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THE EDWARDSES AND THE JUKESSES

BY CLARENCE DARROW

This is what little Edwards are made of,
Little Edwards are made of;
Sugar and spice and everything nice;
This is what little Edwards are made of.

This is what little Jukes are made of,
Little Jukes are made of;
Nails and snails and puppy-dog tails;
This is what little Jukes are made of.

MOST of the evidence on which the eugenists rest their case has come from the study of animals whose love affairs have been controlled and dictated in the interest of science. On the basis of these observations, made on rats, dogs, horses and what not, a large number of people have been convinced that the human race would be stronger and better if its production were controlled by taking thought, rather than by leaving the matter of future generations to the system of pot luck which exists in nature. There has recently come to my attention a book by Mr. Albert Wiggam, entitled, "The Fruit of the Family Tree," which may very well serve the purpose of illustrating what has come to be a rather popular point of view. This book is written in a readable manner. The style is lucid, and the author has adopted some striking methods of stating his propositions. Listen to this lyrical outburst on the possible accomplishments of scientific breeding:

Finally, then, we see, actually and literally, that from dogs to kings, from rats to college presidents, blood always tells. The one central problem of progress, the endless task of statesmanship and education, is, therefore, to bring about those economic conditions, those social, political and educational ideals and opportunities which encourage those of good blood to mate with their own kind and produce good families of children, at least more than are produced by stocks of mediocre blood; and to institute stern measures which will

insure that those of positively bad blood produce no children at all. Such a race of people can easily run on through the vicissitudes of time, creating ideals, building institutions of worth and grandeur, and developing a culture, all of which are simply the outward expressions of the ceaseless energy of noble blood. Such a people and only such can build great civilizations—civilizations that will continue amid happiness and achievement,

"Until the stars grow old
And the earth grows cold
And the books of the Judgment Day unfold."

This is the general thesis of Mr. Wiggam's book. It can be summed up in the words at the end of the first sentence I have quoted: "blood always tells." The thing which interests me about the book (beside the author's poetry) is that, like every other eugenist since the days when Dugdale first wrote his little classic on the Jukes family, Mr. Wiggam brings in, as part of the evidence to prove his case, the old story of the Jukeses and the Edwardses. This tale, from much retelling, is now familiar to every student of eugenics and even to the man in the street. It concerns, as you will recall, the surprising adventures of the progeny of one Max Jukes (the villain) and one Jonathan Edwards (the hero), both pursued by a relentless fate (the germ-plasm).

Now, while I am perfectly willing to admit with the eugenists that blood always tells, I have never been quite clear about just *what* it tells. Let us, then, see what it has to tell about the Edwardses and the Jukeses.

II

As a rule, the eugenists treat the Edwards family as if the stock began with the celebrated divine, Jonathan. The popular idea

would seem to be that Jonathan was sent down from heaven, as it were, to originate a new line and demonstrate the potency of the germ-plasm. In common with many others, I have been considerably impressed, as I have read the books on eugenics, by the array of learning shown in the discussion of the Edwards family, but always there seemed to be something lacking. I was thus not satisfied, and determined to go a step further. After much investigation and deep thinking, I discovered that Jonathan Edwards had ancestors. In fact, he had a father and a mother, grandfathers and grandmothers—an ancestry running back to Adam, or in that general vicinity. Of course, the records of most of this ancestry have been lost in the mists that hang over all the past, but at least one can go a little way in tracing back his line.

Jonathan Edwards' father was Timothy Edwards, a New England preacher, whose glory has been dimmed if not totally eclipsed by his son's. His mother was Esther Stoddard, of whom little is known except that she was the mother of Jonathan. He was one of eleven children. All the rest were girls. This being the case, the family name as well as the immaculate germ-plasm has been carried down through history by Jonathan himself. Timothy Edwards was in turn the son of Richard Edwards, an obscure New England merchant, and of one Elizabeth Tuttle. Timothy was the second of the seven offspring of this fateful couple.

The eugenists stubbornly stick to the Edwards tree and the Edwards name in tracing the output of this remarkable family. Still, even some of the eugenists make it fairly plain that the Edwards family had little to do with the prodigies that followed in the wake of Jonathan. As we shall see, the "tilt toward greatness" in his line was given by Elizabeth Tuttle, his grandmother. Elizabeth Tuttle was not an Edwards, save that she took her husband's name. The important question then becomes: who and what was Elizabeth Tuttle? First, let us hear from the invaluable Mr. Wiggam on the subject:

Elizabeth Tuttle was a marvelous girl. Nearly three hundred years ago at Hartford, Connecticut, she married Richard Edwards, a great lawyer. They had one son and four daughters. They have all left their mark upon American blood. And when anything marks a nation's blood, it marks for weal or woe its ideals, institutions and history * * *

I note in passing, by way of comment on the general possible accuracy of statements of this sort, that the official genealogy of the Edwards family, prepared by Mr. William Edwards and published in 1903, gives the number of children from this mating as seven, instead of four, and says that Richard Edwards was not a "great lawyer" but a merchant. Furthermore, I am unable to find anything about this Richard Edwards in the encyclopedias, so that, even supposing that he actually was a lawyer, it is not likely that his greatness is to be measured with the same stick as that of a Romilly, an Erskine, an Everts, or an Elihu Root. But let that pass. If Elizabeth Tuttle, "this marvelous girl," was the founder of a new dynasty that "marked the nation's blood for weal or woe," it would have been only fair to her memory, to say nothing about the new science of eugenics, for Mr. Wiggam to have given more facts about her character and her family. In all justice it should be said that he is not the only one at fault in this respect. A number of other books on eugenics give the same meager account. However, Mr. Charles Benedict Davenport of the Carnegie Institute of Washington, who is really the outstanding exponent of eugenics in this country, has fortunately given us more information. His book, "Heredity in Relation to Eugenics," was published in 1911; Mr. Wiggam's, by the way, was published in 1924. Is it possible that Mr. Wiggam could have overlooked the following statement by so eminent an authority as Mr. Davenport?

From two English parents, sire at least remotely descended from royalty, was born in Massachusetts Elizabeth Tuttle. She developed into a woman of great beauty, of tall and commanding appearance, striking carriage, "of strong will, extreme intellectual vigor, of mental grasp akin to rapacity, attracting not by a few magnetic traits" but repelling when she evinced an extraordinary deficiency of moral sense.

On November 19, 1667, she married Richard Edwards of Hartford, Connecticut, a lawyer of high repute and great erudition. Like his wife he was very tall, and as they both walked the Hartford streets their appearance invited the eyes and the admiration of all. In 1691 Mr. Edwards was divorced from his wife on the ground of her adultery and other immoralities. The evil trait was in the blood, for one of her sisters murdered her own son, and a brother murdered his own sister.

In view of the fact that in the discussion of the Jukes family (as we shall see later) a great deal of emphasis is laid upon the criminal records and immorality of some of its members, it would seem that the family taking its origin from Elizabeth should have received a little more attention at its source. Probably most of the eugenists who believe that the human race should be tinkered with by way of improving on nature would have then united in the opinion that the line should have ended before it began.

That it is really a Tuttle line and not an Edwards line is not a matter of dispute. Mr. Davenport goes on to say that "after his divorce Richard Edwards remarried and had five sons and a daughter by Mary Talcott, a mediocre woman, average in talent and character and ordinary in appearance. None of Mary Talcott's progeny rose above mediocrity and their descendants gained no abiding reputation." This is quite a slam at Mary, but as she has been dead for 250 years she probably won't mind.

In passing, I may remark on the doubtful chivalry of attributing to her the obvious inferiority of Richard Edwards, which manifested itself so plainly after he married her. Still this may be admissible in the cause of science. It is obvious, however, that her descendants by Richard Edwards were as much Edwardses as those coming from Richard and Elizabeth Tuttle. Yet, unfortunately, for the argument in favor of the potency of the Edwards germ-plasm, this second batch of Edwardses "never rose above mediocrity."

So much for the not altogether savoury beginning of the Edwards line. But let us

be generous and put to one side the unpleasant fact that it began to the tune of "adultery and other immoralities," with overtones of murder, soricide, and infanticide. Let us look at the great Jonathan himself. Nothing of startling import showed in the line before the birth of Jonathan. If we forget her "frailties," certainly the fact that Elizabeth Tuttle "was remotely descended from royalty" (whatever that may mean) added nothing to the luster of the Edwards name, especially as the authorities fail to mention the specific royalty or any evidence therefor. What of this Jonathan Edwards, then? Was he really a great man?

III

At the time of his birth at Windsor, Connecticut, in 1703, there were probably not more than half a million people in America. Most of these lived along the eastern border and largely in New England. No doubt all all of them came over in the *Mayflower*. It was in this group of New England Puritans that Jonathan Edwards gained some fame in his day. He was a metaphysician, a preacher, and the president of a college. He wrote an elaborate essay on free will which probably not one out of ten thousand of the present generation has ever read. This discourse was based mainly on his weird theology. He had read Locke's celebrated treatise on "The Human Understanding," but he had never read Hobbes, who was one of the greatest Englishmen of his time and who had written profoundly on this subject. Neither had he read the works of David Hume. However, he did read Hume after the publication of his own book. Such was his open mindedness and scientific zeal that of Hume he wrote: "I am glad of an opportunity to read such corrupt books, especially when written by a man of considerable genius, that I may have an idea of the notions which prevail in our country."

But the real fame of Jonathan Edwards came to him as a preacher. He was a Fundamentalist, stern and unyielding. He was filled with religious zeal and ardor and

never suffered a doubt to lodge in his brain. At the early age of seventeen he wrote: "I seemed to be convinced and fully satisfied as to this sovereignty of God, and His justice in thus eternally disposing of men, according to His sovereign pleasure; but never could give an account of how or by what means I was convinced, nor in the least imagine at the time, nor a long time after, that there was any extraordinary influence of God's spirit in it."

The boy's strange conviction bore its full fruit in his ministrations as a preacher. He delighted in defending the most cruel dogmas and doctrines. He seemed to take joy in the thought of eternal hell for the wicked. Some of the titles of his numerous sermons show the ferocious nature of his religion: "Future Punishment of the Wicked"; "Wrath Upon the Wicked to the Uttermost"; a series entitled "Man Naturally God's Enemies"; "The Misery of Unbelievers"; "A Warning to Professors"; "Of Endless Punishment." Or take, for example, these two titles from his essays: "The Great Christian Doctrine of Original Sin Defended" and "The Justice of God in the Damnation of Sinners." But his greatest effort, prototype of all the rest, was "Sinners in the Hands of an Angry God." Listen to him preaching the religion of the gentle Nazarene:

They [sinners] deserve to be cast into hell; so that divine justice never stands in the way; it makes no objections against God using His power at any moment to destroy them. The sword of divine justice is every moment brandished over their heads, and it is nothing but the hand of arbitrary mercy, and God's mere will, that holds it back.

They are now the objects of that very same anger and wrath of God that is expressed in the torments of hell; and the reason that they do not go down to hell at each moment is not because God, in whose power they are, is not then very angry with them; as angry as He is with many of those miserable creatures that He is now tormenting in hell. Yea, God is a great deal more angry with great numbers that are now on earth; yea, doubtless with many that are now in this congregation, than He is with many of those who are now in the flames of hell.

So that it is not because God is unmindful of their wickedness and does not resent it that He does not let loose His Hand and cut them off. The wrath of God burns against them; their damnation does not slumber; the pit is pre-

pared; the fire made ready; the furnace is now hot; ready to receive them; the flames rage and glow. The glittering sword is whet and held over them, and the pit hath opened her mouth under them.

The God that holds you over the pit of hell, much as one holds a spider over the fire, abhors you, and is dreadfully provoked; His wrath towards you burns like fire; He looks upon you as worthy of nothing else but to be cast into the fire; He is of purer eyes than to bear to have you in His sight; you are ten thousand times more abominable in His eyes than the most hateful and venomous serpent is in ours. And yet it is nothing but His hand that holds you from falling into the fire at every moment; it is ascribed to nothing else that you did not go to hell the last night; that you were suffered to awake again in this world, and there is no reason to be given, why you have not dropped into hell since you arose in the morning, but that God's hand has held you up; there is no other reason to be given why you have not gone to hell since you have sat here in the house of God provoking His pure eyes by your sinful, wicked manner of attending his solemn worship; yea, there is nothing else that is to be given as a reason why you do not this very moment drop down to hell.

O Sinner! consider the fearful danger you are in; it is a great furnace of wrath, a wide and bottomless pit, full of the fire of wrath, that you are held over in the hand of that God whose wrath is provoked and incensed as much against you as against many of the damned in hell: you hang by a slender thread, with the flames of divine wrath flashing about it, and ready every moment to singe it and burn it asunder.

Consider this, you who are here present, that yet remain in an unregenerate state. That God will execute the fierceness of His anger implies that He will inflict wrath without any pity.

The effect of this and other tirades from the pulpit on the minds of the meek and gentle New Englanders was terrible, even ghastly. One account tells us that the "congregations were convulsed with agony. . . . As they groaned and wept, another minister sitting in the pulpit cried out, 'Mr. Edwards! Mr. Edwards! is not God also merciful?'" What the great spokesman of God replied, we are not told. Another account from one who was present on the occasion, is as follows:

I think a person of keen moral sensibility, alone at night, reading this awful discourse, would well nigh go crazy. He would hear the judgment trump, see the advancing hosts of heaven, and feel the day of doom as it began to mantle him with its shroud. And that is exactly what some of his audience felt, for they actually seized hold of the pillars and braces of the meeting-house as if that very moment their sliding feet were precipitating them into the yawning gulf of ruin

below. Many groaned and shrieked so convulsively that their outcry of distress completely drowned the speaker's voice and compelled him to pause and ask for silence that he might go on. Mr. Edwards' sermons have been described as a sort of moral inquisition where sinners were put upon argumentative racks and beneath screws, and with an awful revolution of a great truth in hand, evenly and steadily screwed down and crushed.

This great progenitor of a strong and righteous line, this carrier of a potent germ-plasm to regenerate the race, was a lover of children. In the name of his Master who said, "Suffer little children to come unto Me," he talked of infant depravity in such language as this: "As innocent as young children seem to be to us, yet if they are out of Christ they are not in God's sight, but are young vipers, and infinitely more hateful than vipers; and are in most miserable condition as well as grown persons; and they are naturally very senseless and stupid, 'being born as the wild ass's colt' and need much to awaken them."

But enough. . . . Even cold and Puritan New Englanders could not stand this man of God. They drove him from his church for his hard and ruthless theology. True, he afterwards became president of Princeton College for a short time. But God had need of him and soon called him to his final reward. Let us leave Jonathan resting in the bosom of Abraham and pass on to a consideration of his illustrious descendants.

IV

Here, again, we must be on our guard against the blandishments of the eugenists. It will not do for us to assume out of hand that all the twigs on this family-tree are free from worm-holes. The eugenists do not tell us just how many descendants have sprung from the loins of Jonathan. However, knowing something about the begetting powers of Timothy and Richard, not to mention Jonathan, and assuming with the eugenists that the virility and potency of the Edwards germ-plasm has been passed on in undiminished vigor, we may do a little figuring for ourselves.

Jonathan, it will be remembered, was born in 1703. This was a little more than 200 years ago. If we count thirty years to a generation this means that we are now six or seven generations removed from the founder of this noble line. However, as we have already seen, it was not Jonathan who was the real founder, but Elizabeth Tuttle. This means that we are nine generations removed. Now, we know that Elizabeth had seven children by Richard Edwards, one of whom was Timothy. But Richard had six more children by poor little Mary Talcott, making his total score thirteen. Timothy Edwards, in turn, had eleven children, one of whom, Jonathan, is the hero of our romance. Jonathan, in his turn, had five children. (This all happened before the Malthusian law had been thought of). In order to be fair, let us assume that the first three generations had only four children each who lived to have children of their own begetting (instead of the actual figures given above), and that thereafter, on down to the present generation, each member of the family bore three children, each of which lived long enough to preserve and carry down the precious Edwards germ-plasm.

Theoretically, then, the descendants of Elizabeth Tuttle, living and dead, should number approximately 90,000 individuals. This assumes that there have been no intermarriages in the family. (Which, of course, there have been, and with God knows whom else, mayhap even with the despised Jukeses! But, more of this in a moment). To be perfectly safe, let us cut the figure to less than half. Let us take 40,000. We may then assume that, by the law of chances, half of the 40,000 descendants from Elizabeth were females. This means that about twenty thousand new names have been brought into the Edwards line. Now, it is also obvious that with every marriage, both male and female, new blood has been brought into the Edwards stream of inheritance, and that in figuring out the laws of heredity attention should be given to the female line as well as to the male. Some-

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thing like this has been done by the eugenists. An examination of the list of names given as descendants in the Edwards line reveals the fact that they have grabbed a name of more or less importance wherever they could find it. Davenport quotes fifteen names of the "famous" ones in this line, only two of which are Edwardses. One of these is Jonathan himself and the other his son, who lived near enough to Jonathan "to get talked about." The parade of notables is as follows:

Jonathan Edwards,
Jonathan Edwards, Jr.
Timothy Dwight,
Sereno Edwards Dwight,
Theodore Dwight Woolsey,
Sarah Reeve,
Daniel Tyler,
Timothy Dwight,
Theodore William Dwight,
Henrietta Frances Merrill,
Edward Gates,
Catherine Maria Sedgwick,
Charles Sedgwick Minot,
Winston Churchill.

It might be fair to assume that the fairly well-known family of Dwight, which appears four times in this list, contributed some blood of its own. And this is exclusive of Theodore Dwight Woolsey, who possibly also had something to do with the precious blood that is traced in this genealogy.

If one is interested in knowing how really great are the individuals represented by this list of names, one may apply a rough and ready test by consulting any encyclopedia—and finding what small space is given to most of them, when they are mentioned at all. Another author adds to the Davenport list the names of Robert Treat Payne, who signed the Declaration of Independence, the Marchioness of Donegal (whoever she was), the Fairbanks brothers, Melville W. Bigelow, Morrison R. Waite, Grover Cleveland, U. S. Grant, and Edith Carow. It might be interesting to ask by what right some of these worthies get fame and shelter under the Edwards tree. For instance, Sarah Reeves is put down as the wife of Tapping Reeves—good enough! Daniel Tyler was a general in the Civil War

and founder of the iron industry in Alabama. Henrietta Frances, wife of Eli Whitney, gets in by "burning the midnight oil by the side of her ingenious husband, helping him to enduring fame." The Fairbanks brothers are mentioned as the "makers of scales." Somewhere I have heard of the Fairbanks scales. Their exact weighing qualities are clearly to be traced to Jonathan Edwards. Melville W. Bigelow is mentioned as a great lawyer. Possibly he was. The Encyclopædia Britannica gives biographies of three or four Bigelows which are much more extensive than his. However, we find it stated that he was a law lecturer at Ann Arbor and wrote and revised some law books. This is certainly enough.

But perhaps the inclusion of the name of Edith Carow in the list is the crowning triumph of the eugenists in tracing the enduring vitality of this family-tree. One eugenist uses this language: "Edith Carow, widow of Theodore Roosevelt and mother of his five sons, one of whom, Quentin, was killed in the air service in France, and the remaining four are starting upon careers of honor and distinction." The public generally has attributed some power to Theodore Roosevelt himself. Who would have suspected that his fame and the prestige of his family were due to the fact that his wife was nine generations removed from Elizabeth Tuttle, and had perhaps one chance in a million of having some of the blood of Jonathan Edwards in her veins?

Another author gives us a grand statistical summary of the "greatness" of the descendants of Elizabeth Tuttle. "The descendants number 12 college presidents, 265 college graduates, 65 college professors, 60 physicians, 100 clergymen, 75 army officers, 60 prominent authors, 100 lawyers, 30 judges, 80 public officers, 3 governors, mayors and State officials, 3 congressmen, 2 United States senators, and 1 Vice President." This adds up to something over 600 out of a possible 40,000. We are not informed about the rest. Probably some of the descendants of Jonathan Edwards have been farmers—poor but honest; perhaps,

some of them have even worked. Possibly some of them have received outdoor or indoor relief. There is even room for a few inmates of jails. Who knows? Perhaps if one looked closely enough and had the facts one might find here and there in the 40,000 a few morons and an imbecile or two. But of all these the eugenists tell us nothing. To be a college graduate is not a great distinction; neither to be a physician, an army officer, a lawyer, a congressman, a governor, a Vice President, or even a President. About the only thing that these figures show is that for some reason a considerable number of the descendants of Elizabeth Tuttle escaped manual toil. But this does not mean that they necessarily had rare intelligence or were men of great parts. Genius cannot be proven by lumping together 265 college graduates.]

It is not possible within the limits of this article to show the utter absurdity of tracing out any given germ-plasm or part thereof for nine generations, or five, or three. Not only does new blood enter at each generation, but to follow the germ-plasm one must go across, as over the squares in a checker board, and take a blind chance at every one of the infinite cross-roads reached. There is probably not one chance in a million that any particular individual in the last generation had any of the "blood" of Elizabeth Tuttle. The amazing thing to me is why anybody of this generation or any other should *want* to be traced to Jonathan Edwards. Why should any eugenist resort to the devious ways that have been used in this genealogy for the purpose of linking even his worst enemies to Jonathan? Who was Jonathan Edwards? Except for his weird and horrible theology, he would have filled no place in American life. His main business in the world was scaring silly women and little children and blaspheming the God he professed to adore. Nothing but a distorted or diseased mind could have produced his "Sinners in the Hands of an Angry God." Nothing but the puritanical, cruel generation in which he lived could have tolerated

it. It is easy to see how a considerable number of college graduates, divines, even judges and bankers of that early day might be nearly or remotely related to him. His fame as a preacher gave him a sort of standing that opened opportunities and places to his kin and descendants that were denied to others of greater abilities. The laws of heredity are infinitely subtle and uncertain. The laws of social heritage are very much easier to understand.

What the eugenists have done here is to commit the most elementary error in logic: "after this, because of this." They have gathered a list of more or less well-known names appearing somewhere in the nine generations following Elizabeth Tuttle and have then assumed that in some way the precious germ-plasm of Elizabeth went into making these names "great." Suppose that some evil-minded person wished to show that Elizabeth Tuttle was the bearer of a defective germ-plasm? Such a person would only have to follow the methods and ape the commendable industry of the eugenists. It would be necessary only to pick out of the forty thousand or more individuals who might possibly have taken their origin from the Tuttle germ-plasm a number of idiots, imbeciles, morons, criminals, paupers and the like, and then lay the whole burden on Elizabeth Tuttle via Jonathan Edwards. This without regard to the endless mixture of the germ-plasm all the way down the line, or to the known effect of the social heritage in determining the life of every individual. If the effect of "good" germ-plasm can be demonstrated in any such crude way as has been used in the case of the Edwards family, then anything can be shown which any writer wants to show.

V

So much for the positive side of the case which has been made out for the "marking of the nation's blood for weal or woe." Let us now turn to the negative proofs. What of the villain in the plot, Max Jukes, and all the little Jukeses? Surely, there can be

no reasonable doubt that they were a bad lot. Well, let us see.

Most of the information about the Jukes family which has been elaborated into volumes by near-scientists and from them carried to the man in the street by enthusiastic uplift workers originated with Richard L. Dugdale. Dugdale made his first announcement regarding this unhappy family in a report to the Prison Association of New York in 1875. He seems to have been a moderate, rather painstaking and careful gatherer of what appeared to him to be the facts. He had little scientific knowledge concerning the laws of heredity, and did not make any such claims for their effects as those that have been so boldly made by the uplifters since his time. In his day, and for many years thereafter, anything like scientific and thorough investigation was not possible. The kindness and charity of Dugdale are shown by the fact that the originator of the line, in so far as lines have an originator, was concealed under the pseudonym of "Max Jukes." In this respect, he was kinder than the biographers of the Edwards line.

The origin of the Jukes family, like the origin of the Edwards family, must necessarily be settled arbitrarily. So we are informed that the father of the clan was born somewhere between 1730 and 1740. He was christened 150 years after his birth and 100 years after his death by the name of Max Jukes. He was born, if not especially created by a just God, somewhere on the borders of some wild and rocky lake in the Adirondacks, a region which was then almost an unknown wilderness. Max is described as "a hunter and fisher, a hard drinker, jolly and companionable, and averse to steady toil." Not so bad. In only one regard does he seem to have been like the Edwards family, *i.e.*, he was averse to steady toil. But this appears to be a common failing of all the sons of Adam: I recognize it in myself.

Max in all other respects was certainly the antithesis to Jonathan Edwards, who was not a hunter and fisher (unless of men),

probably not a hard drinker, and certainly not jolly and companionable. One can't help thinking that most of us would have preferred Max to Jonathan, and possibly in that number, knowing her as we do, we may include Elizabeth Tuttle. We may pass over the rather obvious fact that Max must also have had a father and a mother, and grandparents, and so on back, and that where they came from and when is entirely concealed by the years, as is the genealogy of most of the common people. However, Windsor, Connecticut, which, it will be remembered, was the birthplace of Jonathan, was less than 200 miles away as the crow flies from the five lakes region in the Adirondacks. It is probable that Max's ancestors came from that direction, as they couldn't very well have come from anywhere else. But we will come back to this later. We are further informed that Max worked by spurts and became blind in his old age. The statement is worthy of note. He had many children, two of whom married two out of six sisters. All of these six had the same mother and four bore the same family name. The names of the other two are unknown, which for the eugenists warrants the inference—in this family, at least—that they were illegitimate. Much is obscure after 150 years.

The region in which Max and his family lived is described as the forest-covered margin of five lakes so rocky as to be at some parts inaccessible. In the early days the only work which could be had in those parts was in stone quarries and at lumbering. The Jukeses "lived in log or stone houses, similar to slave-hovels, all ages, sexes, relations and strangers 'bunking' indiscriminately. During the Winter the inmates would lie on the floor strewn with straw or rushes like so many radii to the hearth, the embers of the fire forming a center toward which their feet focused for warmth." In these surroundings, we are told, the Jukeses lived for more than a hundred years. A community of semi-industrious laborers and licentious women developed. The young women of the fami-

lies grew up "comely in appearance and loose in morals." These interesting characteristics naturally attracted the men from a nearby city, even those of so-called good families, and there was brought forth many an illegitimate child, usually named after its supposed father. "As a result one finds among the Jukes some of the most honored names of the region." As is only right and proper in a case of this sort, these names are not given by Mr. Dugdale.

Just as the eugenists have produced for us the panorama of the Edwards family from Elizabeth Tuttle down nine generations with all the high spots in between, so, also, they have painted for us in no uncertain colors the dark history of the Jukes. In the latter picture, however, the high spots are all low spots.

Dugdale studied "709 persons, 540 being of Jukes blood and 169 of X blood who had married into the Jukes family." He estimated that the Jukes family would consist of 1200 persons were it possible to trace all the lines of descent from the original six sisters. As the science of eugenics was then in its infancy, it is not explained how Dugdale knew that 540 were of Jukes blood and 169 of X blood who had married into the family. We can understand how the Jukes *name* might be traced for five or six generations, but we can't understand the evident assurance of the eugenists of their ability to trace out the devious wanderings of the Jukes germ-plasm after 150 years, or even after one new birth. It is obvious that what Dugdale did was to start his investigation with a list of names which he had collected during his connection with various State institutions of New York. He then sought to connect up in a single line all of the paupers, criminals, and whatnot, that he had been able to get records of, and to trace them back to Max Jukes. In the case of the Edwards family the same technique was applied. The biographer starts with a list of "prominent" names and then follows the meanderings of the Edwards germ-plasm back to Elizabeth Tuttle by way of Jonathan Edwards.

Of the cases investigated by Dugdale, we are informed that 180 had either been in the poor-house or received outdoor relief to the extent of 800 years. (This means an average of about 4½ years for each person receiving outdoor relief or living in a poor-house). There had likewise been 140 criminals and offenders. (How many criminals and how many offenders, and what or whom they offended is not clear.) There were 60 habitual thieves, 7 lives sacrificed by murder, 50 common prostitutes, 40 women venereally diseased, contaminating 440 persons, and 30 prosecutions for bastardy—all in a period of 75 years. Of course we have no data to show how many of these were the same people under different headings, but that certain individuals were prostitutes, thieves and likewise received outdoor or indoor relief seems to be fairly clear.

This is the way that the case stood against the Jukes when Dugdale finished his investigation in 1875. But science is untiring in matters of this sort, so in 1916 we find Mr. Arthur A. Estabrook publishing another chapter in the Jukes history under the title: "The Jukes in 1915." Mr. Estabrook took up the study of the Jukes family where Dugdale left off and tried to bring the account down to 1915. In his investigation the total number studied, inclusive of those studied by Dugdale, was 2280. It was not claimed that this was by any means all of Max Jukes' descendants. Like Dugdale, Mr. Estabrook was able to study only those of which he could get records.

Without going into technicalities of method or into any great detail, it may be said that Mr. Estabrook finds that some of the Jukes are still up to their old tricks. They are still a bad lot. They are charged with harlotry (licentiousness), pauperism, syphilis, intemperance, crime, idleness, blindness, insanity, feeble-mindedness, etc. But a careful reading of Mr. Estabrook's report suggests that the uncritical and oversanguine partisans of heredity may have to revise some of their notions. When it comes

right down to an examination of the actual traits which are inherited, we find that neither Dugdale nor Mr. Estabrook is willing to hazard the opinion that the cases of social deficiency appearing in the Jukes family are directly due to heredity. When one ceases to talk in vague generalities about "good and bad blood" and begins to talk about unit determiners and chromosomes (which is the only language that a really scientific biologist can understand) the case against the heredity of the Jukeses begins to assume an entirely different appearance.

VI

Let us take up some of these traits one by one. There is harlotry, for example. Mr. Estabrook practically concedes that the cases of licentiousness in the Jukes family were due more to environmental conditions than to any hereditary determiner. He finally concludes that before tracing this defect to heredity it is necessary to have much more data than can possibly be obtained. So far as harlotry can have any connection with heredity, it must be reduced to terms of abnormal sex impulse. As a matter of fact, I am willing to hold that a better case can be made out against the Edwardses in this respect than against the Jukeses. Consider the career of Elizabeth Tuttle and the potency and fecundity of Richard, Timothy, and Jonathan Edwards!

The amount of pauperism and indoor and outdoor relief figure prominently in all accounts of the Jukes family. This, too, is conceded to be hard to trace to heredity. It may be due to illness or environment, or, as suggested, "the readiness of the old-time politicians to grant outdoor relief to prospective voters."

Mr. Estabrook does not claim any evidence for the inheritance of syphilis in the Jukes family. It seems to be well settled that while syphilis may be contracted in some cases in the mother's womb, it is never inherited in the germ-plasm. If it were so inherited, it would be hard to find anyone free from it. In Dugdale's examina-

tion of 709 persons in the Jukes line he found that 40 women were venerally diseased and that they contaminated 440 persons. How he could get this information after 75 years is difficult to imagine, especially the particular persons contaminated, with the evidence of where they were contaminated, and the name of the right lady. To anyone acquainted with the statistics of venereal diseases it is hardly necessary to suggest that the contamination of 40 women out of 350 at some time in their lives, and, especially in view of the conditions under which the Jukes lived, is a rather low batting average. It would only be taken into account by some eugenist hot on the trail of a Jukes.

As to crime, no biologist would pretend to say that burglary, robbery, arson, or murder are inherited in the germ-plasm. Crime doubtless is found more frequently in weak structures, but, weak or strong, it requires the right sort of environment to make a criminal.

Why idleness is catalogued I am unable to say. I never could bring myself to believe that love of work is a virtue. So far as my experience and observation go, the only reason that any one has for working hard is to fix himself in a situation where he won't need to work. If idleness is a crime, why pick on the Jukeses?

Assuming for the sake of the argument that there is an unusually large number of individuals who might be judged socially deficient in the Jukes family, what can we say has been inherited? When all has been said and done, the only contention is that the apparently large number of feeble-minded persons in the Jukes stock furnishes some evidence of inheritance. But what is feeble-mindedness, anyway? I submit that it is entirely out of the question to find out whether a person is feeble-minded fifty or a hundred years after his death. The only way that feeble-mindedness can even be approximately determined is by a thorough and elaborate mental test, which could not possibly have been given in these cases.

It has been the fashion in late years,

under the influence of the publications of alarmists, to assume that feeble-mindedness is directly inherited. However, the latest studies on this subject leave us entirely in the air. Mr. Stanley P. Davies, in an instructive and critical analysis of the question published by the National Committee for Mental Hygiene, says, by way of summing up his investigation: "It is apparent from the foregoing that we can be certain of only one thing at present with regard to the mode of transmission of hereditary mental defects, and that is of our uncertainty."

Is there, then, any mystery about the Jukes family? What is all the shooting about, anyhow? Why do the eugenists dodge the perfectly obvious facts to bolster up their case for tinkering with the human race? The Jukes story is the story of any number of other families environed as they were. Living in a sterile country, surrounded by poverty, condemned by conditions which have always been common to certain localities, they developed a manner of living and acquired a reputation which as social heritages were passed on from generation to generation. A few members of the family were sent to prison. As the record shows, they found it difficult to get work in the small community where they lived. They lacked education where there were no schools nor any adequate opportunity to learn. It is the story of the squalid section of every isolated, sterile, rural community and of every poverty-stricken city district. This has been abundantly proven, if proof were necessary, in the growing improvement of the family.

Dr. Estabrook, whose study has been quoted above, came to the conclusion that the stock of the Jukeses showed marked improvement in those members who migrated to other parts of the country and brought up their children outside of what Dugdale called "the crime cradle of the State of New York." This is what we might have expected. Even Dugdale him-

self pointed out at the time of his study that "during the last thirty years the establishment of factories has brought about the building of houses better suited to secure domesticity and, with this change alone, an accompanying change in personal habits has been introduced, *which would otherwise be impossible.*"

The Jukeses in a barren, rocky, isolated community are contrasted in the literature of eugenics with a family in the fertile Connecticut river valley—a family in which a few members having fame were able to pass this heritage to others down the line. Why go out of the way to even infer that the germ-plasm had anything to do with either case? The generations back of Max and those back of Jonathan were infinitely greater in number than the generations that have so far followed. In any fairly homogenous community one needs only to go a little way back to find the lines crossed and the germ-plasm mixed. Otherwise there couldn't possibly be enough ancestors to go around. These two historical sires are first discovered living less than two hundred miles from each other. I, for one, am willing to contend that it is a safe bet that Max came from the East, and a not unreasonable guess that the ancestors of the Edwardses and the Jukeses were mixed.

The history of the Jukes family is largely that of all pioneers, of all workers, of the great mass which make up the warp and woof of every country. Their history is the "short and simple annals of the poor." Some men may preach hell-fire sermons, or make speeches in the Senate and the court room. Others do the rough work of the world. Which are the most important in the scheme of life, assuming that there is any scheme of life?

If one were confined to a choice of neighbors between Max and Jonathan, which would one take? I am free to confess that I would take Max without a moment's hesitation.