

Heredity. — "*Hereditary phenomena in family-portraits.*" By Dr.
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(Communicated at the meeting of September 27, 1924).

Among the family-portraits in my parental home I remember since my early youth a small picture, representing an elderly lady clad in a huge widows-cap. As I was told by my father it was the portrait of SUZANNA WEVERINGH, my great-grandmother, or more correctly expressed, one of my four great-grandmothers. I did not pay much attention to this painting, till an artist, who had taken a photo of it, remarked that he saw in it a striking likeness to my own face. This assertion was confirmed by all persons confronted with the portrait, and by comparing the photo of the picture with one of my own face, I could convince myself of its truth. That this likeness had never before been remarked by any one, must probably be explained by the very plausible supposition that it had gradually augmented in the course of my life, and so had only now become striking, after I had reached the same age as SUZANNA WEVERINGH when she was painted.

Some time afterwards, Jhr. Mr. Dr. E. A. VAN BERESTEYN kindly placed at my disposal a collection of 46 portrait-drawings, evidently made in the seventeenth century by a rather poor draughtsman, after family-pictures belonging to a group of seventeen interallied families. That such was the origin of this collection, I could prove for four of these drawings, as I became aware that one pair represented copies of oil-paintings in my own house, and another one had been taken from a couple of family-pictures that I found in the gallery of one of my relatives. As these four pictures were marked with the names of the people they represented, I could satisfy myself about the correctness of the names on the banderoles under the drawings, and felt justified in supposing the same to be the case with the rest of them. So I concluded that I had got before my eyes the effigies of no less than 29 of my direct forefathers, and of eleven other members of my ancestry, only six belonging to sidebranches which were not in blood-relationship with myself.

Among these direct ancestors was a picture of a clergyman, called

JUSTUS VAN DEN BOOGAERT, a calvinistic preacher living from 1623—1663 at Naarden and Utrecht, and belonging to the eighth parentation ¹⁾).

Once again a casual remark of an uninfluenced spectator directed my attention to the similarity between my face and that of JUSTUS VAN DEN BOOGAERT. That such a similarity really exists, I venture to conclude from the result of a little experiment, in which I invited different people to make an independent choice from the full collection of my family-portraits (now already amounting to more than a hundred), of those that according to their opinion showed the greatest likeness with myself. The larger majority of these unprepared and impartial spectators placed JUSTUS VAN DEN BOOGAERT and SUZANNA WEVERINGH at the top of their list.

Now, when tracing in my ancestral tree the relation in which I stood to these two ancestors, it turned out, that the line of descent between JUSTUS VAN DEN BOOGAERT and myself passed through SUZANNA WEVERINGH. Moreover it became evident, that, thanks to the above-mentioned portrait-album, I had the disposal of the portraits of the four intermediate generations, which all proved to be of the female sex, as may be seen from the following pedigree :

8 th	parentation	JUSTUS VAN DEN BOOGAERT and CATH. BROUWERS.
7 th	„	ANNA CATHARINA v. d. BOOGAERT and BERNARD DE MOOR.
6 th	„	ANNA CATHARINA DE MOOR and JAN VAN ROYEN.
5 th	„	JUSTINA CLARA VAN ROYEN and HENDRIK VERBEECK.
4 th	„	JACOBA ELISABETH VERBEECK and MAARTEN WEVERINGH.
3 rd	„	SUZANNA WEVERINGH and PIETER PAMA DE KEMPENAER.
2 nd	„	ANTOINETTE ADRIANA DE KEMPENAER and JAN FRANS VAN BEMMELEN.
1 st	„	JACOB MAARTEN VAN BEMMELEN and MARIA BOEKE.

As to portraits, the only missing links in this chain of ancestors are CATHARINA BROUWERS and JUSTINA CLARA VAN ROYEN, but I am in possession of the portraits of no less than three sisters of the latter, which all show a remarkable resemblance to one another, but have no feature in common either with JUSTUS VAN DEN BOOGAERT or with SUZANNA WEVERINGH. The origin of this family-type of the sisters

¹⁾ I have made the proposition to indicate the successive generations of ancestors by the theoretical number of their members. According to this method I call JUSTUS VAN DEN BOOGAERT my 256-father.

By an English friend and colleague, who had the kindness to correct my translation of the Dutch original, my attention was called to the fact that parentation and filiation are not habitual English expressions, but nevertheless will be understood by English scholars of genetics.

VAN ROYEN I consider to be able to trace through the paternal ancestry, as I am acquainted with the portraits of no less than eight members of that line:

CORNELIS I VAN ROYEN and PETRONELLA VAN BLANKENDAEL.

NICOLAAS VAN ROYEN and ANNA VAN SOLINGEN.

CORNELIS II VAN ROYEN and JOHANNA DE ST. GILLES.

JAN VAN ROYEN and ANNA CATHARINA DE MOOR.

From these portraits it becomes evident, that it is JOHANNA DE ST. GILLES who has imprinted her type on her descendents.

Moreover the abovenamed album (which probably has been drawn by a member of the VAN ROYEN-family, and so may be called "album-VAN ROYEN") contains the portrait of JUSTUS VAN DEN BOOGAERT's father, called GILLES, and married to CORNELIA VERSPREET, but also this does not show any striking resemblance to his son.

From these facts I conclude that the familiar type of facial features is handed down from parent to child for an undefined number of generations, without however manifestating itself in each succeeding filiation. So the repetition of the type occurs in leaps, and the number of intervening generations between each pair of manifestations cannot be predicted beforehand. It therefore becomes evident, that the type is hereditarily handed down by parents, who carried it genotypically, but did not themselves show it phenotypically.

In itself this assertion contains nothing strange or unexpected; it only teaches us that family-likeness follows the same rules as other hereditary features, mental as well as physical. My intention in this communication is simply to draw attention to the importance of portrait-studies for the knowledge of hereditary phenomena in man. An inevitable preliminary condition for this study is to get acquainted with the stock of portraits still existing. That this knowledge is far from satisfying or in any way complete, I need not specially insist upon; the majority of people possessing family-pictures are not at all or at least not correctly informed about the names of the persons represented, and many paintings have been combined in pairs, and framed anew, only to form nice decorative couples, without any regard to their real relation. Still worse are the conditions in the era of photography; the overwhelming majority of photo's are not provided with names, and consequently soon become unrecognizable. It may therefore be asserted without the least exaggeration, that nowadays the whole world becomes photographed, but no scientific result of any importance whatever comes out of this immense iconographic material of the species *Homo sapiens*.

Still one more ancestral portrait in the album-VAN ROYEN drew my particular attention: that of CLARA CLAESDOCHTER COLIJN, as so many persons, who joined in the above-mentioned experiment, placed it on their list of ancestors showing a special likeness to myself. The line of blood between this ancestor in the 10th parentation (1024-mother) and myself was again found to pass through SUZANNA WEVERINGH, and moreover to join the line of descent from JUSTUS VAN DEN BOOGAERT in the person of his granddaughter ANNA CATHARINA DE MOOR. This is seen from the following pedigree:

CLARA CLAESDOCHTER COLIJN and ROMBOUT JACOBSZ.

CATHARINA JACOBSZ. and ROCHUS VAN CAPELLE.

CLARA VAN CAPELLE and BERNARD I DE MOOR.

BERNARD II DE MOOR and ANNA CATHARINA VAN DEN BOOGAERT.

ANNA CATHARINA DE MOOR and JAN VAN ROYEN.

Just as in the previous case, I have at my disposal the portraits of all these persons, with only one exception: CATHARINA JACOBSZ., and so I have been able to convince myself, that none of them (with the exception of ANNA CATHARINA VAN DEN BOOGAERT) showed any special similarity with the person at the top (CLARA COLIJN), whom according to the impartial evidence of many independent judges, I resemble in features, though she shares her contribution to my procreation with 1023 others.

At first sight this observation might seem to stand in contradiction to the theory of saltatory repetition of family-type, as it might be thought illogical to suppose that SUZANNA WEVERINGH did inherit her type at the same time along the line of descent from JUSTUS VAN DEN BOOGAERT and along that from CLARA COLIJN. But a moment's reflection teaches us, that such a double or even multiple derivation of the same hereditary features is by no means impossible or improbable, but on the contrary will occur pretty often.

Why indeed should it be necessary to suppose that the family-type in question started with JUSTUS VAN DEN BOOGAERT in the seventeenth century? Is it not much more probable, that the same repetition of type, which, judging from the portraits occurred twice in the lapse of time from 1623 to 1760, had manifested itself an unlimited number of times in foregoing periods, each time skipping an indefinite number of generations? Nor is it in the least probable that in each case this reappearance of type remained restricted to one single person, and that all these manifestations of the type should be concentrated in the line running through JUSTUS VAN DEN BOOGAERT — SUZANNA WEVERINGH. On the contrary, it seems much

more likely that this type repeatedly became manifest in a number of different but interrelated families, living in the same town or at least in the same neighbourhood. This opinion agrees well with the fact that CLARA COLIJN and her husband ROMBOUT JACOBSZ., as well as GILLES VAN DEN BOOGAERT and his wife CORNELIA VERSPREET, were inhabitants of Antwerp, and belonged to the prosperous merchant-guild, the same being the case with the family DE MOOR. All these families, and many others, that were interrelated with them and with each other, emigrated to Holland in consequence of the troubles and persecutions in the days of the insurrection against Spain.

Undoubtedly they may have imported a certain number of family-types, which they carried in their hereditary material. May be ANNA CATHARINA DE MOOR had obtained a double dose of one of these types, along the lines of both her parents: viz. the type that had become manifest both in her grandfather JUSTUS VAN DEN BOOGAERT and in her great-great-grandmother CLARA COLIJN. It remains to be explained why notwithstanding this double inheritance, the type in question did not once more become manifest before the third generation in descent from ANNA C. DE MOOR, namely in SUZANNA WEVERINGH.

As the starting-point for our consideration we can best refer to the condition at the end of the sixteenth century, which we may imagine to have consisted of a rather large circle of interrelated families, that for centuries continually intermarried, but from time to time begat individual members, who carried the family-types to other Flemish and Dutch towns and even to foreign countries. At the said period this hereditary disposition probably was already rather complicated, but by no means reached the complexity, that arose during the seventeenth century, when numerous Flemish, Brabantic, Walonic and French exiles gradually mixed up with the autochthonic inhabitants to the North of the Rhine-delta.

Now supposing this hypothesis about the saltatory repetition of family-types to be well-founded, it necessarily follows that this type should reappear periodically and therefore also contemporaneously in different persons, whose mutual forefathers rank so high up in their pedigrees, that these bearers of the same type are themselves quite unaware of the existence of blood-relation between them, and consequently consider this similarity as an inexplicable and accidental trick of pure chance.

In short: by the saltatory repetition of family-type a natural explanation might be given of the mysterious but undeniable fact of the "second-self".

A priori there seems to be no plausible reason to consider the occurrence of the second-self as an isolated and independent phenomenon, in need of a special explanation. For the similarity, that so often shows itself between members of the older and younger generations of the same family, cannot reasonably be supposed to be of another character than that which sometimes is seen to exist between two or more descendents of the same remote ancestor. Yet this distinction is very readily made by the greater majority of people. When a person shows a striking likeness to a male ancestor, say e.g. that one of his great-grandfathers, with whom he shares the family-name, nobody will hesitate a moment to ascribe that similarity to blood-relationship. But when the same kind of similarity shows itself between two descendents of that same great-grandfather, who can therefore be relatives in the 9th degree, and may differ not only in family-name, but also in all sorts of other features, even in nationality, and be quite unaware of the existence of any blood-relation between them, this phenomenon awakes sensations of astonishment and even awe, and is ascribed to the influence of accident, which only means that no reasonable explanation is deemed possible.

Though therefore the theoretical explanation of the phenomenon of "second-self" as a consequence of blood-relationship seems clear and simple, yet the reconstruction of the concrete proof in each single case of similarity between apparently quite unrelated persons is of course studded with difficulties. In the first place the overwhelming majority of people are completely unacquainted with their higher ancestry; often they do not even know the family-name of their maternal grandmother. So when we want to compare the pedigrees of two persons, who do not appear to be in any way related, we are met with the difficulty that the chances are very much against our obtaining on two lines of descent the evidence of mutual ancestral relationships. But even when we succeed in discovering one or more mutual ancestors, there is no need whatever to suppose, that the type in common should exactly be derived from this ancestor, and as long as we do not discover a portrait of him, the solution of this question will remain impossible. Even if the portrait should really be found, the chance exists, that the common forefather shows features different from those of his descendents, and yet has handed down to them their family-type, which he carried hidden among many others in his genotypical predisposition.

On the other hand we may safely assume, that as soon as it proves possible to trace the pedigrees of a set of two (or more)

persons that show a striking similarity, (say e.g. up till the tenth generation), we will in most cases undoubtedly meet with forefathers in common. This can be expressed shortly by the assertion: All men are blood-relations, in every kind of degree and in many different manners. The relation may be of a very simple character, but also of the highest complication. As it cannot be told beforehand, what will prove the case in each special instance, it seems fairly hopeless to undertake such an investigation concerning the pedigrees of two or more second-selves, and still more to try to collect as many portraits as possible of their ancestors. Even for one single pedigree the search for family-portraits is next to impossible, at least for the private student. I am therefore fully convinced, that the only way to extract any scientific results about the heredity of family-types from what is left us of the likenesses of our forefathers, will be to get them all photographed, and so make them accessible for comparative investigation. As this material is scattered over the whole civilized world, and for the greater part is not provided with the names of the persons represented, it seems very doubtful that such a collection of the iconographic material of Europa and America could ever be brought together. But assuredly mere codification, without reproduction by photography, could only be of very slight use for the study of family-likeness by means of portraits.

Yet the private investigator need not remain inactive, as he can try to apply his hypothesis to a few well-defined cases. For this endeavour he may find encouragement in the consideration, that the above-mentioned check to the discovery of the common forefather of the family-type, hopeless as it may apparently look, can be seen really to contain a strong support for it. Should namely the supposition that an unlimited number of family-types independent of one another, may be hidden in the hereditary material of each person, prove true, then the demonstration of the probability of the above-named hypothesis is considerably simplified. It may be restricted to an elucidation of the question at issue:

Do those ancestors that, according to existing portraits, have strongly influenced the type of one member of a set of closely-resembling persons, also occur in the pedigree of the other member?

I consider that I am able to produce evidence concerning this restricted deduction in a case of resemblance between three gentlemen, which I noticed at a moment, when I was still quite unaware of their mutual relationship. It was in the library of the Dutch Society for Genealogy and Heraldry, called „De Nederlandsche Leeuw”, that I first got sight of the portrait of the well-known

Dutch genealogist Mr. W. J. Baron d'ABLAING VAN GIESSENBURG. The portrait immediately reminded me of my uncle Mr. P. VAN BEMMELEN, but at the same time vividly impressed me by its likeness to the late statesman Jhr. Mr. A. F. DE SAVORNIN LOHMAN. These gentlemen were contemporaries, and as the latter two belonged to families, whose pedigrees might probably be investigated with good chance of success, I resolved to make an attempt. Yet, as a matter of fact, such an effort can never lead to a complete pedigree, even when the number of generations is restricted to ten. And even with this restriction we can safely predict, that in any case a certain number of ancestral quarterings in common to both families will be found. To go up still higher than the 10th generation will of course only prove possible for a very few families, mostly belonging to royalty or the higher nobility, but in those exceptional cases we may be perfectly assured that we shall find alliances in common. That this is inevitable may be understood by the following consideration:

Mankind of to-day is the product of foregoing generations. Theoretically the number of ancestors of each individual increases at the rate of multiples of two, which in a period of ten centuries, corresponding to thirty generations, leads to a theoretical number of 2^{30} forefathers and -mothers. Such a number will probably already surpass the number of men, capable of existence in those days over the entire habitable surface of the earth, but in any case it greatly exceeds the number of inhabitants of western Europe, that lived there about the year 900, and practically form the ancestors of our nation. This becomes the more stringent, when we take into consideration that only a certain part of the population in those days as well as in others can have contributed to the procreation of posterity, a great number remaining excluded from propagation, by all kinds of reasons: untimely death, illness, coelibacy, sterility etc. So the number of people fit for begetting issue must have been so restricted, that practically all of them must have participated in the procreation of every separate member of the present generation of Europe and America. In other words: every man of the generation of Anno 900, who got children, is the forefather of every white man of to-day.

That this assertion is true, can of course never be proved rigorously and only made probable for a few historical figures of those remote days, e. g. Charles the Great (Charlemagne), but we may safely infer, that it may as well be applicable to all his contemporaries.

In itself the possession of common ancestors therefore implies nothing strange, on the contrary, I have been rather astonished, that

in the case of DE SAVORNIN LOHMAN their number came out to be so low, not only in connection with VAN BEMMELEN, but as well, and even more so with D'ABLAING VAN GIESSENBURG. Notwithstanding that, I succeeded in tracing a few quarterings in common to all three, and in one case to ascend to a mutual forefather. I was greatly surprised and pleased to find, that a few of these quarterings led to the same circle of families at Antwerp, which I mentioned before, and in the case of D'ABLAING VAN GIESSENBURG even to the family JACOBSZ., to which belonged the husband of CLARA COLIJN.

Though I did not succeed in finding either the name COLIJN, or that of VAN DEN BOOGAERT, among the ancestors of both D'ABLAING VAN GIESSENBURG and DE SAVORNIN LOHMAN, I don't think that this must be considered as a serious obstacle against my hypothesis. For we must never forget, that JUSTUS VAN DEN BOOGAERT may as well have obtained his face and complexion from his mother CORNELIA VERSPREET, as from his father GILLES, and that the mother of this CORNELIA, also named CORNELIA, was a daughter of the family BRUYNSEELS, that probably stood in blood-relationship along many different lines with the remaining merchant-families of Antwerp, mentioned in this paper.

When we look at the question from this point of view, we clearly conceive how unscientific it would be only to attach value to a name. Yet names are the last thing left, in tracing family-relations, when all other indications fail, and so it is clear that exact genealogical studies must form the foundation of every investigation of family-resemblance.

It need not be specially mentioned, that we should not restrict ourselves to the external features, but may and even must extend these investigations to all bodily and mental characters, and so try to make as complete a reconstruction of our ancestors as possible. Especially on the latter field we can often still obtain important results, even when all indications about the material personality fail. By the study of his mental inheritance in publications and letters, and even by the graphological analysis of his manuscripts, as well as by the knowledge of his rôle in public and private life, we may obtain a good insight into the character and the remaining mental disposition of many a forefather, or, when not of himself, at least of his nearest bloodrelations. When we take into consideration, that undoubtedly in many cases an intimate connection exists between bodily and mental features, we may be led to more or less probable conceptions about the former by the study of the latter. From this point of view it may prove of interest, that Mr. P. VAN BEMMELEN,

who undoubtedly had inherited his external features from his grandmother SUZANNA WEVERINGH, had probably obtained his juristic predisposition not only from her side, but as well from his grandfather PIETER PAMA DE KEMPENAER. He shared this legal ability with his uncle Mr. JACOBUS MATTHEUS DE KEMPENAER. In this respect it is assuredly remarkable, that also his second-selves, Mr. D'ABLAING VAN GIESSENBURG and Mr. DE SAVORNIN LOHMAN, have distinguished themselves in the realms of the law.

The two brothers of P. VAN BEMMELEN, JACOB MAARTEN SR. and ADRIAAN ANTHONY, did not possess such a striking similarity to SUZANNA WEVERINGH, and showed no juristic disposition, but were naturalists. But by the issue of the former of these two, it becomes at least probable that also JACOB MAARTEN VAN BEMMELEN SR. carried in his hereditary material not only the facial type of his maternal grandmother, but also the juridical predisposition of both his maternal grandparents. Taking this aspect of the question, it might prove of interest, that the pedigrees of these three personalities: D'ABLAING VAN GIESSENBURG, DE SAVORNIN LOHMAN and VAN BEMMELEN, have led me to an ancestor common to all three of them: AEM VAN DER BURCH, a member of the well-known municipal family of Delft, now extinct (according to the popular conception of this word). This man lived about 1400, and had a daughter BAERTE, who married GERRIT GERRITZ. BENNINGH, the founder of the well-known patrician family BENNINGH or BANNING of Amsterdam. This alliance led to the families D'ABLAING and VAN BEMMELEN, in both cases along two different paths.

Furthermore he had a son HENDRIK, who married AEGHT HART VAN DER WOERT and had a daughter HADEWICH, who married twice, first with WILLEM ALBRECHTSZ. PIJNSSSEN VAN DER AA, which union led to ancestors of Mr. D'ABLAING VAN GIESSENBURG and Mr. DE SAVORNIN LOHMAN, and a second time with REYER DIRCKSZ. VAN HEEMSKERCK, which made her a female ancestor of the issue of the couple DE KEMPENAER-WEVERINGH, on both paternal and maternal lines of descent.

But still further we find that out of the second marriage of HADEWICH VAN DER BURCH there issued a grand-daughter called ELSJE VAN HEEMSKERCK, who, by marrying HUYG CORNELISZON DE GROOT, became the grandmother (on the fathers' side) of the famous HUGO DE GROOT. So perhaps it might be suggested, that the accurate investigation of the complete progeny of AEM VAN DER BURCH could furnish us with arguments, that proportionately it contained a greater number of members with juridical predisposition than other similar families, accessible for statistical supervision. The number of these

descendents must needs amount to several thousands, and the investigation therefore will prove exceedingly laborious and difficult, but on the other hand it is fairly certain, that only by the comparison of very large numbers of persons in a long series of generations it will be possible to exclude the influence of numerous external circumstances (such as habit, tradition, social and religious tendencies) which have no direct connection with heredity.

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