## PHOTOGRAPHIC CHRONICLES FROM CHILDHOOD TO AGE.

THE object of this memoir is to advocate the establishment of family chronicles, of which the most prominent feature shall be photographs of its various members, taken from time to time in the uniform manner about to be described.

The family Bibles of past generations served as registers of family Births, illnesses, marriages, and deaths were chronicled on their fly-leaves, and those ponderous books fulfilled an important function in this incidental way. But they are now becoming generally replaced by more handy volumes, and the family register is disappearing with the old family Bible. In the meantime photography has been discovered and has sprung into universal use, and the hereditary value of what are called "life histories" is becoming continually more appreciated. It seems, then, to be an appropriate time to advocate the establishment of a new form of family register that shall contain all those notices that were formerly entered in the family Bible, and much more besides, namely, a series of photographic studies of the features from childhood onwards, together with facts that shall afford as complete a life-history as is consistent with brevity. But it is only to the photographic part of the register that I shall on the present occasion call attention. What is desired is something of this sort. In each substantial family we should find a thin quarto volume, solidly bound, having leaves of stout paper, on which photographs may be mounted. Each pair of opposite pages would be headed by the name of some member of the family. A double row of photographs would run down the side of each page, each about half as large again as a postage stamp, the one containing a medallion of the full face, and the other one of the profile. Opposite to each of these the events of the corresponding period would be chronicled. Every opening of the book would contain the photographs and events of about ten periods, five to each page, and would include from ten to twenty years of life history, This brief statement may suffice to give a general idea of what is aimed at; the particulars will now follow.

My experience during the last year in photography has been extensive and peculiar. With the view of testing the scientific value of my method of "Composite Portraiture" on an adequate scale, I have, in conjunction with Dr. Mahomed, applied it to investigating the physiognomy of disease. My own medical knowledge was inadequate to justify the undertaking of such an inquiry by myself, but that knowledge was supplied by Dr. Mahomed, who also worked realously with me in the photography. He has written a memoir on our joint results, illustrated by the Autotypes of 47 composites and of 113 individual portraits, which will be published in the Guy's

Hospital Reports at about the same date as this number of the Fortnightly. I need not again describe what composite portraiture is, having already frequently done so, but may refer to the Fortnightly Review of 1881, p. 738, for a brief account, and to the Photographic Journal of last June for the fullest and latest particulars. My experience is therefore as follows. I have well considered and obtained much knowledge on—(1.) The conditions to be fulfilled in order that a series of portraits should be exactly comparable. (2.) The smallest size of a photograph suitable for physiognomical study. (3.) The special requirements for making such photographs expeditiously in large numbers. (4.) The cost. (5.) Autotype reproductions.

In my process of composite portraiture the portraits must be strictly comparable; this necessitates their being taken in exactly the same aspect and in similar light. There are two, and only two, aspects that practically admit of strict definition. These are the perfect full face, looking straight in front at the camera, and the perfect profile (either right or left), also looking straight in front. They correspond to the elevation and side-view of a house, and give hardand accurate physiognomical facts in a patent, outspeken manner, in a way that enables each portrait in a series to be studied on precisely equal terms with all the rest.

I have not as yet worked as much with profiles as I hope to do. They are more suitable than the full face for truthful photographic representation, because they are defined by outlines which do not vary in varied lights, while the features in the full face are defined by shades which do. It is impossible to compare satisfactorily two portraits taken from different aspects, and the different aspects are I have searched in vain among hundreds of photographs such as one may buy, of statesmen, popular preachers, and professional. beauties, for a sufficiency of faces taken in the same aspect and light to form good composites. I am therefore almost always obliged to use portraits specially photographed for me. What is unsuitable for a composite must be unsuitable for every other method of exact comparison. The newspaper Punch has begun, since I commenced writing this, to give pairs of portraits of various statesmen. One of each pair represents the statesman when he first entered public life, and the other is his likeness at the present time. They are rough copies of well-known pictures, and, without entering into Punch's reasons for inserting them, I would appeal to those (portraits on the one hand in evidence of the interest of a succession of likenesses taken periodically of the same individual, and on the other hand in evidence of how much is lest by not taking them always in the same aspect. Of the pairs that have already appeared there is no one case in which the two portraits that make the pair are strictly comparable.

I do not for a moment say that front and side views of a face are artistic, nor is it to be supposed that they are capable of replacing

artistic photographs. They are wanted in addition to them, not in substitution. They have a function of their own that cannot be dispensed with, in making a physiognomical study possible of the change of features as we advance in life. I may add that though they may be inartistic individually, they would afford materials for making pleasing composites by throwing the portraits taken at several successive periods into the same picture, the effect of which, as is seen in all composites, would be to produce an idealised representation much more regular and handsome than any of the constituent portraits.

As regards the scale of these photographs it must not be too small. The faces in ordinary group portraits are too minute for the present purpose and are insufficiently sharp to bear enlargement. The result of my experience has shown that a perfectly satisfactory portrait can be got on the half of an ordinary carte-de-visite or "quarter-plate." Such a print may be trimmed down to a small rectangle including the head alone, the size of the rectangle so reduced being half as long again each way as a postage stamp. The best scale of reduction is, I think, one-seventh, so that the image of a rod 14 inches long placed by the sitter's chair would be 2 inches long on the focusing plate of the camera. In portraits on this scale, the vertical distance between the line of the pupils of the eyes and that passing between the lips is about four-tenths of an inch, or ten millimetres. Such representations admit of being enlarged on paper to life size, while still preserving their sharpness.

Next, as regards the practical part of the photography. It may be well that I should describe my own experience of the best way of taking them in large numbers, because it is applicable to schools and other large institutions, where I hope to see the practice of periodical photography introduced and methodised. I photographed about a hundred patients myself, Dr. Mahomed photographed others, and a professional photographer, Mr. Mackie, whose services I subsequently engaged, did several hundred more under our supervision. The photography took place, from time to time, at Guy's, at the Brompton Consumptive Hospital, and at the Victoria Park Hospital for Diseases of the Chest. Some of the patients were photographed in the wards, but the great majority were out-patients. There was an excellently lighted studio at Guy's, but at the two other hospitals we had to arrange matters out of doors, which Mr. Mackie did with much cleverness, by means of screens roughly put together, partly as a background, partly to control the lights. It was necessary that each portrait should carry its own means of identification, and this was effected by a label held in the sitter's hand, and photographed at the same time as himself. A standing inscription for the day was neatly written on the label, giving the place and date. When the print was trimmed for mounting, the part that contained the picture of the label was cut off; until that was done no mistake in identification was possible. There was a special object in making the patients take hold of the label, namely, to get a photograph of his fingers, which are somewhat characteristically shaped in many cases of consumption. Had it not been for this, we should have laid a broad black batten of wood across two standing supports, just like a leaping bar, above the sitter's head, and should have chalked his name upon it. It is of importance in quick photography that the chair should be small; a wooden stool is best, with a high narrow back. Then the successive sitters occupy almost exactly the same place, and no head-rest is required. A somewhat different arrangement is wanted for profiles. My camera held a "quarter-plate" disposed crossways, and it had a repeating back, so that one portrait could be taken on one half of the plate and a second portrait in the other. I used the dry-plate process. When all was prepared and the patients were ready, the photographing proceeded with rapidity, a pause of a few minutes being now and then advisable to develop a plate and to satisfy one's self that the time of exposure was correct. Thirty patients have been photographed in a single hour, the plates being developed for the most part at home and at leisure.

The scale of the photographs was, as already mentioned, one-seventh of the original. The size of a quarter-plate is  $3\frac{1}{4}$  inches by  $4\frac{1}{4}$  inches, therefore the half of it available for each portrait is  $3\frac{1}{4}$  inches by  $2\frac{1}{4}$  inches, or, say, a clear 3 inches by 2 inches. It follows that the image of a frame of seven times that size, namely, of 21 inches by 14 inches, will be completely contained within the allotted space. A breadth of 2 inches along the top is required for the label, leaving a clear available space of 19 inches by 14 inches for the head and neck, which is even more than sufficient for the purpose.

The price for which my photographs were made was the same as that which had shortly before been the contract price for taking photographs of prisoners at Pentonville Prison. It was fifteenpence for each glass negative and three rough prints from it, and this included the whole cost of material. The difference between my requirements and those at Pentonville were these: At Pentonville there was no delay; the prisoners were in readiness and taken successively without a pause; but the hospital patients were not always in readiness, and valuable time was lost. In compensation for this the photographic plates I used were only half as large as those at Pentonville, and therefore the cost of materials was less. I feel sure from all this that in any large institutions, such as schools, if a custom of taking periodical photographs should be established, the cost to each boy would be very small, and in no case ought it to be large.

The results that I obtained are far superior to anything that could be got from group portraits. These cannot be in focus throughout, and every attempt to minimise this fault compels the use of a small aperture of lens, with the corresponding necessity of out-of-door illumination and long exposure. The several portraits in a group are never equally good. The waste of photographic space is serious, much the larger share of the prints being occupied by background and dresses, leaving but a small fraction for the faces, which are almost the only interesting part of them.

The Autotype process is a ready means of obtaining permanent prints of collections of portraits, whether of the individual himself at different periods of his life, or of himself and his contemporaries at any one period in it. The forthcoming publication in the Guy's Hospital Report is illustrated by four octavo pages crammed full of autotyped portraits of patients and of composites of them. The former are smaller than I should propose for photographic chronicles, having been made small in order to avoid the cost of printing many pages, which is heavy for a large edition, though moderate enough for a few copies. Other prints of a somowhat similar kind will be found in the Proceedings of the Royal Institution of 1879, in illustration of my lecture on "Generic Images." The cost of a single octave page of autotype reproductions, with six proofs, is advertised at £1 2s.; or, if one hundred prints be ordered, the total cost is £1 17s. 6d. only preparation necessary before ordering the autotype is to mount the prints on a card in the way they are to appear, with any desired lettering. The card is then sent to the Autotype Company, who make a fac-simile of it or reduce it to the required scale, and they send back their reproductions printed on paper in printer's ink, and therefore secure from fading. I calculate that I can get glass negatives of twenty different prints, three prints from each, and twenty full-sized autotype reproductions of all the twenty on the same octavo page, for twenty times 2s. 6d. Half-a-crown would, at that rate, be the total cost to each of twenty persons for obtaining permanent memorials of himself and of his nineteen companions. wanted extra prints of the page, they would cost 41d. each.

Every one of us in his mature age would be glad of a series of pictures of himself from childhood onwards, arranged consecutively, with notes of the current events by their sides. Much more would he be glad of similar series of portraits of his father, mother, grandparents, and other near relations. To the young it would be peculiarly grateful to have likenesses of their parents and of the men whom they look upon as heroes taken at the time when they were of the same ages as themselves. Boys are too apt to look upon their seniors as having been always elderly men; it is because they have insufficient data to construct imaginary pictures of them as they were in their youth.

In America it is, I understand, a growing custom to keep manuscript books of family memorials, and even to print them for the private use of the family. I know hardly any instances of such

registers in England; but there is, at all events, one sumptuous work of a similar kind, which is now in the possession of the Royal Society. It consists of two huge volumes filled with portraits, prints, newspaper-cuttings, and all kinds of illustrations bearing on the life of Dr. Priestley and on those of his neighbours and associates, which was compiled as a labour of love by the late Mr. Edmund Yates, and which is a unique work of its kind.

The sum of the statements and recommendations in these pages is to this effect. Obtain photographs periodically of yourselves and of your children, making it a family custom to do so, because unless driven by some custom the act will be postponed until the opportunity is lost. Let those periodical photographs be full and side views of the face on an adequate scale, and add any others you like, but do not omit these. As the portraits accumulate have collections of them autotyped. Take possession of the original negatives, or have them stored in safe keeping, labelled, and easy to get at. They will not fade, and the time may come when they will be valuable for obtaining fresh prints or for enlargement. Keep the prints methodically in a family register, writing by their side all such chronicles as those that used to find a place on the fly-leaf of the family Bibles of past generations, and much more besides. Into the full scope of that additional matter I do not propose now to enter. It is an interesting and important topic that requires detailed explanation, and it is better for the moment not to touch upon it. This, however, may be said, that those who care to initiate and carry on a family chronicle, illustrated by abundant photographic portraiture, will produce a work that they and their children, and their descendants in more remote generations, will assuredly be grateful for. The family tie has a real as well as a sentimental significance. The world is beginning to perceive that the life of each individual is in some real sense a prolongation of those of his ancestry. His character, his vigour, and his disease are principally theirs; sometimes his faculties are blends of ancestral qualities, more frequently they are aggregates, veins of resemblance to one or other of them showing now here and now there. The life-histories of our relatives are, therefore, more instructive to us than those of strangers; they are especially able to forewarn and to encourage us, for they are prophetic of our own If there be such a thing as a natural birthright, I can conceive of none greater than the right of each child to be informed, at first by proxy through his guardians, and afterwards personally. of the life-history, medical and other, of his ancestry. The child is brought into the world without his having any voice at all in the matter, and the smallest amend that those who introduced him there can make, is to furnish him with that most serviceable of all information to him, the complete life-histories of his near progenitors.

FRANCIS GALTON.