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GRANDFATHER WAS A RACIAL BIOLOGIST

A story of human dignity yesterday and today

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Page numbers from the book are indicated in the header.

Ellipses in the text are marked with three asterisks and a page break.

Foreword

Every human being has a story inside. But does it have to be told?

“You must write your story,” Göran Rosenberg, then editor-in-chief at *ModernaTider* (“Modern Times”) told me when I first started writing for the magazine.

I protested: “Other people have to. I don’t.”

I was riddled with shame. I had begun haphazardly reading my grandfather’s scholarly works, and realized they extended far beyond plant breeding.

My story was a “bad” one. Had he been fervently anti-Nazi it would have been a different matter.

But perhaps Grandfather also wanted me to write. He kept rapping me on the head with his signet ring, and so to prevent myself developing a callus, I finally produced an essay for the magazine with the same title as this book.

I shuddered in anticipation of my relatives’ reactions. Would they reject me? Although Grandfather was long in the grave, he retained his status as head of the family. The father superior.

No one made negative remarks. My father called it the best piece of writing I had ever done. And my aunt phoned, saying: “We need to shed some light on *our* side of the matter. We were the ones who were subjected to his theories.”

And so my journey began in earnest. My relations have generously shared with me of their lives and experience, agreed to be interviewed, allowed me access to letters and diaries. I have encountered the same willingness amongst scientists and others whose work is concerned with contemporary genetics.

“If I am going to write a book about this, it will have to be a worthy one,” I told Eva Fallenius, my publisher, and Ulrika Larsson, my copy editor. Both these women have been invaluable sources of support in my endeavours to bring that ambition to fruition. I am sincerely grateful to them and to everyone else who has helped me make this book reality.

My journey is over. After five years, I am finished writing. I still have enormous respect for my grandfather. I place him in the hands of the readers with the sense of being poised at the edge of the diving board.

It’s sink or swim.

I

The skull

I was just tall enough to peer over the edge of his desk and see the cranium bowl with its jagged edge, the skull Grandfather used for paper clips and rubber bands.

There was a gentle rap on the crown of my head, a sort of loving tap. His long, thin fingers with the loose signet ring fumbled, investigating, searching: "My how you've grown."

Had I grown? Was my head big enough? Wasn't mine always smaller than my brothers' and my male cousins', and didn't that mean my brain was smaller than theirs?

Grandfather was so thin and yet so overwhelming. Straight as an arrow. Professor. He was in the encyclopaedia, had been portraited in oils. Once a year we stood in line there, his grandchildren. One by one we approached his desk.

A cold draft blew along the parquet floor from the window, open for airing. The Uppsala cathedral bells were ringing. Potted plants, cut flowers in vases and in cylindrical valves – Grandfather always had things in bloom, even in deepest winter.

Whose skull was it, lying there, wobbling with our every move? Why did it have a seam, and what made it so jagged? What did my own seam look like, could it split, might all my thoughts suddenly leak out? And what would happen when I died myself – would somebody use my skull, too, as a receptacle for paper clips?

Grandfather died when I was twenty-four. A botanist who regarded his own ageing unsentimentally – a biological process like any other. His coffin was lined with seasonal wildflowers in accordance with his request – and to the extent December permitted.

My aunt held the funeral eulogy: "Greatly appreciated as a teacher. Curious and enthusiastic. Contradictory. A serious challenge to his nearest and dearest."

Who was Grandfather? I phoned my father and asked him to send me Grandfather's publications.

"I'm afraid they are nothing but flowers and butterflies," he said.

I received a box in the mail that also contained copies of speeches, including the one my aunt held at Grandfather's funeral. I find myself coming back to the way she put it: "Some people have a sort of glass wall between themselves and those around them."

I never got behind that wall. But is it necessarily too late? I make up my mind to break it down. I'm going to get to know my grandfather; I'm going to understand him, that man who has dominated my life and my career choices in so many ways. Can a woman think? Can she write?

The memories flit past, queue up like impatient slides. But the chronology is broken.

We are all sitting around the dining room table, with Grandfather occupying the seat of honour. I mustn't touch the cheese. Grandfather is the only one with the right bacterial flora. On his desk there is a microscope, and we can look at my bacteria in it, if I like. His hand trembles slightly, the cheese slicer clatters down on the plate as he serves all his children and grandchildren. The prisms in the crystal chandelier

refract the light. The grownups are drinking wine in cut-glass goblets, and when Grandfather prepared the dessert and mixed the syrupy fruit drink for the children he was wearing his white lab coat. The nutmeg he ground into the fruit drink makes me scowl.

All the grandchildren crowding around Grandfather at his roll-top desk. He opens little boxes to reveal the hair of our relations, living and dead. Old letters and diaries. Satin wedding shoes worn by his mother and maternal grandmother. Teeny tiny toys.

Grandfather is a scientist. He pronounces whole sentences of Latin, he knows all kinds of things – he might even know everything. He talks about his trips to Africa, about strange things that happen when nature goes off kilter, about four-footed and two-headed birds.

In the long, murky hallway, he has rows of wooden drawers. The insects live in them. Beetles and butterflies with glimmering bodies and fragile wings. Some a little moth-eaten, all pierced with pins. Lined up like soldiers at attention. I often ask if I can see the insects. He opens a drawer, he tells a story – and I am almost close to him.

” Grandfather has such a beautiful neck”, Grandmother says.

She flutters around the flat like an anxious butterfly. Sets the breakfast table every evening. Porcelain teacups, glasses, cake plates, spoons, little forks. Covers it all with a sheet of plastic. ”I can’t sleep if I don’t do it. What if I forgot something, if I put something in the wrong place, if Grandfather...?”

Grandmother is just four feet ten inches tall and has to stand on a step-stool to work at the stove. She saves the empty paper bags from instant mashed potatoes or soup, giving them a thorough shaking out and storing them in a drawer. ”If you’ve lived through the war...” she says.

Myself, I’m a child of industrialization. My father is Director of Product Development at Findus Foods in Bjuv, a little community in southern Sweden that arose around a coal mine. It is the late 1950s and very few people work in the mine. Findus is the big employer nowadays. We are surrounded by velvety green fields of peas, and gaudy yellow fields of rapeseed, and we live in the Findus residential area, a neighbourhood in the ”English garden style” that grew up close to the food processing plant. On the pot-holed road that runs past our home we can pick up carrots and heads of cabbage that have fallen off the trucks. In our garden, little peaches and bunches of grapes cling to the south side of the house for dear life. In the experimental cultivation areas, we steal enormous plums and pears off the trees. The hybridized fruit is juicy. This is also where the caretaker spends his days, a man with a shotgun and a hat with a shaving brush sticking up from the brim. ”It stings your bum like the devil,” the children who have been shot at warn us.

It’s difficult to learn to roll our ”r’s” as they do in the local dialect. We moved here from Karlskoga, where father was employed as a chemist at Bofors, and where people had a completely different lilt. I cannot boast about ”my big, strong dad”. But I do toss out: ”My Grandfather’s got a skull on his desk”. That shuts them up.

I go to the Findus playschool, where I learn that the name of the enemy is Felix. We are a Findus test family, so we get test meals X and Y for our dinner, six days a week. One has a pale yellow label, the other a mint green one. We get tins of brown beans, TV soups, deep frozen meatballs, and creamed vegetables you cook right in their plastic bags. And we get TV dinners – compartmentalized plastic plates with depressions for potatoes, vegetables, and some kind of meat. Long questionnaires to fill in about the taste, smell, colour, consistency and appearance. Sometimes X is

better than Y, sometimes the other way round. We like the pickles from Felix better, but we hardly dare breathe this judgement. We never eat Felix products at home, in fact they don't really exist for us. They come from Eslöv – wherever that is

The first experimental TV dinners aren't exactly tasty, but the idea is American, and that makes it good. We're a modern family.

At Grandmother and Grandfather's, the world is different. Under every single object that comes from Grandfather's side of the family is a little label telling how old it is and who its previous owners were. Grandfather, too, has tins. But not of X and Y – his tins contain our relatives' teeth. And in a jar of formaldehyde, he has the placenta from my father's birth.

Grandmother's quite deaf and has a battery on her chest. It hangs under her dress, in a little cloth bag around her neck.

"What on earth would have become of me if Grandfather hadn't married me?" she asks.

Grandmother and Grandfather live at opposite ends of the apartment. Grandfather's door is ajar. In the mornings I see him lying in bed rustling the pages of the newspaper *Svenska Dagbladet*. He always reads the arts commentaries, and we mustn't disturb him. At the head of his bed hangs a portrait of his own paternal grandfather, Carl Otto Nathanael Dahlgren. He was a Doctor of Philosophy, and he held his professorial position for more than 50 years. The same applies to Grandfather, who has hung his own laurel wreath across one corner of his grandfather's portrait.

Grandfather wears a little green satin cap over his bald spot. Sometimes he pees into a bottle.

In Grandmother's room there's a funny half-wall running down the middle. Grandfather had it added to the plans for the house in the 30s. This was their bedroom when the house was new, and they had the heads of their beds on either side of the wall, and could signal by knocking. It's quite a thick wall, fitted with electricity outlets.

That wall made Grandmother sad.

Now she sleeps alone in that room, and Grandfather sleeps in what used to be the maid's quarters. Grandmother has books about Freud and psychoanalysis and even about something called parapsychology. When the door is shut she tells stories about people who have had strange presentiments, including one about a man who saved his own life by staying home from the theatre. He sensed that the theatre would burn down that very evening, and so it did. But Grandmother is a scientist, too, just like Grandfather. She has a university degree in chemistry and geology, and she has a big fat German book called *Edelsteinkunde*. It is full of pictures of glittering gems and minerals, and has thin sheets of parchment between the illustrations. Her father-in-law, my paternal grandfather Otto Dahlgren, is also protected by a piece of parchment like that in the photo album. I shiver when she lifts the rustling paper, because I have never seen a picture of a dead person before – I look him right in the face, right in the eye. He doesn't look like an old man. Grandmother tells me he died because of a little sore that wouldn't heal. A doctor pierced the abscess, but his instruments weren't sterilised. The bacteria made their way into his bloodstream, and he died of blood poisoning.

"The sun went out that day", Grandmother says.

Hyacinth bulbs are carried down to the cellar after Christmas, to hibernate under stiff paper cones. The shelves are cold and full. Pears and apples, carrots and peas are pressed into big Mason jars, their tops held in place with green rubber rings.

Grandfather's hands tremble when he waters his plants; he puts his fingernail clippings and empties his electric razor into the soil.

He has a heart problem, it doesn't pump the way it should. The problem is relieved by something called digitalis. He is a systematiser and an arranger. His letters and publications will be donated to the Carolina library. The Carolina – where the Silver Bible is! Grandfather must be famous indeed.

Some peculiar Alpine race

At the manuscript department of Carolina I put in a call for the letters of K.V. Ossian Dahlgren. They wheel out an entire cart. I begin glancing through the correspondence, letters from professors, physicians and other academics. Sten Bergman, the explorer, writes to Grandfather that he and his wife are experiencing "mountain health". They have been sleeping under the stars, night after night, at minus 20 – 40° F in the tundra of Kamchatka, often during snowstorms.

I find an annual report from the University of Agricultural Science. "In 1933–34 I, the undersigned, took over Professor Herman Lundborg's lecture series on heredity and racial hygiene."

Racial hygiene? Wasn't Grandfather's speciality flowers?

I go on reading through the letters at random.

Racial hygiene?

It's about 70° F here at Carolina, but I'm freezing cold. I don't think I possess that "mountain health" of which Sten Bergman and his wife boasted.

Suddenly a name surfaces out of my childhood: Lundman. Bertil Lundman. He was a regular visitor at Grandmother and Grandfather's home. He taught physical anthropology. I listened to the stories of his visits with a combination of horror and excitement. About how he spit out prawn shells right onto the carpet. How he toured the province of Dalacarla by bicycle, measuring the sizes of people's heads and noses. He had inspected mamma's skull as well. "He didn't even introduce himself, just walked right up to me and started groping around under my hair", she told us. Lundman had found it satisfactory. Mamma was long-headed. The daughter of a Dalacarian farmer. "Lucky for you", the family crowded in unison.

Grandmother, however had not passed muster. "Some peculiar Alpine race", Lundman had said.

Although I never met Lundman he had always been there, somewhere off in the wings of my childhood stage.

Ought I to have known, ought I to have realized?

I start going through the box my father sent me. It contains Grandfather's book: *Botanical Genetics*, newspaper articles, offprints from various journals. "Extras" they called them. Grandfather and the other scientists were always sending around their extras.

Grandfather was a botanical geneticist. A plant breeder. "Through methodical application of the findings of research on heredity, plant breeders have succeeded in increasing the value of the crops raised in this country by orders of magnitude annually. Human beings, like plants and animals, have hereditary traits. /.../ Heredity research, plant breeding, food supply, demographic policy and racial hygiene are intertwined in various ways," he wrote in *Upsala Nya Tidning* on 3 March 1941. He added: "Some people prefer the term "heredity hygiene".

So it's true, then. The leap from plant breeding to human breeding was only a small one.

In honour of his sixtieth birthday, the same newspaper praised his scholarly works on flora and fauna, on racial biology and the science of heredity, as well as his well-attended lectures at the Institute of Racial Biology, his summer courses and his folklore courses, his radio programmes. This was in 1948. Was it still – three years after the war – considered to a man's credit that he was a racial biologist? And what was the Institute of Racial Biology? And what about Professor Herman Lundborg, whose lectures in racial hygiene Grandfather took over – who was he?

The Göteborg public library doesn't have anything by Lundborg on the open shelves. But they can be ordered from the stacks. "Good grief, what would you want to read that awful stuff for?" asks the woman who takes my call form.

Herman Lundborg was also from Uppsala. He was Professor of Racial Biology and the founder of the National Institute of Racial Biology, which opened in Uppsala in January 1922. The Institute was the first of its kind in the world, and Lundborg its first director.

In his book "*Racial Biology and Racial Hygiene*" (*Rasbiologi och Rashygien* Stockholm, 1922) he clarifies the term:

"Racial biology is the study of the lives of families, peoples and races. It deals with all the causes of change of the internal constitution, that is to say racial characteristics, in favourable or unfavourable ways. Thus racial biology is not only, as many people believe, the study of heredity from a medical point of view. Rather, it also touches on all the spheres of social intercourse, and has already far surpassed the traditional boundaries of the discipline of medicine. Its mission is to establish the significance of heredity contra race – and their relationships with environment and culture, to investigate and combat hereditary illness and degeneration of families and peoples, when such problems arise. The time will soon be past when medicine sees as its only or its primary responsibility the "curing" of individuals who are ill. Men of medicine will have to broaden their views and shoulder more extensive responsibility and heavier duties, they must become the advisors and assistants of families and peoples.

Racial hygiene (eugenics) is, one might say, the practical arm of racial biology. Its aspirations and aims are to prevent, wherever possible, hereditary degeneration from occurring and from spreading, and to organise the prevailing conditions in society so that future generations will be as well equipped as possible in the struggle for survival.

One of the basic principles of racial hygiene is the contemporary idea of the "biologically fittest", i.e. that it should be left to the physically, morally and intellectually best-equipped to reproduce the species, whenever possible."

Was my Grandfather, then, one of those scientists who formulated the theories, one of the scientists to whom the politicians listened when they were producing the legislation that made possible the compulsory sterilization of the people referred to as "inferior"?

Why couldn't my Grandfather's name have been Raoul Wallenberg or Torgny Segerstedt? What gets passed down? I know that I have inherited my Grandfather's crooked teeth.

Purissima

Grandmother and Grandfather had four children. Their only daughter, my aunt, tells me she has all their correspondence. My ageing uncle has all the letters Grandfather wrote to his parents during his youth. Not only that, but he has made clean copies of every single word of every single one.

I decide to make a research trip, the kind of research trip Grandfather often made.

I start by going to visit my aunt. She is 75 years old, but she still sees a few "patients" each week in her large flat in central Stockholm.

"I became a psychologist for one simple reason – I wanted to understand my father. How does that kind of personality develop? I have devoted my life to working on him. I wonder if you will, too", she comments.

"No, no. Absolutely not", I assure her.

My plan is to spend a few weeks working on the letters, after which I will be free. Released from Grandfather.

But there are more letters than I had imagined. Then my aunt tells me that throughout her upbringing and well into adulthood, she was convinced that she was a "minus variant". Physically speaking. She was convinced she did not have the right to reproduce.

How much can there actually be inside, when one opens the Pandora's Box of one's family? I ought to close it right back up. But that can't be done, I have passed the point of no return. Grandfather is knocking on my head and I touch it to see if I am getting a lump there. No, not the slightest little bruise.

How could the daughter of a racial biologist possibly be too poor a specimen to reproduce? Wasn't Grandfather the expert? The one who lectured on racial hygiene? "I felt Father was almost criminal. He did research on heredity and thought people should have tall, strong blond children. And yet he went and had four children by Mother who was small, weak and brunette", my aunt says.

"My awareness came with adolescence. I was not meant to reproduce. It wasn't my fault that I existed, I couldn't be held responsible for that, but I could take responsibility for not bringing any children into the world."

No one told her she was inferior, it was understood, she points out. There was no need to say it.

She watched him give little gifts to girls with blonde plaits.

"One knew what was right – one was supposed to be tall and blonde and blue-eyed and long-headed. I was ashamed of our appearances. We weren't just short, we were skinny as well. They were always weighing and measuring us and giving us vitamins, but to no avail. The doctor would always say: 'We're going to have to use a different chart here.'"

We were teased in the schoolyard: "Ha ha -- skinny and short can't fight or do sport. Big and strong, that's me – I can be anything I want to be!"

My aunt tells me she completed upper secondary school, but only with the feeling of "excuse me for living, if you just let me graduate I'll never bother you again."

Higher education was for valuable members of society.

"I was going to be a secretary, and type the articles valuable people wrote, people who shouldn't have to waste their time on such trivial pursuits," she says..

Another plan was to open a laundry. She would call it *Purissima*, Latin for "the cleanest of the clean". Grandfather thought up that name.

Purissima would be right at the bottom of the hill leading to Carolina, so she would be able to pop in and listen to university lectures.

"Because I had no right to bring children of my own into the world, I wanted to look after others'. I planned to open an orphanage for children of A-types and provide them with a good upbringing. This was important, as they would become society's decision-makers. I would finance the orphanage with the income from the laundry."

"Father thought the laundry was a fun idea. He was a fundamental admirer of manual labour and of strong people, such as blacksmiths. The best thing was to be a poor widow whose sons all grew up to be professors. That was a sign of a strong constitution."

She took a two-year vocational diploma to become a laundry manager. White shirts.

But by the time she had her diploma she had also discovered the work of Bertrand Russell.

"Oh, how I loved that man. I saw myself reflected in every aspect of his struggle to grow up. One doctor had told him his genes were of such poor calibre he had better not reproduce. His offspring would be weaker still."

My aunt never opened *Purissima*.

"But what made you think you were inferior?" I wondered. "It couldn't have just been that you were short and brown-haired!"

"I was an inferior variant. I had buck teeth and got my first grey hairs already at puberty. I don't know if that was hereditary, it could have been the mental strain. During my first year of upper secondary, a teacher grabbed a strand of my hair, tugged it out and exclaimed: 'Good grief, you're going grey!' And then I had to have my tonsils removed, too. There was pus build-up in my ears and it affected my hearing. I spent a lot of time in hospital waiting rooms, and was constantly afraid."

She says she has come to terms with Grandfather. She harbours no hate. In retrospect she feels love for both her parents.

"I do have one positive memory", she says. "Mother and Father are standing in the kitchen. Father has his white lab coat on, and mother is wearing her jammy-dress, the one she had dyed in red currant syrup. They are making preserves and sterilising the jars. They're happy. They are back in the chemistry lab at the university, where they met."

Why had I embarked upon this journey? I am neither tall nor blonde; five feet two and brunette. What did Grandfather think of me? Was I a "minus variant", too? Perhaps I should never have been born.

I phone my father and ask whether he, too, had felt he did not have the right to reproduce.

He said he hadn't.

"However, I did always feel as if I was no good. That feeling stuck with me until I had my degree from the Stockholm University of Technology", he said.

My father weighed two stone nine the year he started school. He had asthma and a heart defect and almost never had to participate in physical education. He was only allowed to join in on the traditional Swedish game of throwing the "varpa" stone.

In the basement

All the posters from the exhibit on race and other activities of the Institute for Racial Biology are on file at Carolina in the department of cartography and illustrations. I had phoned and been told that they had the portrait of Grandfather. And still – when I am leafing through the pile and his face suddenly appears, with his tie pin looking like a third eye, I have to hold on to the edge of the table to steady myself. I sank to the chair which was, fortunately, at hand.

”You’re not claustrophobic, are you?” Margareta Lindgren, department director asks.

”Not a bit”, I reply, struggling to look as if that were true.

”Excellent, because I will have to lock you in, down in the basement. That’s where most of the collection is archived – hundreds of albums, including nude photographs.”

In the lift that takes us down, she tells me how the illustrations ended up here. One day in the early 1980s she got a call from the Institute of Medical Genetics, the 80s euphemism for the Institute for Racial Biology.

”A man’s voice told me: ’We’re moving and we aren’t going to take all these old pictures with us. Unless you come and collect them right away, they’re likely to be dumped in the river outside the building.’”

She scurried off and succeeded in rescuing this huge collection: more than 12,000 photos, including 1,000 name-labelled portraits. Once she got it all over to Carolina, her colleagues were dubious: “Is all this really worth saving,” they asked her?

Margareta Lindgren unlocks the archives and shows me around the shelves full of great big, thick albums. They are leather bound, with brass rings and fancy clasps. She promises to come back later.

”I did forget someone down here once,” she says before she turns the key in the lock.

It smells of contact cement down here, probably from the new corrugated paper boxes I can see nearby. Behind me there are rows and rows of rolled-up maps made of yellowing sheeting. I see a shelf full of old, worn classroom wall charts of insects, mushrooms and fungi, and fish.

I examine the table of contents: Nordic types, Lapps, Jews, gypsies, twins and triplets, criminals and other deviants, foreign racial types, Lapp huts and cabins.

I start with the file on the staff of the Institute of Racial Biology. Grandfather is not listed. Well, that’s something. He lectured and wrote articles, but wasn’t on the staff of the Institute. Herman Lundborg, the director is sitting in his white coat at this desk. He has a big ledger in front of him, and there is a bouquet of lillies-of-the valley next to him, I can almost smell them. He holds a wooden ruler in his hand as if he were armed. He looks determined.

Lundborg was particularly interested in the Saami, or the Lapps as he called them, and travelled around measuring and photographing them. One of the big albums is labelled M 11 – I’m sure it weighs at least a stone. ”Full length photos of Lapps and individuals with Lapp blood 1927–28 and 1932” it says, in neat hand printing. Centred, tidy, gauged.

Pale bodies, completely nude. Like porcelain against a soot black background. The hands, necks, faces and feet are dark. They are standing on a white sheet with a little mound in the middle. Is there a phone book underneath? Young boys and girls. Older women and men.

M 9: " Full length photos of young men from various Lapp districts at the nomad school, 1932." Three naked boys in a line on the same sheet, a row of four – no five – boys. Some of their names and addresses.

I want to get out of this place, but it will be an hour until she comes back for me.

"Jews. Photographs from forensic examinations, 1931." A bank director with members of his family. It starts like a family album. Suits and soft silk blouses. Then profiles, left, right. Then left hands, right hands, palate moulds. Then come X-rays of hands, of skulls, nine crania.

Photos from the penitentiary in Landskrona. Naked women. Full length photographs, Torsos, profiles, left, right, front and from behind. Some of them are smiling crooked, forced smiles. The older women reveal at most their breasts. Could the photographer have been a shy man? There's a picture of him, too, a young man with stiff little waves in his hair, as if the tide had ebbed once and for all.

One of the older women has thick plaited hair, she looks like an Indian squaw. She is staring right through me. I shut the album.

I remember something Grandfather wrote in *Svensk Tidskrift*, a mouthpiece of conservative theories, in 1942: "A Negro in southern Sweden has borne seven children, half-breeding of a kind which should, naturally, neither be encouraged nor tolerated." And he went on: "Some 5,000 children receive their schooling in special classes or homes for the retarded. Just one example of non-desirable child breeding."

What happened to all these "inferior" human beings?

The faces dissolve. I keep remembering one of the other women who was studying social work when I was.

It is the 1970s and we are in training to become social workers and change the world. But I know very little about the world. I am one of the youngest students, and neither grew up in foster care nor have served any time in prison. I am attracted to her because she doesn't wear purple velour, but a blouse and jeans, with a belt pulled tight around her bulging waistline. She is much older than me, has big breasts, and appears to have some experience of LIFE.

She invites me to her little studio apartment in Kärrtorp, outside Stockholm. She has cross-stitched proverbs on the walls and serves me "dip-in-the-cup", boiled almond-shaped potatoes dipped in melted butter, something they eat in the far north. She's not from very far north herself, she tells me, as she describes the village in Småland where she grew up. We have some wine and we have even more wine and she tells me: "I can't ever have kids."

She tells me she was raped. It happened when she was five, and her father didn't press charges against the man. He told her she had been asking for it. So the way was wide open for him after that. And for her big brother, too. Later on for her foster father. Her eyes are icy blue and narrow as slits now, and she makes a fist. But she doesn't raise it. I'm frightened and I want to go, because she is large and her upper arms are muscular, but she just goes on drinking wine and tells me how they locked her up in the loony bin. The diagnosis was "loose". She signed a paper allowing them to cut her fallopian tubes so they'd let her out. She blushes – as if it were her fault.

I left. I was twenty years old and ashamed to be so young and to have uncut fallopian tubes.

And that was how I got to know one of them, one of the people in Sweden who were subjected to compulsory sterilization.

My classmate must have belonged to the group Grandfather was writing about in *Svensk Tidskrift* when he said: "Qualitative demographic policies may be defined as measures aiming to promote the formation of families by the fit rather than by the inferior who, whenever possible, should be prevented from reproducing".

I am having trouble breathing. The air is thick the ceiling low, the fluorescent light bulbs naked and bright. A radiator is hissing somewhere in the background.

Don't cry, don't cry. I am crying.

The key turns in the lock and Margareta Lindgren takes me up to daylight and fresh air. I am tired, but I think that if I just go on, if I scroll my way through some more microfilms, read more documents, more letters, I will eventually get to the point when Grandfather disavows these ideas.

The point where he writes that all human beings are created equal.

A full-grown Swedish man

Grandmother and Grandfather's grave. It comes to me that I have to go there.

I take the train to Uppsala again, and have just settled into the restaurant car with a paper mug of coffee when a man walks up to me.

"How tall are you, actually?" he asks.

"Five- two-and-half", I reply.

"You look a lot shorter," he says.

I put down my coffee and try to take in what just happened, as I watch a bald spot in a brown and beige plaid blazer leave the car.

I think they call that pattern Glen check.

How tall was Grandfather, actually? I remember always hearing about Grandmother's height, that she was only five foot five. What about Grandfather?

My memory of him is as overwhelming. He was the head of the clan, he was the father superiour.

In reality Grandfather was only 5 foot seven and a half inches. But that made him nearly a whole foot taller than Grandmother. And none of their four grew to be as tall as him. Was it genetic or nutritional?

"Everything had to be good for you. We got boiled carrots and clear broth. Every now and then there would be stewed chicken with rice, and I would eat till I was ready to burst. You had to take it while it was on offer," the younger of my two uncles tells me.

He also remembers Grandfather as enormous. "But there was a psychological element to it," he adds.

Five seven and a half is not very tall for a Swedish man today. But in Grandfather's generation it was quite tall enough. Professor Herman Lundborg wrote in *Racial Biology and Racial Hygiene* (Stockholm, 1922) that the average height of a full-grown Swedish man was only five feet six inches. This figure had been determined after measuring 45,000 conscripts as part of the *Anthropologia suecica* project in 1902.

Which made Grandfather half an inch over the average.

Lundborg wrote in the same book:

"The Swedish male of pure Nordic type is tall and muscular. The head and face are relatively long and narrow, the skin fair and reddish; the hair blond; the eyes light; the nose often short and straight.

The criteria for pure Nordic type are as follows 1) true "long-headedness" [index figure up to 75], 2) tall build [five feet seven inches or taller], 3) blond hair and 4) light-coloured eyes."

I don't know if Grandfather's cranium had an index figure of up to 75, but it is clear that he was over five foot seven.

According to a press cutting in the Lundborg binders at Carolina there are three European racial types: "The fair, long-headed Nordic type, the brown-haired short-headed Alpine type and the dark-haired long-headed southern European type.

The wife of one of my uncles guides to my grandparent's grave. I've forgotten where it is.

It's a mild autumn day, the paths and graves are strewn with yellow leaves and it's difficult to see what's what. Huge trees strain skyward. One of them is growing on their grave plot.

Grandfather insisted on being buried here, in the old cemetery close to Carolina. Along with Fröding, Geijer, Dag Hammarskjöld and all the other professors.

I am startled – Grandmother and Grandfather are buried next to Herman Lundborg. That name didn't mean a thing to me when Grandfather died in 1976. But Grandmother (who lived until 1982) said, when it became clear that Herman Lundborg was going to lie in the plot next to theirs: "I wish Grandfather could have known; he would have been so pleased."

Herman Lundborg's gravestone says nothing but "Professor", whereas Grandfather had theirs engraved in Latin: *hic iacet pulvis botanices professoris hc, ph doktoris iub kv ossian dahlgren 1888–1976 uxor eius greta nata estelle 1895–1982.*

Here lies an honorary Professor, Professor for more than 50 years at the Faculty of Philosophy. And his wife.

Grandfather and Herman Lundborg only socialized sporadically. But they held lectures together. Grandfather's journals contains several descriptions a month about their talks, held, for instance, at the Sparrsätra Mission-Hall, the Sala Good-Templar Lodge, the Nurses' Association, the Institute of Ethics and Education, the Bollnäs Good-Templar Lodge, the Eskilstuna Rotary Club, the Hållnäs Parochial School, and many, many more such venues.

They spoke on the subject of "Sexuality and its significance for the individual and society".

On 15 February 1922 Grandmother wrote to her mother about a lecture she attended in Gävle:

"I did enjoy my husband's speech. It was held in a large cinema and there was quite a crowd -- at both the last two talks the audiences numbered over 400! They applauded madly after the second one. Ossian had overheard the cinema caretaker talking with one of the other staff members: 'Well, Lundborg gave a lecture here on the same subject last year, but he was nowhere near as plain and clear!' That pleased him no end. He certainly is pedagogical. – After the second lecture, Ossian, myself and Ernst were invited to the home of one of the former members of our congregation in Sala (who now lives in her home town of Gävle again), a woman the Dahlgrens of Sala have befriended over the years. She lives with a sister of hers, they are both gainfully employed, and they had arranged a lovely little supper with delicious wine and grapes as well. We had a very nice time."

In the same letter she also describes a charity evening in Uppsala for the benefit of the unemployed. Grandfather had purchased tickets but been unable to attend personally because he had "already committed to holding a talk on heredity for the teetotallers."

I cannot know precisely what Grandfather said, because he never spoke from a manuscript. I assume he put forward roughly the same ideas he wrote about in his articles. Such as: "We must never forget the overwhelming significance of heredity" and "The individual is not the be all and end all, nor an end in itself. A person with

strong genetic traits fulfils an ethical obligation and a duty to the foster land by bringing many new citizens into the world” and ”The cream eventually rises to the top, just as the dregs fall to the bottom”.

Grandfather pasted in a newspaper article published in the local Bollnäs paper *Ljusnan* about a lecture he held there. It is dated 15 October 1938, and it reads:

“Senior lecturer Ossian Dahlgren spoke last night at the good-templar lodge in conjunction with a course on heredity research and its economic and social impact held at the folk high school. Unfortunately, the audience for this unforgettable event was quite small.. Dahlgren’s excellent presentation kept the audience on tenterhooks from the first to the last word. One can only express dismay that the wet weather and the ‘dry’ topic kept so many people away. The address itself was anything but dry. Although he remained entirely objective throughout, as befits a true scientist and researcher, Dahlgren has also mastered the art of spiking his intervention with good humour.

He began, using wall charts and slides, with a detailed account of the basic findings in heredity research. The listener was able to obtain a clear picture of the incredible processes of chromosome division, and the practical applications of such research. For example, it is possible today to explain, with mathematical precision, how colour blindness is passed down from one generation to the next.

Dahlgren’s presentation continued on the subject of the economic and social impact of heredity research. He clarified the biological standpoint regarding hereditary hygiene and demographic policy. He gave us, in his impassionate objectivity, a distressing and frightening picture of the future of Western civilization, not least as regards the future of the Swedish people.

I left the lecture hall with a dizzying sense of having peered deeply into the process of creation under the guidance of a wizard, It is no exaggeration to say that Doctor Dahlgren’s brilliant intervention on the way a biologist looks at life will have had a lasting effect on my entire world view.”

Species studies

Grandfather was a systematiser and organiser all his life. Species studies were important. He made his children collect plants, put them into herbariums, and learn their Latin names. The reward for a certain number of plants was a bicycle.

To what species did Grandfather belong? I continue to systematise and organise my efforts to understand him. But he constantly eludes me. One side is tough and unrelenting, another fragile and vulnerable. Like an egg that hasn't quite coagulated.

One of the boxes in his family bureau contains the laurel leaves from the wreaths conferred upon my great grandfather and my grandfather when they were awarded their PhDs. Grandfather's at least, was from the laurel trees in the garden of Carolus Linnaeus in Uppsala.

To Grandfather, I suppose Linnaeus was the greatest of the great. According to Gunnar Broberg and Mattias Tydén in "Unwanted in the Welfare State" (in Swedish only: Oönskade i folkhemmet, Stockholm, 1991), Linnaeus was also the person who established the link between homo sapiens and the concept of biological race or variation, thus paving the way for physical anthropology, in his *Systema naturae* in 1735.

Broberg and Tydén point out that whether we like it or not, Swedish natural scientists have played a pivotal role in the history of racial hygiene. Linnaeus' name became a touchstone when research into racial matters became a Swedish speciality.

In that tradition, during the 1840s Anders Retzius, Professor of Anatomy and Physiology at Karolinska Institute, introduced the skull index that became the basis for the division of the races into long and short-skulled. Retzius travelled extensively to collect skulls. In Egypt he purchased a large number of mummy skulls he then "ruined" in order to measure them. They can still be seen today. Retzius' own body parts can be found at various departments at Uppsala University – one has his skull, another has his spleen, a third has one of his feet, and so forth.

In a book entitled *National Race Research* (in Swedish only, *Statlig Rasforskning*, Lund, 1995) Gunnar Broberg describes the early Swedish history of racial biology, saying that although no one actually called himself a "racial biologist", there were still quite a few scientists working in the discipline. In other words, there was nothing strange about Grandfather's having been a botanist. The members of the board of directors of the Institute of Racial Biology included Herman Nilsson-Ehle, Professor of Botany at Lund and Nils von Hofsten, Professor of Zoology at Uppsala.

Racial Studies

Schoolteachers were an important resource in terms of finding interesting "types" to measure and classify. They were also key individuals when it came to spreading racial biology as a subject of study .

Herman Lundborg published a popularised version of his English-language scientific study *The Racial Characters of the Swedish Nation* as "Swedish Racial Studies" (in Swedish only, *Svensk Raskunskap* Uppsala, 1927). It cost five crowns, but could be ordered by teachers at the reduced price of two-fifty.

It was reviewed in the journal of the Swedish teachers' union, *Svensk Lärartidning* (4.1.1928) by A Ljung, a schoolteacher himself. He wrote: "This work, with its many illustrations and maps, can easily be read and understood by all. *Svensk Raskunskap* fills a longstanding vacuum in an excellent fashion."

Ljung went on:

"In the field of racial research, Sweden has long held a forefront position. /.../ Our little nation remains in the vanguard. We not only have a well-known research institute for plant breeding in southern Sweden, but also a government-established Institute of Racial Biology with a focus on the study of human beings, the aim of which is to combat degeneration and raise the quality of the material from which our population springs. /.../ The idealistic ambition of this book is best summarized in Professor Lundborg's concluding plea: Let those of us who live in the original home of the Nordic race now do our utmost to maintain the race and prevent it from degeneration and extinction."

To England

Grandfather was a strong spokesperson for having large families. He, though, could hardly bear the existence of his own children. My aunt says he couldn't bear the competition.

In August 1930 he travelled to Cambridge, England as a delegate to the Fifth International Botanical Congress. Grandmother remained at home with the four children. Her youngest son was three months old.

Cambridge 18 August 1930

/.../ After lunch we relaxed for a while in the easy chairs. I was introduced to Nawaschin junior, the son of the man who discovered double fertilization and a prominent researcher in his own right. I suppose he is well-placed to compare Russia and England.

Around 4 in the afternoon we made our way by bus and on foot to Roebock House, where Prof. Haldane lives. He received us in his shirtsleeves. His bare-armed, barelegged, lively wife danced towards us and was, needless to say, "very glad". It was all as unceremonious as you please. The guests who were staying with them were Darlington from John-Innes and a dark, good-looking young man – Vilmorin from Paris. Of course I reacted to the name Vilmorin. He turned out to be the great grandson of the famous Vilmorin, and his family was still running the renowned breeding centre outside Paris. I recalled that Frl. Schwarzenbeck from Zürich had worked there for a few years, and he told me all about how she had been responsible for bringing a couple of lovely *Gladiolus* varieties to market. He also knew that she was now married to Ernst and that they lived in Java. The other guests included Prof. Rosenberg, Miss Andersson-Kottö and Mrs. Newton, Newton's widow, who was recently appointed professor (!) at a little university in Wales. She was a charming professor indeed, presumably in her 30s, colourful and shapely. I suppose she has made quite a living for herself out of her brilliant husband's notes. Once he knew there was no saving his life, he put a tremendous amount of effort into organising them.

There was a lawn outside the house (where lawn tennis was played), extending all the way down to the river. /.../ Tea was served at an oak table in the dining room. No tablecloth was used. Our perky hostess hopped hither and yon on her peachy legs, laughing and tossing her curly locks. Lips too brightly painted, fastidiously shaven underarms. She undoubtedly has a good portion of "*judain*". She served China-tea with one hand and India-tea with the other. In England one is not plied with food. Instead, each person takes what he pleases when he pleases. A lad, clearly his mother's son, came up from the river draped in a bath towel, said hello to no-one, helped himself to edibles and then vanished, only to return shortly in European garb. His mother also went almost straight back to her tennis game out on the lawn with some young man. We had no idea who he was, since he had clearly decided he had nothing in common with us.

We sat on for a while, conversing with Haldane, who is a large, calm Germanic type. After a while we went out to see Mrs. Haldane play Badminton, a game played with special rackets and "shuttle-cocks" rather than balls. We sat on folding canvas chairs admiring his wife's graceful catlike leaps and her skill. On a blanket alongside us lay a shaggy Esau wearing nothing but a pipe and a pair of wet swimming trunks of a rather too-tight cut. Mrs. Haldane proposed a swim. Knowing that the sewers of Cambridge are emptied right into the river, I refused, but Bruun borrowed a bath towel and soon chugged passed us like a Roman in his *toga candida*. English tea parties are clearly shockingly informal. /.../ Rosenberg, too, whispered in my ear as he was leaving: "Bloody strange family, this." However, this is a country with very little formality. No one tips his hat to an elderly man. A slight nod is considered quite sufficient. Their whole way of socialising is characterised by a certain kind of naturalness, calmness, and make yourself comfortable. Vilmorin said he found this relaxed way of life in England a pleasure. After several enjoyable hours people began taking their farewells of our kind hosts. After the Congress, Haldane is going to the Tyrole to do some mountain climbing; his wife will be going to a French spa, which undoubtedly suits her better. /.../

A standard bearer in the Olympic troupe

"The family of a professor in Uppsala had six children. They were all perfect examples of A-types. I could hardly bear to look at them. There was another family with six children, too. They were all midgets. That was equally horrid", my aunt recounts.

She tells me she was deeply in love with her piano teacher.

"He was tall and handsome and could have been a standard bearer in the Olympic troupe. But he limped, and that defect somehow made him possible to me."

"I had boyfriends. They found me cute, but I never thought anything but: They don't get it. They have no idea how inferior I am, that there is something fundamentally wrong with me – with my genes."

She never spoke to Grandmother about it. It would have been far too offensive. "But Father betrayed his own ideals, he should never have brought children into the world."

She decided never to start smoking, never to drink, her initial odds were so bad she had no desire to make them even worse. Or to make herself end up in the hospital.

"I remember this girl at a dance who was a bit tipsy and came up to me and said: 'You're going to make something of yourself, really'. That really got to me."

A standard bearer in the Olympic troupe. Her having said that made me realize what an impression Leni Riefenstahl's two-part documentary film about the Berlin Olympics in 1936, made on her. It was called *The Great Olympics*, and was screened in 1938. Grandfather wrote to Grandmother: "The children had already seen the film about the Olympics at the cinema, but now it's being shown at all the schools, too."

At the BMC

Past the red manor house, the Botanical Gardens, the Akademiska Hospital, and right out into a field where the new BMC, the Biomedical Centre, is. The Department of Genetics and Pathology is one of the many departments in these very modern buildings. I have come to visit, because I need to know how contemporary geneticists think. Why should I give their theories any credence? What is knowledge, when theories considered scientific in the twenties and thirties are disdained as quasi-scientific today? How could we have had a Professor of Racial Biology?

Genetics and Pathology is the present day name of the old institute of racial biology. There's nothing in these new buildings to remind a visitor of the past. The old measurement instruments are on loan to an exhibition in Berlin. And what about the publications? BMC librarian, Per Syrén tells me that the ones that are left are in a room in the basement. "Nobody wants to touch that material."

We walk down a long corridor. Syrén stops at a grey door marked 005b. Behind a collection of discarded bookcases and desks are shelves full of books and binders: the racial characteristics found in Sweden, on the Lapps and other peoples, Finnish skulls... German journals of demographic policy from 1937-43. Grandfather's name is on one of the binders.

I envisage a yellow label with a skull and crossbones warning me: Beware of rat poison.

Professor Ulf Pettersson, director of the Department of Medical Genetics, has his office far from the basement. I ask him: are the racial biologists a thorn in the side of the department today?

"Oh no, I tend to joke about them. When I introduce myself to people I say I'm the new director of the National Institute of Racial Biology. Sometimes I use them as an example of the poor power of ethics. The Institute continued to exist until 1958 – thirteen years after the end of World War II. Since I wasn't around then, I don't feel any responsibility."

I go on to ask him: "Looking back on the racial biologists, what do you think they were wrong about? And right about? They can't have been wrong about everything, can they, if they were regarded as scientific thinkers?"

"That is a very important question, the matter of truth in science. The natural sciences are often depicted as producers of unambiguous truths, but unfortunately this is not always the case."

"We cannot see molecules. We think about them, we model them, we make symbols of how we think. Of course these models do not describe the real world. It is easy to be wrong in one's thinking about something, or to exaggerate an effect, for instance, without consciously being untruthful. I suppose the scientists in those days were not consciously untruthful either, but they had a certain amount of knowledge and then they filled out their thinking with opinions and wishful thinking."

"What happens is this: the scientific community adopts certain ideas; people find a certain kind of thinking reasonable and apparently logical, and then they fail to remember that it may not be 100% scientifically underpinned. This is most obvious in medicine. Many treatments still used in Sweden and elsewhere are quite poorly underpinned. But once they have been introduced to the medical community it's hard

to get rid of them, because to do so you really have to prove that they have no effect.”

I ask him for an example

”All right, take chemotherapy in cancer treatment. In some cases it is extremely beneficial, while in others it may be given mainly as a kind of palliative treatment to put the patient’s mind at rest.”

Why did racial biology have such an impact? Even a handbook for social workers published in 1925 prescribes the solution for society as ”racial breeding through parent selection”.

”Genetics were rediscovered in the early twentieth century, and quickly gained a firm foothold in relation to flora and fauna. Thanks to plant breeding, crop yields increased exponentially. The result of cattle breeding was cows that produced by orders of magnitude more milk than the original material. Thus there was good reason to be fascinated by the possibilities. And since human beings are part of the same great ecosystem – why should mankind be deprived of the potential benefits?”

”However, they overlooked human complexity. It’s quite easy to breed a cow so as to improve its milk production capacity, whereas it is considerably more difficult to produce a ’good’ person – how do we even define it? They also neglected the fact that our society might not only need *elite* human beings – it takes all kinds.”

”Scientists thought it ought to be quite easy to develop people with nothing but good qualities, and that many of the problems in the world would then be solved when they reproduced.”

”Kind of like plant breeding, but with people?”

”Exactly”

”Well, were they right about anything?”

”Most of their thinking was quite poorly underpinned. Your grandfather worked in plant genetics, and I think it was typical of the times that people who worked with the genetics of plants and domesticated animals automatically became involved in what we call eugenics, or genetic hygiene. Herman Nilsson-Ehle in Lund, a botanist of international repute, was, in fact, a Nazi sympathiser.”

”There was also a fear that reproduction among the uneducated masses would get out of control, resulting in a kind of genetic depletion in which the good genes had too few opportunities to multiply, while the ”inferior” genes took over as the population multiplied.”

Did people use the word weakness?

”Yes, but the diagnostic criteria were extremely inadequate. Not to mention that weakness might present as a transient decline in an otherwise perfectly capable person. But I believe most people considered it a terrible threat. Even the politicians.”

Yes, the politicians envisaged genetic depletion. And travellers, gypsies and other ”inferior peoples” were regarded as a scourge of which the community ”body” needed to be cured. Grandfather wrote about the ”insidious consumption, which has attacked the nation and is eating away at its lifeblood”. Consumption is an older term for tuberculosis, and I think with the aim in mind of achieving a healthy ”community body”, this was quite a suitable metaphor for a health teacher to use.

As early as 1922, Professor J. Vilhelm Hultcrantz wrote in the journal ”*Hygienisk Revy*” (*Hygiene Review*, in Swedish only), that for racial hygiene to achieve its objective ”it will have to have full support in popular opinion”. I suppose it is in that light that I should see Grandfather’s lecture tours around the country – at good-templar lodges, schools and mission-houses.

The politicians and the general public were receptive to Grandfather and other scientists in exactly the same way we listen to researchers today, and the politicians legislated accordingly. Although there were some protests when the Riksdag adopted its decision to extend the 1935 Sterilisation Act, there was surprisingly strong political consensus. Before 1941, it was permissible by law to sterilise the mentally retarded (often referred to as the mentally deficient), for reasons of racial hygienics. Beginning in 1941 sterilisation was also permitted for medical and social reasons. Medical reasons were often used, for example, to justify sterilisation of women whose bodies were "physically exhausted" and who were said to be at risk if they had more children, and the social justifications were quite broad, encompassing various "inferior peoples" such as travellers and women considered unfit to look after their children. It is estimated that between 1935 and 1975 when the Sterilisation Act was replaced by the legislation currently in force, more than 63,000 individuals were sterilised in Sweden. Sweden thus ranks second only to Germany in terms of percentage of the total population subjected to sterilisation. We will never know exactly how many of these people were subjected to *compulsory* sterilisation, since the means of coercion used were often indirect. My classmate from the social work programme was far from the only person who signed her own application for sterilisation in order to get herself released from the insane asylum.

Journalists were early to draw attention to the sterilisation, but not until the late 1990s did the people who were violated in this way receive an official apology and financial compensation. The series of articles written by Maciej Zaremba in *Dagens Nyheter* in 1997 triggered the passage of a law thanks to which several thousand people who had been sterilised received compensation. Grandfather wrote about a "mulatto breeding in southern Sweden which could not be tolerated." Such opinions were apparently perfectly politically correct even long after the war. I looked up racial biology in the 1952–55 edition of the Swedish encyclopaedia *Nordisk Familjebok*, and found myself reading that racial hygiene was a branch of the study of human heredity the aim of which was to: "prevent unfavourable racial mixing. It is assumed in this context that it is undesirable to cross substantially differing human races. This assessment has been made on the basis of each respective race's view of culture and, more importantly, their average proportions of socially valuable genetic traits. Thus, for example, crosses between Negroid and European races are undesirable from the point of view of the latter."

Ulf Pettersson tells me: "The way of thinking underpinning such prejudiced classification of what were known as 'the races' is completely absurd. And as far as I can see, the whole business of racial mixtures was a total fabrication. My personal belief is that human beings have a pronounced inclination to distinguish between 'us' and 'them'. This may be a genetically conditioned tendency – when we lived as hunters we had to stick together and regard strangers as enemies. I imagine it was extremely enticing for the racial biologists, who were intellectually gifted men, to interpret matters so that they themselves belonged to the elite. Anyone who did not was inferior. The machinery of their bodies was imperfect. It was also very tempting to categorise the races on the basis of the fact that Asia and Africa were poor parts of the world, as was the American south where the blacks mostly lived, and to claim that these were genetic facts."

"So is your way of thinking today completely correct?"

"My thesis is that there is no process of human evolution with regard to moral issues. We cannot claim to be much wiser today than the racial biologists were in

their day. We may have just as little common sense as they did, but in the particular matter of the races I think we see things a bit more clearly. This is why we need to maintain the ongoing dialogue between the experts and the general public. We cannot just say 'now we know how things are, full stop'. We must constantly be willing to reconsider, so as not to lose track of what we are doing."

Are you saying we do not have that dialogue today?

"Well, I'm saying it could be better. There may be too little of it because the general public feel too secure. People tend to think that genetic engineering and genetic therapies have nothing to do with them. They have had their children the natural way, and they do not feel that the debate about selection of children on the basis of their genetic traits is relevant to them."

Grandfather was a product of his times, you are a product of your time. What will your grandchildren be questioning one fine day?

"Perhaps they will read about the kind of work we were doing and question how we could be so naive in our search for knowledge. They might claim that the world would have been a better place without our mapping of the human genome."

"And what do you think?"

"Well, it may prove to be extremely difficult to handle our knowledge about genes in terms of behaviour, for instance. Our psyches are very much under the influence of our genes, and I am sure that the genes relating to aggression, depression and emotions in general are going to be located. Once we possess that knowledge, it will always be possible to trace the relevant genes by testing. The main problem is that we are unable to imagine the potential future problems. We do not know what is waiting around the next corner. And the risk is that we will learn more about the way the human being works than is actually good for us."

"I think if we start comparing the DNA from different people and attributing different characteristics to genetic traits, this could result in discrimination. And I don't think we should actively try to find, for instance, the specific genes that would allow us to smoke without developing lung cancer. It's a better idea for people not to smoke. One can also ask oneself whether it would be right to investigate which genes might be implicated in homosexuality, because such knowledge is also tricky to handle and can be discriminatory."

"There could eventually be unbridled uses of foetal diagnostics, and a situation where parents – if society did not intervene – could pick and choose amongst their own potential offspring. I can imagine people in the future asking: 'How could you get involved in all that so unsuspectingly, under the guise of simply wanting more knowledge?' And yet I'm an optimist. I don't think the search for knowledge is stoppable. Human beings are instinctively curious, and if we halt the search now, someone else will take it up again. In which case it's better to seek knowledge in responsible ways, with society supervising the practical applications."

Being normal

What is a normal person? And when is a person so defective that it would have been better never to have been born?

“XXY” is the name of a chromosome anomaly that is detected today in an amniocentesis. A foetus with this anomaly has one extra X-chromosome. Approximately every 700th baby boy born has the XXY anomaly.

Mats Svensson, an ethnology student at Stockholm University told me:

”A woman phoned to ask me about the implications of XXY: I explained that it could mean having learning difficulties, growing to be particularly tall, or being sterile. But that there is no saying that a child with XXY will be disabled. Later I heard she had had an abortion. I found that terribly painful. It hurt me physically. I felt as if she had decided I didn’t have the right to be alive. I was deeply hurt. She judged that foetus, and thus me, as unfit for life”. I met Mats Svensson when he was in Göteborg, where I live, to chair the annual meeting of the XXY Association. He was staying outside the city with his sister, and I went to her place to see him. My first thought, when we met, was that I can completely understand how 90 per cent of the men with XXY remain undiagnosed. What would make them suspect there was anything wrong? Some men with XXY do grow to be unusually tall, but Mats Svensson is five foot ten while his brother, who has the normal chromosomal structure of XY, is taller. XXY is not hereditary, it “occurs spontaneously at the moment of conception”.

Mats tells me that the reason XXY has received so little attention is that most people who have it are reluctant to go public. And many parents do not want to talk about having a child who is slightly deviant. Mats himself gives the impression of being accustomed to talking openly about it, which, of course, is the only possible attitude for the chairman of a patient support organisation.

Mats tells me that when he was in puberty he began to suspect that something was not quite right. He felt out of step with the world around him. And he found it impossible to plan for the future; he could only think of the present. A week ahead felt like a year.

”I felt like my mind had gone all stiff, as if my whole body had developed a squint. My teachers told me there was nothing wrong with my intelligence, and accused me of laziness

The years passed. He went to various doctors seeking an explanation. But none of them could find anything wrong with him, and just prescribed vitamins to perk him up.

”I was 32 years old and had never had a sexual relationship. I wanted one, but the feeling that there was something wrong with me had an inhibiting effect. I can perfectly well imagine that many young men give up -- it’s difficult to persist.”

At around that age he came into contact with the physician who had discovered the XXY chromosome anomaly, and was finally put on hormone therapy.

”The testosterone patch changed my whole life. Now I have access to myself.”

He does a lot of thinking about what the term “normal” actually means; par for the course for an ethnology student.

”The boundary of normality is constantly in flux. Who is allowed to be part of the gang? What is normal depends on what the prevalent thinking is at any given time. Today people seem to be aiming for perfection.”

”I believe we need diversity. I think diversity makes human beings more human.”

Mats Svensson's work is largely devoted to insurance matters for members of the XXY-Klinefelter Association (XXY is also known as Klinefelter's syndrome), because no-one with XXY is granted private health insurance coverage, not even children.

"In one way it would be fantastic if all boys could be tested, so the anomaly would be diagnosed early and they could be treated. But not until we resolve the insurance issue."

Jan Wahlström is a clinical geneticist in Göteborg who has begun to question if it will be possible to go on pursuing foetal diagnostics. The more sophisticated the technology becomes the more genetic anomalies are discovered.

"Today we are discovering anomalies we might rather not know about – slight aberrations like XXY which, in the vast majority of cases, do not prevent people from living a normal life."

One out of every 700 boys is born with XXY, but today only ten per cent of these boys are diagnosed, while 90 per cent never know they have it, which indicates that they can hardly be very deviant at all.

I ask him why researchers look for things if they don't want to find them

"We have to look for them. When we study human chromosomal make-up, as we do in amniocentesis, we lay all the chromosomes in that person's chromosomal organisation on a slide. So we have to count and examine them all."

"We are prohibited by law from concealing any information from a patient that could be of importance. And that, of course, is quite correct. People have to be able to trust that the health care system will tell them the truth, even when the truth is bad news."

So physicians are obligated to tell presumptive parents about chromosomal anomalies they find in an amniocentesis, with the result today that some people opt for an abortion when they find out their baby-to-be has the XXY anomaly.

Anomalies also have to be noted in the medical records, and insurance companies have the right to read applicants' medical records. Jan Wahlström gives me a recent example: a woman was told that the baby she was carrying had XXY. She decided she wanted the little boy anyway. Later she was refused insurance coverage for him. She was persistent, and did eventually find a company willing to issue a restricted policy.

The positive side of discovering XXY early is that a young man can receive testosterone treatment right away when he enters puberty, and thus be spared all the problems with the absence of a sex drive and of mental energy.

However, the insurance issue is the negative side.

"Foetal diagnostics and the insurance companies may force parents to have abortions", Jan Wahlström concludes.

He adds that most defects are discovered today at the ultrasound scans that are more or less a routine aspect of antenatal care. The technology in this area is developing rapidly, image resolution is improving, and scans can be done earlier and earlier during the pregnancy.

"An ultrasound scan will, for instance, reveal heart defects that might require surgery at some point in the future."

"It doesn't matter if the parents say, for example 'We think our child will be able to have a good life in spite of this problem, we don't want an abortion'. Any defect that is found still has to be put into the medical records. And the insurance companies have the right to read the records of anyone applying for private medical coverage."

Today about half the patients who come to the genetics ward begin by asking about the insurance implications

It is important to be aware of what you are getting into when you have genetic testing done. Very few expectant parents are aware of the link between an amniocentesis or an ultrasound scan and these insurance issues.

Jan Wahlström has long been a spokesman for legislation to combat genetic discrimination. He is afraid that society is at risk of developing a genetic lower class, people who will get neither employment nor insurance coverage as long as employers and insurance companies are allowed free access to genetic information. In his view, the dismantling of the public social insurance system is the greatest threat of all.

"It is what is driving us into the open arms of the insurance companies," he explains.

In his view, insurance companies should not have the right to any information at all. That might lead to higher premiums, but his view is that it is a matter of solidarity in consideration of the weakest people in society.

"We have not yet reached the point where insurance companies can force people to have abortions. But we may find ourselves there one day, if the welfare state continues to disintegrate and it becomes more urgent for parents to get private insurance coverage for their children."

The split

When Willy Brandt reported from the Nuremberg trials after the second world war, he wrote that the line between evil and good does not always go between one person and another. Sometimes that line goes right down the middle of one and the same person.

My Grandfather was this kind of split man. But we do not choose our families. And he was the Grandfather I got.