing and the use of textbooks were almost unknown. In Wait's own words, "This state of facts and the existence of many different styles of embossed letters indicated a defect somewhere. Investigation and experiment showed that in a majority of cases the Roman forms of capital and small letters, which had been so generally adopted, did not lie within the power of the sense of touch, nor could they be used in writing."

This quotation neatly summarizes the causes of the failure of the systems of embossed letters. Before turning to the history of the point systems, however, an outline of

the history of other tactual devices for the blind must be briefly given.

In addition to reading devices the aids for teaching the blind by means of the skin and muscular senses, or through touch and motion, may be conveniently grouped under the following heads:

1. Devices for the teaching of number work and of mathematics in general.
2. Relief maps, relief globes and other aids in teaching geography.
3. Models in relief or in three-dimensional form, used in a variety of teaching, notably history, literature, biology, and physics.
4. The actual objects or specimens under study in biology and similar subjects.
5. Field work where the kinesthetic senses may be largely employed to give ideas of distance and the like, but where actual contact is also of high value.
6. Musical notation in relief.
7. Devices for writing in relief.
8. Devices for guiding the hand in writing with the pencil.

No argument is needed to convince the average educator that the blind should learn like normal children through self-activity, that the processes of learning should be as largely their own as possible. Yet the average teacher is so unwilling to be relegated to the position of mere director that one frequently encounters in schools for the blind at this advanced time the old-style method of pouring into receptive ears endless formulae and endless facts, near-facts and no facts, the grist to return unground in the form of the same identical formulae, facts, etc., endlessly re-



peated. If a mere ready tongue, a quickness in producing just the right formula for the occasion, is the highest desideratum in the education of the blind, then the method is ideal; impressive dictation has solved the whole problem. But, strangely enough, the world at large does not to any great degree repeat schoolroom conditions. Often the quick-witted pupils, finding that previously prepared formulae do not meet actual situations, learn to throw over the whole mass of intellectual lumber and conform to conditions as they are. For these pupils the years in the school were not wholly wasted, but those with less flexibility surely have suffered a great wrong.

The wise teacher will not discard any valuable educational means and to such a teacher lectures, readings and dictations will always appear as indispensable aids in directing, binding together, summarizing, and lending zest to the work in hand. Just as truly, however, this "easy way" will not be followed to the point of limitation of the powers of the child to learn for himself and through self-expression. The blind like, even more than normal children, to be entertained; and the teacher has soon to learn the dangers that lurk in the interested attention of mere receptivity. No one interested in the actual welfare of the blind can afford to let them take this broad highway to "fool's paradise." A few hard bumps of reality are worth immeasurably more in getting acquainted with things as they are than any number of pleasant sails to fairyland.

A certain blind boy of my acquaintance who insisted on being his own guide, fell into a new excavation, some ten feet, into a shallow puddle with a soft clay bottom. He learned a great deal of reality in that very brief time, and it speaks well for his grit and good sense that he still refused guidance in finding his way. While this is not

to be recommended as a regular procedure in education, it indicates something better than the usual coddling.

Reality in educational content is the *summum bonum* in the education of the blind. The accumulation of devices for over a hundred years, while not in any true sense rendering it possible for the general education of the blind to equal or even to approach that of persons of normal vision in completeness, at least makes it possible for the blind to build up a very real objective world and to learn to deal with actual situations with a fair degree of success.

Devices for teaching mathematics to the blind by means of peg-boards and perforated balls strung on wires are older than the systematized education of the blind. Saunderson's peg-board consisted essentially of a rectangular grouping of small, elevated squares, each square with nine holes, thus:



By placing pegs with different-sized heads in the holes, a great variety of symbols could be expressed. With a large-headed peg in the central hole, a square was 0, with a small-headed peg in the central hole, the number 1 was expressed; with the large-headed central peg plus a small one directly above, 2, and so on, combinations of the central peg plus one peripheral giving the numbers to 9. In this very simple manner each square could represent the primary numbers, and by giving the squares digital value, units being represented by the row of squares on the right of the board, tens by the next to the left, and so on, large numbers could be represented.

By increasing the number of squares, fitted with pegs, from top to bottom, large sums in addition could be

secured, with the whole operation rendered tangible. Subtraction was also easily represented, but the more complicated processes had to be carried out to a great extent mentally. By a further use of pegs, simple geometrical figures could be made on the board, though complicated plane figures, even with no curves, could not be readily represented, and the representation of complicated curves and solids was practically impossible. Saunderson's ingenuity after all made much of little; for he was a distinguished mathematician and an original investigator of no mean ability.

Christian Niesen greatly improved Saunderson's peg-board and invented or adapted a number of other tactual devices. Some of Niesen's devices were used by Haüy, though the latter, dominated by visual ideas, discarded the work of his predecessors and made use of a number frame with holes into which could be fitted types with the symbols cast in relief. This device had of course a wide range of applications since practically all the signs of arithmetic and algebra could be represented on the types in relief.

Both Zeune and Klein gave careful attention to mathematics. Both made use of the abacus, or similar devices, often applying great ingenuity. Klein gave deep thought to the problem, and some of his conclusions have a wide range of application. He says: "The blind person loses nothing because of the fact that his condition prevents his becoming acquainted early with the written number symbols, for he thus gains the power of handling mathematical problems by pure mental process; and to the extent that he thinks more on the actuality of the thing than on its mere signs and forms, he gains time and avoids difficulties." For the teaching of number and the fundamental mathematical processes, Klein would have the child use a modification

of the abacus. This and similar aids must not, however, take the place of the more purely mental exercise. The mind must be trained to be alert, to hold long series and to secure results with speed and accuracy. The reckoning string, another modification of the abacus, might be used in teaching division, while for complicated work the abacus would come into double use—one for actual work and one for the record of results. The Pythagorean table was used in teaching the multiplication tables. In all Klein's work the Pestalozzian dictum, "Clear perception is the basis of all knowledge," was the fundamental guiding principle.

The peg-board, the abacus, and the mathematical frame with relief type each had such large possibilities that all have been retained to some extent in the teaching of the blind. In the higher mathematics these devices have to be supplemented with models and with plane figures in wire or other semi-flexible material. The mathematical frame, sometimes known as the "slate," has undergone marked improvement. Above all, the punctographic systems have not only given the blind a complete, or fairly complete, mathematical notation, but they have supplied a means through the writing frame and point machines whereby the pupil can write down and follow the processes and record his results in neat and permanent form. Today, however, as in Klein's day, the mental process is far more important than the tactual aids. It may be safely said that in mental arithmetic the blind have a slight advantage over their seeing competitors. The feats of a few blind persons in the mental solution of the difficult problems of the higher mathematics are little short of miracles.

Relief maps have been in use in schools for the blind from the beginning of organized education. Their chief fault lies in the fact that generally they are too small,

and too frequently the overzealous teacher "doctors" them with a bewildering multiplicity of wires, tack heads, and other odds and ends, which must make them "look" very confused indeed to the finger-tips of the blind. Just to what extent a crooked wire can convey the idea of a stream of water is a puzzle for psychologists to work out: the fact that the wire must stand out in relief surely makes it misrepresentative. We may be permitted to question the glibness with which the blind child explains a map. Such a recitation has a decided lack of reality about it.

Relief maps are meant primarily to teach topography. In that field they can convey accurate ideas, provided the relief is not too exaggerated, and provided also that the map work be preceded and continuously supplemented by field work. The shape of continents and the location of the chief mountain ranges, as well as the relation of the continents to each other and to the great bodies of water are taught with fair accuracy by means of good relief globes; but these should not be given, except to fairly advanced pupils.

The bounding of countries is in the main a vain pursuit: the larger topographical features are much more important. Endless names of cities and towns, endless locations and populations and the rest are chiefly rubbish. The child's geographical knowledge should be based on physiography and mensuration, and these should be field studies, supplemented by class recitation and the examination of good models and relief maps and globes. Even the location of great centers of population should be made with reference to topography and hydrography.

Whenever possible the actual materials and objects under study should be brought to the classroom and examined. Why study and talk *about* a beet when a beet can be taken fresh from the garden and examined, tap-root and all, by di-

rect contact? The fingers of the blind are fairly aching for reality, and in many schools where the deadly classroom method has prevailed—and still prevails to a great extent—many a boy or girl has learned much by original investigation out from under the eye of an overofficial teacher. The boy who climbed a blackwood sapling and tried to “teeter” on it, found that in its early stages of development this tree is very brittle; in spite of the slight bruises he received, he learned a valuable lesson; he had acquired reality.

Too much emphasis cannot be laid on the development of the kinesthetic senses. In the best schools this is recognized as a valuable pedagogical fact, but like too many other pedagogical facts, it remains safely stored for the most part; sacredly guarded, not used. There is, indeed, an increasing use of gymnastics, rhythmic and games, fully theorized, and frequently carried out to the immense satisfaction—of the teacher. But of actual discovery of the world, actual expeditions into the unknown, through *use* of the muscles, there is very, very little. Blind boys are actually forbidden to climb trees, it is *so* dangerous. A blind person crossing the street is instantly aided by some charitable person, and when he spurns assistance, he is considered rude and ungrateful. Not that blind children are to be allowed to run wild—their spontaneity is to be encouraged and wisely developed; their self-activity trained into something fine, with a minimum of self-consciousness and usually under the watchful eye of an attendant.

In the matter of penmanship it cannot be claimed that a majority of the blind can acquire great success. Much effort has been wasted in this direction and many inventions made. A few extraordinary blind persons have acquired a legible handwriting after long and painful

training. The typewriter has solved the problem much better. There are few who cannot learn typewriting with fair success and very few of those who learn who cannot have access to a typewriter on request; many have their own machines. For communicating with each other the blind have the simple, strong, and inexpensive braille typewriter or the New York Point Kleidograph, or at least the small metal writing frames.

Previous to the devising of the braille music notation, there were no satisfactory means of teaching music to the blind through touch. All attempts to emboss the "seeing" staff and notes, with all the complications of that system, were doomed to ultimate failure, and all attempts of modification of the line form were equally unsuccessful. The braille and New York Point systems will demand a fuller treatment later.

To revert, in conclusion, to the general topic of tactual appliances, we may safely say that there is no longer any excuse for not giving the blind child the advantages of active study through direct contact with real things or with good representations of them in concrete form. That the old attitude still persists toward the "empty vessels" of child minds, there is ample evidence even in the best schools. On the whole music is best taught of all the subjects, and in this field the blind have much to teach the seeing. In the German and Austrian schools particularly there has been a long continued and scientific development of the teaching of the *Realien*. American schools still have much to learn. What lines of development are "indicated" by social, physical, and psychological investigation will be more completely considered in subsequent sections.

The following words of Edward E. Allen, Director Emeritus of Perkins Institution, spoken at a meeting of the

A.A.I.B. at Halifax, Nova Scotia, in 1916, form a most fitting close for this chapter:

A few years ago, while studying the latest systems of instruction in residential schools for the blind on the continent of Europe, I found everywhere swarming upon my attention vast collections of material . . . illustrating the fact that basic instruction of the blind should be objective, or through specimens and models. When seeing these collections, I was repeatedly reminded of an experience of my own while first attempting to teach the blind. I kept seeing myself, textbook in hand, telling the children about the muzzle of a gun and hearing one of the grown pupils say, "Mr. Allen, haven't we a gun somewhere which you can show us so we may really see what a muzzle is?" There was a gun in the outer room, as I knew very well, and I was teacher enough to go and get it then and there and to spend the rest of the recitation period in letting it describe itself.

Now, as stated, the recollection of this episode swarmed upon my attention in every school visited upon the continent of Europe, particularly each one in Germany and Austria, where I was impressed by the vast hivedfuls of objects which had been collected. In our American schools we put a few objects in glass cases and we call the room or hallway where they are exposed our museum. When I said to one of the European Superintendents, "Herr Director, I am impressed with your museum," he said, "That is not a museum. It is a collection of necessary objects for giving our pupils clear ideas of things; a museum is something else, is it not?"

I remember in particular a great room in a school for the Jewish blind of Vienna, which was so crowded with objects that I have likened it to a bee-hive, with only just enough space left for people to move about in. There could be seen and examined all manner of common things, life size where possible, such as a mole's nest; and when not, in miniature, such as a dissectible salt mine. I recall seeing there a real horse skin stuffed, mounted, saddled and bridled; doubtless every child in the school had been on it.

Now the teachers of Germany and Austria can evidently give us American instructors of the blind points along the line of objective instruction. They do thorough work abroad where, as everybody knows, teaching is truly a profession. Not even a brand new teacher of the Austrian blind would have expected his pupils, irrespective of when they became blind, to comprehend from description what the muzzle of a gun is, as I did my class of pupils in London.

Ladies and gentlemen, after listening to Sir Frederick's paper,



we should realize that it is also our duty to get roomfuls of specimens and objects and to treat them as necessary material for our teachers to use as fundamental to textbook instruction, and not to put them behind glass cases merely or chiefly for the public to gaze at. How to get them, do you ask? Old people sometimes leave legacies to schools for the blind. This very year a friend of the Perkins Kindergarten was found to have left behind him before flying away, a sum yielding annually about \$125, to be used in gradually furnishing a room with the didactic material which we should decide to be of the greatest value to the children. After thinking a good deal about what this might better be, one of the teachers said to me: "Let us buy objects to place in the room which, you say, is to be called after the donor, and let one of the first things be a model of that beautiful statue of the Indian on Horseback which stands before our Boston Art Museum; and let us find a little model and not have it so valuable that the pupils can not freely use it." Of course, this is to be done, for it is well to let the teachers assist in such matters: they will be the more interested.

May I hope that you will do likewise and add to your collections of objects when somebody leaves your school a small sum of money? But specimens may be collected without money; for if encouraged even the pupils will gladly bring a lot of little things from home, and the teachers, too. Fellow superintendents, when you rebuild, do not fail to allow room for object teaching material, for your school cannot afford to do without it.

## CHAPTER VII.

### *The Point Systems and Later Phases of Embossed Literature*

ENOUGH has been said in the preceding chapter to show that, laboring under the psychological delusion of the "vicariate of the senses," various inventors had brought forth a multiplicity of types for the blind—"a confusion of types—like that of tongues of Babel," as Mr. Wait aptly puts it. The thought that somehow the skin and muscle senses could mysteriously take the place of sight and enable the blind to read by touch what could be read with the greatest ease by sight, led practically all who tried their hands at inventing embossed symbols or letters to imitate the forms used either in normal print, or handwriting, or stenography. While many systems never passed beyond the stage of experiment, a large number got as far as the casting of type on an extensive scale and the embossing of a considerable number of sheets. This meant, of course, the expenditure of relatively large sums of money and tended accordingly to give a degree of permanence to any system that went so far, leading its advocates to foster the further production of literature in the given type and to become partizans and propagandists.

In considering the whole field, one is almost compelled to admit that, in the realm of invention as in that of biology, the laws of overproduction, struggle for existence and survival of the fittest hold true. Had a definite psychological investigation of embossed literature and writing for the blind been undertaken, the utter unfitness of the line system would have been revealed; and had all the knowl-

edge gained by this investigation been reduced to its lowest terms, all would have stood summarized in a *point*, the period, the only readily perceived embossed sign used in the earlier systems. That no one saw this for many years after Haüy's first attempt at embossing is little less than amazing. There was a vague general dissatisfaction with all the older systems. This is apparent in the rapid rate at which new systems were brought forth, tried and discarded. Economical considerations and human inertia can alone account for keeping systems alive when the single fact that from a third to one-half of the blind in the schools were non-readers blazoned the failure of the line systems in no uncertain terms. Seemingly it required the practical sense of a man of affairs to point the way to the true system of embossed literature for the blind, a system of extreme simplicity, yet one fairly adequate for all needs of the blind.

That man was Charles Barbier, the Frenchman. When Barbier, engineer, inventor and philanthropist, appeared in the field, there were no readable books for the blind, nor was there any sure or simple method of writing and communication. Inventions there were galore, and some of them possessed real merit, notably those of the Italian Jesuit, Francesco Lana. Lana experimented with various angle and point combinations. The fault of his various suggested systems was that they were essentially ciphers and required keys for coding and decoding and were in any case bulky and impracticable. Barbier may or may not have been influenced by Lana's work, just as he may or may not have been influenced by a knowledge of the way in which Maria Theresia von Paradis marked her playing cards with pin pricks tangible in relief.

Again it is doubtful whether Barbier's first experiments were meant for the blind at all; they may easily have been intended as ciphers for military intelligence service; the

very name *écriture nocturne* or "night-writing" suggests the possibility that they were designed to carry messages in such a way that they might be read in the dark without the risk of betrayal by using candles, torches or lanterns in reading. In both his first and second publications (1808 and 1809) Barbier speaks "not a word" about the blind or the adaptability of his inventions to them. In his publication of 1815 Barbier sets forth some dozen forms of his "expeditive" with the methods of writing, coding and deciphering each. In this publication there are in addition to a cuneiform system, three tangible systems making use of points, namely his eleven- and three-point systems and his (musical) note-writing. The eleven-point system differs only by one point and hence six possible letters or letter combinations from his later twelve-point system, the immediate predecessor of the braille. In all the Barbier systems the features of a secret code were retained.

Barbier's system was, in fact, of far greater theoretical than practical value. His writing frame, a truly great invention and one which in simplicity rivals the later work of Hall, was the forerunner of the first really effective writing device known, namely Braille's. Both the writing frame and the whole later system were based on a twelve-point so-called cell, thus:

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In the frame there were two parts, between which the paper was placed. In a wooden board beneath the paper there were depressions or grooves running in horizontal rows in groups of twelves, two by six as above. A narrow

strip of wood or metal over the paper was perforated in such a way that a blunt-pointed steel instrument could force the paper into the depressions beneath, producing in intaglio what were later to appear as the embossed points on the paper. This had to be done of course from right to left.

Barbier arranged a fairly exhaustive table of the sounds and sound combinations of the French language in six vertical by six horizontal lines, as follows:

	1	2	3	4	5	6
1	a	i	o	u	c	c
2	au	in	on	un	eu	ou
3	b	d	g	j	v	z
4	p	t	q	ch	f	s
5	l	m	n	r	gn	l mouillé
6	oi	oin	ien	ste	x	ment

In the cell the points in the left column corresponded to the numbers of the horizontal rows, while those in the right-hand column were used to place the letter or sound symbol or combination by vertical row. Thus the word *bon* would be written:

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*b* being the first letter of the third horizontal row and *on* the third sound symbol of the second horizontal row.

This system is logical but clumsy. It involves a number

of fundamental errors. First the cell as a whole, provided the points are far enough apart and sufficiently large to give a clear impression, is altogether too large for a single impression for the average finger-tip. In the second place, on account of the enormous size of the cell, books in the system would be extremely bulky and practically prohibitive in price. One cannot say that a disregard of the frequency of the occurrence of letters was a fault, since psychologically the signs, if grasped at all, would be grasped as wholes and not as isolated points, especially by the advanced reader. The lack of capitalization and of correct orthography was, however, a third serious defect, leading the blind children to an erroneous idea of the normal printed or written language and preparing the way for countless errors whenever they should attempt handwriting.

Barbier saw the crudity of his first attempt, and at once set about to modify his system. Many variations were tried, one of which involved a greater number of rows, each with a reduced number of points. In fact it became quite a fad, particularly among the Parisian blind, to vary Barbier's twelve points, either numerically or in arrangement, and to attempt thus an improvement of the system. It remained for a young blind student of the Paris institution to bring the work started by Barbier to a high degree of practical utility. This student was Louis Braille, and the system has ever since borne his name.

We know definitely then that Barbier invented the system of point-writing and the device, now called the slate and stylus, by which it could be written with comparative ease and certainty. We know, too, that his system was at last consciously adapted to the use of the blind and that experiments with it were carried on in the National Institution in Paris and that there young Braille became acquainted with it. But we know equally that the Barbier system neces-

sitated the learning of an elaborate cipher, that it was phonetic and not alphabetic, that it was clumsy and cumbersome both in reading and in writing, and above all that it was too bulky ever to permit of an extensive embossed literature—its cost indeed would have been practically prohibitive.

Braille's greatness lies therefore in his having grasped the most fundamental elements of Barbier's inventions without having become a mere follower and adopting the vices with the virtues. The stroke of genius which cut Barbier's ungainly cell in half, brought the tangible sign within the scope of a single finger-tip. Therein lies the greatness of braille—points in easily perceived groupings become unit symbols under the reading finger, which reads letter or other wholes, not the disjunct single points. Braille saw through the fallacy of ciphers and codes and had he lived to witness the attempts at shortening his system, I doubt if he would have approved. Barbier's system was fatal to orthographic correctness and Braille aimed to keep the written work of the blind correct in spelling and punctuation; hence its purely alphabetic form.

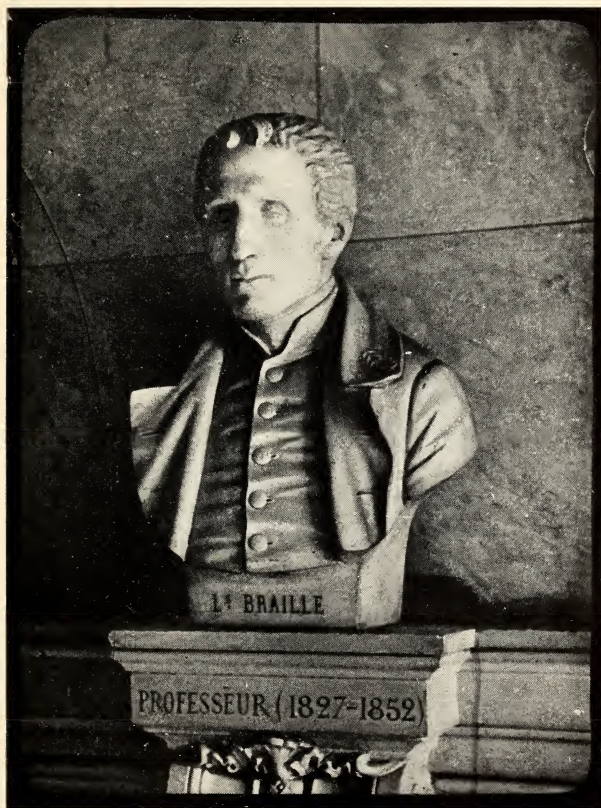
The life of Braille does not materially affect the value of his adaptation of Barbier's system, yet there are in his early history a few points of more than mere biographical interest. The most important of these is that Braille was blind from early childhood and that he conducted his experiments from the point of view of a blind person, not that of one who, seeing, feels that the blind must rather be adapted to the things of sight than these latter to the condition and need of the blind.

Louis Braille was born at Coupvrai, Department of Seine-et-Marne, France, January 4, 1809. His parents were in comfortable circumstances, his father being a saddler with a reputation for great integrity of character. The elder Braille was extremely sensitive toward the affliction of his

son, because of the peculiar way in which it was brought about. At three years of age, while imitating the work of his father, Louis put out one eye with a knife; the loss of sight of the other eye soon followed. The child was, in spite of his blindness, sent to the village school. In his free hours and during vacations he worked at such simple tasks as he could do about the home and shop, taking particular delight in being with his father. After all attempts to save his sight had failed, his parents reluctantly took steps toward sending him to the Paris institution, where he was accepted as a pupil in January, 1819, entering the following month.

Thus Braille entered the course of the Paris school at the age of ten, with considerable previous education, and, above all, with some practical knowledge of handicrafts that would stand him in good stead in his rôle of inventor. Always noted for kindness and attractiveness of character, he soon became a favorite with both pupils and teachers. His diligence and native ability caused him to take high rank in scholarship, but music proved to be his true vocation and therein he distinguished himself, becoming first a proficient student and performer on the organ and later an excellent and successful teacher. By the time he was ready, in the usual course of events, to be discharged from the school, young Braille had made himself indispensable and was appointed first to a minor tutorship and then elevated to the position of a regular teacher. This continued to be his occupation until his untimely death at the age of forty-three. During his last years, he was almost an invalid, his efforts being gradually reduced to lighter and lighter tasks in teaching. Perhaps his invalidism added to the endearment and the esteem in which he was held by all who came in contact with him. He died beloved of all





LOUIS BRAILLE



and continues to be the most loved and revered single figure in the whole history of the welfare of the blind.

As Braille's primary interest was in music, it is not unlikely that his adaptation of Barbier's system was first undertaken with musical notation rather than literature in view. Illingworth says in this respect: "This view would appear most reasonable, for it is more likely that the *four lines* had their origin in the requirements of the efficient representation of quaver, crochet, minim and semibreve, than that a purely arbitrary arrangement of dots for an alphabet and some contractions so excellently and accidentally suit the necessities of musical notes. Another argument in favor of this view is the fact—which has of late been so frequently remarked upon—that a genius such as Braille should have formed an alphabet without any relation between the number of dots used in the letter and the frequency of that letter's recurrence in ordinary literature. Louis Braille considered the exigencies of ordinary literature secondary to those of music, and his genius stands justified today. There are many variations of the Braille alphabet and contraction signs, but only one musical alphabet, and that practically as he made it, still unchanged in all parts of the world where Braille of every kind is used."

Also according to Illingworth, "Braille at first soldered strips of metal across Barbier's writing frame so as to cover up one half of the cell for each letter, and by this means acquired the power of writing his own more compact alphabet." The new two-by-three cell has as its fundamental sign

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which may be altered by the omission of one or more points in any possible combination. The total number of combinations that may thus be secured is easily determined empirically and amounts to sixty-three; namely, one of six points, six of one point, and so on through combinations of two, three, four and five. Of these combinations a few are unilateral and, because of this ambiguity, the total number of signs cannot be readily used. Thus it would not

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be easy to tell either by touch or sight whether the dots above were in the left or right column.

One need not follow the somewhat complicated early history of the braille system. Its author desired to escape the chaos of the line letters and sought a true scientific basis for his symbols. He gave up Barbier's idea of the representation of sounds and, for reasons primarily educational, kept to the common system of orthography and punctuation. In 1829, Braille ventured his first publication, but it was not until 1837 that he published his full system which, with no very great changes, remains the system still used in France.

Both pupils and teachers in the Paris institution at once saw the immense superiority of the braille not only over all line-letter systems but over Barbier's twelve-point signs as well. For some unaccountable reason, however, the authorities of the institution insisted officially on the use of the line letters. Braille had to teach his writing "out of hours." Its merits did not become fully recognized by official adoption until 1854, two years after the inventor's death.

◁ If one inquires as to just what the merits of the braille system are, he will find first in its favor extreme simplicity,

combined with a fairly wide range of possible symbols. By starting with ten basic symbols and adding thereto, Braille produced forty signs. These were further supplemented by signs "in the lower case" and, by combinations of signs and the addition of supplementary signs, they served the purposes of mathematics and music. The second advantage was that the braille signs could be written by the blind by a very simple and cheap device, but little improved upon since Braille's day. This device, known to the American blind as the "braille slate," is similar to Barbier's, but usually with point depressions instead of grooves, and consisting wholly of metal, with or without a supporting board. The stylus is of steel, with a wooden or metal grip fitting the hand.

Thus the blind could not only write with ease in simple symbols, but they could read what they wrote, which was not possible with ordinary handwriting. The more skillful could take notes. But above all they now had the means for writing and multiplying music. Another advantage, to appear later in America, was that the braille offered itself to stereotyping the best of all systems. The fact that it has had only one serious rival, itself but a modified braille, and that it has won its way to universal use against all prejudice and opposition bespeaks more for the genius and insight of its author than worlds of specious argumentation. Like the Roman alphabet, the Morse code and all those other greatly simple inventions, it bears the stamp of supreme genius.

If the braille system had to fight for recognition in the school of its origin, where Haüy had set the example of encouraging the employment and prizing the achievements of the blind, it had a still harder fight abroad against the prejudice of convention, traditions of long standing, and the ever-present bugaboo of "arbitrariness." Pragmatism

was not yet a philosophy of life, discipline was still interpreted in terms of authority imposed from without, and what obviously did "work" was rejected in favor of what ought to be successful from the point of view of preconceived schemes. Braille remained in comparative obscurity in the city of its birth while without chaos reigned. Only slowly did some knowledge of it filter into other lands. Almost by stealth and nearly always through blind students or other blind persons who came in touch with it, the system came to be known and appreciated outside of Paris. On the whole, it met a more sympathetic reception on the continent than in the English-speaking countries, but even British conservatism had to succumb at last.

Braille was introduced into Britain about 1868, but it was fully twenty years before it had anything like general recognition in institutions for the blind. According to Illingworth, "In Scotland especially it was bitterly opposed by the home-teaching societies, and even at the Edinburgh institution, it was only after years of persuasive entreaty that the then manager, William Martin, succeeded in getting the teachers at West Craigmillar to give 'Braille' a trial." The greatest single step in advance in Britain was the formation, in 1868, of the British and Foreign Blind Association for Promoting the Education and Employment of the Blind, of which Dr. Thomas Rhodes Armitage was the leading spirit for many years. While the purposes of the association included all matters concerning the education and general welfare of the blind, the first vital concern to which its attention was turned was that of types. Two important criteria were formulated, the first that the blind should be the judges—the sole judges—of what was best for them; the second, that the merits of the respective systems were to be settled only through direct acquaintance and not on theoretical grounds.

Armitage in particular looked upon the dominance of institutions for the blind by people with sight as one of the chief causes of chaotic conditions and, while the association welcomed to its membership persons with sight, the Executive Council had to be composed wholly of those who must use the sense of touch in reading. While the general stand taken was based on sound principles, it ought to be noted in passing that this view may very easily lead to a social perversion and to absurdities in practice.

The newly formed association began an exhaustive study of types. The line systems, except that of Moon, were condemned. The braille system was favored because (1) of the facility in writing it by means of the writing frame, (2) of ease in reading, and (3) of the possibility of saving space in writing by interlining. Orthographic correctness was also urged in its favor, though this is by no means the peculiar property of braille. While the association had no official force and could not by mandate secure conformity with its decisions, its influence was very great. The year 1869 marks the beginning of better practice in the education of the British blind, and in their care as well. Slowly the institutions and schools discarded the older systems and braille was left without a rival. Only one other type was used to any extent, that of Moon. Once, indeed, the supremacy of braille was threatened by the introduction of the New York Point system, but after deliberating for two years, the association decided to adhere to the braille system.

For many years British educators were exercised over the question of uniformity in the writing of braille. As the system was extended, various methods for cutting down in space were attempted. There resulted contractions, abbreviations and similar devices, into which there crept in time such a lack of uniformity as to threaten the utility of

the system. Constant agitation for many years led to the appointment of the British Braille Committee, which was charged with the revision of the braille system as used in Britain. It rendered its report in 1905. In what were termed "Grades I and II," it laid down the orthodox rules for the writing of braille. While not by any means perfect, the revision did secure uniformity, and its latest triumph was its virtual acceptance in America, resulting in a nearly uniform system for the English-speaking world.

The braille system was introduced into America about 1860. It was taught in the Missouri School for the Blind at St. Louis, where it was eagerly taken up by the pupils, who found it superior to the line systems. Why it should have remained for years in oblivion, it is hard to say. It had to make its way surreptitiously and was in general proscribed on the ground of its being arbitrary. Dr. T. Sibley of the Missouri school seems to have been the first American educator to recognize the merits of braille and extensively to advocate its use. By that time New York Point had made its appearance. Before many years the "battle of the points" was joined and even yet its smoke has not cleared away.

Just who invented the New York Point system will perhaps remain one of the enigmas of history. It has so repeatedly been accredited to Dr. John D. Russ, first superintendent of the New York Institute and one of its founders, and on such good and apparently unbiased authority, that one hesitates to say that Russ did not invent or at least suggest the system. An exhaustive search has, however, led the writer of this study to the conclusion that Mr. Wait's own statement is substantially correct and that he was the inventor of the system. At any rate, he was responsible for fostering it and for forwarding his propaganda with such zeal as to make New York Point for some time the accepted and dominant type in America.



One of the first of Wait's observations was that few blind could read with the line systems then in use. A survey of a number of schools for the blind led to the inevitable conclusion that the line letter was unsuited for the education of the blind. The percentage of non-readers was very high, while the number of those who read with facility—and in this the basis of comparison was not with seeing readers but with the slower blind—was appallingly low. As a consequence of this condition, the use of regular textbooks in classes for the blind was practically unknown. What books there were seem to have been rather eagerly read by those who could read. For this survey and its far-reaching results, if for nothing else, Mr. Wait is entitled not only to the gratitude of the blind but to rank as an educator of real acumen and insight. It showed the utter failure of the older systems.

But Mr. Wait was not content with the negative and destructive side of his survey and criticism. "At this juncture," to quote his own words, his "attention was turned to the merits of the new idea of points as against lines. The old line letters could not be written and they lacked tangible power. The point letters could be written but it was necessary to show that they possessed that great prime essential, tangibility." In order to test the matter, the braille system was taken into consideration. A survey of the only institution in America where braille was known showed the startling fact that *100 per cent were readers* and that of these nearly *two thirds read with facility*. A trial in rate of learning to read was made in the New York school and showed at once the immense superiority of braille over the Boston Line. Mr. Wait was fully warranted in his carefully stated conclusions:

"*First*: That the code of embossed line signs, being intangible to a large class, being unwritable, and impractic-

able for the purpose of musical notation, was unsuited for school purposes and for the general use of the blind, and was therefore fatally defective.

"*Second*: That a code of *point* signs would possess all the requisites which were lacking in the *line* codes."

Happy would it have been for the blind of America had Mr. Wait rested in these conclusions, proceeding only with what must have appeared the logical sequence, namely, the adoption and advocacy of the braille system. But the *élan inventif* possessed his soul and drove him to commit the egregious error of bringing forth a new system.

Wait saw, or thought he saw, two serious faults in the braille system: first, a disregard of the frequency of occurrence of letters in determining the number and arrangement of points in a symbol; secondly, an inelasticity of base, the cell structure remaining always the set six, whether the symbol had one point or many. To remedy the first defect he arranged a fairly exhaustive table of letter occurrences and gave preference in simplicity of symbol to those letters occurring most commonly. In the second place, he adopted as a fundamental base a symbol two points high but indefinitely extensible to the left in writing, or to the right in reading (and later in writing by Kleidograph and stereograph machines). Practically, the three-point base forms the limit of signs, though *theoretically* there is no limit and consequently the number of signs theoretically possible is infinite. The commonly used bases are as follows:

:        : :        : : :        : : : :

but of these the fourth has been avoided in practice, as much as possible.

Wait possessed skill as an inventor, but he possessed even more the zeal of the prophet, the untiring energy and

courage in the face of disappointment that mark the successful propagandist. Coming at the psychological moment, that of the obvious breakdown and failure of the older systems, his system made immediate inroads on the line letter, and, except in the strongholds of conservatism, soon ousted line almost completely. The advantages claimed for New York Point over line letters were obvious and needed no argument but only demonstration: the advantages claimed for it over braille were less obvious, not so easily demonstrable, and supported too often by specious and sophistical arguments, or, in the absence of argument, by sarcasm, innuendo, and appeal to prejudice.

Mr. Wait claims that his advances toward a compromise on the basis of braille, made to Dr. Howe, and to William Chapin of the Pennsylvania school, in 1868 and prior thereto, were not accepted. This may account somewhat for his bitterness, but can hardly excuse the extreme attitude of Wait and his followers in later years. Standing on the advantage of official acceptance of the system by the American Association of Instructors of the Blind, the Wait group latterly opposed any attempt to put braille on an equal footing with their system. For many years schools that *would* use the braille system for either literature or music had to do so at their own expense. Even a reasoned belief in the correctness of either system cannot excuse the angry and heated arguments and denunciations in which both factions engaged at conventions and elsewhere.

Mr. Wait's strenuous advocacy of his system, particularly of the recurrence feature, the simplicity of writing and reading, and the small amount of space required, did not convince all. From the very beginning there was more or less opposition, centered in the Boston school. First Dr. Howe and then his son-in-law and successor in office,

Michael Anagnos, persistently ignored or openly opposed the New York system. Dr. Howe's chief objection would seem to have been against the arbitrariness of the system. Ultimately the Boston school tried braille. John W. Smith, a blind teacher, endeavored to overcome the objection to braille on the recurrence ground by rearranging the points and assigning the smallest number to the most frequently occurring letters. He further elaborated a system of contractions and word signs that, in books for advanced readers, would go far toward decreasing the objectionable bulk. A practically new system thus came into being. This was published under the name of "American Braille."

However, the intrinsic faults of the New York Point system were not openly apparent nor were the merits of the "new braille" clearly demonstrated as long as the writing frame was the sole practical means for embossing in the hands of the individual writer, and books had to be printed from set-up type or hand-punched metal plates. In the year 1892, there appeared one of those simple inventions, scarcely thought of at that time, not welcomed with noisy acclaim, but destined to make far-reaching revolutionary changes. Not enough credit has been given Frank H. Hall for his part in the education of the blind. When that credit is duly given, his name will stand with those of Haüy, Klein, Howe, and Braille. And it is perhaps not too much to say that these names should be ranked with those of the greatest educators of the last century and a half.

Mr. Hall was called to the superintendency of the Illinois School for the Blind in 1890. He brought an open and inquiring mind and thirty years of experience as a teacher in the public schools. Impressed with the novelty and magnitude of his new task, he decided to profit as much as possible by the experience of others. A trip to Boston brought him into contact with Anagnos and with



FRANK H. HALL



the maker of the new American Braille. He was struck by the merits of the system; but on stopping at New York and visiting the institution there, he heard the story of New York Point, told as only its inventor could tell it. At once all idea of giving the braille a trial was dropped from his mind. He was the more convinced because he found that books in New York Point could be had free from the American Printing House for the Blind at Louisville, Kentucky. If he wanted to use braille books, he would either have to print them at great cost or purchase them from Boston. This last was, to say the least, a clinching argument.

Hall returned to Illinois determined to use New York Point and that only. He found that some of the older pupils had bought braille slates, and that invariably those who knew both systems preferred braille. So determined was the superintendent that there should be uniformity that he forbade the use of braille and probably went so far as to confiscate braille-writing instruments.

With a natural bent toward invention, Mr. Hall began to ponder the possibility of a quicker and more effective way of writing the point characters. It was but natural that this attempt should be made with the New York characters as wholes on account of the non-fixity of the letter base. Here he was influenced by the typewriter on which all letters occupied equal spaces. A consideration of the fixed braille cell led him to make a trial of that system. The ban on braille was lifted, to the joy of the school. When the invention of the machine was announced, this joy knew no bounds. A braille typewriter was what all had been longing for!

The first Hall Braille Writer was finished in May, 1892. The next month it was exhibited at a convention of the American Association of Instructors of the Blind. It was

followed by a stereoplate-maker for impressing the braille characters into metal sheets. The problem of writing and of producing relatively cheap literature had been solved for all time. Both machines were simple key writers, each with three left-hand and three right-hand keys exactly corresponding to the braille points; a large spacer lay between the right- and left-hand sets of keys. In the smaller machine the pressure of a key brought the corresponding metal point firmly against a piece of stout paper, pressing the paper into an opposite and cuplike depression and producing a slightly elevated point, such as was produced by the stylus in the older writing frames. The keys could be pressed in any combination. On the release, an automatic spacing took place, as in the common typewriter. In the stereoplate-maker a foot or power pressure was necessary in addition to the depression of the keys, which only brought the metal points in place against the sheet of zinc or brass. In both machines, a full space was secured by depressing and releasing the "space." Later improvements have brought both these simple machines to a high degree of perfection.

Thus at a single stroke of inventive genius, braille was given an immense advantage over its rival. But Mr. Wait was not caught napping: soon there appeared a similar New York Point writer and the contest of the systems waxed warmer than ever. Simplicity was as ever on the side of braille, while logical completeness and theoretical perfection aided and abetted its rival. Mr. Wait's Kleidograph was itself a virtual admission of the necessity of a fixed base, but that base was four points long. The four-point horizontal letter was rather too large for the reading finger to take in at a single impression. Besides, the Kleidograph, though operable by one hand, was not a simple



machine; nor was it, in its earlier form, so strong and durable as the Hall Braille Writer.

As the contest wore on and years passed, the merits and demerits of the two systems became more and more clearly established. People, getting farther and farther from heated personalities, began to look upon the wrangling of the rival schools of thought very much as the crowd views a battle of the books. A more kindly natured attitude arose between the younger advocates of the two systems. The blind themselves were not as partizan as their seeing champions. Had they been left alone in the decision, the issues might have been decided years sooner. Even the most bitter contestants began to feel that there must be ultimately some compromise. Two most notable victories for braille, those in the Chicago and New York Public School Classes for the Blind, brought the question of uniformity still more to the front. The Milwaukee Classes for the Blind, too, adopted the braille system; the printing of books in braille on a pro rata basis was forced upon the American Printing House, and most of the newer state schools adopted the braille musical notation. An interesting table was presented before the Committee of the Board of Education of New York City in 1909 by George W. Jones, Superintendent of the Illinois school. This table illustrates the gains of braille.

	1894	1907	Per Cent Increase or Loss
Number of schools.....	33	44	33 $\frac{1}{3}$
Number of pupils.....	3630	4573	26
Schools using N. Y. Point .....	26	24	-8
Schools using braille.....	7	20	185
Pupils using N. Y. Point .....	2566	2762	7
Pupils using braille.....	1064	1811	70

“British Braille” had meanwhile begun to attract the attention of American librarians. The new writing machines had to a great extent reduced the importance of the argument in favor of giving the most frequently recurrent letters least space. Most adaptations of braille on the continent neglected the principle of recurrences. The British Braille Committee kept for the most part to the older writing of braille, but vastly increased the number of contractions and word and part-word signs. Through this, braille shorthand arose; a clever device for writing it on a long ribbon of paper was invented; and blind stenographers were made a possibility. Even some of the advocates of New York Point seemed willing to admit the virtues of British Braille. Helen Keller in particular favored it. Her influence was, of course, very important. At the time of the hearing held by the New York City Board of Education Committee in 1909 upon the relative merits of New York Point and American Braille, she wrote a letter to the board in favor of the latter system, but the fact was well known that privately she preferred British Braille to either of the rival American systems. Thus there came into the field a third and formidable rival, but one that in its very threat of overwhelming the other two systems seemed to offer the possibility of a safe and dignified retreat.

The American Association of Workers for the Blind had appointed a Uniform Type Committee which made a notable report in 1907, with recommendations for a further investigation and the raising of funds looking toward that end. The committee was continued from biennium to biennium, making reports and quietly and unostentatiously pushing forward the propaganda of uniformity. Even Mr. Wait, now advanced in years and less likely than ever to look at the type question dispassionately, in his *Examination of the Report of the Uniform Type Committee of*

*June, 1913* (New York, 1915), gave due credit to the industry of the committee, though he at once flared up into a fiery denunciation of their findings that probably did more to injure the cause of New York Point than any other single act or utterance. These wrath-arousing recommendations, based on fairly exhaustive and apparently well-arranged reading tests, favored for literature and writing the British Braille alphabet, with the American Braille capital prefix, though they went further and urged the extension of base to a three-dot horizontal. Very wisely they left the matter open for further investigation. The report of the committee in 1915 was very extensive, covering elaborate tests. On the whole it adhered to the conclusions and recommendations of 1913.

One not directly interested in the education of the blind will find it hard to follow this controversial literature with any great degree of understanding. He is likely to throw down the whole mass and exclaim, "Why not let the blind decide it?" The blind did decide it in France and again in England, and the blind are gradually deciding the question in America. The formal adoption of the first British system base and parts of the second, by the American Association of Instructors of the Blind in 1916 and again in 1918, does not mean that the question is forever settled. A few schools still continue to use the New York Point. But the determination of a large part of the instructors of the blind in America and of the vast majority of the blind themselves to have a real and lasting decision and no more of the chaotic conditions of the past, has led to greater and greater uniformity.

The worst feature of the Braille-New York Point controversy was that it led to a wasteful duplication. The competition no doubt had some advantages, chiefly in spurring on the rivals to make improvements, but in a field

where production is so extremely expensive at best, all funds ought to have been turned to the production of literature in a single system. One of the regrettable features of the settlement of the controversy was the need of scrapping thousands of expensive plates and thousands of bulky volumes that were not worn out in the few years that elapsed between the introduction of the new system and the complete passing of the old.

The agreement reached by the American Association of Workers for the Blind in 1917 at the Portland, Maine, convention may be found in the proceedings of that year. A similar agreement was reached by the American Association of Instructors of the Blind at Colorado Springs, in 1918. That all did not agree fully in the decision reached is apparent from the following words of Dr. Olin H. Burritt of the Overbrook institution:

The feeling is, however, quite general in this country, and particularly so among the educators of the blind, that enormous sacrifices have been laid on the altar of uniformity. Large libraries for finger-readers that have been established by the slow, laborious and costly processes by which embossed books must be produced will slowly but surely depreciate in utility and in value until they will eventually become useless and be discarded. But even though the textbooks in the two dot systems in general use in this country—the New York Point and the American Braille—will wear out with use, the volumes on the shelves of our embossed libraries, the thousands of embossed metal (usually brass) plates that will become useless represent an economic loss of thousands of dollars.

But, above all these economic considerations, is the belief almost universal in the United States—shared alike by the advocates of New York Point and American Braille—that in adopting English Braille the United States has taken a backward step. This is the conviction, particularly of educators of the young blind; and, as one who is a firm believer in the American Braille system, I do not hesitate to say that in displacing American by British Braille we are discarding a simpler for a more complex system, and we are thus increasing the difficulties of our people by giving to those already sufficiently handicapped a more intricate medium of instruction.

For these and other equally cogent reasons we American educators of the blind are strong in our conviction that the adoption of the British Braille for use in the American schools is of doubtful wisdom, and warranted only on the ground of expediency. Experience proves that the more capable blind will master any embossed system that has yet been devised, but it is equally true that the simplest embossed system that has been devised is sufficiently difficult for the rank and file of the children that reach our schools. Considerations of expediency have, therefore, obtained; and English Braille has been adopted because no other way of uniting on a uniform type for the blind of America could be devised. Nevertheless, the educators of the blind, who are the ones most vitally interested in the type question because we are charged with the duty of training the blind youth of the country, are in substantial agreement that no other conclusion could be reached, and that the advantage of uniformity will be the rapid increase of the output of the embossing presses of the country, as soon as they can be readjusted to enable them all to produce literature in one embossed type.

The calm spectator is likely to wonder what it was all about, if after the lapse of twenty or more years, there exists in all English-speaking countries one uniform system, with all attention turned toward creation and production in a single field, not toward the procreation of new systems and the destruction of those who do not agree. One who has been in the battle, who has seen kindly feelings give place to wrath, who has seen the friends of the blind become the foes of each other, who has witnessed the hurling of epithets, who has followed the literature of controversy, knows that here we have repeated on a small scale the "battle of the books," the fight between "realism" and "idealism," the contest of science with classicism: that, even where in the very nature of things all animosities should have been laid aside and all should have worked together in a spirit of service toward a common end, the beast that lurks in man made himself manifest and a beautiful service for humanity was at times transformed into an ugly travesty.

Only the expert can actually enter into the relative merits of the two systems in question. Had they not been so nearly equally meritorious, it is very doubtful if the contest could have lasted so long. The issue would seem to show that the superior merits were on the side of braille, but New York Point no doubt has its own very great merits. Into the technicalities of bases, capitalization, full spelling and punctuation, erasures and corrections, and the like, the non-technical student need not enter. To say that no good has come out of the conflict of systems would be to confess a certain lack of faith in the principle that, somehow or other, good triumphs, even through human perversity. At best, however, we close this section of inglorious controversy with a sigh of relief, noting only that we must credit the actors therein with a high degree of probity and sincerity. Even the bitterest contestants seemingly fought in the belief that they—and no others except those that agreed with them—were right.

PART II  
*CHIEFLY CRITICAL*





## CHAPTER I

### *Special Methods in the Education of the Blind*

THE term "methods," as usually employed in education, has such a narrow connotation that a few words are necessary as to its use in this section. Method has come to mean the particular manner in which a given subject in the curriculum is presented to pupils, that manner varying with the subject matter, the "system" in vogue, the individuality and educational background of the teacher, and the age, mental advancement, social status and needs of the pupil or class. As here used, method must include not only the manner of class or individual presentation of subjects but those larger questions of ends and the means of attainment of ends that involve such factors as child study, vocational bearings and the general subject of discipline. It is even doubtful whether this phase of the whole study should precede or follow the section on the vocations and avocations of the blind as related to their education; but, on the whole, it seems best that those parts of "Special Methods" of a more directly physiological and psychological nature should precede, while certain questions involving trades and occupations will of necessity require a fuller treatment in a later chapter.

From the beginning, there have been two almost diametrically opposed theories in dealing with the blind child. The one grew out of the social approach of Haüy and others who, like him, came to the problem of the education of the blind with a well-formed, if not well-defined, social theory and who endeavored to secure in the educa-

tion of the blind a conformity with the education of seeing children. This might be called the "impressionist" point of view—that of imparting a definite content and of securing through that content a preconceived and equally definite result. This may be illustrated by a suppositious case of an educator who holds that the blind may best be served and best fulfil their part by becoming broom-makers. The system adopted and the course pursued will then be bent to the single end of producing successful broom-makers; there will arise a special technology of "blind" broom-making; intellectual and emotional education, if not wholly neglected, will conform to the broom-making ideal; schools will become broom-factories; a very tradition and atmosphere of the broom will arise, and in the course of time a genuine broom-making point of view and a cult of the broom will be developed. We have seen this impressionism in the *devices* used for educating the blind, but it appears equally in the actual course of education.

The opposed point of view is psychological rather than social and may be called the "developmental" theory, out of which there is yet to grow a true developmental practice in education. It arises from an attempt to understand the blind person, and particularly the blind child, as he is; to enter sympathetically into the inner workings of his mind; to appraise his possibilities, not forgetting social and economic necessity, and to fit him, in accordance with his physiological and psychological nature and his abilities, for the highest place that he can possibly fill. All method, all discipline, will from this point of view be adapted to the child: which, far from meaning that the coddling process will be tolerated, connotes rather the reverse, that is, a most strenuous striving to bring each to his own highest possible point of development but in strict conformity with the actualities of life. Nor does this again mean extreme

individualism in method, for the very reason that every person, blind or seeing, is a social creature. While a high degree of individual attention is necessary, much can be done in class work and, in certain subjects, larger classes will be imperative. Wholesome rivalry, social interaction, and healthy association of the opposite sexes, are a part of the educational birthright of each individual.

How these two points of view and the resultant practices have met and clashed, excluded each other and intermingled, and how they are likely in the best practice to merge into one, will appear from the following pages. It may be well to point out that on the whole it is very doubtful if many educators of the blind even yet hold very definite theories consciously in mind. Nearly all practice has been undertaken in a more or less purely empirical manner. But, no doubt, preconceptions have had a tremendous influence on practice.

The fact that these preconceptions were not rational has been one of the worst hindrances to the advancement of the education of the blind. Superintendents, principals, and teachers alike have nearly always been too busily engaged, either in the tasks of actual education or in holding down their jobs, to engage for any length of time in reflection on their own experiences, let alone in the study of problems, in experimentation, in collecting and collating data, and in drawing workable conclusions. As Guilbeau says, we are but now at the beginning of the period of logical development.

As seen in Chapters III, IV, and V of Part I, in the earlier schools there was a fairly well-marked distinction between the school, conceived as the medium of training the intellect, and the music department, and the workshop. In all three the methods of teaching the blind differed from those in vogue with the seeing chiefly in those tactual aids

which have already been described and in the fact, obvious enough, that all acts usually guided wholly or in part by sight, had to be accomplished through direct touch. Thus the left hand would, for the right-handed person, become a supplementary guide in tasks where the greater part of the process was accomplished with one hand, and where both hands came into play, naturally distances would be judged almost wholly by the muscular sense, though hearing might play a minor part.

An illustration of the importance of the left as *guide* hand may be seen in the trimming of brooms, where that hand must adjust the placing of a very sharp knife. The writer has watched with admiration the extreme skill of blind broom-makers in placing the knife for trimming the larger ends of the broom stock. One operator, a woman of twenty years' experience at that time, declared that she had in all her long service, cut her hand only once. The adjustment had become automatic and both speed and skill were highly developed.

Now these physical adjustments, so essential to the blind, ought to receive primary attention in any system called education. But they were left almost wholly to take care of themselves, especially in British and American schools. The very foundation stones in the education of the blind, namely those of physical education, were left out, and are yet left out. Even today the possibilities involved in the education of hands and feet, of arms and legs, of the muscles of the torso and neck and face are but little understood and less heeded. Thus we see that what should have been the basis of all other method was almost wholly neglected. In three of the earliest works on the education of the blind, those of Haüy, Zeune, and Guillié, one looks in vain for more than hints at the physical education of the

blind, though how such an essential factor could have been so grossly neglected it is hard to say.

Dr. Howe was apparently the first to recognize the importance of physical training, but he again did not see the imperative necessity of securing not only a high proportion of physical—as opposed to mental and emotional—activity but that kind of coordination of part with part and that adaptation of the body to its objective environment that comes about in blind children only when painstaking care and unremitting effort are employed. With seeing children these matters are too much neglected: with the blind their neglect leads to that fatal lack of such elemental necessities as good circulation of the blood, the regularity of the excretory system, and the complete aëration of the lungs—a lack which leads, as previously pointed out, to a congestion of mind and an emotional morbidity, and to an utter failure of adjustment to reality.

The preponderant importance of the methods of physical education and of physical orientation was first clearly recognized in Germany and Austria. It was in the latter country that the first extensive schemes of special physical education and orientation for the blind were worked out. This began with a recognition of the immense part played by the hand in the education of blind children. A glance at any receiving or kindergarten class in a school for the blind will show at once how weak and helpless the little hands almost always are. To remedy this helplessness as well as weakness, there were devised, toward the close of the nineteenth century, systems of hand gymnastics. Previously any systematic physical education of the blind had confined itself to calisthenics and differed little, if at all, from the exercises for the seeing.

Antecedent to the work of Emerich Gigerl in Vienna, Édouard Séguin, the French physician and alienist, had

laid the foundation of the education of the feeble-minded in a physical, or perhaps better, physico-psychological system—an accomplishment of overwhelming importance. In a way, all recent educators who have laid emphasis on physical education have been, whether they knew it or not, disciples of Séguin—Montessori consciously so—others with or without acknowledgment of the influence of the master. It is more than likely that the startling exhibitions at Vienna in 1873 were the foundation of the first vital recognition of the importance of the physiological factor in the education of the blind.

Séguin began, of course, with the large movements and muscles and the bigger correlations, proceeding slowly to the more specific education of the smaller muscles and articulations. In his scheme, the hand received great attention: and he, perhaps more clearly than any other philosopher of education, recognized the importance of the hand, for good or evil, in the education of all children. Séguin's devices and methods were so well thought out that many of them are still in use. His was not a system of mere calisthenics or gymnastics but involved the whole body and the whole mind.

Gigerl's important paper on finger and wrist gymnastics which appeared in a report of the school, is the first to give an extensive systematic scheme of physical training specially adapted to the blind. In the Vienna school the *value* of gymnastic training had been recognized by Klein, and gymnastics had been employed as an educational means there and elsewhere; but, at the risk of repetition, it must be definitely stated that up to the work of Gigerl, the thought had been rather to fit the blind into schemes than to devise a philosophy of physical training and a practice consistent therewith from the point of view of the actual condition and needs of the blind themselves. Others

had doubtless given thought to the question in passing; but here we have the first real thought-out scheme, with a definite physiological and psychological background.

An examination of Gigerl's paper shows some lack of insight, and were the paper not supplemented in the same report of the Vienna institute by another contribution "On the Contact of the Blind Child with Nature," by Alexander Mell, one would be tempted to think little of the scheme set forth for training fingers and wrist. But, as they stand, the two papers are complementary and contain a fairly complete philosophy of special physical education, which, it is true, lacks a third very important element, namely of early corrective training, but which, nevertheless, surpasses all that had been done and thought before and may be said without exaggeration to be as foundational as the work of Haüy, Klein, Braille, Howe, and Hall in other lines.

Briefly, the paper of Gigerl calls for a systematic strengthening of the fingers and wrist, a training leading to suppleness and skill, and above all a correlating of brain and hand, looking toward correctness of spatial judgment, so important to all blind people. While the last element may be secured through piano-playing or trades occupations, it may rightly be contended that these are in their nature *specialized* and that what is needed most is a series of *generalized* exercises. Only the illustrations that accompany the original paper can give an adequate idea as to just what were the exercises outlined. They involved very simple apparatus only, and did not correlate so completely with sense training as do the later devices and exercises of the school of Montessori.

Mell's even more important contribution follows the line of orientation set forth in the introductory chapter of this book. On the whole, it leaves the impression of beginning

at the end; that is, it treats of ages where the correction of impression and of adjustment is to be looked for rather than the formation of right habits and adjustments. Mell is perfectly right in rejecting a rigid gymnastic training for the older pupils and in substituting instead a more natural training, which, while attending to the ends held in view in physical education, at the same time brings the education of the blind into close correlation therewith, marking a new tendency of making education a single whole. Mell followed the plan of scheduled excursions for the most part, but did not neglect the *Realien* in the school, as is shown by the vast collection of *used* material in the museum of the Vienna institute.

Michael Anagnos was the first in America to recognize the utility of the kindergarten for the blind. He collected funds for starting one at Boston and at last saw his wishes realized. The kindergarten may be said to be the embodiment of the idea that right thinking comes from correct sensation and correct perception. However formal the institution may seem under some of its many guises and disguises, at bottom it represents an attempt at physiological education. While it may become grossly intellectualistic, rightly thought out it treats bodily adjustment as the beginning of all effective education.

In the kindergarten movement we see, then, a more or less inarticulate struggling toward a correct start in the education of blind children. The very fact that the physical means of education were so emphasized could not fail to lead to a still more fundamental idea of correlation, ultimately to be embodied in a reasoned recognition of the value of physical education as basic in all education of the blind. In this work Anagnos was but following out ideas either expressed or implicitly contained in the reports of his illustrious father-in-law, who was the first to call for



the eradication of those "blindisms" which are chiefly physical bad habits. In founding and fostering the kindergarten, Anagnos made a good beginning at getting down to the root of the evil. Hitherto that had been attended to in largely unheeded "instructions to parents of blind children."

While physical education was thus in America and in Germany beginning to receive rational attention in schools for the blind, the larger movement, variously expressed in calisthenics, physical culture, corrective exercises, and athletic sports, was becoming ever more important in its bearings on education; and, by the end of the nineteenth century, it seemed, in promise at any rate, that the old Greek emphasis on the body in education would once more be realized in practice. This movement, as regards the blind, made itself most noticeably felt when the two greatest American institutions "moved to the country." At Overbrook in 1904 and at Watertown ten years later, the former Philadelphia and Boston institutions, removed from the heart of congested cities, found breathing space in wholesome surroundings. Ample grounds were added to hitherto little-used gymnasias. Simultaneously "physical culture" received a great impetus in many schools for the blind.

Soon there began to appear a voluminous literature on the physical aspects of the education of the blind, both in the reports of institutions and in the *Outlook for the Blind*, the quarterly of The American Foundation for the Blind. In many schools a regularly appointed physical director, sometimes two physical directors, a man and a woman, took up seriously, in cooperation frequently with the work of the school physician, a systematic training of the muscles and muscular activities of the children. This was surely another step in the right direction—but only a *step*, be it

remembered, for the greatest movements in physical education were yet to come.

The first of these movements was an overflow of the great Boy Scout movement—a movement which in its saner aspects has promised the redemption of both boys and girls from the evils of congested life in the cities and from the gang spirit. The Boy Scout movement as applied to schools for the blind compares more than favorably with the older German movement of *Orientierung*, for it not only brings about contact with nature and with “real” things, but it adds very valuable social and moral elements. To some extent it tends to supply those incentives to action mentioned in the Introduction; more specially, it leads the blind to a vivid realization of their place as a part of the social whole.

The second movement aiming at the physical redemption of the blind was that undertaken in the homes for blind babies. Here we have at last a beginning at the beginning. Instead of having carried on into adult years those disgusting and repulsive habits commonly acquired by blind children, they may be fairly eradicated by the sixth or seventh year, and sometimes earlier. Frail, helpless waifs may be built up by diet, proper clothing, fresh air, and directed play into strong, healthy, bright-minded children; barring of course, the hopelessly feeble-minded and those with incurable maladies, but even these are very largely benefited by the process. This work very closely resembles the work of Séguin for the feeble-minded but is not so well based nor so thorough. The movement so far is but a fragment: the time has come when the care of blind children must be started with the inception of blindness and directly correlated with the work for older children in the residential institutions and the day schools.

To summarize, we have, then, in the nurseries and homes

for blind infants, a recognition of the basic importance of physical education of the blind. In earlier days, while recognized by Klein and Howe more especially, it was but an incident and received but scant attention. Either through the wonders accomplished with idiotic children by Séguin and his school or through direct intuition, the hand gymnastic and orientation movement came into being. These were highly formalized, however, and lacked that most valuable element of freedom and spontaneity: there was yet too much of impressionism in them. The general renaissance of physical education could not fail to reach schools for the blind as it did those for normal children and youths, but here again formalism met and checked, hampered and repressed the spontaneity of natural development; there was too much impression from without, too little direction of spontaneous or induced activity; the gymnasias too often partook of the dull and deadly routine of the schoolroom.

The corrective of this condition came in the introduction of directed play, through the kindergarten at first, but gradually extended to the whole school. The play movement may be said to have culminated in the Boy Scout and Camp Fire Girl movements, in which play is directed to higher social ends. The work of the International Sunshine Society of New York and similar organizations attempts to go to the root of it all, beginning education where it should begin and in the way that it should be begun. There remains to be accomplished a synthesis of all these movements, a true philosophy of physical education for the blind in correlation with the other aspects of general education. This study can only hint at the main outlines of that philosophy in a later connection.

The "school" studies most closely correlated with physical education are the natural sciences and geography, the latter to be taken as a relational or orienting study.

The neglect of physical education would lead us to surmise that the physical sciences have been the least and worst taught of all subjects, and that surmise is very near the truth. Somehow the elemental importance of nature study in the broader sense—nature study as life and life relationships—has been very long in penetrating the minds of educators. Spencer and his fellow-workers very slowly forced *science* upon a reluctant scholastic world—a science the values of which were misunderstood and misemphasized even by its most ardent supporters. Bergson's redefinition of science comes much closer to that which the needs of the blind call for. All perceptions of the objective world are science, or better, the crude materials out of which science as a system may be erected. And every child will have such a system, whether we will or not. The worst feature of the culture-epoch theory is that it not only permits but encourages the child to build up a mythological science.

Now, if seeing children ought, according to the contention of the late Dr. Fletcher B. Dresslar, university professor and authority on education, to be started right in the world of the *given*, in order to avoid later that painful and unending process of "uneducation," how much more must the blind child be started right. But what do we find? Until most recently, the cloister and what went with the cloister—an overwhelmingly linguistic and literary and mathematical education, with music and the trades thrown in. For actual relation of science to life and the problems of life one looks almost in vain to the earlier authorities, save Klein alone.

When even Dr. Howe speaks of "science," he means the science of the schools, and when he speaks of proficiency in science, one is tempted to believe that he means by proficiency a glib recital of current information "about it and about." The first movement toward a direct study of nature

and true relational geography comes only with the development of physical education and of the *Orientierung* idea, leading very slowly to a permission for the older children, at first, to have little gardens of their own and to explore the world a bit for themselves.

Teachers of the blind have too often forgotten that the *word* is never an adequate symbol for the entity, phenomenon, process or idea, that it symbolizes. Words are themselves "things" as well as representations or symbols of things. In the bookish, linguistic type of education so generally prevalent in all schools, frequently enough the word is accepted as the reality. Of this sort of education in science and geography blind children have had more than enough. But if teachers are not merely to substitute a series of representations of representations, a new basis must be found for relating the child to his physical environment. The lesson that John Metcalf continues to teach must become the basis of a philosophy of teaching science to the blind. The confusing riches of modern science cannot be imparted as a whole, and very few blind youths can ever become scientists, but all blind children and youths have a right to know the fundamentals of scientific method, and to take as a part of their life equipment some of the most outstanding facts of science.

Geography has been taught from the time of Haüy. Aside from tactual appliances, its method has not materially differed from that in vogue in schools for the seeing. One advantage the blind have had, and that has been in the use of relief maps, so that contour has probably meant more to them than to the average child. Another advantage, claimed by Howe, was that the parts of maps used for the blind bore as a rule no written labels. Just in so far as the geography taught the blind resembled that in the common schools, it was based on two false assumptions: the first,

that representations might safely precede reality; the second, that the acquired representations might be applied to reality and form an adequate basis for the understanding thereof. In this the vicariate idea reached the limit of its extension. In the schools, geography and science as a whole, instead of starting with experience and expanding that into a vital understanding and sympathetic touch with nature, started by giving representations. We have yet in general education for the seeing to realize the fundamental doctrines of *The Émile*; how much more, then, in the education of the blind.

Here reference is, of course, to geography and science as a part of life and as an equipment for larger and more complete living. No one has yet distinguished with sufficient clearness between that type of science and what may be called "effective science"—science with a rigidly mathematical basis, that science which is slowly making man the master of nature and bringing all things phenomenal under the sway of his understanding. Even mathematics has its humanistic side, but there is a real danger that the instrument may become the master and that a sterile mathematics and an equally sterile mathematical science may lay claim to being a philosophy of life. Now, it is just the phase of science and of mathematics that is humanistic, that enriches and expands the soul, but that arises in experience and appeals to books only secondarily, which is the birth-right of every child. With pure science, if such a thing exists, with pure mathematics, with even the applications of science and mathematics in the technical as opposed to the more broadly human way, the average individual has little or nothing to do: much less the average blind person.

That the leaders of the blind realize the necessity of *reality* in education is apparent from much of the recent literature. It is not to be found so much in specific instances

or in reasoned discussions as it is in mere hints here and there, especially in discussions of psychology. It has appeared in the education of notable blind persons, particularly that of Helen Keller. It is a movement in a rather vague sort of incipency, in imminent danger of formalization and deadening in the hands of the older type of schoolmen; but it is a real movement, and one holding forth great promise of future possibilities.

Just because mathematics is so little phenomenal, so nearly a matter of pure reason, we would expect a priori that here, if anywhere, good methods and fair results could be looked for in the education of the blind. This a priori surmise is amply justified in the actual history of the education of the blind as well as in the best present-day practice. Saunderson's mathematical peg-board was the first notable invention for aiding mathematical studies, and since Saunderson's day much ingenuity has been expended in the invention of devices for facilitating processes and recording results both in arithmetic and in the higher mathematics.

Klein was the first to point out that these aids are only aids, and that as far as possible the operation should be mental, i.e., carried out in mental symbols or images: and, further, that the efforts of both teacher and pupil should tend toward the elimination of apparatus. Klein's judgment is strikingly confirmed in the career of one of the most notable of blind mathematicians, in his work both as pupil and as teacher. His testimony very vividly confirms, or *seems* to confirm, what some mathematicians have claimed for their study as a means of mental discipline. Pupils learn to carry long polynomials in their heads with seeming ease and to perform well-nigh miraculous feats of combination, computation and solution. This power, however, is gained only with great pains and effort, and is lost very

quickly when its possessor ceases to exercise it. This would seem to indicate rather a very specific function for the higher mathematics, if not also for arithmetic; a very specific sort of memory and imagination, without the great generalized, or "carry over," values sometimes claimed. This notable teacher himself claims that it is "sheer cruelty" to try to teach algebra and geometry to any but the brightest blind children.

The way of Klein and the few who have had his insight prevails only to a limited extent. The formal mathematics of seeing children has its counterpart in the education of blind children and many become helplessly the slaves of their slates. In mathematics, there is a recognition of mental-training values greater than those found in other studies but mathematics may degenerate into a formalism of training that greatly vitiates its utility. That is to say, there is altogether too much drill on set combinations and made-up problems, with an almost complete losing sight of the end of mathematics, which is to administer to the well-being of living organisms.

There is surely a mathematics of daily life, as fundamental to life relations as reading, writing, talking, or walking. If one asks where the chief call for this mathematics comes, the reply without equivocation is, in measuring, in making change, in counting, in computing simple quantities and distances, in telling time and figuring out time tables. These are beginning to receive proper attention in the commercial courses, now more and more largely introduced in the schools, but unfortunately these courses are not introduced far enough down in the grades. We hear of the general values of mathematics, but all applications of mathematics are specific, a principle that cannot be too clearly realized in practice with blind children, where all useless mental waste must be eliminated. A child who can



tell the day of the week of April 1, 1950, instantly, may have a wonderful, automatically working brain, but of what earthly utility is the fact, either for self-development, community or natural adjustment, or any other real end? He may be able to say the multiplication tables to twelve times twelve backwards, forwards, or beginning at the middle and going both ways, but if he does not know how much change he should get back when he buys a thirty-cent article and offers a dollar, of what use is his arithmetical skill?

Reading and writing have, as we have seen, taken up a disproportionate part of the energies of schools for the blind. Of reading, little remains to be said save that on the whole it has been well taught: the blind, unless they are under-age mentally, become with the equipment of the point systems, facile readers, and when reading aloud generally read better than the average seeing child. But nearly all the blind known to the writer would rather at any time hear a good reader than read for themselves even those books that are accessible to them in point; this is a physiological phenomenon, perhaps due to the fact that hearing is a very much less tiring process than reading by touch. Hearing, too, offers a much more coherent whole, even the best point readers having frequently to pass over in mental repetition what they have covered with their fingers. One result of hearing much reading is that the blind become very discriminating in their taste for books, much more so than other children. This in part grows out of the fact that one hesitates before putting cheap and foolish literature before the blind by the laborious process of reading aloud—and of course the same principle applies to a very great extent to the expensive embossed literature.

By-products of much dwelling in the world of letters and of sounds are to be found in the almost universal soft and well-modulated voices of the cultivated blind, in the general

clearness and careful articulation of their speech, and, barring vocal defects, the very pleasing effect of their oral discourse. Elocution, argumentation and debate belong to the blind by right of eminent domain and many a brilliant and effective speaker has come from the school debating society. The ease with which these social instruments may be perverted to unsocial uses need not be pointed out to one at all acquainted with the blind. All too well known are an argumentative perversity bordering on the boresome and a readiness to talk on any and all subjects, almost always on the "other side." A study of clear exposition is needful, for it tends to counteract trickiness and superficiality in debate. The culture of the voice, too, is recognized as of extreme importance.

The psychological and bodily factors involved in the reading of the blind are at the present being scientifically studied for the first time. Until these and similar studies have been carried through to some sort of conclusion, more or less tentative, it will not be safe to venture broad generalizations on the methods of teaching reading. It is safe to assert, however, that until very recently the alphabetic method was the one chiefly used. The very mechanism of reading necessitates a much more disjunct method than with seeing children, and in languages with phonetic, or nearly phonetic, alphabets this can do little harm.

In the best American schools the newer methods have received recognition and are applied with the necessary modifications; at least this must be inferred from the courses of study and descriptions published in reports, as well as from the contents of the various readers published in the point systems. The list of publications of the American Printing House shows a number of the more recent readers, nearly all of them committed to a greater or less

extent to methods involving words or larger wholes and not letters or syllabic combinations.

The study of linguistics has received large attention from the beginning. One of the earliest books published by Haüy was a grammar. Orthography, grammar and rhetoric have been held as of the utmost importance ever since. The importance of foreign languages was also early recognized, and today the curricula of practically all schools contain at least one, sometimes two, three or as many as four, foreign languages. In method of presentation this group of studies has not differed radically from the prevalent system or systems in vogue in general education, save that the purely oral and aural elements have always been conspicuous. In this respect the blind have been much more fortunate than others: the spoken word has been so dominant that the so-called dead languages have been made living realities; and the blind have learned French, German, and the other modern languages more nearly as they are learned by those whose mother tongues they are.

It is a mistake, however, to think that the blind are specially gifted linguistically: their greater facility comes, if at all, from necessity. Possibly this very necessity might be made the basis of a much more complete and effective linguistic training than children with sight secure; but the dangers of linguistics, in any departure from the more solidly realistic studies, are too obvious to be pointed out again. A blind interpreter is a possibility, and in exegesis there is another possible field, but even in these vocations, or parts of vocations, the call comes more and more insistently for a background of experience and of contact with reality, so that any exclusive training looking toward such ends would defeat its own purposes by the utter emptiness of its content.

And the last statement is very largely true of the more

literary studies, including literature proper and composition. Blind writers have been successful just in so far as they have embodied in their writings the deep feelings and the experiences of their own lives. Helen Keller complains that people seem much more interested in her than in her opinions about the subjects of the day; much more interested, for example, in her dreams than in any discourse that she might write on wireless telegraphy. Now it is precisely because her dreams are a real part of the big world of reality, in its broader psychic, as opposed to a merely physical, sense, that people are interested in them. Helen Keller on wireless would, on the contrary, be largely a "rehash" of what someone had spelled into her hand from some account of a popular writer, who had himself gathered his materials at second hand. Aside from a few of the charming verses of Clarence Hawkes and some of the finest hymns of Fanny Crosby, most of the poetry written by blind people, that is, people who have been blind from childhood, though often flawless in structure, lacks the "true ring."

From these facts the cue might be taken for all literary education of the blind. In the past that education has piled unreality on unreality. In an age when the bombastic outpourings of an orator of the old type held audiences spellbound, it is no wonder that the worship of the word prevailed in all schools and especially in schools for the blind. All effort was directed toward proficiency in expression, whether that expression expressed anything or not.

This ultra-literary education superinduced on the small world of reality a great and expansive world of fancy, where one walked on clouds and where the feeling of freedom was rampant. If so many with all their faculties intact fell from the clouds on leaving the schools and entering "real life," how much more must the blind experience an

awakening shock on leaving their literary dreamland and alighting in the world of "things as they are"? And cannot the shock of disillusionment be prevented by the integration of a real world along with that integration of complete, well-rounded, effective personality, which is the true end of all real education?

Education is, of course, vastly more than adjustment. Any sacrifice of high ideals to the god of "things as they are" is to be deplored. How then is literary education to keep its ideal values and at the same time be in accord with present actuality? In part the answer to this question lies in greater emphasis on the teaching of science, of commercial subjects, and of the vocations, including music as a vocation; in part it lies in the selection of literature for its moral values rather than mere interest in the story; but most of all it lies in a large physical and social orientation.

Handwriting, point-writing and typewriting have been discussed as far as they concerned devices for writing. The methods used in teaching have been those necessitated by the means. Point-writing is so very simple on its mechanical side that to read *is* to write: in fact for some, writing is easier than reading. Handwriting may be taught either through a frame with specially devised guides, by the letters traced in grooves, by means of wires, or simply in very large freehand. Montessori has used the tracing of sandpaper outline by the finger in teaching subnormal children. This method might be applied with profit in the teaching of the blind, though I find it nowhere discussed in literature on the blind, either as "tried out" or as a possibility. In fact, it is doubtful whether handwriting, by pencil or otherwise, aside from personal signatures, is desirable. Typewriting very completely fills all needs for communication with the seeing, and the blind can learn typewriting very successfully, if they are not mentally subnormal. They have a decided

advantage in having to learn by touch from the start, but are greatly handicapped in not being able to read over what they have written. This necessitates careful thinking out before writing and the completion of a composition or letter at one sitting, or at least of a well-defined part of the composition or letter. The needs of the blind call, too, for a very thorough fundamental training in typewriting: anything less than perfection is imperfection indeed, for the blind cannot go back and make erasures and corrections.

No special attention need here be given the historical and social group of studies. In these the blind are fully as proficient and progress as well as visually normal youths and children. Aside from the greater use of oral methods, there is but little difference in the manner of teaching. Not enough attention has yet been given to the self-government idea in the conduct of schools and classes for the blind, and self-government might, particularly in boarding schools, be made a valuable adjunct to the teaching of civics.

Historical pageantry has of late come into use and the blind enjoy it fully as much as seeing children. It may be significant that a blind man, Clarence Hawkes, planned a very successful historical pageant for the town of Hadley, Massachusetts, designed a number of floats and largely carried the whole scheme into execution. There is undoubtedly developed with education an historical "sense"; this is to be found in educated blind persons, according to the experience of the writer, in much greater degree than in equally well-educated seeing persons; it is almost always accompanied by a lively sense of narrative values and more or less aptitude at telling a good story.

Commercial subjects have been so recently introduced into schools for the blind that the time has not yet come for appraising either their value in the schools or the methods best suited to teaching them. The mechanical difficulties

in the way of complete systems of bookkeeping, accounting, exchange, and allied subjects are almost insurmountable, but an adaptation of braille will undoubtedly give sufficient material for the actual needs of the blind. The importance of the commercial subjects, especially in their relation to the daily life of the blind, is coming into more and more recognition. The fact that there are so many successful small tradesmen among the blind ought to lead to a larger study of commercial possibilities. A survey of what these men find most necessary and what they have found most wanting in their education might well guide the forming of new bases of method and of school practice.

Of music we need say very little. It is chiefly a vocational and avocational subject. Hence its fuller treatment in the next section. Of the fact that it is the best taught of all subjects given the blind, there can be little doubt; it is also, perhaps unfortunately, the most taught. In some schools nearly every boy and girl expects to become a musician, and many hope to become teachers or paid performers. But it is a case where "many are called, but few are chosen." A test of abilities and frequent grading according to reasonable possibilities would soon weed out the inapt and give the genuinely gifted a broader opportunity. This holds equally, however, of all the vocational aspects of the teaching of the blind.

## CHAPTER II

### *Vocations and Avocations of the Blind as Related to Their Education*

**N**O SUBJECT has more seriously engaged the attention of those who have given thought to the condition of the blind than that of trades and occupations. Long before education had assumed the aspect of a problem, socially minded individuals and institutions had given some attention to their industrial possibilities. In at least two important instances a solution well in accord with the social development and prosperity of the people as a whole had been found. These instances are those of the blind fortune-tellers of China and the blind masseurs of Japan. The latter demand our further attention at this point because of two noteworthy aspects, namely their training and the formation of a guild with a virtual monopoly of massage.

Massage as a means of maintaining good health is much older and better known in the Far East than in the Occident, and is much more generally practiced at the present time in India, China and Japan than in the West. A special profession has grown up, with a technique all its own, empirical in origin but very thorough and very effective. More especially in Japan but in a lesser degree in all the Far East, this technique is imparted by the apprentice system in a more or less well-defined guild; and in Japan this guild of masseurs has consisted largely of the blind. Their skill in the manipulation of muscles and joints is very great and their services are (and have been) in almost universal demand. The guild of masseurs includes men and women, who make their rounds either early in the morning or late in



the evening, their presence being heralded by blowing on a small whistle. Both this guild and a guild of fortune-tellers and musicians are very ancient, dating back to about 850 A.D.

In the Mohammedan countries some recognition was given to the economic possibilities of the blind, but in both the Mohammedan and Christian countries the idea of charities has been too dominant to allow the blind very much chance for industrial development. They perhaps suffered somewhat less than in the extreme Orient, but on the other hand no large efforts were made toward utilizing their energies by any form of industrial occupation previous to 1784. Even such an institution as *Quinze-Vingts* recognized the right of its inmates to beg, and beggars the blind were and continued to be until their education became almost universal.

Valentin Haüy, in his *Essai*, says, "Before the birth of our institution, some of the blind, doubtless fatigued with that wretched inactivity to which their deplorable situation seemed to condemn them, made efforts to shake it off. Convinced of their fitness for certain manual employments, we had no anxiety but that of selecting such tasks as were proper for them. We applied them with success to spinning. Of the thread which they spun we succeeded in making them twist pack thread, and of this pack thread we made them weave girths. Their labors at the Boisseau in making small walking staves of cords, in the working of nets, in sewing, in binding books, all were tried to our satisfaction and we wanted laborers rather than work; so many are the kinds of manual employment, which one may trust to the unfortunate persons who are deprived of the pleasures of sight." He continues, "After these first trials, we will neglect nothing to put early into hands of a child born of indigent parents, an occupation from which he may one day draw his

sustenance. We will thus extirpate the inclination to beggary. . . .”

Thus spoke Haüy with that supreme optimism that disregards obstacles, and his successors have continued to make the same mistake. First it must be unqualifiedly conceded that there is little in an industrial way that a blind person can do at all that cannot be done better and more expeditiously by people with sight. This is practically axiomatic, but an illustration will serve to give the assertion point. Theoretically a blind man ought to be able to sell newspapers just as successfully as any one.

A blind man, who keeps a small newsstand and is extraordinarily successful, was one day asked by a young Hindoo student whether he had a certain paper. “Yes, madam,” was his answer. He had mistaken the thin voice of the young man for that of a woman. For a minute the young Hindoo was in a rage, looked daggers at two or three spectators who dared smile, then evidently collected himself and departed in high dudgeon. It is not likely that he ever bought another paper at that newsstand.

While this particular blind man’s accommodating politeness makes him hosts of friends and patrons, a person with sight could never have made such an egregious error; his very politeness caused him to trip, though fortunately he was never conscious of his fall. It is even truer in the handicrafts than in salesmanship that what the blind may be able to do well, the seeing can do better. The question is not, then, whether the blind can compete on equal terms with the seeing—there is no reasonable doubt that they cannot. The whole question of occupations resolves itself then into just how far concessions and monopolies may be given the blind, how much start they may safely be granted over seeing competitors, to what degree they must be checked and their work held to standard by competition or

by an inspection and grading that will take the place of competition.

Society more or less automatically makes way for the blind person who wants to work and support, or partially support, himself. In fact, its inclination is to kill with kindness, to make heavy the burden of self-support by seeming to take it away. One has but to watch a blind man at a street crossing to see how ready the general public is to give a helping hand. There is less danger that the blind will suffer from overcompetition than that their chance to compete at all will be taken from them.

These considerations would indicate two main directions of procedure. It is wrong to start with the school, as Haüy did, and to teach there a number of occupations that the blind can do, but to teach them out of relation to their practical and relative values. This is equivalent to attempting to create trades for the blind and then more or less angrily to demand that the world recognize the work and buy the product, whether useful or useless. It is equally wrong to thrust the blind, unprepared or half prepared, into a world that, perversely, will not take their competition seriously and insists on bestowing charity where only a fighting chance is asked. Only a far-reaching survey can show for what occupations the blind are best fitted, taken individually; and, equally, what occupations offer satisfactory return as life callings. Such a survey would have to take into consideration the vagaries of invention, the fact that the hand operations of today may be thrown on the scrap-heap tomorrow, and choose those occupations that have the greatest possibility of continued existence as well as the readiest market for products. The second indicated course is to determine either by legislative action or by social acquiescence—perhaps both—certain *preferred* occupations for the blind, wherein the larger number may be

employed, leaving the battle of wits only to those select few that may be considered, and determined to be, specially fit.

These two methods in actual operation would entail a vast amount of foresight and thoroughness of training that neither schools, industrial homes nor other associations and agencies have usually displayed or generally can display until expertness takes the place of volunteer service and both corrupt politics and inefficiency are permanently ruled out. Grading and segregation according to ability must be recognized as a part of training and a certain seemingly cruel aspect of such grading and segregation overlooked in the avoidance of the greater cruelty of thrusting misfits upon the world. As I see it, a complete vocational survey for each state and country is the starting point of the right education of the blind. Then educational practice must be brought into harmony with the findings of the survey, and "bread-and-butter" education made the most fundamental concern of the schools for the blind.

Considerably over a hundred years of experience in the industrial training of the blind, and their success or failure in the empirically chosen callings, have, of course, accumulated a large body of data as a starting point. These data in themselves cannot indicate future possibilities or a right method of procedure until they have been subjected to a survey and made to yield their meaning. A very cursory view of the literature of the subject from Haüy to the present at once brings to light a few facts as generally conceded by those who have given the subject thought. These are:

First, that music as a vocation for the blind has been grossly overestimated.

Second, that the handicrafts in which the blind can do first-class work are very limited in number, with basketry,

weaving, knitting, broom- and brush-making, and chair-caning as the most promising and most thoroughly tried out.

Third, that in these crafts the blind cannot enter into direct competition with the seeing either in the quality of product or the amount turned out in a given time.

Fourth, that the crafts pursued by the blind may best be carried on in special workshops under the charge of government officials or trained officers of certain benevolent associations.

Fifth, that the blind succeed best when their actual participation in a trade is preceded by a thorough apprenticeship or by an equally thorough trade education in a school fully equipped to give such education.

Sixth, that there is need of a good commercial education both for those who must enter the handicrafts as a life work and for those who would venture into other callings.

Seventh, that among those other callings, salesmanship and the keeping of small shops offer an especially alluring field for those sufficiently fortified in soul not to "go under" at the first indication of failure.

Eighth, that among the "higher" callings piano-tuning and massage are, under favoring conditions such as prevail for masseurs in Japan, the fields offering the greatest chance of success, while the learned professions, including teaching, are on the whole only for those of very superior talent and, more particularly, very superior courage and determination to win at all costs.

Ninth, that to argue from individual successes is not to show what the "blind as a class" can do, and that therefore many notable examples of success, whatever their moral worth may be, cannot be taken as other than exceptional and therefore as practically valueless in the formulation of general guiding principles.

Perhaps one other finding should be added, and that is

that, in spite of the best that can be done, there will remain a large class of indigent, helpless blind, mere "feeders," who either cannot, or what is frequently exactly equivalent, *will* not, make the venture of earning their own living. With these general deductions, we are ready for a more specific discussion, taking them up serially and adhering to the same order as completely as the subject matter will allow.

The success of Maria Theresia von Paradis in music as a profession probably influenced Haüy more than any other one factor in making music the most important element in his school, but the tradition of blind men as minstrels, from Homer down, and the consequent deep ingraining of the idea in the popular mind, conspired with Maria's influence to give a tendency to the education of the blind, which if not wholly evil, has nevertheless wrought great harm. So completely was the Paris school turned over to the one interest that it came to be in time little more than a national conservatory of music for the blind, training at least sixty per cent of its pupils for one calling. Of these it is doubtful if more than one in five was able to make a respectable living. When we consider the relatively small number of the blind attending this school, the failure is simply appalling.

The invention of the braille musical notation means much in making music directly accessible to the blind. From about 1850 on, musical training became more and more thorough; but even the best musical training cannot make a person of indifferent natural qualifications a success. There is in music, as in other art, a real "gift," interpret it how we may, and where that gift is lacking no amount of training can make good the deficiency. Even where the gift for musical expression is present to a greater or less extent, there may be lacking in the blind other elements of success, such as physical vigor, determination, external incentive, a sufficiently high mentality, or other equally important factors.

A few illustrations taken from the personal experience of the writer will serve to strengthen and illustrate this point. The first is that of a boy of fairly normal mentality but low physical vigor and no particular talent. As a student he was devoted to his work, gave many hours to faithful practice, gained a certain mechanical proficiency and was graduated with a good musical education. But he lacked nearly every essential to success; he was servile in attitude and very unprepossessing in appearance; he lacked confidence in himself, although making an outward show of overconfidence; and, above all, he was utterly lacking in any touch of divine inspiration. He sought pupils and engagements in vain, and died a wreck, and a victim of the discouragements of a false system that took one who might have been a fairly successful basket-maker or weaver and tried to make a musician of him.

A second case is that of a boy of low mentality but of undoubted musical gifts, a second Blind Tom, with the latter's talent for composition and improvisation. Case B showed unlimited patience in learning, and his performances ultimately reached the point of skill, coupled with genuine feeling, where they attracted great attention and much favorable comment; *but* utter general unfitness, once more, doomed this lad to failure. His education was undertaken with no broad view of his all-around qualifications; no survey was made either of the abilities of the boy or of the field he hoped to enter.

Case C is that of a girl of fair mentality but indifferent musical ability, and lacking, once again, the very essentials of success—well-founded self-confidence, adaptability, pleasing address and attractive personality. No success came to her because she could not command success either as a performer or a teacher.

The cases could easily be multiplied and only rarely will

one find an example of unqualified success, while the sorry failures pile up mountain high. It is heart-breaking to one who looks at the process from the afterview and would be still more so if the remedy were not so apparent. Genuine talent will be recognized in the blind musician more quickly than it will be in the person with sight; but institutions must shape their policies and their courses with a view to finding out and cultivating talent. The process must first and always be one of selection, segregation, and development according to abilities. Blindness in itself gives no right of eminent domain in the realm of music any more than deafness implies talent in drawing or modeling. Blindness is a severe handicap, and only the specially talented can hope for any success in music, either as teachers or as performers. A professional course in music, as opposed to one for culture and personal comfort and enjoyment, must be primarily selective. With this qualification we may accept as guiding principles Illingworth's five points, as follows:

To ensure a large measure of success among pupils after they leave a blind music-school, the following considerations are necessary:

1. The aim must be to form musical artists who shall not be inferior to seeing artists trained at the best conservatories.
2. The school must contain a large number of pupils, so that properly graded classes may be formed.
3. The school must have a very large income, in order to command the services of the best teachers, and to possess pianos and organs in sufficient numbers to give each pupil the opportunity of some hours' daily practice.
4. The kindergarten and literary work should also be thoroughly good.
5. Careful attention to personal appearance and the cultivation of good manners and a polite bearing are essentials to success and this should be insisted on by the teachers.

The application of the principle of selection would at once make an immense reduction in the number of those taking music with professional performance or teaching



in view, but the few left would more than repay the now possible double or threefold time and attention that might be given them. Guided by the principles that have stood the test of time, teachers could reasonably hope for the success of their pupils. A few could become teachers; more might find places in orchestras; some could form quartettes and the like and seek local engagements or even hope to find places in regular circuits, vaudeville or otherwise; here and there one might become a church organist, choir master or orchestra leader; and a very few, like David Duffie Wood, the musician, or Sir Francis Campbell, the famous director of the Royal Normal College in London, might become successful organizers of the teaching of music and the directors of departments or of schools.

For the vast majority of the blind, music as a vocation must forever remain closed. The cruelty of crushing budding ambition, of dashing to the ground high hopes and aspirations, is as nothing compared with the cruelty of thrusting misfits into a world that in turn thrusts them into asylums or industrial homes, where their high notions of their personal dignity and of the vulgarity of labor make them even worse misfits than they were in the outer world.

Basketry is perhaps the oldest occupation followed by the blind and, as a machine-made product is never likely to supplant that of the hand worker and as the market for the product is always large and fairly secure, basketry can be made one of the best trades for blind hand workers. That the blind in some instances can not only acquire very high proficiency in basketry but can even rival seeing makers in speed has been demonstrated both in schools and in workshops. Beautiful baskets as well as useful baskets are being made by the blind and sold at reasonable prices, both in such institutions for their education as that of the Ontario School for the Blind in Montreal, where for years basketry

has been a feature of the industrial training, and under the auspices of various associations for the blind. In San Francisco, California, rattan work has been taken up with considerable success.

Closely allied to basketry are weaving and chair-caning, in both of which the blind show marked skill. The former is confined to mat- and rug-making, the weaving of small curtains and portieres, towels and similar pieces. The expense of manufacture and machine competition strongly militate against weaving ever becoming a real trade for the blind. The market is too limited, and there is too great a tendency toward selling relatively useless articles at high prices merely as the work of the blind. Knitting is open to somewhat the same objections as weaving, though there is less doubt of the utility of the product. Small knitting machines are successfully operated by the blind, especially in England. Both knitting and weaving supply valuable *busy work* for otherwise idle hands but cannot be put on the same level with basketry, chair-caning, and broom- and brush-making.

Chair-caning, either in repair work or in chair factories, not only is an excellent and fairly well paying occupation for the blind, but it promises fair permanency and there is little danger of machine competition. That chair-caning can be taught in schools ample demonstration has been made. Brooms and brushes are ever in demand. While the machine-made product can be put on the market somewhat cheaper than the hand-made, hand-made brooms and brushes are superior. Besides, machine operation is not beyond the powers of the blind and the machine only completes a part of the process. A half hour or more in a well-conducted broom factory will convince the most skeptical that here is a trade that the blind can follow with success, the men conducting the heavier operations and women do-

ing the lighter work. The blind have at least one small advantage over seeing operatives, notably in grading, where the "feel" of the stock is surely a better guide for selection than the mere cursory glance that a grader with sight would give. While it is to be doubted whether the blind can successfully make the smaller sorts of bristle, hair and fibre brushes, except the twisted wire brushes, they doubtless can make coarse scrubbing brushes and the like almost as well as they can make brooms.

We must constantly revert to the fact that even under the most favorable conditions in these and closely allied trades, the blind cannot, without careful and far-reaching organization, hope to enter into successful competition with the seeing. Any trick that the blind can turn may be used with equal or greater success by the seeing. Wait's hypothetical case of workers, B and C, at a given trade, is very convincing. B and C are equally skillful, equal in any test that competition may offer and equal in being able to take whatever advantage cooperation may secure. Now, suppose C to be blindfolded and see with what advantage or disadvantage he will follow even the simplest trade. There is no need for further argument.

This being the case, wherein may the blind hope for any success in the crafts? Only in organization and in education. Organization must take such forms as will do away with the worst features of competition, while guaranteeing a sufficient measure of competition to secure high standards, or else substituting for the efficiency of competition a sufficiently rigid inspection and grading of products to secure the same result. The organization may take the form of a voluntary association, with cooperative workshops and agencies both for buying raw materials at an advantage and marketing finished products at the highest current prices. Such an association has the advantage of avoiding

politics, but it is likely to run into a worse situation in having mere *bodies*, to use the terse Caledonianism, in its directorate and offices—elderly ladies with few home duties, philanthropically minded superannuated clergymen and the wealthy *out of a job*, but with very little really expert ability. State commissions, of sufficiently wide scope of powers, can perhaps best handle the whole matter from the incipency of education. This, however, leads us into certain social aspects that deserve fuller consideration than can here be given them.

There can be no doubt that an education is an imperative antecedent to any real success in the crafts. This applies equally to adults becoming blind and to those who graduate from the trade courses in schools for the blind, and is a point not yet conceded by all educational leaders. One cannot see, however, when many of the blind must follow manual pursuits and are happiest and most successful in those pursuits, how there can be any further hesitation about making trade education an integral part of the school work. At the risk of reverting, to the tiring point, to the principle of selective education, once more we must emphatically state that the education of the blind must go on blundering and producing human wreckage until the doctrine of the talents is vitally and organically recognized. To those who cultivate their one small talent of manual skill surely there will be given as clear a satisfaction in success, in the happiness that comes with utility and the consciousness of utility, as to those gifted ones whose opportunity will be made all the larger by the segregation of the less fit. Undoubtedly the cost of trade education will be greater than that of the older academic type, but that cost will be counterbalanced by the greater values secured. This ought to be axiomatic, but unfortunately there are many yet who either will not or cannot see the necessity

for thorough industrial training in the schools or in actual industrial employment along with part-time school attendance. The latter scheme could hardly be employed with the blind.

Along with the craft education, there ought to go commercial training of a very specialized sort; commercial orientation might be still better. Every blind child ought to have this training, no matter what his vocation may be. The training need not be so much in the specific processes of bookkeeping, accounting, banking and the study of credits, as a generalized course including such parts of these and other business processes and relationships as may be imparted to the blind, all synthesized into a knowledge of the necessity of strict business dealing and high business integrity in all relations with anything of a commercial character or aspect. As I have personally observed the blind, one of their greatest needs—a most appealing need—has been that of an acute sense of importance of the business relation—the need of a business *sense*. This lack is a correlate to the lack of the larger sense of reality, and is likely to display itself in wild schemes that can have no basis in reality.

An instance that ought to become classic is that of a young man, graduated from an academic course, who went to a business friend for advice. He had conceived the plan of buying on a large scale for grocery firms on a cooperative basis, securing a good commission for himself, while saving the companies for which he bought not only considerable sums of money but all the trouble of buying. "What do you know about the grocery business?" his friend asked. "Why, nothing: and I don't see that *that* makes any difference." "Well, it will with the grocers, you may be sure. Do you suppose that if this scheme were feasible, it would not have been tried long ago? Learn the grocery business, my boy!

Learn the grocery business and then we can talk it over." And the young man departed, disappointed but unconvinced.

A thorough commercial course might serve the selective purpose in finding the rare few really fitted for salesmanship and shopkeeping. These few would have to possess superior acumen and good general intelligence. With adequate commercial training they could venture forth in small beginnings and by the utmost thrift secure a competence. Grit would be an essential quality, but sheer grit cannot take one far in the competition of actual trade; so that determination would only serve to fortify the business intelligence. In the sale of papers and small wares, competition is overkeen, so some sort of half-monopolistic route would, on the whole, offer a more promising venture. Suitable concessions in public buildings and parks are of a less competitive nature and bring a fair compensation.

Passing over into the so-called higher occupations, we find piano-tuning by far the best field for the efforts of the competent blind. This has long been recognized in Europe, where Claude Montal led the way by tuning a piano in the Paris institution shortly before 1830. The seeing tuner had done such an indifferent job that Claude, with the aid of a fellow student, took apart the piano on which he practiced, and the two succeeded—in making trouble for themselves with the tuner—and were sharply reprimanded and forbidden ever to do it again. Undaunted, they secured an old piano for themselves, dissected and rebuilt it and kept this up until they knew the structural technique of the piano. They repaired the old instrument, supplying missing parts, until it was finally in good tune. The director was convinced; he allowed the lads to repair the chapel organ, and very wisely saw in their efforts a new occupation for the

blind. Montal thus established for himself a reputation and for the blind a vocation.

This occupation, discovered by a blind man for the blind, is generally recognized as the one that skillful and well-trained blind men can follow with the degree of success most nearly approaching that of their seeing competitors. A blind tuner can make fair wages and besides can command a respectable place in society. So successful have blind tuners proved themselves to be that some factories have come to employ them exclusively or almost exclusively in their tuning departments. Thus the greatest piano manufacturers of Europe, the Lebrüder Zimmerman Co., of Leipzig, employ only blind tuners in their factories. In their two factories, with a production of 8,000 instruments a year, nearly thirty blind men were employed in 1909, the year when Dr. Allen reported the good news to the *Outlook for the Blind*.

There is some reluctance on the part of salesmen about employing blind tuners because of their inability to find their way to houses where instruments in need of tuning are to be found. Very generally, where this inability actually does exist, there is found a willingness on the part of patrons to meet the blind tuner and conduct him to his place of work. Thus I know of a high school principal who gave the job of tuning the school piano to a blind man and personally conducted him from the railroad station to the school and back again. It was a small service; and the object lesson to the boys and girls of the school, who were very greatly interested in seeing what a blind man could do, was worth all the extra efforts.

Piano-tuning has fallen on evil days in recent years. Less pianos are being manufactured and used. In part, radio accounts for this change, also "canned music" in the motion picture theatres, and perhaps to some extent the economic readjustment. Whatever the causes, the demand for tuners,

blind and seeing, is less; and schools would do well in their guidance work to consider this decreased, if not still decreasing, demand.

Massage has been briefly discussed in connection with the organization of the blind in Japan. The occupation itself is of comparatively recent introduction into America, and therefore offers the additional difficulty of not having a prepared clientele. The only very extensive use of massage hitherto has been in hospitals, sanatoria, and Turkish bath establishments. The creation of a regular patronage must precede any extensive employment of the blind as masseurs and accordingly the public must be educated up to the need of massage. There can be no doubt as to its desirability both as a curative agency and as a means of prevention of disorders—nervous disorders more especially—through the relaxation of the muscles and the consequent rest secured.

We see, therefore, that in America, particularly, a field of real promise opens out to the blind in massage, as in the tuning of pianos; but in both these there is great necessity for severe and long-continued preliminary training to begin with and a guild organization or an organization of a similar nature, to take over the work of the trained graduates. In other words, there must be no quackery in either occupation and each must be so firmly organized as both to eliminate the unfit and secure continuous employment for those of proved fitness. The "half-baked" piano-tuner, who loses parts and leaves the instrument in such condition that its "last estate is worse than its first," does not simply bungle his own job but makes doubtful the employment of other blind men and gives the blind in general a bad name as artisans or workmen.

Likewise, the uneducated, untrained masseur, who racks the frame of his victim and leaves sore and tired muscles sorer and more tired than at the start of the treatment,



both ruins his own chance of reemployment and makes impossible or improbable the employment of any of his fellow blind. The West has been very patient with quackery of all sorts, but the time is fast approaching when competition will have become so keen and merciless that the unfit must drop from the contest. Unless the schools wish to multiply and fill up asylum and refuge, they must courageously face this fact, and not venture to prepare any but the best for the higher callings. Those prepared must be most carefully selected, and thoroughly trained.

A few blind people have succeeded—some remarkably well—in the learned professions. Mathematicians like Saunderson and, of recent years, Dr. Newel Perry; teachers like Sir Francis Campbell and Anne Sullivan Macy; politicians and statesmen like Henry Fawcett and United States Senators Gore and Schall; writers like Clarence Hawkes and Helen Keller; musicians like Maria von Paradis, Leila Holterhoff Mosher and David Wood; these and others too numerous to mention even by name must stand as an everlasting inspiration to blind and seeing alike.

These people must not, however, be taken as the norm of judging what the blind can do. Schools have taken on too much the patent-medicine standards, the "before and after" attitude; they have had too much faith in the efficacy of prescriptions. One of their worst faults has been the holding up of examples, saying to this girl, "You can be a Helen Keller, if you will!" or to this boy, "You can emulate the example of Gore; you can master mathematics, as did Saunderson," and so on *ad infinitum*. Personality means precisely that there can be only one Helen Keller, and would-be imitators sacrifice their own possible personal development to become echoes, to become shadow personalities. False categories of worth drive mediocrity from its chances of real success into the surety of failure; good

basket-makers are turned out indifferent musicians; the possibly successful broom-machine operator becomes an ill-qualified and starveling lawyer.

And the worst of it is that when the adult home receives its own, these poor failures are utterly unfitted to take up the tasks that they might have done with success. Hope has given way to cynicism and now "the world owes us a living." It is a positive cruelty to elevate mediocrity to the places due to unusual ability, because, when the shock of awakening does come, its victims find themselves completely unnerved and do not simply drop from their cloudland of false and idealized values, but they drop on below that level in which they might have "found" themselves to become not merely virtual outcasts from society, but, what is far worse, outcasts in their own estimation, conscious of their own abject failure and unfitness. And here we must include not the naturally servile and mean spirited, but those of real character, of a certain sterling worth who might have been developed into a fine human product. There are philosophers of the forge; there is a poem in every well-wrought basket or rug; there is a real idyll in any small duty well done; and if we could but drop once for all those standards of valuation which we have inherited from a feudal and aristocratic society, the real *worths* might have fair chance of recognition.

First of all, schools must not be shaped toward the ends of higher education. The only higher education is that fitted to each one; that education capable of bringing out in each the best that is in him while imparting to him certain skills in the manipulation of realities, objective or otherwise, to secure certain useful ends. We can only revert to education as a process of selection, of sifting; of finding, not so much the fit themselves, but the peculiar fitness of each one, even of the physically weak and the feeble-minded; but, above

all, of finding that type of fitness which has hitherto been regarded as higher and of giving it the fullest possible opportunity for development. There is no need to fear that an educational system of this sort will smother genius under the weight of mediocrity; just the reverse, for mediocrity will early be found out and the special fitness of mediocrity directed into its proper channels while that which stands out as above mediocrity will be freed from the everlasting drag and downward pull that comes of rating all alike.

We have in the economic aspects of the education of the blind simply a modification of what exists in the education of normal children. But in the case of the latter, the blunders of educators, charitably so-called, or, better, the blunders of an educational system that is only slowly shaking off the incubus of medievalism, fortunately cannot spoil all the opportunities of a lifetime. He who finds himself failing at twenty-one quickly readjusts (which is equivalent to saying reeducates) himself to meet conditions which he finds to be not as represented in the schools. The blind may be able to do this in a very lesser degree; but not only the blindness itself but frequently the low physical tone, the general lowering of vitality and consequent mental and moral results which render readjustment practically impossible, militate against readjustment.

The finished product of the schools for the blind is surely finished in a much more literal sense than may be applied to the school system as a whole. It is true, perhaps, that many fully endowed individuals suffer all their lives from an education founded on false social and psychological principles and badly carried out even from the point of view of its own fundamental concepts; perhaps all pupils suffer at times and in a lesser degree from such wrongly conceived systems, from poor teaching and from the unethical attitude of teachers. With the blind, however, the lack of

resiliency, the limitations of sense life, the attitude of the public, all conspire to make failure tragic in the last degree: the victim sinks beneath a load too heavy to carry, a burden of bad thinking, of blundering leadership, of impossible ideals and of an idealized world. The remedy lies in that educational reconstruction toward which the trend of present educational and social thinking seems inevitably to lead.

A few words should be said about the avocations and amusements of the blind. While their vocational training and the actual pursuit of the vocation when mastered call for a larger expenditure of time than is true of the person with sight, the blind still have left a very considerable leisure. How to dispose of this leisure is an important educational and social question. Education for the use of spare time becomes doubly important in view of the fact that the only recourse of the uneducated blind is either utter idleness, desultory conversation or petty handwork. A use for leisure time and an outlet for surplus energy may be found in any one of a number of ways that are socially and individually of worth. The first of these to suggest itself is in the realm of sports, taking the form of such games as bowling and shuffleboard that can be supplied best in clubs or in the clubhouses of adult homes and industrial institutions. The blind enjoy keenly these and other games of physical skill, in addition to wrestling, vaulting the bar, and other more strictly gymnastic or athletic exercises. Walking is always possible, but walking in itself becomes very monotonous where one is without objective, and without seeing where he is going; walking with a cheerful and sprightly companion is, of course, another story and must always offer great attraction to the blind.

Javal suggests riding a tandem tricycle as a means of open-air exercise and enjoyment. This means would be possible for very few. Trips by automobile, trolley car, or

train are ever attractive, especially with a seeing companion or in a merry crowd, when there is some final objective such as a picnic or a swim at the beach or at the pool. And this leads to the further remark, that all the blind, both men and women, should learn to swim; swimming is a sport in which the blind are nearly on an equality with the seeing and in which they can attain great proficiency. Riding a gentle horse is also good sport. Whatever may be said of sports and games for the blind, the open-air principle must be strongly emphasized; if the ever-present germs of colds and of the dread tuberculosis are to be conquered, there cannot be too much cheerfully undertaken exercise in the open, where the health-giving sunshine and fresh air can exert their curative powers the best.

Reading aloud to small groups will always have its place. The blind prefer lively narrative and, as a rule, are good judges of the best in narrative style. The voice of the reader means much to them, and those who read well have in their possession a source of almost unbounded enjoyment for their blind friends; they can surely perform no more simple unselfish service than to go, as often as may be, to adult homes, blind men's and blind women's clubs or the home of a blind friend and read an hour or two from some well-chosen story. Ethics, religion, philosophy, science are enjoyable, too, but offer better fields for conversation and disputation than for reading. Reading to oneself in braille or other embossed type is apt to be tedious, especially when added to a tiring day's work, yet it is a source of undoubted enjoyment, and the now fairly extensive and accessible libraries for the blind are a blessing for which they may be devoutly thankful.

Social gatherings, with card games, refreshments and informal musical and literary programs are to be commended

very highly. They have a decidedly humanizing effect and are immensely enjoyed by the blind, particularly when a number of seeing friends mingle with them on terms of helpfulness but of perfect equality. Such gatherings, when of one sex, require no very vigilant policing; and, personally, I feel that it is rather an insult to the blind to suppose that the opposite sexes cannot safely mingle in a social good time. With the adolescent this may be an open question, but surely with grown people, mixed social gatherings, with or without dancing, are perfectly wholesome. As a blind friend has very facetiously remarked, "The surest way to prevent the marriage of a blind man to a blind woman is to let him get well acquainted with her and learn that she is not a creature of light and air but just about as commonplace as he himself is. In this instance, while familiarity may not breed contempt, it can have no other than a wholesome deterrent effect. Social gatherings are to be commended and not condemned."

The blind brain-worker may rightly choose some hand-craft for recreational purposes. Knitting is both fascinating and useful, as are likewise basketry and weaving. But more to be commended is such an occupation as gardening or the rearing of pets, poultry and hares. These give just the right objective touch while bringing one into intimate and friendly contact with animate nature. Dogs and cats are not only companionable, but they take the mind away from the cares and worries that come from the interplay of human minds. For the exceptional blind, great interest may accrue from nature study such as that pursued by François Huber, the Swiss naturalist, but this must practically necessitate the use of a pair of seeing eyes belonging to another.

It is more than doubtful if the blind hand worker should turn to a second craft for his avocational interests. "Much

work and no play makes Jack a dull boy" holds good in the world of the blind as in that of the seeing. If the occupation is sedentary, all the more reason why the avocation should be of the out-of-doors recreational type. In industrial homes not enough attention has yet been given to the recreational side of institution life: there is actual need of gymnasia, swimming pools, bowling alleys, and other recreational adjuncts if the life of the institution is to approach wholesomeness and work efficiently, insuring a high-class product along with the happiness of the workers.

Of recreations, and of avocations in general, it holds true that their nature should be such and they should be so suited to the individual needs and the time at the disposal of the individual or group as to secure the most wholesome bodily effects and the greatest humanizing and cheering of the mind. Sports that are a mere prolongation of the day's work, occupations that keep busy the same muscles and involve the same nervous processes, conversations that are gossipy, desultory, or "dirty," athletics that simply weary, walks that lead nowhere, all are alike deadly, dehumanizing, mechanistic, automatizing, in the worst possible sense.

It should be added, too, that recreations of a purely passive nature have very doubtful value. Thus, with all its wonders, and with the indubitable blessings that it has brought to the blind both educationally and by way of entertainment and recreation, radio itself may be easily overdone. "Listening-in" must be limited in time, and the nature of the program given careful consideration.

Education for leisure is absolutely imperative both with the young blind and with later blinded adults. No training may be considered complete which leaves out of consideration play and the meanings of play. Every teacher of the blind should be familiar with the psychology and sociology

of the subject. Teachers of the blind ought to be selected with a view to their own human qualities. On the avocational side we have the place for the larger human outlook, for the idealistic phases of existence, for the drama as a means of emotional *catharsis*, for the novel, for music as art, and for all forms of art that the blind may enjoy.



### CHAPTER III

#### *Some Social Aspects of the Care and Education of the Blind*

CERTAIN matters previously treated will of necessity reappear in this section, but they will appear in new connections and under new aspects. The danger from repetition is less than that from the obscurity which might arise from omissions or the extended use of references. From the study as it has thus far progressed it ought to appear as almost self-evident that the blind, left wholly to their own resources, must inevitably drift into beggary or into the other lowest and least social ways of making a living, becoming in any case virtual parasites. We have seen how blind beggars swarm in the streets of the Near and Far East today; how, until comparatively recent times, the sightless wandered about, or were guided about, in the cities of the West, extending a cup or a hat for the petty alms that might be dropped; how, too, they were even exploited and their beggary made a means of gain for others.

Those blind with sufficient energy, initiative and courage to force their way to a status of self-respect did so in opposition to a great social pressure. It was universally assumed that the blind were and must be dependent; and their dependence was encouraged by the religious mandate to give alms to and protect, the poor, the wretched, the sick, the weak, and the outcast. Christianity, itself sprung from the lowly, was for centuries the refuge of the unfit and the oppressed, and even as a dominant religion, it retained much of its pristine charity. One cannot belittle this charity or call it vain; it was the only solution that cruder ages

could offer for certain social problems. It can be considered to have become an evil itself, instead of a remedy for evils, only when it stupidly defeated its own ends, rendering the weak weaker, and the sinful more sinful by supplying their creature wants without exacting some response toward an improvement of condition. Only when charity becomes the easier way, when it becomes a mere giving, not a sharing, mere pity, not sympathy, does it grow monstrous, a perversion of its pure beginnings.

Under the very crudest forms of Christian charity, the blind were perhaps better off than in China today, which, with all its wonderful achievements, all its marvelous social mechanism, still presents much of the naively primitive and may, therefore, be taken as a type of humanity without the leavening of Christian thought and Christian ethics. In China, not only is the beggary of men and women alike open and flagrant, the very organization of the blind fortune-tellers being the acme of beggary, but social thinking has, until very recently, conceded the right to exploit one's misfortunes or the misfortunes of others. Thus women of the lowest moral tone, acting as procuresses, still hunt out little blind girls, pay their parents a trifling sum of money and take them to brothels, where they are "educated" to their profession, serving first as slaves, and when their maturity warrants, becoming instruments of debauchery. When told that the blind could learn to read and to make their own living, the Chinese public was skeptical; a demonstration of the educability of the blind has resulted in a vast awakening of deep-hidden human qualities.

An example of the splendid response of Chinese philanthropy is shown in the experience of Dr. Mary Niles of Canton. Officials had watched her school for blind girls, started in 1891, with ever-increasing interest and as they saw its results, decided that in it and not in the brothels

was the proper place for blind girls. A raid was made under the direction of the chief of police and some seventy girls were gathered and marched through the streets in two bands to Dr. Niles' school. Dr. Niles was utterly unprepared to receive them and protested against having such riffraff mingle with her girls of better families. Finally she flatly refused to have anything to do with the newcomers unless those responsible for their coming would undertake to house them. No sooner said than done; a large matting shelter was erected at once and a subscription was started for a permanent building, which was erected soon thereafter and the girls thus permanently rescued.

This is but an example of the response of the Chinese when once they understand the meaning and utility of a movement. Schools for the blind exist in many cities but they care for only a few hundreds of pupils. This is but a "drop in the bucket," for China has over a million blind children and adults. Officials are at length interested, however, and the outlook is decidedly brighter.

But long before any demonstrations had been made of the ways of the West, perhaps before any similar movement had been undertaken in the West, there had been some more or less systematic relief of the blind in both China and Japan. In China, the blind, at least in some of the larger cities, form "blind villages where all the destitute blind can obtain a small hovel rent free and perhaps a couple of dollars, Mexican, for food and necessities per month." How ancient this relief is we have no means of knowing, but we do know that in Japan there came an era of great prosperity for the blind through the efforts undertaken in memory of the blind son of the ruler, Kokan Tenno, who came to the throne in 885. Blind men were admitted to the councils of state and many special provisions were made for their relief and comfort, but the best

that grew out of the movement was the organization of those guilds of which sufficient has been said in another connection.

In both China and Japan, the work of relief for the blind arose from social considerations chiefly: any individualistic conceptions of the innate right of the blind to education or care seem wholly foreign to the oriental mind; and, too, the religious aspect of charity seems almost wholly lacking—hence the much more practical economic forms assumed by the work, particularly in Japan. While not all the blind were gathered in the guilds by any means, the principles of craft education and organization were clearly recognized.

In the West a different conception prevailed. The blind and the deaf and other "defectives" fared badly in the pre-Christian world, but with the coming of Christianity they became objects of charity. That charity aimed chiefly at reaching and saving their souls but wisely aimed at the soul through the body. The *Quinze-Vingts* may be taken as the type of effort put forth in behalf of the blind previous to 1784. A study of the *Quinze-Vingts* would very nearly epitomize the change from medieval Christianity to the highest modern social conceptions. Accounts agree that it undertook only the relief and housing of the blind, offering food and clothing to the inmates of the hospice and extending its charities to a certain number of "externs," as its funds permitted. That it ever approached looking after the wants of all the blind of the city of Paris, not to mention the provinces, is not to be imagined; but it did do a splendid work both in the good accomplished and in the example set. Enjoying freedom from taxation and receiving from time to time endowments and other gifts, the *Quinze-Vingts* accumulated great wealth, which the modernizing touch of the director, Jean Alphonse P  phau, converted

into one of the most widely useful trust funds in existence. Nothing could more vividly illustrate the changed social conceptions than the change in practice from the maintenance of the blind in vegetative idleness under the old regime to the numerous educative, preventive, and reconstructive activities of the modern institution. Not to anticipate our account, we must again leave the Quinze-Vingts, and turn to the forces that brought about the change.

Those who look upon the new social ideas and ideals that expressed themselves in Diderot and Rousseau, in the Naturalistic and similar movements, as a revolt against Christianity, entirely miss the meaning of the eighteenth century and those movements of liberation and uplift that arose then. We must rather think that the spirit of Christianity, in spite of efforts to conserve it in books and lock it away in a controversial theology that the commons could not understand, had through the centuries very gradually percolated through the strata of society and transformed to a very great extent not only the outward character of man but also his aspirations and desires. So long as the interests of the world-to-come overshadowed all else, the evils of a pagan world might be tolerated by a system utterly foreign to the institutions of slavery and oppression; men would submit in the hope of a speedy release in the Kingdom of God.

But when the expanding knowledge of geography, science, and philosophy cast a doubt on the whole conception of the future life, without destroying the ethical and social groundwork of Christianity, those forces that had been content to spend themselves in aspirations after the coming kingdom overflowed into *this* world and a mighty movement toward the realization of the Christian social and ethical ideals, here and now, began. It is significant that every leader of the new movement, in so far as it concerned social

life, was either a member of the commons or in close, sympathetic touch with the life of the common people. The new social ethics was indeed an "ethics of the dust," an ethics of the suppressed wishes and aspirations of the submerged nine-tenths, crude and sometimes cruel, but only incidentally so, when lacking sane leadership or following the vagaries of some unbalanced fanatic.

At bottom the movement that produced the great modern philanthropies is as sound as Christianity itself; it is Christianity realized, the religion of the Carpenter of Nazareth translated into terms of the conditions at present existent, the only conditions of which we can have sure knowledge. Those who mourn the destruction of the fabric of the Christian religion have anticipated the demise by some eons of time, because the old forces have only become embodied in new forms, more vital and more suited to the spirit and conditions of the age. From this point of view, the French Revolution and all similar movements everywhere, far from spelling the subversion of Christian charity, point rather toward its fulfillment. Christianity as a moral and social force has always emphasized two truths—the infinite value of the individual soul and the "solidarity of the universe of persons."

We have seen how Haüy was saturated with the ideas of philanthropy. It is scarcely to be wondered at, that he and other pioneers should both overestimate the possibilities of education and at the same time fail to distinguish clearly between the school and the asylum. They aimed to educate the blind to independence; and, failing that, they naturally incorporated the fundamental idea of the *Quinze-Vingts* in their school organization. As the blind present all degrees from abject helplessness to complete independence, the line of cleavage between educational ends and those of charity is often hard to find. Many serious thinkers have frankly admitted to themselves, if not to others, that right pro-

cedure involves both the school and the asylum. Practice in some notable British institutions, in a number of German institutions, and in the *Quinze-Vingts* involves at least three phases of work for the blind: education of the young blind, the provision of work and industrial training for adults, and the housing and care of the more helpless as public charges.

Whether three, or even more, such apparently diverse ends can safely be served by the same institution depends, first, on how clearly those ends are conceived and kept separate and, secondly, on the organization for the carrying out of these as separate ends. Thus the *Quinze-Vingts* may safely provide a clinic for defective and diseased eyes, conduct a school, run workshops for providing employment in the crafts, and maintain an asylum, because, under the organizing genius of Péphau, all these activities were *thought out* clearly and confusion of ends avoided. It remains to be seen whether the organization of the *Quinze-Vingts* is not the sanest so far accomplished: it has at least the virtue of coordinating many activities and making them all serve the one general end of the welfare of the blind.

Those who have insisted on the sharp distinction of educational as opposed to the more purely charitable aims have on the whole made the mistake of supposing that the work of education ended with the school. Those with the most intense belief in education have optimistically judged results to be what they ought to be and, strangely enough, they have to a greater or lesser degree been sustained by statistics. Thus Mr. Wait in his "Three Special Studies in the Sociology of the Blind," (New York, 1905), adduces well-substantiated data to show that an extremely small percentage of the blind educated in special schools become public dependents. This is probably true. The few hundred that were public charges in New York State were mostly in

the class of later blinded adults, and the reason for their helplessness is sufficiently apparent not to merit discussion.

To argue that this latter class entered the almshouse simply because of lack of education and that the educated blind are successful when they simply avoid the poorhouse is to introduce two vicious fallacies, both based on an absence or neglect of evidence. In the one case we do not consider the collateral causes of dependence, and in the latter we base success on a purely negative principle. That the schools do not avoid making beggars in disguise, that they do not prevent the parasitism of the blind, is the complaint of nearly every educator who expresses himself freely on the subject. If the schools fulfilled their function half as well as Mr. Wait avers, we should have cause for great self-congratulation; but those who feel that camouflaged parasitism is worse than open beggary or acknowledged helplessness cannot share in these optimistic conclusions.

By what criteria should the success of the blind be judged? On the whole these must not be very different from those by which we judge the seeing. Without dogmatic finality we may postulate the following as fundamental: (1) the making of a decent living by giving value for value received; (2) contribution to the social whole in loyalty and good citizenship; (3) a happy bearing and that degree of contentment that reflects cheer on one's associates; (4) physical health; and (5) a moral tone sufficiently high to insure maintenance of the "moral level" and a little more.

All these points are general and open to a wide range of interpretation, but just so is success, and no one should quibble about the success of a blind musician who plays in an orchestra, or even gives a passable entertainment on the streets, provided that he makes enough to support himself, involves no others in his misfortune, does not yield to bad



social habits, contributes good cheer to the audience or passers-by and is a good citizen. Likewise, we should consider successful the broom-maker who earns his own board, room, clothes, traveling expenses and incidentals, and otherwise lives up to the requirements of good humanity and good citizenship. We should most decidedly condemn as a vagrant, one who makes his way by proffering his blindness in lieu of honest goods, sells five-cent shoestrings at ten cents, forgets the change, and performs similar beggar tricks, or who of honest or dishonest earnings, devotes the larger part to vice and falls back on charity for his main support; who drags a wife into poverty or procreates children that he cannot decently support or educate; who in any way shows a disregard for social fitness and gets on by shameless practices that would not be condoned in a person with sight.

Very few blind fulfil all the postulates of success or, better perhaps, of complete social fitness; and where the remedy does not lie in their own power, they are not to be blamed. Equally, until we know more thoroughly the possibilities and limitations of the blind, until the whole field is scientifically surveyed, the schools are not to be too harshly condemned as failing in their duty. But just to the extent that the blind do meet the requirements of social and economic life and personal fitness, they and the schools that educated them may be said to be successful.

A minor point at issue appears in the marriage of the blind. This looms as an overwhelmingly serious problem in the minds of some social thinkers, but one can only judge a blind man or woman in this respect as he would judge the seeing. A blind man in his right mind is not going to contract marriage with a blind woman, and if he is not in his right mind, he has no right to be married at all. A blind man who carries no taint of inheritable disease and can

decently support a wife and children has as much right to marry and be happy in marriage as any one else. A blind woman, of normal health and mentality, has a perfect right to marry and rear children, if a man who can properly support her and her children, sees fit to choose a blind wife—and there are many perfectly charming blind women.

For two helpless blind persons to be mated as public charges and to bring children into the world, whether congenitally defective or not, is the height of folly: worse than that, it is a crime and one that ought to be made impossible by law and law-enforcement. The whole question of marriage of the blind ought, then, to turn on the same considerations as ideally govern the marriage of the seeing. Both the blind and the general public stand in need of education on this most vital and delicate subject. Until it is frankly made a matter of the soundest, most thorough-going education, we cannot hope for solutions of the social problems involved.

Judged by the criteria above set forth, the special institutions for the blind and those dual institutions where both blind and deaf are taught have done remarkably well. Extended surveys, made as yet, of the graduates and ex-pupils of schools, so far as the writer has been able to ascertain, as for instance that of the graduates of the College for the Blind Sons of Gentlemen, Powyke, Worcester, England, are chiefly of successes, not failures. Too frequently such lists contain exaggerations of accomplishments in the enumeration of honors that have no real meaning—in the padding of accounts; but when all allowances are made for failures, the special schools still have a record of success that justifies both their existence and continuance. The severest criticism of special institutions for the blind has arisen chiefly out of their social failure, taking social in the

large sense as involving the whole human and economic environment. The most pointed adverse criticisms are as follows:

Special residential institutions :

1. Segregate the pupils from the world in which the greater part of their lives must be passed.
2. Impart a marked "institutionalized" point of view, idealizing the world of actuality and undervaluing the severity of its conditions.
3. Give a highly specialized training with an extremely expensive plant, with instruments and apparatus such as the pupil cannot possess in after-life, and with methods often perversely divergent from those used with normal pupils.
4. Provide at least some interassociation of the sexes (and this often leads to the intermarriage of the blind).
5. Involve, as a general rule, more or less state control and are sometimes run for the benefit of political hangers-on rather than that of blind children.

The validity of the first two arguments is recognized by all thoughtful teachers and officers of institutions. No end of effort has been put forth to minimize the institutionalizing effects. Even under the older regime these were more fully offset by compensating advantages than the critics of such institutions are willing to admit. Compare Clarence Hawkes at home, moping in a corner and wishing he were dead, to Clarence Hawkes at South Boston, entering with spirit into all the mischief and fun afoot, so interested that he smuggled his typewriter to bed, editing a paper, fast becoming a poet and writer of ability. Institutionalism and pessimism often lie too close together, and the worst de-

tractors are often those of the household of the institution itself. Most sane is the dictum that every institution worker ought to take frequent vacations in the world outside, but more sane still is the work of bringing the real social and natural worlds into the residential institution.

The third point of criticism is only partially valid. The specialized training is the one thing needed, provided that the after-life is always held in view and the training aimed at whatever the individual pupil can do best. Teaching pupils "how to extract sunbeams from cucumbers" is a thing of the past. And as to cost, we must agree with H. H. Goddard, applying what he says of the cost of segregating the feeble-minded to the education of the blind, that, no matter what the cost, "it must be done."

Intermarriage cannot be done away with except through rigid enforcement of proper legal enactments. The association of sexes in special institutions may be made dangerous by undue emphasis on the danger. It is not well to excite in boys a morbid curiosity concerning the wonderful creatures that they are forbidden to see, to speak to, to come in contact with. Healthful interassociation under strictly proper conditions is likely to prove a deterrent to intermarriage. It is probably generally true that those with the most sound knowledge of sex and social relations are the least likely to enter hasty alliances, to repent at leisure.

Politics has become less and less menacing and tenure of office is now fairly secure in practically all states. A few have yet to recognize by law continuity of tenure as better than reappointment with each change of state government. Long tenure is not in itself a cure-all: sometimes a "shake-up" is very beneficial and sometimes a political appointee proves a most efficient worker. On the whole there is a marked tendency to put the welfare of the blind above all other considerations and in this regard special institu-

tions for the blind are just as well off as the day schools. In favor of the latter, it is urged that they

1. Keep the blind children in their normal environment and in their homes.
2. Provide healthful social conditions, especially through association with normal children.
3. Cause the blind child to learn the use of such materials and apparatus as are likely to be available to him in after-life.

A brief examination reveals that most homes of blind children are very unfit for their proper care and rearing, most parents ignorant of the most elementary essentials. Further, the *normal* child is not an ideal child and the blind boy or girl is as likely, even more likely, to be corrupted in a common public school than in a special institution. Again, in the public schools, the tendency to "help the blind" is too marked to admit of their securing the best training. The undoubted advantage gained by actual contact with things as they are is also liable to exaggeration; it may legitimately be asked, to what extent does the supposititious *normal* child come in contact with "real things" in the average public schools? Every parent knows that there are *certain* realities that they are all too likely to come into contact with, the eradication of which may take years. In our overfeminized and oversedentary public schools, there is yet lacking that degree of ideal conditions which would warrant our considering them the best place even for normal children, let alone the blind.

The undoubted advantages of the special institution are to be found:

1. In the great assemblage of apparatus, models and books.

2. In the right kind of specialization in teaching and the special training of teachers for their work.

3. In very thorough, and very special, and very direct and personal, physical care and medical attention.

4. In the specialized teaching of trades and occupations.

5. And, last and most important of all, in the possibility of segregating pupils and teaching them according to mental, moral, and physical fitness and special aptitudes.

Unless the teaching of the blind in the day schools takes on the best features of the special institution, it is doomed to failure; and, when sufficient numbers are assembled and sufficient books and apparatus gathered, to carry out properly the best that the special institution can do, you have the institution, even if the name be different. No better statement can be made concerning the day-school movement than that in which Dr. Allen summarizes both its advantages and shortcomings: "Many, perhaps most, expert observers feel that, while these 'day schools for the blind' possess certain indubitable advantages over 'boarding schools for the blind,' the latter likewise have their advantages, and that, until the existing state of society changes and a saner responsibility for all childhood and youth reigns, the best interests of the blind will demand both kinds. It is felt, too, that education is not a matter of dollars and cents, but of results, and that blindness should command whatever the condition calls for."

One sentence may be added to this, namely, that for general efficiency, particularly economic efficiency, the training of the day schools is the more limited, while they perhaps better serve the ends of social efficiency. The worst thing that can happen to a blind child is to be "educated at home"; any school is better than *that*.

Neither the day school nor the institution, as constituted in America, can solve the important social and economic problems of after-care of pupils or properly serve the needs of adults becoming blind after the completion of formal schooling. These two very vital ends can be served best by the appointment of a special commission for the blind in each state, with a general field agent, and local agents in important centers of population, or the creation of similar special agencies. The Massachusetts Division of the Blind, in the State Department of Education, while not perfect, may be taken as a model of this work as it has so far progressed. A subdivision of the work of such an agency would involve the virtual organization of blind craftsmen, piano-tuners and masseurs into guilds, the erection of special workshops and salesrooms for the minor crafts and trades, the establishment and maintenance of industrial homes for borderline cases, the relegation to the almshouses of the proved unfit and the helpless, and, last, the most important function of all, the correlation of the work of the schools with the probable after-life of the pupil.

This would be a big work, demanding expert service. It should be a state work, entirely free from political interference, the commission itself small and selected with a view to securing wise direction rather than the actual carrying out of work. It would be the duty of the commission, itself without other pay than traveling expenses, to select the field agent and name his local assistants. The field agent would of necessity be a well-paid officer, preferably a man with sight, though there are blind men who can do the work most excellently. The local agents would have charge of workshops and salesrooms chiefly. They could be chosen from those with partial vision or from the exceptionally clever blind, though here again the exactions of inspection of work and the conduct of business demand sight or the

assistance of a person with sight. The number of local agents for each state would depend on the number of great centers of population and would seldom exceed three.

Personally I am convinced that any effective commission must include the superintendent or principal of the state school for the blind and the superintendent or foreman of the industrial home, if there is one, and one or more business men. There should not be over five members on the commission. Their activities should be specialized and confined to the directive, not to the executive side. They should be severally kept in constant touch with the work through the field and local agents.

All this is apart from the educational aspects of the subject, other than as they concern economic success. And because economic success is so very vital, the success of education, and of the blind, would depend from the beginning on a frank and, if it must be so stated, somewhat brutal recognition of grades of efficiency, always with the proviso that such personal liberty as concerns choice of occupation, home life, amusements and recreations and petty personal vices shall not be interfered with by the commission and its agents except as their duties are strictly defined by law. The suggested gradation or classification would of course be purely confidential, kept for the guidance of the commission and its agents.

A tentative gradation follows:

Grade I. The wholly self-helpful: writers, professional men and women, musicians, capitalists, tradesmen, salesmen, and national, state, county or city officials.

Grade II. The followers of the higher crafts, with guild organization: piano-tuners and masseurs.

Grade III. Simple hand workers, with organized



production and marketing; degree of self-support complete; work either homework or community-shop work.

Grade IV. Partially self-supporting inmates of industrial homes and those receiving "pensions" or similar aids.

Grade V. The pauper blind: the inmates of almshouses, to which the blind who are unwilling to work should be relegated.

Grade I would not be the object of much attention and it ought to be open always to the "proved" efficient. The attention due would increase with the downward steps. Grade V would be extended and modified in practice to include the blind who are hopelessly feeble-minded, the insane, the alcoholics, and the tubercular, who would be cared for in the appropriate institutions.

Interpenetrating the more purely economical work of the commission, there would be other activities that could come under their general powers for the sake of uniformity and harmony. Among these would be home-teaching and the circulation of books in raised characters; while more important still would be the prevention of blindness and the conservation of eyesight.

Home-teaching is of two sorts: the teaching of the school subjects, especially reading, chiefly as a means for the blind to pass pleasantly otherwise tedious time, and the teaching of handicrafts and other occupations either as a means to partial self-support or as "busy work." Home-teaching as a way of bringing happiness and light is deserving of every consideration. There is even a little to be said in its favor as offering a field for volunteer workers to gain some measure of self-satisfaction. But as home-teaching is either economic or recreational, in some states it is deemed better

that one side should be looked after by the commission's agent, who can both supply the teaching and raw material, and market the product and return the pay; while the various library agencies can attend to the matter of teaching reading. The number of circulating libraries for the blind is now fairly adequate for all needs, and as the United States postal service provides free carriage, no blind person who wants to read need be without abundant free reading matter. The recently passed Pratt-Smoot act, as well as the increased subsidies to the American Printing House and immense and increasing private or semi-public publications in braille, are creating voluminous embossed literature tending to enlarge still more the intellectual world of the blind. Even more current and ephemeral things are becoming available.

Here, perhaps, is the place to say a few words further about voluntary associations. On principle, I am opposed to them: they offer fertile fields for the growth of the noxious weeds of spite and envy, petty personal jealousy and quarrelling; or, to change the figure, they offer occasion too frequently for division and party strife. They carry no mandate; their force can lie only in public opinion and often enough it does *lie* there. Their members are prone to the personal as opposed to the impersonal and disinterested point of view; they are likely to seek petty popularity and aggrandizement; they give a quirk to activities that ought to follow straight lines; they bring prejudice where clear thought is chiefly in demand.

*Otherwise*, such voluntary associations may be harmless enough; under wise leadership, they are no doubt of great utility, and in this respect there has been for them in the past a definite place. Our fast changing conception of the state, however, makes toward the disappearance of such utility as has existed in these associations in the past, and

the only excuse for their existence in the future will be in their possible utility as agencies wholly subsidiary to the work of legally constituted authorities. They may be able at times to bring just the right human touch; they may serve the invaluable purpose of constructive criticism; but they can only serve these two and other similarly useful purposes when their membership is purged of mere busy-bodies and self-seekers, when those busy and useful people who "haven't time for side issues" take time to devote some of their energies and good sense to the public weal.

The last place for volunteer services, popular lectures and hysteria is in the prevention of blindness. The exact percentage of preventable blindness is hard to determine, but in view of the causes of blindness in the young it is probably considerably above fifty per cent, not counting accidents, such as premature powder explosions, which could be prevented often by a little care and foresight.

The whole matter of prevention is one for experts, physicians, nurses and midwives; and they are the ones who should instruct parents in the care of the eyes of children. It is well that the public should be awake to the possibility and duty of prevention, but the eyes are altogether too precious to be entrusted to tinkering and home remedies. At the beginning of work for the blind, blindness was looked upon as a divine infliction, but the rise of the science and art of ophthalmology, together with the germ theory of disease, displaced the old theory with that of specific causes.

Workers for and with the blind have not as a rule been physicians, and the movement for prevention has had to come from without. The oculist has long been an official part of each important institution; but until recently, he considered his function that of examination, diagnosis and treatment or operation, not prevention. Preventive medicine arose chiefly with the discovery of germs as specific

causes of disease, though vaccination for small-pox is antecedent by more than a century. Prophylaxis is relatively recent, arising chiefly, of course, from the experiments of Pasteur and Lister. Prevention as opposed to cure is so recent as not yet to be generally accepted, some people preferring the risk of death to a slight personal inconvenience.

Since 1900, the literature of prevention in general and of prevention of blindness in particular has grown enormously. The growing importance of the movement is nowhere better reflected than in the *Outlook for the Blind*, established in 1907 and now published by the American Foundation for the Blind. In the first volume, there are three very short articles on the prevention of blindness; by the end of the third volume (1909), prevention had become the most important and most fully treated topic, with a wealth of illustrations. If, in the United States, we were to point to the two most important workers in this most important of fields, there would be no hesitation in naming Charles F. Campbell, former editor of the *Outlook*, as one of them. As a layman, he has done all that a layman could do. Dr. F. Park Lewis probably stands first in the ranks of the medical profession both in his work of publicity and in his studies of prevention.

In France, the work on the professional side dates back to the starting of a clinic in the Quinze-Vingts in 1780, the leader of the movement being Thevenin. Under Péphau, this movement grew to nation-wide importance, and, since the year 1872, the clinic of the Quinze-Vingts has been foremost in saving and restoring eyesight. It seems very fitting that the oldest institution for the blind should be a pioneer in the cause of prevention, and that from it as a center the movement should spread to other countries besides France. Today all civilized countries are awake to the possibilities

of saving eyesight, of preventing blindness both in infants and in those in danger of becoming blind in after years.

Perhaps no greater social service can be rendered to the individual and, in view of the vast number that would be blind were prevention not practiced, the service as a whole takes on immense proportions. But once more it must be stated with unqualified emphasis that this is no matter for the layman, aside from publicity and the awakening of the general consciousness to the vast importance of preventing this particular kind of human waste; on the technical side it must be left to the skilled hands of specialists. Their duty is clear, and it speaks volumes for the social spirit of the profession that medical practitioners and nurses are so thoroughly alive to the need of prevention as is witnessed by the rapid falling off of the proportion of blind to the total population.

A most recent minor movement of great promise is that of classes in the public schools for the conservation of eyesight. Children with weak or defective vision, where they can be gathered in sufficient numbers, form special classes. Boston led the movement in the United States with the first class in 1913. The city of Cleveland followed, and the movement since has been very rapid. The first "class was opened in frank recognition of the fact that" children with defective sight "are going to use their eyes no matter how much training in touch reading they may receive." The assemblage of special reading material is essential to the conduct and success of these classes, but otherwise no great modification of means and methods is necessary. The chief element of utility lies in the concerted effort to care for weak or failing sight and to prevent by school means, in conjunction with the optical and medical aids, such complete or nearly complete loss of vision as would render the pupil technically *blind*. This is but a "side-line" of prevention but

a very important one from the point of view of personal happiness and social service.

Considering the social side of blindness, its prevention and the education and care of those who are blind, we find a steady convergence toward what appear now as almost inevitable conclusions; namely, first, that "an ounce of prevention is worth a pound of cure," but, second, that given the blind individual, the object of his care and training will be to render him as nearly *normal* in every respect as possible, to make him a contributing factor of the social whole, not a charge upon the community; a worker in proportion to his ability, not a drone; a useful member and not a parasitic growth.

Only crass optimism can say that the latter end is very generally accomplished in present-day practice; a very large percentage of the blind remain dependent on charity; many who might be wholly self-supporting under a better social organization take to some slightly disguised form of beggary as easier than honest effort. A superintendent of an adult home is responsible for the statement that the worst problem confronted in work for adults is a shameless parasitism, taking the expressed form, "that the world owes me a living, and as long as I don't have to, I'm not going to work." This attitude is the result of bad education somewhere and of a sentimentality that regards the blind as simply blind and therefore as objects of pity and of benevolent care. Until the honestly striving blind are placed on a level of worth above the shiftless, the lazy, the incompetent, and the mentally unfit, there can be little encouragement for the hard uphill battle in the dark.

A word needs to be said about the physically helpless blind. To stigmatize them as paupers would be perhaps unsocial, but so it would to stigmatize the paralytic or the helpless incurable of any other class. It may be that a pen-

sion is the best means of caring for such cases. It has been my conscious purpose to avoid the subject of "pensions" for the blind. Pensions are so easily subject to abuse that they should not be resorted to except as the last recourse, and who is to draw the line between the worthy and the unworthy? We come inevitably back to the central state agency; such a group alone would be able to determine action in a given case, and they might successfully administer a relief fund for the helpless indigent blind and subsidize those striving toward self-support.

In closing this chapter, we cannot do better than dwell for a moment on the inspiration to be drawn from the presence in society of those blind who have battled bravely and won against all odds. Not only those who have won to prominence but those who have quietly fought their way, against all opposing forces, to a modest success, inspire all, both blind and seeing, who come in touch with them. They are not always the brightest or the most gifted, but possess that pluck and energy that bring victory against overwhelming odds. In the old days it was called "faith," and these blind men and women of faith justify by their very presence and example all that has been done and all that can be done for the blind as a class; they cancel the debt, and they annul the perversity of the misfits and the ingrates.

## CHAPTER IV

### *Recent Phases of Organization and Propaganda*

**I**N THE education of the blind, institutionalizing was the inevitable first step. Public school systems had by 1784 reached no real place in the many schemes for human betterment and uplift. Small beginnings had been made here and there, notably in the northern group of English Colonies in America, but very generally education lacked systematic organization. The only really good schools, judged even by the standards of those times, were the schools that had grown out of the monastic systems or had been modeled on the same lines, namely, boarding schools, isolated and cloistered, with an atmosphere of "otherworldliness" still clinging to them.

Only a few pupils or students lived at home while attending any but the most elementary school: children of tender age were torn from the mothers whose direct care was still essential to their well-being and ushered into the harsh realities of the boarding school, with its brutalizing domestic regime and its travesty on education. The externs fared better than the interns, but in schools that were run for the profit of the masters, externs were not welcome. Only foundation schools, with good endowments and a semblance of public control, attained anything like the standards of excellence that are common today in the remotest rural districts.

It was but natural to assume that the blind could be educated only in the highly specialized residential school. Their education assumed the residential institution form almost at the very beginning of Haüy's experiment. Klein



alone of the earlier educators had sufficient insight to see that, as the institutions were then constituted, they could not adequately take care of the blind children, and that some home training was essential. Up to the fourth quarter of the nineteenth century, or roughly, in America, to the death of Dr. Howe, the sole thought was to herd the blind together in special institutions, where they were to be educated for good citizenship, economic efficiency and complete living. All possible alternatives seemed utterly foreign to the thinking of the time.

The one protest that was uttered during this long period of ninety years, so far as a research covering twenty years of work has enabled me to speak conclusively, was that of Mrs. Hippolyte van Landagen, who, in 1864, published in London a booklet entitled *Charity Misapplied*, with the significant subtitle "*when restored to society, after having been immured for several years in exile schools, (where they are supposed to be educated,) the blind, and the deaf and dumb, are found to be incapable of self-support, hence they often become street mendicants or inmates of the work-houses. Why? The question considered and answered.*" Mrs. van Landagen, herself blind, wrote this book after twelve years' experience in an "exile" school. Here was truly a "voice crying in the wilderness," unheeded, and heard only after years of waiting in its mute appeal to the specialist delving in a special library.

The truth is that the institutions for the education of the blind were to a great extent temporary asylums. Blind youths, after spending from five to twelve or more years within their walls, "graduated" to some new form of dependence—a truth that still very largely holds good. But the institutions were withal very humane. It is very doubtful if special day-school classes could have solved the problem half as well. The boarding school *was*, at any rate, the

accepted means of the education of the blind. Any who entertained doubts as to its efficacy either kept those doubts to themselves or spoke very feebly and ineffectually.

A view of education that obtained to the very end of the nineteenth century is, in all probability, the chief factor in this unquestioning acceptance of the old institution, with all its now glaringly apparent faults. It may be tersely termed "the little red schoolhouse" idea of education—the idea that education consists of contents and that those contents can be imparted within the walls of a schoolhouse.

I find this fallacy nowhere better illustrated than in a bit of "campaign literature" used by the Vienna institute and entitled *Gebt den Blinden Arbeit!* It contains a number of pictures that are more significant than the text. The whole may be summed up in two illustrations, the *Sonst* and the *Jetzt* of the condition of the blind, wherein the transformation from beggar to industrial worker is pictured, the industrial worker—and this is the point that the picture is not intended to illustrate—an inmate of an institution.

Now, the old educational institution was a preparation, not for life in the world, but for life in a continuation of the institution; in other words, the special institution as originally constituted was logically the forerunner of other institutions for after-care. The Germans have frankly accepted this principle, not only in dealing with the blind but in dealing with normal children as well. If education means the complete institutionalizing of society; if the school is to be the prototype of life, then the residential school with its rigidity of method, its special content, its set curriculum, is a success; and Austria in particular has carried the education of the blind to the very acme of perfection.

Likewise, in the case of our own American life, both special institutions and public schools would succeed in imparting an ideal education, if the conditions that obtain in

the schoolroom at all represented or epitomized the larger life of the social whole. But the mechanizing of life is utterly abhorrent to the American as it is largely to the British and the French mind.

And just because the mechanizing process in the school—and here we may include the public school as well as the special institution—did not at all harmonize with or prepare for the conditions of life without, the school failed in its most essential function. Instead of giving resiliency, the school gave rigidity; instead of securing adaptability it deadened initiative and suppressed any tendency toward originality and inventiveness; instead of opening the way to a world of infinite gradations and never-ceasing change, it prepared for a static world of dead levels of existence.

Perhaps this point may be illustrated still more clearly by a supposititious world in which the whole social and natural orders have been wholly mechanized. All natural laws are understood and all adjustments provided for. Social life is as set as if it had been carefully worked out on paper and every contingency foreseen. In the distant past the discovery had been made that the shape and size of the brain determined aptitudes and abilities. Thus, in practice, when the elders should decide that a certain individual was to become a mathematician, the first essential would be to put his head in a cast and allow it to grow so as to fit the mathematical mould. That done, education would consist simply in having the mathematics teacher impart the definite mathematics content. The education completed, it would follow that the specially "formed" person would find his niche at once, fit in and function without fail.

That our schools have approached dangerously near to a similar ideal and practice need not be proved to one who is acquainted with their workings, and knows their utter failure. How many of the most successful men, successful

from the most broadly human point of view, have almost entirely escaped the school, have received a real education through the clash and contact with things and social conditions as they are, and have exercised the divine prerogatives of creative mind in direct contradiction of the dicta of schoolmen and mechanists in general!

A very vivid illustration of the dead level of the "blind institution" may be seen in the fact that every notable invention and discovery that made progress possible was the work of a novice, as witness the Hall Braille Writer, or of a pupil who worked either secretly or out of hours, as Braille did in the invention of his system of punctography or Claude Montal in the tuning of pianos. From without or through secret and surreptitious action within, real progress was rather forced upon the institutions than made a part of their natural evolution. In fact, progress was not the progress of institutions as such but of invention and the application of invention, of discovery, of the inquiry of searching and original minds. The tendency of all human institutions to destroy their creator like Frankenstein's monster, is only too well known to those who think in social and philosophical terms.

Nowhere is this tendency better illustrated than in schools, most of all in the special institutions for defective classes. Progress has been proved to be even in organic evolution more a matter of individual initiative, if we may be permitted so to speak of "mutations," than of orderly generic or specific modification: in human affairs progress springs inevitably from the individual—the endowed individual, sometimes the queer, the non-social individual—but never from collectivity or crowds.

From 1784 to approximately 1900 in the education of the blind there was an almost unqualified acceptance, then,

of the special boarding institution; which, in its failure to prepare for real life, tended to fit its protegees simply for a continuation of institutional life. By the end of the nineteenth century this conclusion had been frankly accepted in Germany, and recent progress in the broader aspects of education has meant above all else the elaboration of a system of after-care. Britain, in part at least, acquiesced in a similar solution, but the blind of Britain have struggled against the dehumanizing influences of institutional life, the first serious protest emanating, as we have seen, from London.

In America the revolt came practically with the opening of the twentieth century. Progress up to 1900 meant progress in means, methods and instrumentalities of education; and in these it was only natural that Germany and Austria should lead as far as adaptation and application were concerned, though it is to be noted that not a single epoch-making discovery or invention emanated from those countries. America, and to some extent France, was always restive under the older institutional system. This restiveness took the form of the American Blind People's Higher Education and General Improvement Association, which at first confined its membership to the blind, and declared war, covert and overt, on the American Association of Instructors of the Blind, then a purely institutional organization. The immediate ground of battle was "multiplicity of types," a field of fight the mention of which had been made tabu in the older association. In 1905 the "A.B.P.H.E. and G.I.A." dropped its monstrous designation along with its exclusiveness, and became, with many sighted members, the plain American Association of Workers for the Blind.

This association constituted itself the merciless but not altogether undiscerning critic of all that was representative

of the older institutionalism. Its work has been to force uniformity of type on a reluctant educational system, to foster agencies for the employment of the blind under conditions permitting home life and the normal contacts, and either to re-form and modernize or dispense with the specialized institution. Many of the best blind workers as well as seeing workers for and with the blind hold membership in both national organizations but so far attempts at harmony have not been very fruitful. It is perhaps well that the A.A.W.B. should continue to be the "Party of the Opposition."

The older associations, in America as well as in the few international congresses, represented a tendency toward getting together, toward "pooling interests," toward the synthesizing and unifying of work. At one convention the Remington Typewriter would be displayed and its merits and possibilities set forth; at another the newly invented Hall Braille Writer might make its initial appearance; and thus, in instance after instance, new machines or new ideas could become known and have a trial of their utility made possible. But the meetings of the associations were infrequent and the return to the routine of institution life all too frequently brought forgetfulness of new findings or there was not enough money or time for the experiment or trial. Not even reports of proceedings or of institutional activities could keep alive the high but ephemeral enthusiasms of meets and conventions. An organ of synthesis, a clearing house of ideas, was the one imperative demand, if progress were to be made steady and rational, and the magnificent distances of the New World successfully coped with.

Along with the change of concept from general education toward education with specific ends came a faith, which

grew into confidence, that somehow, with the breakdown of tradition, a newer and better way might be found for the solution of educational problems and the correlation of education with life. It was felt that somehow practice could be rationalized, that scientific method and a logical critique could successfully be applied to the questions not only of curricula, means and methods, but of ends, both the physical, the economic and the more broadly social and cultural. Pure empiricism, the rule of the thumb, and hit-and-miss of the older days, died a lingering death and the new idea was born, in great travail and with no assured certainty that it was not a mouse after all. No date can be assigned to either the death of the old or the birth of the new, but the nearest that we can come to the actual dating of the latter, so far as America is concerned, is to consider it coincident with the starting of the two great national organs, the *Outlook for the Blind* in ink-print and the *Matilda Ziegler Magazine* in embossed symbols, both dating from 1907.

With the *Matilda Ziegler Magazine* we need not here concern ourselves extensively. It is a most excellent monthly which brings to the blind a sense of real contact with the affairs of the world. Under the able editorship of Walter G. Holmes of New York, the magazine has made for itself a very large place in the lives of the American blind, bringing both the current news and stories of live interest, as well as articles more purely concerned with the welfare of the blind themselves.

The *Outlook for the Blind* is in its way a most unique and at the same time most interesting and widely useful periodical. It makes the whole world of the blind its realm and in it, as nowhere else, may be found reflected all there is of progress in the work of the blind, for the blind, and by the blind. The files of this periodical adequately epitomize the progress of the years since its foundation and

a perusal of its index serves to show the main currents of thought and activity from 1907 on. These are, very briefly:

1. The founding and extension of work, of voluntary associations looking after the welfare of the blind.
2. The organization of self-improvement clubs by blind people.
3. The coeducation of the blind with children having sight.
4. The creation of state commissions to look after (a) the welfare of the blind in general or (b) the special interests of the adult blind.
5. The holding of conventions and congresses, both national and international.
6. Home teaching (a) of reading and (b) of the industrial arts.
7. The institution of special nurseries for blind babies.
8. Problems of after-care, including (a) homes for blind women, (b) industrial homes for men, (c) industrial homes for both sexes, (d) workshops for blind adults, and (e) household industries for the blind.
9. Special legislation regarding the blind, more notably concerning commissions and "pensions."
10. The establishment and fostering, either by private gifts and endowments or by public aid, of special libraries, or special collections of books in already existing libraries, for the use of the blind.
11. Education in its more general aspects, including both institutional activities and those of agencies previously mentioned.
12. Special education: (a) Physical training, (b) industrial training, (c) musical education.



13. Prevention of blindness, (a) in infants and (b) through care and operation in older people.

14. Publications concerning the blind, either scientific studies or articles and books of popular interest.

15. The type question, especially the activities of the Uniform Type Committee of the American Association of Workers for the Blind.

16. The fostering of literature for the blind in the braille, New York Point and Moon types.

17. Surveys of work for and with the blind both (a) by states and (b) abroad.

A tracing of any one of these lines of thought through the years will lead to a somewhat surprising, not to say startling, result. Let us take, for example, the matter of tactual prints. In the years 1907 to 1910 the Braille-New York Point controversy may be said to have reached the highest point of acrimonious debate: at no time, perhaps, had the two parties been so openly hostile. Previously debate had been smothered and the American Association of Instructors of the Blind had practically agreed not to discuss the subject in open meeting.

The *Outlook* offered a place for discussion away from the heat of personal conflict, and the battle opened with renewed violence; the braille victories began to put a new aspect on the whole controversy; by 1914 there were many indications of a final resolution of the difficulties in the way of a steady, if somewhat reluctant, convergence of opinions. In the succeeding four years practically all difficulties were cleared away and the unity of all English-speaking countries in the matter of tactile print for the blind came closer to realization. In this, the *Outlook* has played its part not only as the semi-official organ of intelligence but as the active synthesizing agent; the editorial comment, the free discussion of both sides, and the very

impersonality of paper and ink becoming essential factors contributing to a final solution.

And thus it is with other equally important phases of this great work, the marked tendency being from the controversial toward the "get-together" attitude; from diversity, mixed with perversity, toward unity; and all this largely because of the peace-making ability of one man and his small group of aides. This tribute is due the *Outlook* and its founder and long-time editor, Charles Campbell, and his successors.

If the greatest recent progress has been made in the unification of work and the clear statement of problems in conventions and in periodical literature, so that we begin to know where we stand and what we have to do, the question naturally arises as to how remaining problems are to be solved, for it must be conceded that mere community of interest cannot solve the specific problems of education and the related problems of individual happiness and social and economic fitness. We must look, then, at the two or three most potent means for the solution of specific problems.

The first, and by far the most important, is the study of the problems of education and after-life, in which so far there have developed three fairly well-defined methods each with its legitimate use but also its distinct limitations. The older is the historical-critical method, as represented in research chiefly confined to the special literature and special libraries. The second is the sociological-statistical method, applied to the material found or obtained in reports, censuses, surveys, and questionnaires. The third, and most recent in application and development, is that of psychological experiment and measurement, and introspective analysis, the material for which depends for its validity on strict adherence to rigid scientific procedure, without guess-work or surmise.

The historical method is best represented in the work of Alexander Mell in Vienna and that of Dr. Howe and his successors in Boston and Watertown. The work in Vienna really dates back to Klein, but it was systematized by Mell. To him belongs the chief credit for having collected one of the best and most complete libraries of special books, pamphlets, articles and original manuscripts relating to all that is covered by that exasperating and untranslatable German word, *Blindenwesen*. The most important outcome, in the concrete, of all the labors of Mell is his truly monumental *Encyclopaedic Handbook of Matters Relating to the Blind*. Many of the minor studies undertaken by him or under his direction in the Vienna institute are important and valuable.

Although Dr. Howe began the studies which have made Perkins Institution famous, his son-in-law and successor, Michael Anagnos, first began the systematic collection of books, pamphlets and other *blindiana*. On his succession to the directorship, Dr. Allen still further systematized and extended this splendid collection, which is now housed in the main building of the institution at Watertown under the charge of a special librarian. All books and other materials may be used by accredited investigators within the library and certain duplicates may be borrowed by special arrangement, so that the utility of the collection is assured. While the studies emanating from Boston and Watertown are not comparable as yet with those completed in Vienna, the Perkins library and museum represent a great potentiality in scientific, critical and historical investigation.

Many collections similar to that at Perkins but on a smaller scale have since been started in both residential schools and other institutions. The University of California has a notable collection. The American Foundation for the Blind in its special library in New York aims not so much

at completeness as utility and its growing collection is available to the borrower to a greater extent than any other.

To make the facilities of the Perkins collection more effective and also to enable students to use the whole institution as a clinic for the solution of the problems of the education of the blind, Dr. Allen instituted in 1920 the Harvard Course, now really the Harvard Courses. With the cooperation of Dean Holmes of the Graduate School of Education, the work was duly elaborated into an effective series of lectures, readings, demonstrations and individual studies, in which both unity and sufficient diversity to suit individual needs were made possible. Not only Dr. Allen, but invited superintendents and special authorities like Dr. Samuel P. Hayes, Professor of Psychology at Mount Holyoke College, Massachusetts, and Miss Jessica Langworthy of the Perkins staff, contributed to what virtually became a cooperative plan of presentation, research and study. Students from many states and some foreign countries have studied under this plan and have taken home both new and better formulated ideas and a new enthusiasm for their work. Summer school courses of similar intent but somewhat different methodology have been instituted, notably in Nashville, where the Tennessee School for the Blind has cooperated with the George Peabody College for Teachers, under the able management of Superintendent I. S. Wampler.

Of late much doubt has been cast on the value of historical criticism, but its critics overlook or disdain its chief function. The present can only be understood in the light of the past. Freud has pointed out that mental aberrations are best cleared up by knowing the personal history of patients; frequently a serious mental illness may be cured by simply finding the fear or suppressed wish that caused it and clearing up the connection in the patient's mind. The

same holds of social aberrations; if it can be shown that a controversy arose in personal passion and prejudice and that there is no special sacredness attaching, for instance, to the arrangement of braille points; that inventions, supposedly final, were in their origins carelessly put together, accidentally hit upon, not thoughtfully worked out, then the way may be cleared to discard, to reform, to revise or to better in other ways. If historical criticism can do nothing else than loosen the death grip of the past, it stands gloriously justified. But it can do far more. Out of the past grow present ideals. A rational criticism alone can clarify and purify those ideals and so transform them as to bring them into progressive harmony with present conditions. Our golden age is in the future but, if it is to be anything more than a vain dream, it must become a possible, realizable golden age, in the light not merely of present conditions but of past experience, with all the exigencies, limitations and unseen possibilities clearly revealed in retrospect. A critical looking backward may become the ground of wise prevision.

Neither Vienna nor Boston has a monopoly on criticism or on history. Good work has been done elsewhere, some of the best being the researches undertaken in Paris. Maurice de la Sizeranne stands out preeminent with his most excellent *Les Aveugles par un Aveugle, Trente Ans d'Etudes et de Propagande en Faveur des Aveugles*, and his periodical contributions. His Association Valentin Haüy pour le Bien des Aveugles with its little leaflet, *Valentin Haüy*, is the chief French agency, aside from the Quinze-Vingts, for the study of the blind and propaganda for their betterment. The work of De la Sizeranne and his confreres is more especially historical and critical, though socio-economic and psychological in a minor way. The gem of all the work emanating from this school of thought is Pro-

fessor Guilbeau's *Histoire de l'Institution Nationale des Jeunes Aveugles*, a work that deserves to be rendered into English, with historical and critical notes.

Much good work has been accomplished in England also. Both mention and use has been made of Illingworth's *History of the Education of the Blind*. Other works of great worth have come from England, especially in the realm of biography of the blind, a very noteworthy book being that of J. B. Mannix entitled *Heroes of the Darkness*. On the whole, the English studies seem to be lacking in that thoroughness of historical research and critical acumen that mark the best product of the French and German schools.

Allusion has frequently been made to the work of William B. Wait of New York. As defender of his own system of punctography he went with some thoroughness into the history of the subject. Almost to his death he took an active interest in the problems of research and criticism connected with typography. In the Pennsylvania school, too, interest in historical questions has centered very largely in the matter of types.

Mr. Wait again may be considered the most prominent earlier exponent of the statistical method as applied to the education and welfare of the blind. His defense of the residential institution against the attacks of the propagandists of special public school classes led to his rather elaborate, though not extensive, studies in "comparative sociology."

Far more important than any individual studies, however, have been those undertaken by state and other commissions and by associations for the aid of the blind. Extensive canvasses of the blind have been made in a number of American cities, more notably Boston, New York, Cincinnati and Cleveland, and a few state-wide canvasses have been attempted, with varying degrees of success. Aside from very general surveys made in Great Britain, this

method of getting at the numbers, condition and problems of the blind through special agencies with the one object in view, is peculiarly American. It is quite different from the older way, still so prevalent generally in Europe, of bunching defectives together under some commission or ministry and relying on the general census for statistical material.

The small number of the blind and the difficulty of making them fit any general classification militates against the success of any but the most specific type of survey, with very specific ends in view. Naturally in the general national census minute care cannot be given a small and relatively unimportant class and hence the worth of census statistics for any but the most general purposes may be seriously called in question. The special commission, with its special machinery for dealing with its problems, is much less likely to err, unless it be on the side of over-great subdivision and overemphasis of single phases of its work; as in the case of the old Massachusetts Commission, whose later efforts seemed rather overbalanced in favor of propaganda of prevention.

An examination of the most recent reports of a number of state commissions and semi-official associations, leaves the writer with a feeling that to date the promise is much bigger than the performance, that much more could be done with much less machinery if there were a greater centralization of effort, more paid expert service and less volunteer, well-meaning but inexpert service; that we are on the right track in dealing with the blind, more particularly the adult blind, but that as yet we have not progressed far on that track.

My more recent studies and experiences have confirmed a previously expressed opinion that the only way effectively to deal with the problems of the blind is through direct state agencies, fully empowered to act and carrying a gov-

ernment mandate. The school may attempt a canvass of its graduates but often cannot reach them, and we may justly regard data thus obtained as of little value. Could the school reach and question and classify all its graduates and ex-pupils it would still not touch the bigger problems of the blind. This the state surveys have clearly shown, as considerably over half the total blind population is late blinded. When, as in Pennsylvania, institutions for the blind attempt extension work through a field officer, they doubtless accomplish much good, but they also open up larger problems for solution. The need of a synthesis of agencies, a pooling of efforts, becomes apparent as the number and condition of the blind stands revealed and, with these, the makeshift nature of present agencies and efforts.

Just how to get at all blind persons, to know their age and education, their present circumstances, their economic abilities, their social needs, are not problems for any but the most thoroughly constituted and effectively organized public bodies. And the discouragements faced by even the best organized bodies are sufficient to replace any feeling of "cock-sureness" with a humble willingness to learn and be guided by experience. Commissions and similar agencies are beginning right in their emphasis on the economic problems and those of prevention: we hope soon to see them take up the problem of correlating education with after-life, of using the special school and day classes as subsidiary agencies toward larger ends. We hope, too, to see every state and every civilized nation institute similar centralized agencies, with large and well-defined powers and effective means for carrying out their work. Today the economic-social approach to the problem of the blind is but in its incipiency, but the outlook is brighter than it has ever been since that rosy dawn when Haüy heralded to the world the solution of the problem of the blind—with this notable



difference, that the present hope is based on solid premises, while Haüy's had no foundation save in vague speculation.

Schools for the blind, like other special institutions, have suffered more from public indifference than from internal mismanagement or the short-sightedness of officers. The public is too busy with its own affairs to be interested, except in a curious way, unless it sees some threat to its own well-being. Even the "menace of the moron," so vividly portrayed in Dr. Goddard's wonderful survey of the mentally backward of New York City, stirs no ripple of interest. In the absence of serious public criticism it is little short of amazing that the special institutions have responded so splendidly to the modern spirit in education, that they have moved more rapidly in their readjustments than the public schools in general. Not merely the three great pioneer schools, but the most obscure western institutions, strenuously strive to keep abreast of the times. We hear from Colorado Springs of the continued success of their poultry-raising venture, from Kentucky of athletic organization and field meets, from the California School of a splendid new plant; of new workshops here, a new kindergarten there, and a bewilderingly large number of improvements everywhere. We hear of all these through the *Outlook for the Blind*, the minutes of proceedings of the two national associations, the American Association of Instructors of the Blind and the American Association of Workers for the Blind, and the now numerous braille periodical publications.

The reasons for this almost feverish spirit of progress are not far to seek. The world of the blind is a microcosm. In no field of education are the problems so outstanding or the ends sought more clearly conceived. In no group of educators is the spirit of self-criticism of the constructive sort more patently manifest than in the small group of teachers of the blind who handle the approximately six

thousand blind children and youths of America. In no other group is there a more steady determination to know and solve the problems of education. If there has been some shutting of the eyes to the question of after-life, there have not been wanting those who, like Dr. Allen, were ready to point to the failure to connect the efforts of the school with the bigger problems in life.

Again, that criticism of special institutions which embodied itself concretely in the day-school movement was not without its effect in forcing a more progressive spirit upon the conservatives. In the efforts to rid themselves of the stigmata of the cloister the special residential schools have gone far in the introduction of the most up-to-date methods and apparatus, in the improvement of housing and living conditions, in the introduction of physical education and in the socializing of the educative process.

Here is the natural point of transition to the third means of scientific study, as previously outlined. The residential schools could not afford to ignore any means of improvement and consequently have most recently called in the aid of psychological research and of educational psychology. The large number of feeble-minded and backward blind children had always offered serious problems to educators, and it was largely in the hope of determining some method of dealing with these that the aid of psychologists, with the modified Binet-Simon mentality tests, was first called in. Antecedent to this movement, the "psychology of the blind" had meant chiefly myths and mysteries.

It is too early to state just what the psychologists can do for the schools; but this much is apparent, that grading on a fairly accurate scientific basis according to mentality and moral fitness, correlated with a careful physical rating, will serve as the best possible basis for partial segregation according to aptitudes. This in turn ought to lead to a re-





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organization of educational practice, with a fairer chance for each "educand" to get that course of training consonant with his own highest good and the highest good of society.

Studies in the psychology of blindness, like the studies of pathological and abnormal cases in general, can offer no sure ground for normal procedure; but this study has thrown some light on obscure points in the psychology of the senses and on the question of mental imagery. With the greater perfection of instruments and methods much more is to be hoped for. No great flood of light will be cast by these researches on the normal psychic life; but doubtless many valuable findings will be made that may be of more or less direct use in the education of the blind; and a few may cast some not entirely worthless sidelights on general psychology. Until recently Pennsylvania and Ohio led in psychological research as a whole, though the most valuable individual contributions have come from Boston, particularly the illuminating studies of Laura Bridgman and of Helen Keller. The cooperative psychological and educational research program undertaken by Dr. Hayes and his collaborators is the most far-reaching and significant scientific study so far undertaken in America. Some valuable results have already been attained and with an extension of the collaboration, still more practical results will no doubt follow. The psychological researches undertaken in Germany have had more academic than practical bearing.

One seeking more specific information on the organization and recent progress of the American institutions for the blind is referred to their recent reports, of which those of Perkins Institution and the Pennsylvania Institution at Overbrook are decidedly the best. Many institutions still follow the plan of issuing a purely statistical report, from which little can be gained, except for purposes of compilation and comparison.

At this point it may be well to say a few words on the higher education of the blind. Since the blind made noteworthy achievement in the realms of learning before their systematic education was undertaken at all, it was not unnatural for the schools to assume that a large number proportionally could succeed in the learned professions. Agitation for a national college for the blind began in 1886 at the ninth biennial meeting of the American Association of Instructors of the Blind, Mr. Wait presenting a paper in favor of the proposed institution. The movement was destined to failure; but practically all residential schools attempted to prepare students for college entrance, and "being accredited" to the state university is the proud boast of even the smaller schools.

It is very doubtful whether college preparatory work ought to have any large place in special school curricula; the sacrifice is too great in proportion to the number profiting by such training. On the other hand, two or more years in a regular high school course is the best possible preparation of the blind boy or girl for the university or college, where in the very nature of organization and method, the blind must have special aids to succeed at all. It is a big step to go from a residential school with its special equipment into a university where all is so different, where the individual succeeds or fails without any heed being given to his success or failure, save to notify him that he has failed. To bridge the chasm between the regular secondary school and the university is difficult enough: to bridge that between the special residential school and the university is still more difficult, though not impossible.

Given the blind college or university student, by what means can he best succeed? Very few of the books he uses can be obtained in embossed type. He cannot take sufficiently copious notes on lectures to make sure of his courses.

He can accomplish only a very uncertain minimum of laboratory work, and he must have special provision in examinations and tests. The fields most open are the languages, literature, history, mathematics, economics, political science, philosophy, the legal studies, and theology. To succeed in any of these the blind student must have a paid reader or rely upon friends to read for him. Allowance can be made for his handicap, but to let him get through without severe requirements in scholarship is to handicap him still further in a kindly intended but really cruel way.

It was with a view to helping blind students to a successful career in the university that agitation was started, first in New York, culminating in 1907 in a scholarship provision for blind advanced students in a law formulated by Dr. Newel Perry. New Jersey was the first state to follow the lead of New York, making very generous provision for tuition for the higher education of the blind by the act of the Senate and General Assembly, approved April 1, 1912. When Dr. Perry came back to California early in 1912 he began agitation almost immediately for a similar law and saw the fulfilment of his desire in the law, approved June 13, 1913, making provision for a maximum payment of three hundred dollars to each blind student for the purpose of securing a reader. This law reads as follows:

An act to provide for the instruction of blind students in certain state institutions.

*The people of the State of California do enact as follows:*

Section I. Whenever one or more blind persons with the proper education and moral qualifications shall regularly matriculate, enter and work for a degree in the University of California or a diploma of graduation in any one of the state normal schools, the trustees or governing authorities of said institution shall out of the funds appropriated for the maintenance of such institution provide a reader to instruct such students from textbooks and other printed matter provided or required for the course taken by such student; *provided, however,* that no more than three hundred dollars per

annum shall be expended by any such institution for the instruction of any one student and not more than a total of nine hundred dollars shall be expended in any one school year by any such institution, except the University of California, for the purpose of so instructing blind students.

Later amendments of the wording were necessary to make the act operative, the fund being administered by the state school for the benefit of all blind residents of the state who matriculate in approved higher institutions of learning.

In effective results the California law has worked splendidly, enabling a number of students to take and complete university courses. These students would otherwise have been greatly handicapped, if not entirely excluded from securing a higher course because of lack of means. Many states now have similar laws.

Before closing this chapter a few words are in order concerning institutional progress, with special reference to our three great pioneer institutions for the blind in America; also on new possibilities of cooperation and coordination. As before stated, institution leaders have been their own severest critics: the failure of the older type of special institution to form sufficiently extensive economic and social contacts has weighed heavily upon the more thoughtful. But, after all, can we place the blame for failures wholly upon the institutions and the training therein offered? And if the blame for failures, why not some praise for success? The most hopeful sign in the whole situation is the ready response of leaders to the call for economic efficiency and social-mindedness in the graduates of their schools. Personally I cannot believe otherwise than that when the special institutions respond to the new demands with a new type of education, they, with their accumulated experience and their vast assemblage of materials, can solve the problems of the education of the blind much better than special classes in vast city systems.



The three greatest schools, taken as a type, epitomize what is being done today in the education of the blind. A careful study of what they are doing leads to the conclusion that they are doing extremely well. They are fast coming to embody those ideals of the education of the blind, which will be set forth in the next and last chapter of this study. There is no place in this study for a detailed setting forth of the work done and methods used: for such information the reader is again referred to the excellent reports issued by the various institutions and to the files of the *Outlook for the Blind*.

When the American Foundation for the Blind came into being, many leaders hailed it as the long-looked-for agency of coordination, the clearing house of work for, with and by the blind. And that is exactly what this splendid organization has proved to be. Taking over the *Outlook* and building on the work of Campbell and his assistants, the Foundation has, under the direction of Robert B. Irwin, supported by his able corps of assistants, made for itself an enviable reputation in research, constructive propaganda, and coordination of activities. What it has already accomplished justifies the prophecy that within a few years, with greater financial backing, the Foundation will be the most outstanding single organization in the world engaged in work for the blind; not only will this be so, but its place will be unique and the expansion of its activities will justify rather the name "International Foundation for the Blind."

## CHAPTER V

### *Summary and Prospect*

ONE hundred and forty-five years have now passed since the founding of the first school for the blind. Could he today step into one of our great American schools, Haüy would find it extremely hard to recognize in the splendid plant, extensive equipment and advanced educational methods, an expansion of his own small beginnings. The embossed sheet, with its pitted and point-covered surfaces, would seem altogether strange and irrational to him; the vast array of books would astonish him beyond measure; devices that he could never have dreamed of would meet him at every turn. Methods no less than material means would bewilder the kind-hearted philanthropist; psychological research, Binet tests, Montessori methods would be wholly new. Even his most sanguine dreams could hardly compass what has actually already been done for, and with, and by the blind. And when told the whole story of the progress of nearly a century and a half, if assured that in the thought of the greatest and best educators we but now stand at the beginning of the era of real progress, the founder of the Paris institution could only ponder in amazement the progress yet possible.

What has been done in the *éducation* of the blind to date? We can only answer, in a very imperfect way, that:

1. Open beggary by the blind has practically ceased in all civilized countries.
2. Reading has become simple and easy, books have multiplied, and the poorest of the blind can have a

wide selection of reading matter for the slight trouble of asking.

3. The point systems have made possible the inter-communication of the blind, while the standard typewriter brings within their power free written communication with those who see.

4. Through maps, models and other objective material, the world of phenomenal reality has become very largely their own, while through books, the world of the intellect may be theirs to a degree inconceivable a hundred years ago.

5. Trades and occupations are better understood than ever before; and, though the limitations of the blind are reluctantly acknowledged, we are surer of their economic possibilities and of the means of attaining partial or complete independence than ever before.

6. From being virtual outcasts the blind have come to be accepted as an integral part of society; one no longer pities them as poor dependents, one must often respect them both as bread-winners and as highly cultivated men and women.

7. While the distinguished blind are not to be accounted typical, their example is a perennial source of inspiration, and without the work of Haüy and his successors, we should have no Helen Keller, no Clarence Hawkes, no de la Sizeranne.

8. For the rest, the blind are infinitely happier and their happiness must add greatly to the sum total of the general welfare: they are better off in every way—physically, intellectually, socially, economically, morally.

We have but to pause and picture the blind before Haüy and then behold them as they are now, to accord the laurel

of undying fame to that man of faith, who wrought better than he himself knew; whose work was, however, but a small beginning.

Shall we throw over the residential institution and start anew? On the whole, institutional life has been so greatly expanded and enriched within the past few years, isolation has been overcome to so great an extent and social contacts so largely multiplied, that the tendency must be stated rather as toward a modification of the special institution, in both organization and method, than toward its ultimate abolition.

Surely no one can claim to have begun to solve the multitude of harassing problems that surround institutional life. A few moments of speculation as to the ultimate desirables in schools for the blind may not, then, be amiss. If such a thing were possible, a composite photograph showing the best in institutional organization and practice in America might come very near to the ideal of institutional life.

The tendency in location is toward the suburbs of our greater cities, rather than in their midst. Thus most of America's greatest schools for the blind have within recent years been removed from the centers of great cities. Ample grounds are very desirable, especially if the blind children are to have even an approach toward the naturalness and freedom of the better kind of American home life. No one can deny the desirability of making the life of blind children as nearly normal in every respect as possible, and the norm should rather be that of the country than of the congested city, whose objective life is so woefully deficient even for children with their full complement of senses.

One of the most wholesome influences that can be brought into blind lives is that of the sweet, open countryside. Boys in particular become, under proper tutorship,

keen observers and bold investigators, while their minds expand with the ever-uplifting thought of the real conquest of man over nature. In the absence of desirable location, organized country rambles become a makeshift substitute, not satisfactory to any concerned. Garden plots for blind boys and girls, with actual contact with the soil from which we all draw our life, are easily made a part of education. Such plots must of necessity be small, but aside from that the blind can care for both vegetables and flowers and can learn to distinguish species and even varieties. In fact, the extent to which gardening can be carried has never been adequately tried out, but it doubtless holds many educational possibilities. An orchard and numerous ornamental trees and lawns would add vastly to the educational value of the site. They would entice to wholesome outdoor life.

On the other hand, the removal of institutions to isolated country towns is a serious error. The great musical and dramatic presentations, the splendid services of the churches and the opportunity to hear distinguished speakers, make their peculiar appeal to the blind and these are, of course, chiefly to be found in great cities or at least in considerable centers of life and activity. An ideal location would, therefore, seem to be in a decidedly rural suburb but within easy distance by trolley car, train, or "auto" service of rich art life and social, intellectual and industrial activities.

The housing of children in barnlike barracks is surely out-of-date. Housing must begin with a strict segregation of the sexes and a division, according to age, into relatively small groups. These groups may be assigned to cottages, with preferably a private room for each boy or girl and by all means with single beds and separate closets and dressers. A group of from twelve to twenty boys or girls may live in a cottage under the care of one matron and assistant.

They may make their own beds, sweep their own rooms, which must be very simply furnished, and carry out under direction all the necessary activities of a well-regulated home.

The degree to which the care of the cottage can be turned over to the pupils will, of course, depend on their ages and the presence or absence of some with a slight degree of vision, these latter being very useful members of any blind community. In any cottage group, no matter how young or how apparently helpless, the imposition of regular household duties leads to better discipline, to self-restraint, and to a proper appreciation of the things done for the children. Coddling has always been observed to react adversely, producing among other results, the often observed ingratitude of the blind. I am not sure even that the appointments of the cottage should depart from the normal in any way. Special fixtures for the blind would be a very doubtful blessing.

The question of a common kitchen and dining room must be settled partly on lines of economy, though there is much to be said in favor of the common room on social grounds as well as moral. Common hours of dining at a central hall in the company of teachers and caretakers involve on the one hand punctuality, and on the other a sense of community life and comradeship. Perhaps table manners could best be taught to small groups, though even that is doubtful. In any case it is best at the tables to segregate the sexes and ages, while intermingling the partially with the totally blind. Some with a fair degree of vision ought to render service at the table. In fact, wherever possible, pupils should help themselves and others, not in payment for their education, but as a part of it.

Sex segregation should not be extended to the educational departments or to all social meetings. In all the

technically so-called educational work a few broad principles should govern, with an irreducible minimum of set rules. Mental age should be the first consideration and general physical health and fitness the second. The choice of a vocation should be made only when marked tendencies have become manifest and the unsettled age of early adolescence is well passed. The mentally unfit should be discovered as soon as possible and in decided cases of feeble-mindedness they should be eliminated from the school, while in borderline cases muscular training should at an early age become the chief factor in their education, with as much of the regular studies as they can safely assimilate.

The younger children should by all means spend a considerable portion of the workday in thoroughly organized kindergarten classes, not with the whole Froebelian mythology nor any iron-clad system, but with the best that modern method and invention can give. The kindergarten should have large and airy rooms, separated from the rest of the school, with an outdoor court for fair weather, and a covered court for all times. Tactual appliances specially made for the blind should at this stage be rigidly avoided and an abundance of normal play things and working materials offered. The "story hour" and music should figure largely, but play should be the most important educational means.

From the kindergarten the mentally fit may go at once into the primary division, where the three r's must always form the backbone of the course. Tactual reading and writing should be very thoroughly taught, and pencil-writing with the aid of guide lines as well as writing on a standard typewriter should be introduced at as early a stage as possible. Reading by the children should be encouraged.

Self-activity in all studies must be stimulated by all means. Here the "objectifying" of the blind life must begin with intense insistence on the part of teachers. History should be acted. Geography should start with the schoolroom and simple measurements, and gradually extend to buildings and grounds, to nearby streets or fields; and thus the mind should be led by graduated steps to embrace the world idea. Petty relief maps, doctored with wires, tack heads and numerous other miscellaneous articles, can only lead to error, if they are introduced early in the course. The arithmetic taught should be that of buying and selling, making change, measuring and computing. The useless lumber of the silly old arithmetics must be eliminated entirely from the education of blind children and much of the "processes and tables" can likewise be cut out with profit. Addition and subtraction are the fundamentals of life.

Mere slate work is also of no value: it is only a means to an end. With the blind child memory well cultivated is a most precious asset. A cultivation and stocking of memory by graded selections not only of literary gems but of great fundamental facts is of vast importance. Here, too, is the place for nature study, and this should merge with geography into a bigger intensive exploration of the objective world. The classroom is to be only an incident of education. The thought that education was to be got within the four walls of the schoolroom has been the one big glaring mistake of the "little red schoolhouse" conception of education in America. Men have actually been better educated outside of the schoolroom than in it. Nothing is so unutterably miserable to contemplate as an anemic blind child of ten or twelve, sitting by a radiator in a stuffy classroom and fingering out his lesson from a ponderous volume in point. The same child might be robust and rosy



with the excitement, the energizing, the oxygenizing of wholesome activity in the open and the few hours spent in a well-ventilated and well-lighted classroom would be all the more profitably spent.

An early relegation to the cramped positions and unwholesome dust of the workshop is very undesirable. The hand-training of the younger children should be in the nature of "busy work" fitted into the waste spaces of the short school day and possibly carried over to the cottage at night.

By the time the pupil, boy or girl, is ready to enter the advanced courses, the following equipment must have been obtained:

1. The most robust health and the highest degree of vitality of which he is capable.
2. A certain physical independence, coupled with expanding knowledge of the world without.
3. A fair elementary knowledge of the fundamentals of correct English, without formal grammar.
4. Ability to read one point system of tactual print fluently.
5. Ability to write the same both by means of a "key" machine and the guide and stylus.
6. Ability at least to sign his name in normal handwriting.
7. The fundamentals of number work and the use of the number frames.
8. Elementary geography, closely connected with the physical orientation previously emphasized.
9. The most essential facts of the history of his own land, together with the hero tales of other countries.
10. A beginning of literary appreciation and a

memory fairly stocked with the best examples of prose and verse composition.

11. An elementary knowledge of musical notation.

12. Trained sense perceptions.

At the end of the elementary course, at a point corresponding to the end of the sixth grade in the public schools, a second careful winnowing must take place. Now is the proper time for a further segregation of the intellectually dull, who should until the end of adolescence be given a strictly prevocational course in the workshops in such trades as are suitable for the blind. When the critical period of adolescence is fairly passed, two or more years of intensive training can be given in one or two trades, chosen freely by the pupil. Under no circumstances ought the first three years of adolescence to be spent in the more or less unwholesome atmosphere of the shop for more than three hours a day. Those trades suitable for the blind involve the breathing of more or less lint or dust and in the years of unsettled health, tubercular and other dangerous tendencies toward ill-health are only too easily encouraged. From the seventeenth year on, in most cases, the full eight-hour working day ought to be spent in the shops by those whose living must be earned by trade.

It is unlikely that the intellectually dull will complete the elementary course much before the end of the fourteenth year. Three years may, therefore, be given to the acquisition of such literary, scientific, historical, civic, mathematical, commercial, and musical knowledge as the pupil is capable of receiving, but the other essentials of business transactions, along with some of the elements of bookkeeping, ought to be known by all the blind, but particularly by those in trade or crafts. Here it may be well to add that while no shop or trade can be made wholly sanitary, much can be done toward rendering the shop and

the associated trades reasonably safe, if the common precautions in guarding the general health are given due attention.

As music must be looked upon as vocational to a very great extent, it will not be necessary to say that for those who choose music as their chief field of endeavor the period of intensive training ought to begin with the earliest years of adolescence. This does not mean that unreasonably long hours of practice ought to be forced upon a child in utter disregard of health, but simply that an increasingly large amount of time must be intensively devoted to the technique and theory of music under the guidance of inspiring teachers. And further, only those who show talent of a marked nature ought to be encouraged to choose music as a vocation: the others, even the people of the workshops, should sing in the chorus or take part in the school orchestra, but none should be given a false hope, and the public, long suffering as it is, should not have inflicted upon it any horrible misfits in music, charitably so-called.

The best must be reserved for the intellectually and morally fit, without regard to their choice of occupation. For them the years in the intermediate school, or junior high school, ought to be made rich in content, but even more should they be made years of intensive training for successful living. The first material desideratum of this training is a large, light and airy central study hall, equipped with every tactual aid that has stood the test of time, and filled with a well-graded library of books in one or more of the systems of embossed symbols. There should be large tables with standard relief maps of very large size, "doctored" specially for the blind only to the lowest possible degree. A well-stocked museum should occupy numerous conveniently located cases, left unlocked during school hours. The study tables, with comfortable chairs, must be

placed near the book-shelves—and no noise-making instruments should be allowed in the study hall.

Here under strict supervision all the study of the upper division of the school should be done. Recitation, either by individuals or by classes, should take place in nearby classrooms, where the various writing and calculating machines and supplementary teaching devices are to be found. Such science as is taught—preferably general science, one year, and general biology, one year—should be taught by laboratory and field method, with large use of the museum and of the gardens, the adjoining fields and woods, and of fresh materials gathered and brought to the classroom.

The controversial tendencies of the blind need to be regulated rather than encouraged, and a live debating society can easily be made one of the best aids in the teaching of history, economics and civics. Certain marked tendencies of the blind can also be utilized in a very profitable literary society which may further edit and publish a magazine, or a weekly paper, stereotyped by the pupils and regularly published. Correlation of studies can by these and other obvious means be carried to a higher degree of perfection than can ever be accomplished with normal children. Perhaps the blind, in their intensive world, lacking the many distractions of sight, can become more thoroughly cultivated intellectually than most normal individuals.

The socializing of the blind is not so painfully hard as some, thinking of the old cloistered institutions, may imagine. After all the blind are human beings and tend to act more or less like other people. Only the monastic tendency to suppress activity and crush natural instincts can militate very strongly against their becoming highly socialized within the institution itself. The summer vacation at home, tramps and excursions with normal children, theater parties, and the like, and frequent visitations to the

school by parents and others from the big world outside are useful social correctives. The blind pupils of a good residential school will not, I am convinced, suffer serious social handicap, and they will be spared that horror, so common in "Young America," of social precocity.

The choice of studies is not of such vital importance as might at first appear to be the case. Language and literature, history, civics and economics, geography and descriptions of travel, mathematics and such science as the blind may readily acquire (which excludes a large part of physics, more of chemistry, much of biology, practically all of astronomy save bare theory, but includes the larger part of physical geography), are so obviously good as to need no argument. All these studies must to a greater or less degree be reorganized to be presented to the blind child, but they should be presented as nearly from the normal viewpoint as possible. Like the equipment of the school, the studies should be chosen and organized not with a view to creating a unique world of the blind, but rather with the opposite view of recreating the world of the seeing in terms that the blind can understand.

It cannot be said too emphatically that the class groups of the blind must for most purposes be very small and in some cases, particularly in scientific demonstrations, individual work is imperative. In such work as debate, literary study, history and economics, larger class groups are desirable, however, and the dread of the "lock step" need not drive instructors of the blind into the equally dangerous overindividualizing of studies.

In all special studies with vocational aims, a complete and practical equipment is highly desirable. In the larger schools this ought to include a very complete commercial department. The multiplication of trades is wrong, but it is also wrong to suppose that a large generalized training

can be secured from any one trade. As many trades should be taught as the income of the school and the number of pupils permit. Perhaps no trade ought to be taught to less than ten, and no pupil should learn more than two (or at most, for the very proficient, three) trades. The well-tried handicrafts and piano-tuning and massage, must, of course, be given preference over untried novelties. The development of business sense, integrity, and accuracy in calculation ought to run parallel with all trade teaching.

In general there ought to be a very excellent and thoroughly equipped health department, with a physical director cooperating with the teachers, matrons and administrative authorities on the one hand, and on the other with the school physician, dentist and nurse. The place of health in education is not yet fully appreciated in the public school system, and only slowly are the school authorities coming to realize that dullness and lack of progress are in very many instances to be directly attributed to easily remedied conditions of personal health and of home and school sanitation. The ideal school will give the health of the children first consideration and most painstaking care, particularly when blindness renders the child shy and inactive.

Ample provision for regular *daily* bath, not a semi-weekly scrubbing, must be made. Two gymnasias, one for girls and equipped for girls, one with a full equipment for the complete gymnastic training of boys, segregated playgrounds with very full equipment, an open field for the larger sports of both boys and girls, are necessities, not luxuries. A daily observation of the health of each child, with frequent examinations by weight, measurement, lung and heart tests, and simple endurance tests, is absolutely essential. Nutrition, hours of eating, habits of eating; ventilation of all rooms; hours of sleep, play and physical drill

and recreation; clothing, and heating; and progress in general study, in the handicrafts, in music, in muscular coordination and in manners and social relations cannot be too closely correlated into one whole of culture and education. The water-tight compartment method of education will be avoided by all means possible.

How long the blind should be kept in the school is a relative question which must be decided along the lines of common sense as individual cases arise. A sentence to so many years of internment is one of the horrors of the asylum system. Without dogmatic finality it may safely be said that the school for the blind should not attempt the full high school course. Most of its activities should terminate with the ninth or tenth grade, or with the intermediate high school course. Older and advanced high school pupils might either continue within the institution, or live at home while attending the courses of the nearest local high school. Thus the bugaboo of university accrediting may be safely avoided and much useless lumber of education eliminated. Music and the handicrafts may be carried to a very advanced stage, and in the very large schools a conservatory of music would not be out of place.

So far not a word as to the official administration of such a plant as outlined! It seems actually as if the children were the chief concern in the ideal educational institution. The narrow janitorial point of view, which looks upon the buildings and grounds as the school and suggests that things would be ideal if only the pupils were wholly eliminated, is not the point of view for successful educational work. A *word* is all, then, that the administrative side needs. That word is *business*: the plant, aside from its educational aspects, should be conducted wholly by the methods of modern business and this should be the care of the clerk

or business manager and board of directors, not of the principal. His should be the work of coordinating all the activities of the school into efficient educational practice to the end that the graduates of the school may make successful lives, and he must not be immersed therefore in the petty details of butter, flour and salt, plumbing and plowing, the repair of typewriters and "squaring" the legislature. The principal ought to be an educational expert, not a business manager: and just as a principal is essential to the school, a business manager of the best type, and well paid, is essential to the plant as such and, while subordinate to the principal, must have large and well-defined powers.

Into the miscellanies of organization there is no need to go further than to indicate a few essentials. There should be an isolated hospital, with wards for contagious diseases. Where possible the school should have its own dairy, with blooded and frequently tested stock and certified milk producing equipment. A truck garden is essential, as well as an orchard, where possible. Flowers and ornamental plants must be grown in abundance and taken into the classrooms, study rooms, recreation and living rooms in quantity, in pots and as cut flowers. Lacking light, the blind must have about them always every possible agency of wholesome sweetness.

Education unrelated to vocation is not true education. Education which fails to correlate with the great social and moral ends of actual life is worse than no education. Education broken up into unrelated fragments defeats its own ends. The greatest need in the education of the blind is the close correlation of subject with subject and of the whole with life, while considering the special fitness of each and respecting the personality of each and all. Complete living involves making a living, but even vocational training is



vain unless complete living means social and objective adjustment and certain ideal values that are not of the material world. True education means for the blind, as for all of us, progressive adjustment to the realities both of the world we know and of that world of as yet unattained ideals, call it what we may.



## APPENDICES



## BIBLIOGRAPHY

- Alden, Cynthia Westover, *The Baby Blind*, New York, International Sunshine Society publications. (Also contained in *13th and 14th Annual Reports*, pp. 111-176.)
- Allen, Edward E., *Education of Defectives*, "Monographs on Education," edited by N. M. Butler, No. 15, Albany, N. Y., J. B. Lyon Co., 1904, 51 pp.
- *The Nature and Value of Contributory Effort for Pupils at Free Residential Schools for the Blind*, reprinted from *79th Annual Report* of the Perkins Institution, 1910, 15 pp.
- *Special Features in the Education of the Blind during the Bien-nium 1918-1920*, Washington, D. C., Government Printing Office, 1921.
- American Association of the Instructors of the Blind, *Proceedings of Meetings, 11th* (1890) to *30th* (1930) inclusive, complete.
- American Association of Workers for the Blind, *Proceedings of Biennial Conventions, 1905-1931*.
- American Foundation for the Blind, Inc., *Agencies for the Blind in America*, New York, 1926.
- *Outlook for the Blind*, quarterly, complete from 1907.
- American Printing House for the Blind, *Reports, 2nd*, 1868, to 1930, complete.
- Reprint of *Acts of Legislation affecting the American Printing House for the Blind* (1888), 11 pp.
- Anagnos, Michael, *The Education of the Blind in the United States of America*, Boston, Ellis Co., 1904, 23 pp.
- *Helen Keller*, reprinted from the *60th Annual Report* of the Perkins Institution and Massachusetts School for the Blind, Boston, Wright and Potter, 1892, 248 pp., illustrated.
- Association Valentin Haüy pour le Bien des Aveugles, *Valentin Haüy, Le Revue Universelle des Questions Relatives aux Aveugles*, 22 nos., Paris, 1893-1911.
- *Reports, 1890, 1913-14*.
- Arnould, Louis, *Une Ame en Prison*, 3rd ed.; Paris, H. Oudin, 1904, 172 pp.
- Artman, William, and Hall, L. V., *Beauties and Achievements of the Blind*, Auburn, N. Y., privately printed, 1863, 387 pp., frontispiece.
- Ayers, Edward A., "First Sight at the Age of Forty," *Harper's Magazine*, CXXI, 416-424, illustrated.

- "The Seventh Sense in Men and Animals," *Harper's Magazine*, XCCIV, 606-614, illustrated.
- Best, Harry, *The Blind*, New York, The Macmillan Co., 1919, xxviii and 763 pp.
- Blindenlehrer-Congresses, Verhandlungen des 5, in Amsterdam, August, 1885*, Amsterdam, C. A. Spin and Zoon, 1886, 288 pp.
- Burritt, Olin H., *New Opportunities for Blind Children before Entering School*, paper read before First International Congress of Mothers on the Welfare of the Child, Washington, D. C., March, 1908; 12 pp.
- California Industrial Home for the Adult Blind, *Reports*, complete.
- Campbell, Charles F. F., and Mary D., *Institutions for the Blind in America*, A Directory of the Work for the Blind in the United States and Canada, reprinted from the *American Encyclopedia of Ophthalmology*, IX (1916); 111 pp.
- Campbell, Francis J., *The Physical Training of the Blind*, London, Farmer and Sons, undated, 7 pp.
- *A Plea for the Practical Training of Blind Children*, London, Imperial Printing Works, undated, 4 pp.
- Carr, Harvey, "Maze Studies with the White Rat," I, II, III, *Journal of Animal Behavior*, Vol. VII, pp. 259-306.
- Clement, E. H., "Beauty for Blind Eyes," *The Survey*, April 4, 1914, 8 pp., illustrated.
- Day, Mary L., *Incidents in the Life of a Blind Girl*, Baltimore, James Young, 1859, iv and 206 pp.
- Diderot, Denis, "Lettre sur les Aveugles," ("Letter on the Blind") *Oeuvres Completes*, edition of J. Assezat; Paris, 1875; Tome I, p. 284, *et seq.*
- Elliot, Maud Howe, and Hall, Florence Howe, *Laura Bridgman*, Boston, Little, Brown & Co., 1904, x and 395 pp., illustrated.
- Fryer, John, *The Education of the Chinese Blind* (Berkeley, Calif., 1915), 12 pp.
- Fuller, Sarah, *How Helen Keller Was Taught Speech*, from *Helen Keller Souvenir*, No. 1, Washington, D. C., Gibson Bros., 1905, 11 pp. with portrait of Sarah Fuller. *Volta Bureau: Reprints of Useful Knowledge*, No. 47.
- Gilman, Arthur, *Miss Helen Adams Keller's First Year of College Preparatory Work*, from *American Annals of the Deaf*, Nov., 1897, Washington, D. C., Gibson Bros., 12 pp., portrait of Helen Keller. *Volta Bureau: Reprints of Useful Knowledge*, No. 20.
- Golesceano, Constantin, *Les Aveugles à travers les Ages*, La Clinique Nationale Ophthalmologique des Quinze-Vingts, L'Hospice des Quinze-Vingts Moderne (Paris, 1902), 270 pp., illustrated.

- Guilbeau, Edgar Charles, *Histoire de l'Institution Nationale des Jeunes Aveugles*, Paris, Belin Frères, 1907, 196 pp., 1 illustration.
- Guillié, Sebastian, *Versuch über den Unterricht der Blinden*, aus dem Französischen übersetzt durch Johan Knie, Breslau, W. A. Holäufner, 1820, xxv and 352 pp., 14 plates.
- Haines, Thomas H., *A Mental Survey of the Ohio State School for the Blind*, Publication No. 9 of the Ohio Board of Administration, Jan., 1916. Subject more completely treated in "Psychological Monographs," 1916 series.
- Haüy, Valentin, "An Essay on the Education of the Blind," translated by Rev. Thomas Blacklock, reprint, Leicester, Tompkin & Shardlow, 1889, 36 pp.
- Hawkes, Clarence, *Hitting the Dark Trail*, New York, Henry Holt & Co., 1915, xiv and 176 pp., illustrated.
- Heller, Theodor, *Studien zur Blindenpsychologie* (Leipzig, 1904), 136 pp., with diagrams and tables.
- Hicks, W. Percy, *Seeing by Touch*, A Visit to the Royal Normal College for the Blind, reprinted from *The Temple Magazine*, 7 pp., illustrated.
- Howe, Samuel Gridley, "The Education of the Blind," *The New England Magazine*, IV (1833), pp. 177-187.
- *Letters and Journals*, Vol. II, *The Servant of Humanity*, edited by his daughter, Laura E. Richards, Boston, Dana Estes & Co.; London, John Lane, xii and 611 pp.
- Hubert-Valleroux, M. E., *Des Sourds-Muets et des Aveugles*, 2nd edition; Paris, Victor Masson, 1853, xxiii and 69, 16 and 24 pp.
- Illingworth, W. H., *History of the Education of the Blind*, London, S. Low, Marston & Co., 1910, viii and 167 pp., illustrated.
- International Sunshine Society, Branch for the Blind, *Annual Reports*, The Blind Babies' Home Nursery and Kindergarten, Brooklyn, N. Y., 8th and 9th (in one), 10th-12th. (Now an independent unit and called Dyker Heights Home for Blind Children, Inc.)
- Irwin, Robert B., *Sight-saving Classes in the Public Schools*, issued under the auspices of the Schools Committee of the Association Harvard Clubs, Cambridge, Mass., Harvard University, 1920.
- Javal, Emile, *On Becoming Blind*, translated by Carroll E. Edson, The Macmillan Co., 1905, xiv and 191 pp., frontispiece.
- Die Jubelfeier des kaiserliche königliche Blinden-Erziehungs-Institutes in Wien, Mai, 1904*, reprint from *Der Blindenfreund*, Juli, 1904, 23 pp.
- Keller, Helen Adams, *The Story of My Life*, with her Letters (1887-1901) and a Supplementary Account of her Education, including Passages from the Reports and Letters of her Teacher, Anne

- Mansfield Sullivan, by John Albert Macy, New York, Doubleday, Page & Co., 1904, 441 pp.
- *The World I Live In*, New York, The Century Co., 1908, iii and 195 pp., illustrated.
- Kretschmer, Reinhold, *Geschichte des Blindenwesens vom Altertum bis zum Beginn der allgemeinen Blindenbildung*, Ratibor, Oberschl. Gesellschaftsdruckerei, 1925, 204 pp.
- Kunz, Martin, *The Physiology of the Blind* (Vicariate of the Senses), from *The Association Review*, Washington, D. C., 1908, 31 pp., with tables and diagrams, Volta Bureau, *Reprints of Useful Knowledge* No. 56.
- La Sizeranne, Maurice de, *Les Aveugles Utiles*, new ed.; Paris, Delhomme et Brignet, 48 pp.
- *The Blind Sisters of Saint Paul*, translated by L. M. Leggatt, New York, Benziger Bros., x and 303 pp., portrait of author.
- *Trente Ans d'Etudes et de Propagande en Faveur des Aveugles*, Montbrison, Jules Méchin, 1908, 506 pp.
- Lamson, Mary Swift, *Life and Education of Laura Dewey Bridgman, The Deaf, Dumb, and Blind Girl*, Boston, Houghton, Mifflin & Co., 1895, xl and 373 pp., illustrated.
- Maryland Workshop for the Blind, *Reports, 1st and 3rd*.
- Massachusetts Commission for the Blind, *Reports*, complete from 1906; also "Survey," *Outlook for the Blind*, April, 1907.
- Massachusetts State Department of Education, Division of the Blind, *Reports*, complete.
- Maxfield, Kathryn E., *The Blind Child and His Reading*, New York, American Foundation for the Blind, Inc., 1928, xiv and 215 pp.
- Mell, Alexander, *Ein Versuch zur Gründung einer Blinden-Anstalt in Preussen vor dem Auftreten Häüy's in Berlin*, Wien, März, 1903, 15 pp.
- *Encyklopädisches Handbuch des Blindenwesens*, Wien u. Leipzig, A. Pichlers Witwe und Sohn, 1900, x and 890 pp., with diagrams, illustrations and classified indexes.
- "Ueber den Contact des blinden Kindes mit der Natur" ("On the Contact of the Blind Child with Nature"); also Trinkhaus, Georg, "Ueber Blinde, die durch ihre Gelehrsamkeit berühmt geworden sind"; Gigerl, Emerich, "Die Hand, ihre Kräftigung," Wien, *Thätigkeitsbericht des kaiserliche königliche Blinden-Erziehungs-Institutes*, 1890-1894, 104 pp., illustrated.
- Michigan Employment Institution for the Blind, *Biennial Reports, 2nd to 6th*.
- Minner, Charles B., *The Question of Higher Education for the Blind*, Publications of the Perkins Institution and Massachusetts School for the Blind, Watertown, Mass., 1925.



- Montessori, Maria, *The Montessori Method*, translated by Anne E. George, 4th ed.; New York, Frederick A. Stokes Co., 1912, xlii and 377 pp., illustrated.
- National Library for the Blind, descriptive pamphlet, Washington, D. C., 23 pp.
- National Society for the Prevention of Blindness, New York, *Bulletins on Causes and Prevention of Blindness*.
- "New England Institution for the Blind," *New England Magazine*, IV (1833), pp. 154-157.
- New York Association for the Blind, *Publications*, 1-14, 1908-15, illustrated and with tables.
- New York State Commission for the Blind, *Aiding the Blind*, reprint from *Journal*, Albany, J. B. Lyon Co., 1914, 23 pp., illustrated.
- Ohio Commission for the Blind, *Reports*, 1908-10.
- One Hundredth Anniversary of the Birth of Dr. Samuel Gridley Howe*, Boston, Wright & Porter, 1902, 167 pp., illustrated.
- Pearce, F. Savary, *A Study of the Blind*, An Analysis of 180 Pupils at the Pennsylvania Institution for the Instruction of the Blind, Philadelphia, 1897, 18 pp.
- Pennsylvania Working Home for Blind Men, *Annual Reports*, 1875-93.
- Perkins Institution and Massachusetts School for the Blind, *Special Reference Library of Books Relating to the Blind*, compiled under the direction of Michael Anagnos, Part I, Books in English, Boston, Wright & Potter, 1907, 192 pp.
- First Supplement to Part I, Books in English, compiled under the direction of Edward E. Allen, Boston, George H. Ellis, 1916, 128 pp.
- Pérouze, Georges, *Les Soldats Aveugles et leur Réadaptation à la Vie Utile*, Association Valentin Haüy pour le Bien des Aveugles, Paris, 1915, 32 pp.
- Pöschl, Josef, *Zur Geschichte und Charakteristik des Modernen Blindenwesens*, reprinted from "Das Wissen für Alle," Nos. 18-26. (Wien, 1904), 86 pp., illustrated.
- Proceedings of the Public Meeting on Behalf of a Printing Fund for the Blind*, Boston, 1881, Boston, Wright & Porter, 1881, 34 pp.
- Purse, Ben, *The Blind in Industry*, London, Edson, Ltd., 1925, viii and 109 pp.
- Reeves, T., and Hosmer, Elmer S., *The Wait and Braille Musical Notations Reviewed and Compared*, Boston, George H. Ellis, 1891, 29 pp.
- Renaud, G., "Les Lois de l'Orientation chez les Animaux," *Revue des Deux Mondes*, March 15, 1898.
- Report of the Conference on Matters Relating to the Blind*, Westminster, 1902, London, Farmer & Sons, 1902, 258 pp.

- Rocheleau, Corinne, *Hors de sa Prison*, Montreal, Arbour & Dupont, 1927.
- Rothert, Henry W., *Compulsory Education and Its Relation to Defective Classes*, Press of Iowa School for the Deaf, Council Bluffs, Iowa, 1904, 14 pp.
- Royal Commission on the Blind, the Deaf and Dumb . . . of the United Kingdom, *Report of 1889*, 4 vols., London, Eyre & Spottiswoode, 1889.
- Russell Sage Foundation, Prevention of Blindness Committee, *Bulletin No. 1, A Brief Account of Organized Work for the Prevention of Blindness in Four States*, New York, Maryland, Ohio, Massachusetts, New York City, May, 1910.
- Sanborn, F. B., *Dr. S. G. Howe, The Philanthropist*, London, New York, Toronto, Funk & Wagnalls, 1891, viii and 370 pp., portrait of Howe.
- Schools and Institutions for the Blind, all available *Reports* in this country and abroad.
- Séguin, Edouard, *Report on Education*, from *Reports of the United States Commissioners at the Vienna International Exhibition, 1873*, Vol. II, vi and 137 pp., Washington, D. C., Government Printing Office, 1875.
- Stern, L. William, *Helen Keller: die Entwicklung und Erziehung einer Taubstummlinden*, in "Sammlung von Abhandlungen aus dem Gebiete der Pädagogischen Psychologie und Physiologie," Berlin, Renner und Reichard, 1905, 76 pp.
- Stratton, George M., "The Spatial Harmony of Touch and Vision," *Mind*, 1899, p. 492 *et seq.*
- Talbot, Eugene S., "Statistics of Constitutional and Developmental Irregularities of the Jaws and Teeth of Normal, Idiotic, Deaf and Dumb, Blind and Insane Persons," *Dental Cosmos*, July, 1889, 17 pp.
- Uhlhorn, Gerhard, *Christian Charity in the Ancient Church*, translated from the German, New York, Charles Scribner's Sons, 1883, vi and 424 pp.
- Uthhoff, W., "Weitere Beiträge zum Sehenlernen blindengeborener und später mit Erfolg operierter Menschen," *Zeitschrift für Psychologie*, XIV, pp. 197-241.
- Uniform Type Committee, American Association of Workers for the Blind, *Biennial Reports*, 1907-15. (Also contained in *Outlook for the Blind*.)
- United States Department of the Interior, *Reports of the Commissioner of Education*, chapters on Schools for Defective Classes, Progress in the Education of the Blind, the Royal Normal College for the Blind, London, etc., see Index to Reports, 1867-1907, and *ff.*

- Vienna Institute for the Education of the Blind, *Gebt den Blinden Arbeit!* Vienna, undated, 16 pp., illustrated.
- *Von Unsern Blinden*, 7 nos., 1909-1911, Vienna.
- Villey, Pierre, *La Pédagogie des Aveugles*, Paris, Félix Alcan, 1922, iv and 304.
- *L'aveugle dans le Monde des Voyants*, Paris, E. Flammarion, 1927, 335 pp.
- *The World of the Blind*, London, Simpkin, Marshall, 1922, 403 pp.
- Volta Bureau, *Helen Keller Souvenir of the First Summer Meeting of the American Association to Promote the Teaching of Speech to the Deaf*, 2nd ed.; Washington, D. C., 1892, illustrated.
- *Helen Keller Souvenir*, No. 2, 1892-1899, Commemorating the Harvard final examination for admission to Radcliffe College, June 29-30, 1899, Washington, D. C., 1899, 65 pp., illustrated.
- Wade, William, *The Blind Deaf, A Monograph*, reprint of *The Deaf-Blind*, with revisions and additions, printed for private circulation; Indianapolis, Hecker Bros., 1904, 149 pp., illustrated.
- Wait, William Bell, *Effort and Progress*, A General Review, 1831-1908, 27 pp.
- *Origin of the New York Institution for the Blind—The Origin and Development of the New York Point System*, New York, 1892, 49 pp.
- *Phases of Punctography in Relation to Visual Typography, Writing, Printing, Bookbinding and Other Features*, New York, undated, 20 pp.
- *A Review of the Origin and Development of Embossed Literature and Music for Touch Reading*, New York, 1890, 41 pp.
- *The True Structural Basis of Punctographic Systems of Literature and Music*, New York, 1892, 34 pp.
- *The Uniform Type Question—An Examination of the Report of the Uniform Type Committee of June, 1913*, New York, 1915, 48 pp.
- *Key to the New York Point System of Tangible Writing and Printing*, New York, New York Institute for the Education of the Blind, 1909, 49 pp.
- *The New York Institution for the Blind—Kleidograph*, New York, New York Institute for the Education of the Blind, undated, 8 pp.
- *The New York System of Punctography*, paper read before the World's Congress of Educators of the Blind, Chicago, 1893, New York, New York Institute for the Education of the Blind, 1893, 10 pp.

Willis, Albert S., "Education of the Blind," Speech in the House of Representatives of the United States, Jan. 17, 1879, 12 pp.

Wisconsin Workshop for the Blind, *Biennial Reports, 1st-3rd.*

Zeune, August, *Belisar, Ueber den Unterricht der Blinden*, Berlin, 1829, 84 pp.

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