

# WHAT IS THERE IN PHYSIOGNOMY?

## I. THE SIZE OF THE NOSE

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AS WE go on through life we all acquire a certain amount of critical discernment regarding the human face. Some people, whose occupations have naturally brought them in contact with a vast number of varying types, acquire special skill. Hotel clerks, for instance, physicians, lawyers, business leaders, travelling men, etc., become very adept in what is popularly known as "sizing people up." It is probable that girls begin this science of face study much younger than boys since they need it as a matter of defense and protection, and all through life women are perhaps superior to men as physiognomists. This is usually spoken of as woman's intuition, but there is probably nothing more mysterious about it than that women have paid more attention to the subject.

### WHAT DO OUR "LOOKS" SIGNIFY?

Those who say there is nothing in physiognomy are for the greater part protesting against the extreme and absurd claims of all the cranks and quacks—first cousins and half brothers to the palmists, the astrologers and the phrenologists. For the admission that there is something in physiognomy is necessitated by common everyday experience. Great men certainly do not look like imbeciles, nor do Eskimos and African Bushmen look like courtiers and heroes. There is a line of truth to be drawn somewhere, but just where that line lies has never been determined, even approximately. The true methods of inductive science have not been applied to establishing associations between facial peculiarities and mental traits.

It is a fair hypothesis that at least some associations exist. Man has evolved from an ape-like ancestor characterized by a small nose, small

eyes, retreating forehead and chin. Why should not the most intellectual of men depart more than the "common run" of men from such primitive proportions? Indeed, there is a widespread popular fancy that a high forehead and long nose are marks of intellect, and a heavy chin is a sign of force of character. In fiction and in the "movies" we see the conventional types, and they are usually represented in accordance with these time-honored beliefs.

Whether different proportions of the face have or have not any significance, there is one way in which the human countenance certainly expresses mental differences, and that is through its fluctuating expressions. There is perhaps no branch of knowledge which a human being begins to study so early in life as facial expression. Little babies soon know the difference between a smile and a frown. An intelligent dog will watch its master's face for every change of mood, hanging on the slightest indication of approval or encouragement. The knowledge of the meaning of the face is very important, since the need for the commendation of one's fellow men is almost universal and begins very young, for it harks back to earliest origins. Indeed the desire to be well thought of by the other members of one's own circle is a curious human peculiarity and is almost a prime distinguishing mark between men and brutes. It is probable that not many of the lower animals care at all what the others of their species think of them. Running horses and trotting horses very likely have something of this feeling. They appear to exhibit pride and emulation. So do fox hounds; and perhaps all the gregarious animals have in a crude way the basis for the evolution of this important



#### NOSES OF NINE GREAT MEN

Is intellectual superiority associated with a large or long nose? The pictures above constitute a random sample from a large collection of photographs of great men of history classified into three groups according to nose-size. Nos. 1 to 5 show long or large noses; they are respectively Pascal (1), LaFontaine (2), Cuvier (3), Michel de L'Hospital (4), Voltaire (5). The next two have been placed in the middle grade; they are Captain James Cook (6), and Arago (7). Numbers 8, Boileau, and 9, Talleyrand, are rare examples showing small or short noses. (Fig. 4.)

human attribute. Man, in one form or another, is always seeking glory,—the boy on the ball field, the child in attracting the attention of "grown ups," the college man in athletics, the mature man in business or professional success.

#### CHARACTER IN THE FACE

Habitual facial expression, such as

comes from chronic gloom, seriousness on the one hand, or constant smiling on the other, doubtless causes wrinkles and permanent marks on the face, which in time give an indication of character or disposition. Firmness of will, and habits of concentrated thought are probably to a great extent shown in the eyes and mouth. But here we enter



Profile of Idealized "Average Man." (Fig. 5.)

unsurveyed fields. There is something in all these attributes, but the actual localization and the analysis and measurement of the significant peculiarities remain for future research to determine.

Physiognomy of expressions is one thing, and physiognomy drawn from proportions of the features is another. While no one doubts that expressions of the countenance are usually of some significance, there are many keen observers, more or less professionally engaged in the study of faces, such as portrait painters, sculptors, photographers, anthropologists and psychologists, who doubt if the *proportions* of the face are of any real significance. They believe the exceptions to any rules are too frequent for generalizations.

My own belief is that, by and large, most people look their parts, and furthermore if the method of scientific induction be applied much can be learned from a systematic study of facial proportions. There are, doubtless, exceptions to any rules, but these, if not too numerous, do not invalidate the conclusions. The whole question hinges on the numerousness of the exceptions, or in other and more scientific words, on the *existence of correlations*.

For about twenty years the present writer has been in the habit of collecting, from time to time, pictures of people out of newspapers, magazines and books, as well as engravings and photographs from painted portraits. Out of all this collecting certain general impressions have arisen, but only a few of these have as yet been put through systematic tests. Already the conclusion has been reached that there has taken place a genuine evolutionary change within the last four hundred years in the proportions of the upper



TWO PROFILE HEADS OF IDEALIZED "AVERAGE MEN" SHOWING AVERAGE PROPORTIONS

What does the "average man" look like to you? Has your conception been formed from your ideals or from the men whom you actually meet in everyday life? Most of us have usually regarded the average man "as something very fine." (Fig. 6.)

part of the face. Some discussion of this question (with a few illustrative portraits) is to be found in the *JOURNAL OF HEREDITY* for May, 1919.

#### THE SIZE OF THE NOSE

The present article will deal solely with the nose, especially with the question whether or not intellectual superiority is usually associated with a large or long nose.

If the size of the nose is in any way correlated with intellectual superiority then the greatest men in history ought to exhibit noses measurably larger or longer than the average. The correlation might be true all through the scale of intellectuality, but it would be more difficult to measure it and prove it when close to the average, since the differences would be smaller.

With an idea of making a beginning on this problem, a large number of portraits of famous men in different fields of activity, and in different eras, have been put through some systematic tests. The first group examined happened to be a collection of portraits of eminent astronomers published in "Stars and Telescopes," a Hand-Book of Popular Astronomy by Professor David P. Todd (Boston, 1901). Judging from these pictures, I should say that the following astronomers, mathe-

maticians and physicists had noses approximately as in the list below:

	Nose
Copernicus	large
W. Herschel	average
Fraunhofer	long
Delambre	large
Hansen	average
Delaunay	average
Halley	large
Kirchoff	long
Helmholtz	average to heavy
Oppolzer	small
S. J. Perry	average
Tycho Brahe	large
Kepler	large
Newton	long
Euler	large
La Grange	long
Gauss	long
Airy	large
Gassendi	long
C. H. F. Peters	long
Cassini	long
B. Peirce	long
Le Verrier	long
Adams	long
Tisserand	large
Mary Somerville	long
Watson	rather small
Olbers	long
Arago	long
Kaiser	average
Caroline Herschel	rather large
Maria Mitchell	rather large
Chladni	long
D. Olmsted	long
Winnecke	small or average
W. C. Bond	average
Kant	long
La Place	average
Lord Rosse	large
Heis	long
Argelander	average
B. A. Gould	long
Schönfeld	average
Bessel	long
C. A. F. Peters	small
Brünnow	average
Glydén	very large
Struve	average
Dawes	average
Doppler	long
Secchi	average
Henry Draper	average or small
J. Herschel	long
R. A. Proctor	average
Lamont	average
Huygens	average

There are 34 with large or long, 17 with average, and five with short or small noses. The large or long noses are more numerous than the other two grades added together. This was confirmed by the independent judgment of

another person, the check figures being 31-22-3.

		CHECK OPINION			Totals
		Large or Long	Average	Small or short	
Own Opinion	Large or Long	26	8		34
	Average	5	12		17
	Small or Short		2	3	5
	Totals	31	22	3	56

The correlation between the two independent judgments is shown in the squares above. There are 26 instances in which the nose seemed large or long to both observers, twelve cases in which it seemed average to both, and three cases in which it seemed small or short to both. It will be noticed that there are no cases in which a nose was judged large or long by one, and small or short by another. The scattering instances of slight disagreement in classification are shown in the figures 5, 8 and 2. To physical anthropologists accustomed to measuring shapes of heads with accurate instruments (brachycephaly, etc.) the idea of measuring the features of the face by general impressions may seem unsatisfactory; but it appears from the data presented in this article that such a method is capable of yielding orderly and consistent results. If this method can be used in physiognomy it means that rapid progress can be made towards at least first approximations in evaluating the relationships that do exist, as well as in demonstrating those which do not.

While it is easy to measure head-forms among large numbers of the general population, it is not so easy, with instruments, to measure the size of the nose in proportion to the size of the

face, or measure the proportions of the various features to each other,—mouth, eyes, upper lip, chin, etc. Furthermore, if we wish to study the faces of “great men” it is more difficult still to go about the world capturing “great men” and measuring their noses. There are never many really great men alive at any one time, but there have been a good many men in the world’s history acknowledged as great, and these have nearly always left their portraits behind them. So if there is any way of using these painted records, abundant material is placed at once at our disposal. Also we have the modern photographs of recent and living men, who are among the most eminent of their time. These can be compared with groups of men a little less eminent, and the latter with other groups less eminent still, until the true average or mediocre class is reached.

The second random test happened to be taken from a work called “Orators of England” edited by Guy C. Lee, (2 vols., Putnam, 1902). These appear to me to be classifiable as follows:

R. B. Sheridan	<i>Nose</i>
Francis Bacon	average
Sir John Eliot	large
Thomas Wentworth	long
Oliver Cromwell	average
Sir Henry Vane	large
Heneage Finch	long
Robert Walpole	large
W. Pitt (Chatham)	average
Earl of Mansfield	long
E. Burke	long
W. Pitt, Jr.	average
Charles James Fox	large
Macaulay	average
Lord Erskine	long
Canning	long
Sir James Mackintosh	small
Sir Robert Peel	long
Lord Brougham	large
Lord Lytton	long
Disraeli	long
Gladstone (at 69)	large
Gladstone (at 31)	large

This is a list of very famous men indeed. At least thirteen of the twenty-two are so famous as to have been heard of by all educated English speak-

ing people, and that means a very great distinction, as there are probably not as many as three hundred persons in the whole world’s history whose fame is great enough to meet that test.<sup>1</sup> R. B. Sheridan, Francis Bacon, Cromwell, Walpole, Chatham, Burke, W. Pitt, Jr., Charles James Fox, Macaulay, Peel, Lytton, Disraeli, and Gladstone are the thirteen whom I presume would mean at least something to every educated English or American person.

My own estimate shows, out of a total of twenty-two, sixteen with noses large or long, five average, and one small or short. The check opinion gives 15, 7, 0, and is confirmatory. The large or long are twice as numerous as the other two grades.

The next test is taken from Vols. 5, 8, 9 and 10 of the same work: “Orators of Modern Europe” and “Orators of America.” The lists follow.

“Orators of Modern Europe,” Edited by Guy C. Lee. N. Y. and London—1902. (Putnam):

Lamartine	<i>Nose</i>
Mirabeau	long
Vergniaud	average
Robespierre	small
Danton	average
Bonaparte	average
Chateaubriand	long or average
Kossuth	average
Mazzini	long
Gambetta	large

“Orators of America,” 1910. 3 vols., Edited by Guy C. Lee:

Hamilton	<i>Nose</i>
James Otis	long
John Dickinson	average
John Hancock	long
Patrick Henry	average
Edmund Randolph	long
Samuel Adams	average
John Witherspoon	large
George Washington	long
Henry Lee	large
Daniel Webster	average
John Q. Adams	large
Fisher Ames	long
Thomas Jefferson	long
William Wirt	long

<sup>1</sup> Statement based on experience in presenting lists of famous men to groups of friends and acquaintances.

Henry Clay	large
William Pickering	large
John Randolph	average
Thomas Benton	large
John C. Calhoun	average
Edward Everett	average
Rufus Choate	long
Charles Sumner	long
Stephen A. Douglas	average
Wendell Phillips	long
W. H. Seward	large
Robert Tooms	average
Jefferson Davis	average
Abraham Lincoln	large
Alexander H. Stephens	average

Here the ratios are 23 long or large, 16 average, and one small or short. The check opinion is 22-17-1. The names are not quite so eminent as those from England and the ratios of long and large against the other two are not quite so weighty; but the figures are not large enough for this to be worth more than a suggestion. One thing these tests demonstrate is that the method itself is sound. They show that two persons can look over a series of portraits and (without one knowing what the other has done) receive very similar impressions.

The next test is taken from nineteen portraits of modern American "captains of industry." All but about two of these are well known to everyone.

"Millionaires and Kings of Industry" by J. Burnley, 1901.

	<i>Nose</i>	
A. Carnegie	large	photo
J. D. Rockefeller	average	engraving
P. D. Armour	small	engraving
W. A. Clark	long	photo
Jay Gould	long	photo
C. M. Schwab	average	photo
C. T. Yerkes	long	photo
J. P. Morgan	large	photo
Sir Hiram Maxim	long	photo
G. M. Pullman	large	drawing
C. R. Flint	small	photo
Thomas Edison	long	photo
W. Cramp	long	engraving
James J. Hill	large	photo
James G. Bennett	large	photo
Claus Spreckels	long	engraving
John Wanamaker	average	drawing
Henry Clews	long	photo
Frederick Pabst	average	photo

It may be noticed that one of those whose nose is adjudged small is certainly not as widely known as nearly all the others.

The ratios are thirteen large or long, four average, and two short or small. The check opinion gives 11-7-1. This collection is interesting as exemplifying more modern processes of representation. It is difficult to say just where these men should be rated in comparison with the astronomers, orators and statesmen given in the foregoing tests; but it does not matter for the purposes at hand. They are certainly a representative group and, as far as their own fields are concerned (practical invention, organization and business enterprise), they are very much more eminent than the thousands of others in the same fields who are what may be called "successful" or "distinguished." They are certainly very widely known and "famous" in the dictionary sense of the word. Whether they are more meritorious than others not so widely known, or whether they are really more intellectual or not, may be a matter of debate. But if we can show that the lesser sort of men in their own department of activity have, on the average, noses less large than they, it is indicative of *something*. It cannot be mere chance.

"Who's Who in America" has been much used in sociological studies. Such a list, containing as it does about 20,000 names, gives an average eminence well above mediocrity yet well below "celebrity," "world-eminence," "greatness" or whatever word is chosen for your one man in a million or more. There are no portraits in "Who's Who in America," but the Canadian Who's Who, which bears the title "Who's Who and Why," is replete with portraits. As the total population of Canada is only about seven millions and this book is about half as large as the American "Who's Who," it is fair to say that the standard of inclusion is there lower, but this is rather an advantage than otherwise. The Canadian work contains a very high proportion of the Scotch race, and a good many of French and Irish origin, so that for some purposes it might lead to wrong conclusions, but probably not in this inquiry. An ex-

amination of these and other portraits has confirmed the supposition quite definitely that men of moderate distinction do not as frequently as very great men possess noses that are strikingly large or long. All the portraits under the initials A, B and C have been classified, as in the three accompanying tables, and it can be seen that they confirm each other, so that it does not appear necessary to carry the investigation into D, E, F, etc. The effect of picking out the surnames that are not strictly Anglo-Saxon in origin and dealing only with the Anglo-Saxon does not alter the conclusion. In the table for the totals, letters A, B, C, we see the distributions: first opinion, 52-167-45, second or check opinion, 74-151-39. These become for strictly Anglo-Saxon names, 34-109-26, and 51-93-25. The weights are all in favor of the large or long, first number, as against small or short, third number; but the first number is never equal to the sum of the other two, as was the case among the "great men."

A glance at the Chart (Fig. 7) shows two types of lines. All those pointing upward at the center, making a sort of roof-like, or mountainous structure, depict the percentages of the three classifications from the Canadian Who's Who, letters A, B and C. The continuous lines are from opinion No. 1; the dotted lines from opinion

		CHECK OPINION			
Own Opinion		Large or Long	Average	Small or short	Totals
	Large or Long	8	2		10
	Average	8	17	3	28
	Small or Short		1	3	4
	Totals	16	20	6	42

LETTER A

		CHECK OPINION			
Own Opinion		Large or Long	Average	Small or Short	Totals
	Large or Long	17	9		26
	Average	16	56	9	81
	Small or Short		13	13	26
	Totals	33	78	22	133

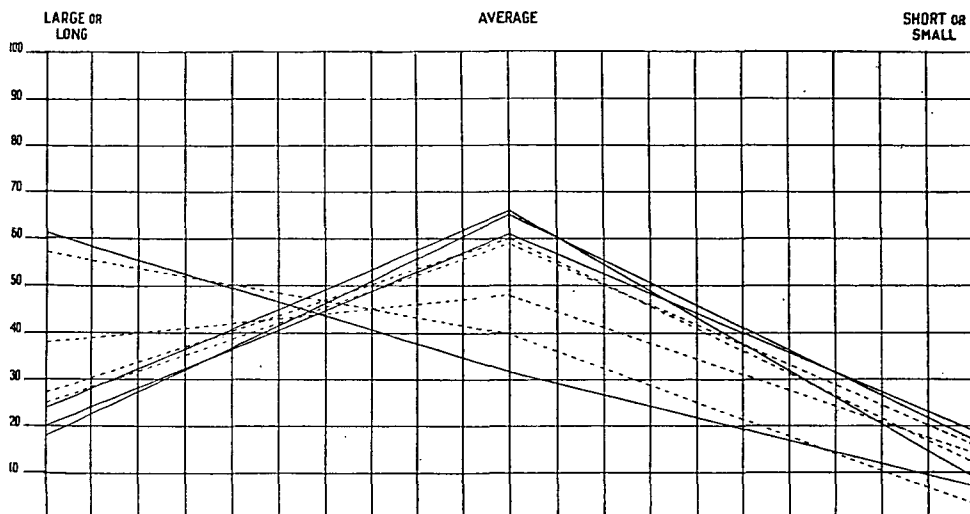
LETTER B

		CHECK OPINION			
Own Opinion		Large or Long	Average	Small or Short	Totals
	Large or Long	14	2		16
	Average	10	42	6	58
	Small or Short	1	9	5	15
	Totals	25	53	11	89

LETTER C

		CHECK OPINION			
Own Opinion		Large or Long	Average	Small or Short	Totals
	Large or Long	39	13		52
	Average	34	115	18	167
	Small or Short	1	23	21	45
	Totals	74	151	39	264

TOTAL LETTERS A, B, C  
in Canadian "Who's Who."



RELATION OF FAME TO NOSE SIZES

The two lines which slope downward from left to right show the distribution of nose sizes among the so-called "great men" of history. The lines that point up in the middle show a different distribution. The latter are adapted from the Canadian "Who's Who." The figures at the left are percentages. (Fig. 7.)

No. 2. The second type of line is like a long sloping roof, high at the left and low at the right. This depicts the percentages from the distribution among the first 147 so called "great men,"—astronomers, mathematicians, orators, statesmen, and great captains of industry. The two opinions agree very closely and give for the "great men" a preponderating weight to the long or large-nosed type—greater than the sum of the other two. The first opinion gives in percentages 61-32-7; the second opinion gives 57-40-3.

Another test was then made by a somewhat different method. The basis of the test was a group of photogravure portraits cut out of current popular magazines. These were taken at random consecutively. All pictures were included, except a very few that were too small or too vague. They were then classified into the three grades. The number of large or long noses came out thirty, the number of average 64; and the number of small or short was ten.

Now which of these three nose groups contained the greatest proportion of eminence? In this instance I have

not put the question of eminence, greatness or intellectual superiority to any strict tests, but have made the test into being widely known or "famous." Out of the first group thirty, "large or long" I submit the following thirteen names as being famous or at least widely known in the United States. They are arranged in the accidental order of their inclusion: Lord Strathcona, Senator Gorman, Brander Matthews, George Randolph Chester, Lord Bryce, Goldwin Smith, Sir William Ramsay, Dr. Morton (Demonstrator of anaesthesia, by ether), Mr. McClure (of *McClure's Magazine*, etc.), Senator La Follette, Senator Quay, G. Marconi, Rudyard Kipling.<sup>2</sup>

Out of the sixty-four in the group of average noses the following are submitted as famous names, or at least widely known in the United States: Gilbert Chesterton, Sir George Darwin, Theodore Roosevelt, A. Lawrence Lowell, Lord Reading, Robert Lansing, Rev. "Billy" Sunday, Joseph Conrad, Mark Hanna, George Harvey, Vilhjálmur Stefansson, George Westinghouse.

Here there are twelve names, but

<sup>2</sup> Kipling is on the border line as to size of nose.



they are out of sixty-four instead of thirteen out of thirty.

I do not print the names of those less well-known. There are seventeen in the group "large or long," and 51 in the central group. It is quite possible, indeed probable that some of those omitted from the famous list should be included; but I am sure that there are not more than seven such in the middle group who would if included raise the number to twenty instead of thirteen. But even with these included, the large-long nosed fraternity would beat the averaged nosed people in point of fame. There are furthermore, on the more liberal basis of what constitutes fame, at least three from the "large-long" group who must be added. There is in the group of ten small nosed men but one single instance of a very famous man. This exception is Lord Lister. Some might call his nose average, but he is placed among the small nosed group, and the benefit of the doubt may be given to an opponent of the present theory.

Another way of testing this problem is to make a list of the very greatest men in all history, in point of fame, and then examine the portraits of as many of them as possible. Here is a partial list. All these are among the most eminent men who have ever lived. There can be no doubt about their fame. Whether they be "great" or not is another matter. For instance people might dispute as to whether Napoleon should or should not be called "great," but no one can dispute the fact that he is eminent in the sense of attracting a tremendous amount of interest, occupying great space in the shelves of libraries, and time in the thoughts of men. These names are part of a list of preëminent men (no longer living) which I am preparing by the objective methods of historiometry. There is no bias in it one way or another towards this test, so it does not matter just how the list is being made.

#### LARGE NOSES OR LONG NOSES:

Descartes, Luther, LaFontaine (Fig. 4), Fenelon, Paschal (Fig. 4), Cuvier (Fig. 4), Renan, Ampere, Tasso, Meyerbeer, Newton, Van Dyck, Copernicus, de Musset, Goethe, Liszt, Heine, Pasteur, Colbert, John Fox, Calvin, Titian, Tintoreto, Aritino, Lamartine, Gerson, Helmholtz, Kepler, Kant, J. Herschal, F. Bacon, Cromwell, Pitt the Elder, Burke, C. J. Fox, Peel, Disraeli, Gladstone, Gambetta, Alexander Hamilton, Washington, Webster, Thomas Jefferson, Lincoln, Pasteur, L'Hospital (Fig. 4), Hayden.

#### AVERAGES NOSES:

W. Herschel, La Place, Pitt the younger, Macaulay, Bonaparte (or long), Kossuth. Bismark, Hugo, Brantôme, Mozart, Wolsey, Lafayette, Voltaire<sup>3</sup> (Fig. 4), Dumas, Moliere, Beethoven, Turenne, Racine, Byron, Robespierre, Cavour, Franklin, Thiers, Fulton, James Cook (Fig. 4), Gluck, Corneille, Arago (Fig. 4).

#### SMALL OR SHORT NOSES:

Murillo, Danton, Lister, Boileau (Fig. 4), Beranger, Talleyrand (Fig. 4).

This list is merely a fragmentary one, but the great preponderance of the first group over the sum of the other two makes it highly confirmatory of all the previous tests.

Still another test was made from some entirely different data where classifications according to intellect had already been made for an entirely different purpose. My publication "Heredity in Royalty" 1906 contains sixty portraits of adult males suitable for inclusion in the present research. These were graded for intellect in a scale of ten, ten being the highest and one the lowest. Those from seven to ten are, in the combined opinions of historians, superior to those in five and six, which in turn may be called the average types of royalty, and are superior to those in grades one to four. A test made by classifying these por-

<sup>3</sup> Some portraits make Voltaire's nose long, see illustration.

traits according to three grades of size of nose does show a slight relationship, in conformity with the other results here given, but the correlation is a small one (about  $r = .10$ ) and the probable error necessarily large, since the total number of cases is small, being only sixty-nine. The distribution is forty large or long noses, twenty-four average and five small or short. It has always been my impression from the time I first formed a collection of engravings and photographs of royalty, some fifteen or twenty years ago, that their noses were longer than the average. A long nose, a prominent under jaw, a finely modeled mouth, "cupid brow" as it is called, thick in the center and pointed or dimpled in the corners, eyes rather near together and nose delicate at the top, the whole face long and narrow, constitute the general facial characteristics of this special breed.

The distribution of nose-sizes given above bears out, as far as this one point is concerned, a hitherto vague and immeasured impression, and if the noses of royalty are larger or longer than those of the middle and lower classes it confirms, as far as it goes, my contention made in "The Influence of Monarchs" (1913) that royalty as a group taken through the ages has been distinctly superior in natural intellectual capacity to the average of their subjects.

#### WHAT CONSTITUTES THE "AVERAGE MAN"

This leads to a discussion of what constitutes the "average man"; and before taking up the question of the size, shape and significance of the nose of the average man, it is absolutely necessary to pause, and ponder on some hitherto but little recognized facts.

Clerks, salaried men, school teachers, small-town doctors and lawyers, farmers and shopkeepers are often spoken of as forming the middle class; but these people really do not belong to the *middle* class in the sense of representing the average or most numerous class in the community. They are

really considerably above the middle or average, which, in the social scale, is occupied by that vastly more numerous class, the laboring class. These alone, if all the skilled and unskilled artisans be included and added to the number of strictly unskilled laborers, make a total so great as necessarily to establish the average. This "average man" whom until recently we were wont to regard as something very fine, we now know, thanks to the army tests, and other mental age tests, to really possess an intellect of about the mental age of a full grown boy. The mental age of fourteen is as high as the average man climbs.

The reason why we should expect more, is interesting to consider. It is probably not gained from the opinions of people whose business in life is to employ and direct labor. Their conversations on this point are not complimentary. Complaints are always heard of their difficulties in finding such qualities as ambition, mental energy, and efficiency. Yet the average man believes that the "average man" is "just about all right" or "quite the proper thing." The truth of it is that the printed or spoken expression "average man" conveys a imaginary ideal that is entirely at variance with reality.

This is partly due to the influence of the newspapers. They cater to the general public, and consequently tend to create an idealized and mythical being who really scarcely exists. This imaginary man, who is supposed to be so frequently seen, but really is so rare, is given form and color in our imagination, not only every day through the press, in the writings of reporters and editors, but the multitudinous sign advertisements that greet the willing or unwilling eye at every turn tend to implant forever in the memory the well balanced type of countenance. Whether our ideal citizen be seated at his breakfast table ordering his patent breakfast food with his pretty wife and nice children, or putting on collars or underwear, he is

always a finely proportioned being both in face and figure, so here, there, and everywhere, the delusion is conveyed and multiplied that the good looking man is the average man. This is not at all true, and one way to prove it is simply to look at people *separately*, one after another, and do a little mental arithmetic.

By taking a number of photographs of people in precisely the same position and over-imposing one upon another, the well known composite photograph is made. But the typical or usual human being is not a composite. Very few people look at all like a composite photograph. Each taken separately varies, more or less, some in one feature, and some in another. Everyone looks different from everyone else, as everyone knows; but how many people have ever thought how astonishingly variable the faces of the people one passes on the street really are? Most people do not look at each face separately, but if every single face is scrutinized separately and mentally recorded, the truth of this general variability, in other words, general ugliness, becomes obvious. This can be done on a not too crowded thoroughfare, in a trolley car, or railway station. The present writer has whiled away many an hour in this lazy, but not unprofitable occupation of looking at people separately, instead of collectively. One of the best opportunities in the world for seeing what the average man really looks like comes once a year on Labor Day, when, for anthropological instruction, men are selected, classified and labeled. Let anyone of intelligence, education, and maturity stand on the curbstone as a Labor Day parade swings by, and look at each single face with an idea of mentally adding up the total number of faces that approximate the composite face of the idealized working man—such a face for instance as one sees in drawings marked Labor. Sometimes he is shaking hands with conventionalized Capital, always a stout gentleman in silk hat, and for-

merly with side-whiskers. Sometimes he is quarreling with said stout gentleman, in which case neither party is a subject for flattery from the artist's pencil, but the true standard figure, the one that remains in the mind, is always the idealized or composite, not the true or usual.

To test this, let the reader turn to the first popular magazine at hand and go through the advertisements or illustrations. The present writer did this after writing the above sentence, and the accompanying cut (Fig. 5) was the first one found. It shows the point very well. Here we have a well balanced and rather attractive face<sup>4</sup> the nose average or slightly long, straight, well formed and thoroughly in harmony with the other features. The second and third pictures found are also reproduced (Fig. 6). They are the two symbolic figures of labor illustrating an article on the conditions of labor. Naturally these are idealized and rendered attractive, almost refined in expression. They are here placed face to face and the rest of the picture is omitted.<sup>4</sup>

Of course, it cannot be said that faces like this do not occasionally exist in the world of reality, but they are certainly rare. Their rarity can only be appreciated by one who seeks to find them either on the street or at some other spot where genuinely average men can be seen in numbers.

The person who searches for facial beauty in crowds, either of men or women, will, according to his standards, probably find one face in from ten to twenty, not that will satisfy, for that is another story, but that will conform to standard proportions. In other words more than nine-tenths of the faces one passes on the street have some feature radically wrong. It may be the nose, it may be the mouth, lips, chin, etc. The reason for dwelling on all this is, that there is a sort of paradoxical statement true of the face of the average man. In one way his features are average in another way not. The forty Canadian soldiers (Figs. 8-10)

<sup>4</sup> All three pictures are from Hearst's International Monthly.



#### CANADIAN SOLDIERS

The soldiers in this and the two following illustrations were photographed by a well-known Canadian photographer while they were on their way overseas. They naturally came from all over Canada, and are representative men. The pictures were selected at random from a very large collection, and out of a group of forty-one, those shown above have been adjudged by the classifiers to have one of the frequent attributes of mental superiority—a nose longer or larger than the average. If, therefore, any reader sees his own picture here towards the head of the list, he cannot take offense! (Fig. 8.)

show this variation, although they are doubtless selected for physical fitness.

Let us limit our discussion to the nose, by way of illustration. If we examine a large number of faces, or

photographs of the truly average class, say wage-earners who in 1913 earned about two to three dollars a day, and in 1919 about five or ten, we will find a very great variation in shapes and

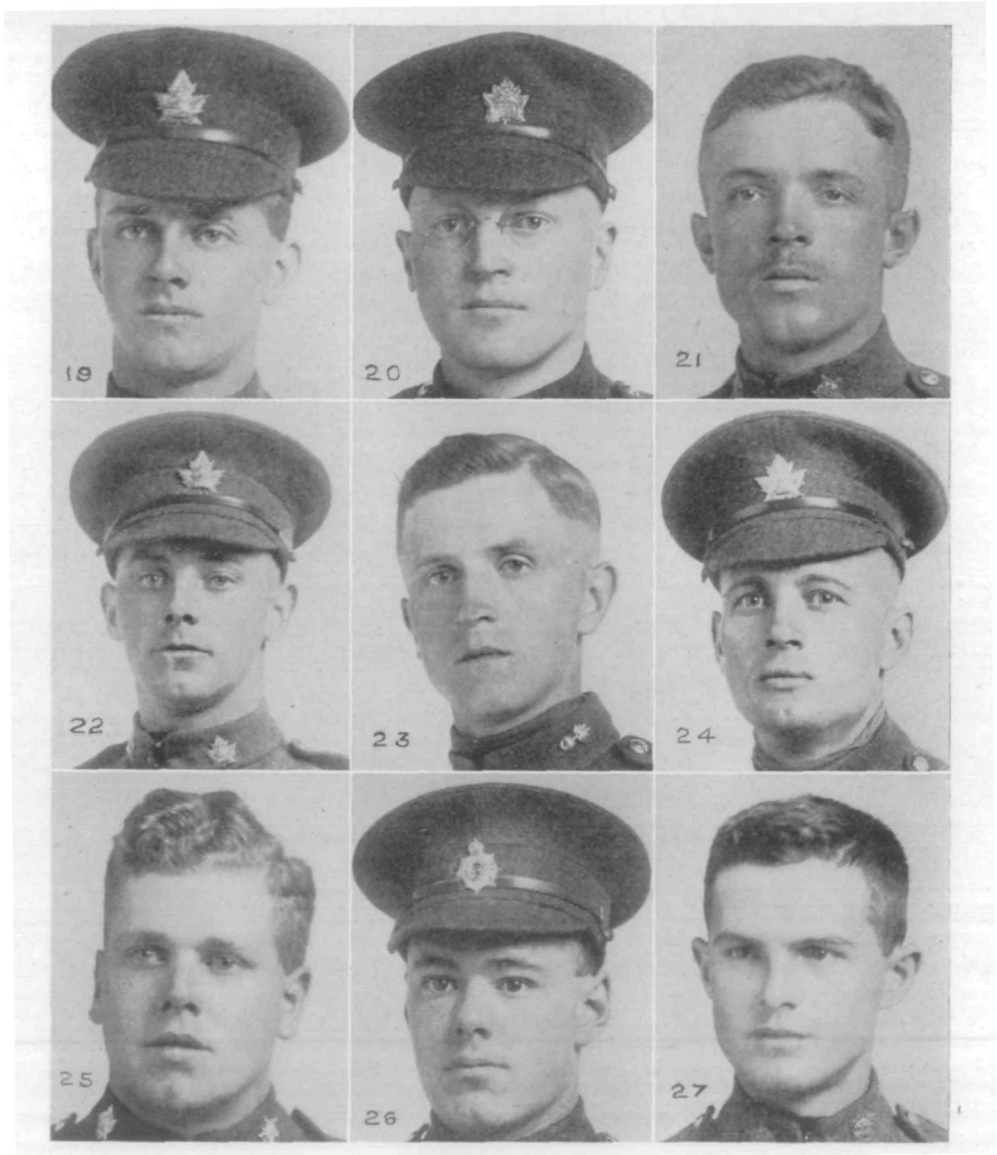


#### AVERAGED SIZED NOSES

These pictures (1-27, Figs. 8, 9, 10) are arranged in the order of the sizes of their noses according to the combined opinions of ten different people. Only the first seven were adjudged long or large. (Fig. 9.)

proportions of the features. But if we classify the noses alone, by the method of general impressions, into three grades, just as we have done for the celebrated, famous and distinguished, we find the large or long-nosed variety comparatively rare, somewhat rarer than the small or short, and much rarer than the average.

The first random test made on the first material available happened to be on a group of faces or employees in a large department store in Montreal (Scroggie's, 1914). Out of thirty-five men, middle aged and young, five appeared to belong in the large or long group, twenty in the middle, and ten in the small or short. The inde-



#### AVERAGED SIZED NOSES

These photographs and those on the preceding pages were taken at random to get a comparative idea of the average nose of the average man. But these were picked men who enlisted in the early years of the war and many are decidedly above the true average. Numbers 28 to 40 of the small or short nosed group are not here reproduced. (Fig. 10.)

pendent check opinion gave three, thirty, two. These persons it must be remembered are somewhat above the true median class of society.

The second test was also made on men probably slightly above the average. This has been developed into a

series of check tests and merits detailed description. J. E. Livernois, Ltd., one of the oldest photographic firms in Canada, took a very large number of photographs of enlisted men, in the early years of the war, without charging any fee for the sittings, and with the

privilege of reproducing and distributing to newspapers and magazines. Of this large collection I ordered forty chosen at random by Mr. Livernois. I told him I wished to make a study of faces but did not tell him of any theories that I had in mind, or of any of the tests. He took these pictures from his collection one after another, just as it happened to be easy for him to find a negative, and have it printed, therefore the forty Canadian soldiers ought to be a good random sample. They came from all parts of Canada, and were on their way overseas. The forty proved to be forty-one, as one accidental duplicate got included, which was not discovered until after some of the tests were made; but this has been allowed to remain in the collection, as it is amusing to see how often people put the same face in two different classifications.

Ten persons, some more or less expert in the art of judging faces, or trained in habits of scientific observation, have classified these forty-one pictures putting long *or* large noses in one pile, short *or* small in another, and reserving the middle pile for all those that did not strike the eye as belonging in either of the two outer groups. No observer was aware of the classification of any other observer, as the record marks were placed on the backs of the photographs.

These tests show that whereas there is considerable variation as to individual pictures selected for the three grades, the proportions in the end are sufficiently uniform to satisfy the purpose at hand.

Even for the individual pictures selected, there is good and significant correlation between the judgments of any two observers. Roughly these correlations are about  $r = .20$  to  $r = .50$ .<sup>5</sup>

Here are three specimens, in the accompanying squares, of my own first classification compared with the first three other independent judgments.

		OPINION OF A. E. W.			
		Large or Long	Average	Small or Short	
Own Opinion	Large or Long	3	2	1	6
	Average	7	8	9	24
	Small or Short		4	7	11
		10	14	17	

$$r = .39$$

		OPINION OF W. W. C.			
		Large or Long	Average	Small or Short	
Own Opinion	Large or Long	3	3		6
	Average		19	5	24
	Small or Short		6	5	11
		3	28	10	

$$r = .35$$

		CHECK OPINION			
		Large Long	Average	Small Short	
Own Opinion	Large Long	5	0	1	6
	Average	7	11	6	24
	Small Short		6	5	11
		12	17	12	

$$r = .42$$

<sup>5</sup> Method of rough approximation, given by Yule, Phil. Trans. A. CXCV, 257-319.

These are better than the correlation for the two independent judgments regarding the portraits in the Canadian "Who's Who." There it was  $r = .29$  approximately. If the same observer is asked to classify the same material a second time, or a third time after several intervening days, these correlations (between his own successive judgments) will be high, even though he has forgotten the individual faces.

I found my own classifications correlated  $r = .62$  between a first test and a second test taken several weeks afterwards, and  $r = .60$  between the second tests and a third taken a few days later. The first and second classifications made by Mr. A. E. Wiggam gave an approximate correlation of  $r = .75$  and the second and third  $r = .81$ . In time, anyone's two judgments would give a correlation approaching perfection, or  $r = 1.00$ , but that would come about only as one grew acquainted with the faces and remembered where they were put before.

All these correlations have an importance to the science of physiognomy, not because of their accuracy (for they are only rough first approximations) but because they prove that the method of visual judgments may be sometimes successfully employed.

Here the chief interest lies in the fact that every one of the ten observers agreed in making the total number of large or long nosed Canadian soldiers a small number, compared to the sum of other two groups. The figures below show the opinions of the observers.

Twenty-seven of these pictures are here reproduced (Figs. 8-10), they are arranged in the order of the sizes of their noses, according to the combined and averaged opinions of the observers. Four pictures in the middle grade have been omitted merely for convenience in representation on the pages of this journal, and the nine at the extreme end of the small or short nosed group have also been omitted so that no one could possibly take any personal offense at the utilization of this material.

	Large or Long	Average	Short or Small
F. A. W.	6	24	11
A. E. Wiggam.....	10	14	17
W. W. Churchill.... Portrait Painter	3	28	10
E. K.	12	17	12
Mrs. Wiggam.....	5	9	27
M. T.	6	21	14
D. Fairchild.....	9	27	5
O. Olson.....	14	18	9
Mrs. Pearl.....	2	12	27
R. Pearl.....	4	17	20
Totals.....	71	187	152
A. E. W. 2nd Test	5	13	23
A. E. W. 3rd Test	10	15	16
M. T. 2nd Test	8	24	9
F. A. W. 2nd Test	7	16	18
F. A. W. 3rd Test.....	6	24	11

The totals 71-187-152 give, when reckoned as percentages of the grand total, 17.3—45.6—37.1. The inclusion of the five repeated observations does not alter the result even as much as one per cent, and is therefore omitted.

The distribution from the group of Montreal department store employees was 5-20-10 or 3-30-2 with a total 8—50—12. This if in percents is 11.4—71.4—17.1, or in other words the middle group is the largest, and the small or short is next; just as was the result from the combined tests on the Canadian soldiers. The average of these two sets of tests on "average men" is 14—59—27.

Subsequently some tests were made on the photographs in Harvard "Class



Albums" to see if the results would fit with those already obtained, and also to see if there is any marked tendency for the nose to enlarge with age. The data are not sufficient to answer the latter question but it appears that the changes with advancing age are merely in the nature of a greater variability. Probably in some, the nose continues to grow, in others the rest of the face becomes heavy in comparison with the nose. The Canadian soldiers were comparatively young, probably about the age of college graduates. The Harvard photographs, being from a presumably higher selected social and intellectual group in the community, ought to show a higher percentage of large—long and a lower percentage of short—small than the enlisted men from Canada.

From the Harvard Class Album of 1920 I made the ratios 9—34—19 on the first 60. Mr. Wiggam's independent estimate was 29—21—10. The two combined give 38—55—29.

I then went through Report VII of the Class of 1886. Here photographs are given of the students at the time of graduation, and also pictures taken twenty-five years later. I examined the first sixty examples, first the young graduates in turn, covering up with a slip of paper, all the adults, and then repeated the process concealing the youthful likenesses and concentrating on the adults. In this way one can measure a double error. If the nose did not change in proportion to the rest of the face, and if one's judgment were perfect, one ought to pick exactly the same individuals for the three classes ( $r = 1.00$ ). Even using the same identical photographs, one's second judgment is not identical with one's first. The correlation is, as above stated, about  $r = .60$  to  $r = .80$ . As the correlation which I obtained for the Class of '86 was  $r = .39$  approximately, and that for the Class of '87  $r = .38$  approximately, it would seem that there is a good deal of change in the proportions of the features, but nevertheless there is enough constancy to yield a significant correlation, even

after allowing for necessary errors in judgment.

The two squares below show that all figures, from the Harvard tests, fit in about where they should for persons mentally above the level of the "average man" but below the level of the "great man."

		ADULTS AGED ABOUT 47			
		Large or Long	Average	Small or Short	
Students	Large or Long	10	4	1	15
	Average	10	21	6	37
	Small or Short		4	4	8
Totals		20	29	11	

Class of 1886  
 $r = .39$  approx.

		ADULTS AGED ABOUT 47			
		Large or Long	Average	Small or Short	Totals
Students	Large or Long	8	6		14
	Average	4	31	5	40
	Small or Short		2	4	6
Totals		12	39	9	

Class of 1887.  
 $r = .38$  approx.

#### HEREDITY AND PHYSIOGNOMY

All this "counting noses" is not without significance for the science of heredity. Great men, famous men, eminent men, distinguished men, successful men, high average men,—using these terms as a descending series of grades towards mediocrity, are all to a certain extent the product of outward circumstances as well as inward forces predetermined in the germ-cells. It

is usually difficult to prove that any mental or moral peculiarities found in groups of persons selected for study are really due to inherent or germ-cell differences. Most of the alleged evidence on this score is entirely without significance, since it can be turned in one direction as well as another. This is the case even in Galton's famous work "Hereditary Genius," though not in his study of twins. It is the case with Odin's oft quoted work, and with the Jonathan Edwards family, and most of the material contained in the notorious degenerate families, "Jukes," etc. The environmentalists have not been slow in seeing this point.

If, as appears probable, each grade of mental superiority is associated with a little larger facial trait, such as the nose, it is at least difficult to see how favorable home environment, good education, or a good run of luck, could make a man's nose larger.

The growth of the face is like the growth of all parts of the body, controlled to a great extent by internal secretion. We do not know much as yet about the actions of these secretions on growth, but one thing however is quite certain, and that is that no matter how important the glands of internal secretion may be, these glands, in their growth and activity must, *under ordinary conditions*, be themselves

determined by heredity. The common facts of every day experience prove it. How else can it be that Chinese look like Chinese and Negroes like Negroes. Not only do the facts of racial resemblance prove that the growth controlling force must be in the chromosomes (since the male can influence it as much as the female) but the common facts of family resemblance prove that smaller facial peculiarities are also highly hereditary, and finally the identity of the facial growths of identical twins caps the climax.<sup>6</sup>

#### CONCLUSION

So, in conclusion, it seems safe to say that here in the size of the nose is one point where a beginning may be made for a future science of physiognomy. The majority of great men have large or long noses, the remainder nearly always have noses of at least average size. Although many mediocre or inferior people have large or long noses, men of measurable intellectual superiority do (statistically) have noses somewhat larger or longer than the average size. The exception only proves the rule. Only very rarely do we find a great man with a distinctly small or short nose.

Furthermore, each supposedly higher and higher intellectual group is found to be associated with greater and greater nose-measurement.

<sup>6</sup> See JOURNAL OF HEREDITY, "Twin Number," December, 1919.

THE EUGENIC PROSPECT: National and Racial, by C. W. Saleeby. New York, Dodd, Mead & Co., 1921, pp. 239.

One knows what to expect in picking up a new volume by Dr. Saleeby, and this one does not disappoint. It shows the fluency, warm-hearted enthusiasm, the lack of documentation, the emphasis on the ego, and the all-embracing definition of eugenics, that have marked its predecessors. The volume is made up of a number of somewhat disconnected essays, which might have been written for periodical circulation. There is no index. Eugen-

ics, as understood in America, is sometimes conspicuous only by its absence. The smoke nuisance, tuberculosis, dietetics, and health centres receive the chief emphasis. One of the most interesting features of the book is the reference to Americans conditions,—an outgrowth of two visits to the United States by Dr. Saleeby in recent years. It is of course gratifying to national vanity to find that he regards us, and our fellow-continentals the Canadians, as years ahead of Great Britain in almost everything that has to do with racial betterment.—P. P.