

On 24 May 1863, a Sunday, my uncle, Professor Lidenbrock, came rushing back towards his little house at No. 19 Königstrasse, one of the oldest streets in the historic part of Hamburg.

Martha the maid must have thought she was running very late, for dinner had hardly begun to simmer on the kitchen range.

'H'm,' I said to myself. 'If my uncle is hungry, he'll shout out his annoyance, for he is the most impatient of men.'

'Professor Lidenbrock here already!' Martha exclaimed in amazement, half-opening the dining-room door.

'Yes, indeed. But dinner has every right not to be cooked, for it's not two o'clock yet. It's only just struck the half-hour on St Michael's.'

'Then why has Professor Lidenbrock come back?'

'Presumably he will tell us.'

'Here he is: I'm off, Master Axel. You *will* make him see reason, won't you?'

And the good Martha disappeared back into her culinary laboratory.

I remained alone. But to make the worst-tempered of professors see reason did not seem possible, given my slightly indecisive character. So I was getting ready for a prudent retreat to my little bedroom at the top of the house, when the front door groaned on its hinges. Large feet made the wooden staircase creak, and the master of the house came through the dining-room and burst into his study.

On his hurried way through, though, he had thrown his nutcracker-head cane in the corner, his broad hat brushed up the wrong way on the table, and ringing words to his nephew:

'Axel, I'm here!'

I hadn't had time to move before the professor shouted again, in a most impatient voice:

'We-ell? Are you not here yet?'

I rushed into my formidable master's study.

Otto Lidenbrock was not a bad man, I will gladly concede. But unless changes happen to him, which is highly unlikely, he will die a terrible eccentric.

He was a professor at the Johanneum, and gave a course on mineralogy, during which he normally got angry at least once or twice. Not that he was worried whether his students were assiduous at his lectures, or whether they paid attention, or whether they were successful later: he hardly bothered with these details. He lectured 'subjectively', to use the expression from German philosophy, for himself and not for others. He was a learned egoist and a selfish scholar, a well of science whose handle groaned whenever someone wanted to draw something out of it: in a word, a miser.

In Germany there are one or two professors like this.

Unfortunately my uncle suffered from a slight pronunciation problem, if not in private, at least when speaking in public: a regrettable handicap for an orator. Thus, during his demonstrations at the Johanneum, often the professor would stop short. He would struggle with a recalcitrant word which his mouth refused to pronounce, one of those words which resist, swell up, and end up coming out in the unscientific form of a swear-word. Then he would get very angry.

Now, in mineralogy there are many learned words, half-Greek, half-Latin, and always difficult to pronounce, many unpolished terms that would scorch a poet's lips. I do not wish to criticise this science. Far from it. But when one is in the presence of rhombohedral crystallisations, retinasphalt resins, gehlenites, fangasites, lead molybdates, manganese tungstates, or zircon titanites, the most agile tongue is allowed to get tied in knots.

The townspeople knew about this pardonable disability of my uncle's, and took unfair advantage. They watched out for the difficult sections, and he got furious, and they laughed; which is not in good taste, even for Germans. And if there was always a healthy attendance at Lidenbrock's lectures, how many followed them regularly simply in order to enjoy the professor's terrible outbursts!

But despite all this, my uncle was an authentic scholar—I cannot emphasise this too much. Although he sometimes broke his samples by handling them too roughly, he combined the geologist's talent with the mineralogist's eye. With his mallet, his steel spike, his magnetic needle, his blowlamp, and his flask of nitric acid, he was highly gifted. From the fracture, appearance, resistance, melting-point, sound, smell, and taste of any given mineral, he could put it without hesitation into any one of the six hundred categories recognised by modern science.

Lidenbrock's name was accordingly very much honoured in the gymnasiums and learned societies. Sir Humphry Davy, Humboldt, and Captains Franklin and Sabine made sure they visited him on their way through Hamburg. Messrs Becquerel, Ebelmen, Brewster, Dumas, Milne-Edwards, and Sainte-Claire Deville liked to consult him on the most stimulating questions in chemistry. That science owed him some wonderful discoveries. In 1853 there had appeared in Leipzig a *Treatise upon Transcendental Crystallography* by Professor O. Lidenbrock, printed in large-folio pages with plates—but without covering its costs.

Add to that that my uncle was the curator of the mineralogical museum of Mr Struve, the Russian ambassador, which was a valuable collection much esteemed throughout Europe.

Such was the character calling for me so impatiently. Imagine a tall, thin man, with an iron constitution and youthful blond hair that made him look a good ten years younger than

his fifty. His big eyes darted incessantly around behind imposing glasses; his nose, long and thin, was like a sharpened blade; unkind people even claimed that it was magnetised, and picked up iron filings. Absolute slander: it only picked up snuff, but in rather large quantities to tell the truth.

If I add that my uncle took mathematical strides of exactly three feet, and that, while walking, he firmly clenched his fists—the sign of an impetuous temperament—then you will know him well enough not to wish to spend too much time in his company.

He lived in his little house on Königstrasse, a half-wood, half-brick construction with a crenellated gable-end. It looked out on to one of the winding canals that criss-cross in the centre of the oldest part of Hamburg, fortunately unharmed by the fire of 1842.

The old house leaned a little, it is true, it pushed its stomach out at the passers-by, and it wore its roof over one ear, like the cap of a Tugendbund student. The harmony of its lines could have been better, then; but, all things considered, it held up well, thanks to an old elm, vigorously embedded in the façade, which, each springtime, used to push its flowering blossoms through the latticed windows.

My uncle was not poor, not for a German professor. The house was entirely his, both building and contents. The latter consisted of his god-daughter Gräuben, a seventeen-year-old girl from Virland, and Martha and myself. In my dual capacity as nephew and orphan, I had become the laboratory assistant for his experiments.

I will admit that I devoured geological science with great relish; I had mineralogist's blood in my veins, and never felt bored in the company of my precious pebbles.

In sum, life could be happy in this miniature house in Königstrasse, despite its owner's impatience; for, while setting about it in rather a rough manner, he did not love me any the

less. But the man had never learned to wait, he was permanently in a hurry.

When, in April, he planted heads of mignonette or morning glory in the china pots in his living-room, he would go and pull their leaves each morning to make them grow faster.

With such an eccentric, the only thing to do was to obey. I accordingly hurried into his study.

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This study was a real museum. Specimens of the whole mineral order could be found here, labelled in the most perfect order, following the three great divisions into inflammable, metallic, and lithoidal minerals.

How well I knew them, these trinkets of mineralogical science; how many times, instead of wasting my time with boys of my own age, I had enjoyed dusting these graphites, these anthracites, these coals, these lignites, and these peats. The bitumens, the resins, the organic salts which had to be preserved from the least speck of dust. The metals, from iron to gold, whose relative value didn't count beside the absolute equality of scientific specimens. And all those stones, which would have been enough to rebuild the whole house in Königstrasse, even with a fine extra room, which would have suited me to a T.

But when I went into the study, I was scarcely thinking about such wonders. My uncle formed the sole focus of my thoughts. He was buried in his large armchair covered with Utrecht velvet, holding a tome in both hands and studying it with the deepest admiration.

'What a book, what a book!' he kept saying.

This exclamation reminded me that Professor Lidenbrock

was a fanatical book collector in his spare time. But a volume had no value in his eyes unless it was unfindable or, at the very least, unreadable.

'Well?' he said. 'Do you not see? It's a priceless gem I discovered this morning while poking around in the shop of Hevelius the Jew.'

'Magnificent,' I replied, with forced enthusiasm.

What was the point of making such a fuss about an old quarto book whose spine and covers seemed to be made out of coarse vellum, a yellowish book from which hung a faded tassel?

The professor's exclamations of admiration didn't stop, however.

'Look,' he said, addressing both the questions and the replies to himself, 'isn't it beautiful? Yes, it's wonderful, and what a binding! Does the book open easily? Yes, it stays open at any page whatsoever. But does it close well? Yes, because the cover and leaves form a unified whole, without separating or gaping anywhere. And this spine, which does not have a single break after seven hundred years of existence. Oh, it's a binding to have made Bozérien, Closs, or Purgold proud!'

While speaking, my uncle was alternately opening and closing the old book. The only thing I could do was ask him about its contents, though they didn't interest me a single bit.

'And what's the title of this marvellous volume?' I asked with too eager an enthusiasm to be genuine.

'This work', replied my uncle, getting excited, 'is the *Heimskringla* of Snorri Sturluson, the famous twelfth-century Icelandic author. It is the chronicle of the Norwegian princes who ruled over Iceland.'

'Really,' I exclaimed as well as I could. 'It's presumably a German translation?'

'What!' the professor replied animatedly. 'A translation! What would I be doing with your translation? Who's bothered about your translation? This is the original work, in Icelandic:

that magnificent language, both simple and rich, containing the most diverse grammatical combinations as well as numerous variations in the words.'

'Like German?' I slipped in, fortuitously.

'Yes,' replied my uncle shrugging his shoulders, 'not to mention that Icelandic has three genders, like Greek, and declensions of proper nouns, like Latin.'

'Ah,' I said, my indifference a little shaken, 'and are the characters in this book handsome?'

'Characters? Who's speaking of characters, benighted Axel! You did say "characters", did you not? Oh, so you are taking this for a printed book? Ignoramus, this is a manuscript, and a runic manuscript at that.'

'Runic?'

'Yes. Are you now going to ask me to explain this word as well?'

'There is certainly no need,' I replied in the tone of a man wounded in his pride.

But my uncle continued all the more, and told me things, despite my opposition, that I wasn't specially interested in knowing.

'Runes', he said, 'were handwritten characters formerly used in Iceland and, according to the tradition, were invented by Odin himself. But look, irreverent boy, admire these forms which sprang from a god's imagination.'

I swear that, having no other reply to give, I was going to prostrate myself, the sort of response that necessarily pleases gods and kings, because it has the advantage of never embarrassing them—when an incident happened to set the course of the conversation off on a different path.

This was the appearance of a filthy parchment, which slid out of the book and fell to earth.

My uncle rushed to pick up this knick-knack with an eagerness easy to understand. An old document locked up in an old

book since time immemorial could not fail to have a signal value in his eyes.

‘But what is it?’ he exclaimed.

At the same time he carefully spread the parchment out on his desk. It was five inches long and three inches wide, with horizontal lines of mumbo-jumbo-style characters written on it.

The following is the exact facsimile. It is important that these bizarre forms be known, because they were to lead Professor Lidenbrock and his nephew to undertake the strangest expedition the nineteenth century has ever known:

Ж. А К И Г	Г К А Г Н Г Г	Г Г Г Г Г Г
Г Г Г Г Г Г	Г Г Г Г Г Г	Г Г Г Г Г Г
Г Г Г Г Г Г	Г Г Г Г Г Г	Г Г Г Г Г Г
Г Г Г Г Г Г	Г Г Г Г Г Г	Г Г Г Г Г Г
Г Г Г Г Г Г	Г Г Г Г Г Г	Г Г Г Г Г Г
Г Г Г Г Г Г	Г Г Г Г Г Г	Г Г Г Г Г Г
Г Г Г Г Г Г	Г Г Г Г Г Г	Г Г Г Г Г Г

The professor examined the series of characters for a few moments. Then he said, lifting up his glasses:

‘They’re runes—the forms are absolutely identical to those in Snorri Sturluson’s manuscript. But what can it all mean?’

As runes seemed to me to be an invention by scholars to mystify the poor rest-of-the-world, I wasn’t displeased to see that my uncle didn’t understand anything. At least, that seemed to be the case from his hands, which had begun to shake terribly.

‘And yet it *is* Old Icelandic!’ he muttered through clenched teeth.

And Professor Lidenbrock surely knew what he was talking about, for he was reputed to be a genuine polyglot: not that he spoke fluently the two thousand languages and four thousand

dialects employed on the surface of this globe, but he did know his fair share.

Faced with such a difficulty, he was just about to give in to all the impulsiveness of his character, and I could foresee a violent scene, when two o'clock sounded on the wall-clock over the mantelpiece.

Martha immediately opened the study door.

'The soup is served.'

'The devil take your soup,' shouted my uncle. 'And the person who made it. And those who will drink it.'

Martha fled. I followed closely behind and, without knowing quite how, found myself sitting at my usual place in the dining-room.

I waited for a few moments: the professor didn't come. It was the first time, to my knowledge, that he was missing the ceremony of dinner. And what a dinner, moreover! Parsley soup, ham omelette with sorrel and nutmeg, loin of veal with plum sauce; with, for pudding, prawns in sugar; the whole lot being washed down with a good moselle.

That was what an old bit of paper was going to cost my uncle. By George, in my capacity as devoted nephew, I considered it my duty to eat for both him and me; which I did, very conscientiously.

'I've never known such a thing,' said Martha. 'Professor Lidenbrock not at table.'

'It's unbelievable.'

'It portends some serious happening,' said the old servant, shaking her head.

In my opinion, it portended nothing at all, except for a terrible scene when my uncle found his dinner already eaten.

I was just on the last prawn when a resounding voice called me from the delights of pudding. I was in the study in a single bound.

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'It's quite obviously runic,' said the professor, knitting his brows. 'But there is a secret and I am going to discover it. If not . . .'

A violent gesture completed his thought.

'Sit down', he added, indicating the table with his fist, 'and write.'

In a moment I was ready.

'Now I'm going to dictate the letter in our alphabet corresponding to each of the Icelandic characters. We will see what that gives. But, by God, be careful not to make a mistake.'

The dictation began. I concentrated as hard as I could. Each letter was spelled out one after the other, to form the incomprehensible succession of words that follows:

mm.rnlls	esreuel	seecJde
sgtssmf	unteief	niedrke
kt,samn	atrateS	Saodrrn
emtnael	nuaect	rrilSa
Atvaar	.nscrc	ieaabs
ccdrmi	eeutul	frantu
dt,iac	oseibo	KediiY

When this work was finished, my uncle eagerly snatched up the sheet on which I had been writing, and examined it for a long time with great care.

'What does it mean?' he kept automatically repeating.

I swear I couldn't have told him anything. In any case he wasn't asking me and continued speaking to himself:

'This is what we call a cipher, in which the meaning is hidden in letters which have deliberately been mixed up, and which, if properly laid out, would form an intelligible sen-

tence. When I think that there is perhaps here the explanation or indication of a great discovery!

For my part, I thought there was absolutely nothing, but kept my opinions carefully to myself.

The professor then took the book and the parchment and compared them with each other.

'The two documents are not in the same hand. The cipher is posterior to the book for I can see an immediate and irrefutable proof: the first letter is a double *m* that would be sought in vain in Sturluson's book, for it was added to the Icelandic alphabet only in the fourteenth century. So therefore at least two hundred years elapsed between the manuscript and the document.'

That, I must admit, seemed quite logical.

'I am therefore led to think', said my uncle, 'that one of the owners of the book must have written out the mysterious characters. But who the devil was this owner? Might he not have inserted his name at some point in the manuscript?'

My uncle lifted his glasses up, took a strong magnifying glass, and carefully worked his way over the first few pages of the book. On the back of the second one, the half-title page, he discovered a sort of stain, which to the naked eye looked like an ink-blot. However, looking closer, it was possible to distinguish a few half-erased characters. My uncle realised that this was the interesting part, so he concentrated on the blemish, and with the help of his big magnifying glass he ended up distinguishing the following symbols, runic characters which he spelled out without hesitation:

1000 417000417X

'Arne Saknussem!' he cried in a triumphant voice. 'But that *is* a name to conjure with, and an Icelandic one at that: the name of a scholar of the sixteenth century, a celebrated alchemist.'

I looked at my uncle with a certain admiration.

'Those alchemists, Avicenna, Bacon, Lull, Paracelsus, were the veritable, nay the only, scholars of their time. They made discoveries at which we can reasonably be astonished. Why might this Saknussem not have hidden some surprising invention in the incomprehensible cryptogram? That must be the case—that *is* the case.'

The professor's imagination caught fire at his assumption.

'Perhaps it is,' I dared to reply. 'But what would be the point of a scholar hiding a marvellous discovery in such a way?'

'Why? Why? How should I know? Galileo—did he not act in this way for Saturn? In any case, we shall soon see. I shall have the secret of this document, and will neither eat nor sleep until I have discovered it.'

'Uh-oh,' I thought.

'Nor will you, Axel!'

'My God,' I thought to myself. 'What luck I ate for two!'

'First of all, we must find out the language of this cipher: it cannot be difficult.'

At his words, I looked up quickly. My uncle continued his soliloquy:

'Nothing could be easier. There are 132 letters in the document, of which seventy-nine are consonants and fifty-three vowels. Now the southern languages conform approximately to this ratio, while the northern tongues are infinitely richer in consonants: it is therefore a language of the south.'

These conclusions were highly convincing.

'But what language is it?'

It was there that I expected to find a scholar, but discovered instead a deep analyst.

'This Saknussem', he said, 'was an educated man. Now, when he was not writing in his mother tongue, he must naturally have chosen the language customarily used amongst educated people of the sixteenth century—I refer to Latin. If I

am proved wrong, I can try Spanish, French, Italian, Greek, or Hebrew. But the scholars of the sixteenth century generally wrote in Latin. I have therefore the right to say, a priori, that this is Latin.'

I almost jumped off my chair. My memories as a Latinist protested at the claim that this baroque series of words could belong to the sweet language of Virgil.

'Yes, Latin,' repeated my uncle, 'but Latin scrambled up.'

'What a relief,' I thought. 'If you can unscramble it again, you're a genius, Uncle.'

'Let's have a proper look at it,' he said, again picking up the sheet on which I had written. 'This is a series of 132 letters, presented in apparent disorder. There are words where the consonants are encountered on their own, like the first one, "mm.rnlls"; others in contrast where the vowels are abundant, for example the fifth word, "unteief", or the second-but-last one, "oseibo". Now the arrangement is clearly not deliberate. It is given *mathematically* by the unknown formula governing the succession of the letters. It seems certain to me that the original sentence must have been written normally, then jumbled up following a rule we have yet to discover. The person who got access to the key of the cipher would be able to read it fluently: but what is this key? Axel, do you have the key?'

To his question I replied nothing, and for a good reason. I was gazing at a charming portrait on the wall: one of Gräuben. My uncle's ward was then in Altona, staying with one of her relatives. Her absence made me very sad, because, I can admit it now, the pretty little Virland girl and the professor's nephew loved each other with all Germanic patience and calm. We had got engaged without my uncle knowing—he was too much of a geologist to understand such feelings. Gräuben was a charming girl, blonde with blue eyes, of a slightly serious character; but she did not love me any the less for that. For my part, I adored her—if, that is, the word exists in the Teutonic

language. As a result of all this, the picture of my little Virland girl immediately switched me from the world of reality to that of daydreams, that of memories.

I was watching the faithful companion of my work and pleasure. Each day she helped me organise my uncle's precious stones, and labelled them with me. Miss Gräuben was a very fine mineralogist. She would have borne comparison with more than one scholar, for she loved getting to the bottom of the driest scientific questions. How many charming hours we had spent studying together; and how often I had been jealous of the fate of the unfeeling stones that she had manipulated with her graceful hands!

Then, when the time for recreation had come, the two of us would go out. We used to walk through the bushy paths of the Alster and head together for the old tar-covered mill which looked so fine at the far end of the lake. On the way we would chat while holding hands. I would tell her things and she would laugh heartily at them. In this way we would arrive on the banks of the Elbe; then, having said goodnight to the swans gliding around amongst the great white water lilies, we would come back by steam ferry to the quayside.

I was just at this point in my daydream when my uncle, hitting the table with his fist, brought me violently back to reality.

'Let's see,' he said. 'In order to mix up the letters of a sentence, it seems to me that the first idea to come into one's mind ought to be to write the words vertically instead of horizontally.'

'Clever . . .' I thought.

'We must see what it produces. Axel, write any sentence at all on this scrap of paper; but, instead of writing the letters one after the other, put them in vertical columns made up of groups of fives or sixes.'

I understood what was required and immediately wrote from top to bottom:

I	y	y	l	u
l	o	l	e	b
o	u	i	G	e
v	,	t	r	n
e	m	t	ä	.

‘Good,’ said the professor without reading it. ‘Now write these words in a horizontal line.’

I did so and obtained the following sentence:

Iyylu loleb ouiGe v,trn emtä.

‘Perfect,’ said my uncle, tearing the paper out of my hands. ‘This is beginning to look like the old document: the vowels and the consonants are both grouped together in the same confusion. There are even capitals in the middle of the words, and commas as well, just as in Saknussem’s parchment.’

I couldn’t help thinking that these remarks were highly ingenious.

‘Now,’ said my uncle again, addressing me directly, ‘in order to read the sentence that you have just written and which I do not know, all I have to do is take the first letter of each successive word, then the second letter, then the third, and so on.’

And my uncle, to his great amazement and even more to mine, read out:

I love you, my little Gräuben.

‘H’m,’ said the professor.

Yes, without being aware of it, awkwardly in love, I had written out this compromising sentence.

‘Oh, so you’re in love with Gräuben, are you?’ said my uncle in an authentic guardian’s tone.

‘Yes . . . No . . .’ I spluttered.

‘So you do love Gräuben,’ he said mechanically. ‘Well, let’s apply my procedure to the document in question.’

My uncle had returned to his engrossing ideas and had already forgotten my risky words: I say 'risky' because the scholar's mind could never understand the matters of the heart. But fortunately, the vital question of the document took precedence.

Just before performing his critical experiment, Professor Lidenbrock's eyes were throwing sparks out through his glasses. His hands trembled as he picked the old parchment up again. He was profoundly excited. Finally he coughed loudly, and in a solemn voice, calling out successively the first letter of each word, then the second, he dictated the following series to me:

mmessunkaSenrA.icefdoK.segnittamurtn
ecertserrette,rotaivsadua,ednecsedsadne
lacartniilujsiratracSarbmutabledmek
meretarcsilucoYsleffenSnl

When he had finished I will admit that I was excited. These letters, called out one after another, had not produced any meaning in my mind. I was therefore waiting for the professor to produce pompously from his mouth a sentence of Latin majesty.

But who could have foreseen it? A violent blow from his fist shook the table. The ink spurted; the pen jumped from my hands.

'That's not it!' shouted my uncle. 'It makes no sense.'

Then, crossing the study like a cannon-ball and going downstairs like an avalanche, he threw himself into Königstrasse and shot off at a rate of knots.