

The Geometer
Lobachevsky

To Susan

ALSO BY ADRIAN DUNCAN

Midfield Dynamo

A Sabbatical in Leipzig

Love Notes from a German Building Site

The Geometer Lobachevsky

ADRIAN DUNCAN



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'It's been such a long time since we met,' the bishop observed, tenderly stroking his mother's arm and shoulder. 'When I was abroad I missed you, Mother, I really missed you!'

—'The Bishop,' Anton Chekhov

A dying man lies prone on a coverless bed in a single-windowed room in the upper floor of a building not far from the sea. The window has been left an inch or two ajar. A rhombus of white moonlight illuminates a portion of wall above the bed, and from the ceiling of this room a glinting mobile of small steel shapes – a circle, a square, a triangle, a pyramid – dangles, clinking gently in the sea air.

In his mind's eye appears the image of a photograph he lost many years before. In the foreground stand five men on the edge of acres of unworked bog. In among these men, all leaning on their implements, stands this man as a younger person. He is smiling, and the wind in the photograph has lifted his dark hair off his forehead into lazy floating strands around his crown.

It is towards these men, over their shoulders and into this broad province of brown earth that the mechanized mind's eye of the dying man proceeds.

PART I

*Point of square touches face of pyramid, while
in the background a triangle spins past.*

I am standing on the edge of a bog. There is wind. And sky meeting arm-opening land. Three men stalk out into this dark terrain. One carries a clinking tripod under his arm and two leather cases in his right hand. Another, head down, bears two bundles of timber stakes on his shoulders, as does the other. I hold a sledgehammer and coiled around my left hand are twenty-two yards of steel chain. My shoes, foot-clothes and feet are wet. I trudged with these men through mud of this kind yesterday and the day before and the day before, laying out across this land a giant if invisible triangle.

A gust of wind breaks and rushes at my face. The two men carrying the timbers topple.

The gust passes.

The two men right themselves and gather up their stakes.

One of the points on this triangle has been carved onto an obelisk three yards to the north of a concrete chimney that protrudes from the horizon in the distance – towards

the west-south-west, they tell me. It is a huge if slim flue for a power station being built by Germans and on the face of this squat stone obelisk has been inscribed the foot of a crow, with three talons extending down from a horizontal line, the centre of which lies thirty-four feet, six and five-eighths inches above sea level. The second point on this triangle has been carved onto the side of a bridge three miles east of where I stand now. This structure is old and of British construction and they refer to it as Kjaknu Bridge. It carries a railway that runs west to a large town called Galway, and east to the capital city of Dublin, and beneath this cut-stone bridge runs a canal that leads north to a lake and south to another. They tell me this canal once carried boatloads of flax, then boatloads of people, until it fell out of use. Onto the keystone to the northern face of this bridge is carved another crow's foot, at twenty-two feet, eight and one-quarter inches above sea level. These three men and I are struggling to place accurately the third point of our triangle into the middle of this stretch of bog before me.

It has begun to rain. The dark undulating hills in the distance have become shrouded in a mist that opens then rolls around these unimpressive summits. The sky is grey in that drab way I would often see, when I was young, in the sky over the shivering countryside outside my hometown, Kazan, on any morning in early spring. The cheerful clipped voices of these three men disappear skyward as they walk a path trampled between long oily openings in the bog. The land

reaches out into further plains of brown and black, and tufts of deep green punctured through with tiny wavering dots of white.

The third man, Kolim, a dark and blue-eyed person, drops a dozen stakes. They make a hollow clatter that seems to trigger from behind me the call of a distant crow or raven or an indigenous bird of some kind whose name I have not yet learned. The second man, Mehl, a balding and bearded person, tips from his arms his stakes, then rubs his hands together while smiling impishly – raising his eyebrows as his thinning dark hair lifts from his forehead and stands for a few shuddering moments, then falls. The first of these country men, Rhatigan, creaks out the legs of his tripod. He speaks calmly to his men as he scans the leaning land, while beckoning me, in turn, out onto it.

When I was sent by the Soviet state to London to further my studies in calculus, knowing I would never become a great mathematician, I strayed instead into the foothills of anthropology. What I lack in my ability now to read numbers I make up for with my ability to read people; and I know these people here will never triangulate this land accurately because this land, as far as I can tell, sits upon a lake, of which they seem completely unaware. When I watch them walking across the surfaces of this place, these people suddenly list or stumble, or some days they simply fall over, as if, unbeknown to them, they are on the deck of an enormous ship heaving upon a distant subterranean ocean on a gusty day. Then they pick themselves up like nothing has

occurred and continue on their way. I can feel these small shifts in the ground beneath my feet too on days when the dark seas far below must be rough. I picture descending labyrinths in the hull of this ship, shaking around terrifyingly, scaring the crew hands within. Sometimes, on these choppy days, when Rhatigan invites me to the tripod and I lift my spectacles and look through the lens of the level perched on top, with its crosshairs trained, say, on the centre of a distant chimney pot piercing the ridge of a small thatched house, issuing climbing strings of smoke from its cup, he utters: ‘Can you not see that, Nikolai? The chimney, moving across the vertical, then above and below the horizontal.’

‘I can,’ I usually reply.

‘Ground vapour?’ he usually asks.

And he always looks doubtful when I nod to his increasingly convenient postulations, and in his doubt he has begun, I feel, molecule by molecule, to see through me. He will soon see that what is in me, is not what I know about the solution here, but what it is I am keeping from him about this problem – that it is the bogland under their feet that is moving and not the buildings in the distance. I will tell him soon that he is better to use the navigation tools of the sea-going vessel here – the sextant, the chronometer. I will tell him, just before I board my train to Dublin on my route back to the Soviet embassy in London, that he is better to turn away from the Euclidean rigidity he has been employing here up to now, because planes of that kind rest too brittlely on soaked-out places such as this.

I pull my collar up on my neck, tug my cap over my spectacles and step down onto the bog.

Rhatigan dangles an inverted bronze cone from the end of a follicle of shining copper. He is in his late forties, grey-haired but well preserved, and entirely engrossed in his work. The plumb, swinging between the legs of the tripod, is seeking in the wind its centre over a ten-foot iron stake that was hammered into the ground the day I arrived. Six inches above the peat hovers a circular head plate with lurid red and white concentric diameters printed upon it. The circumferences decrease to a circle the size of a kopek and in the middle of this circle a tiny dot has been etched, and somewhere within that tiny dot oscillates the secondary benchmark we are trying, in theory, to place into this expanse.

‘Look,’ says Rhatigan, nodding towards a black cloud rumbling up over the ridge of the distant hill.

‘Kolim, Mehl; leave the stakes. We’ll take shelter!’

The rain drums onto the roof of Rhatigan’s auto as we slough off our coats. The land outside has now disappeared behind this odourless curtain of passing rain. There have been many far more intense storms here this week.

‘I had a thought,’ says Rhatigan, as Kolim, turning from the front seat, flares a match then lights a cigarette, ‘we’ll stake out across this parcel in triangles. The parallelograms feel like points too many.’

Kolim exhales a cloud of smoke across the land map upon which Rhatigan has neatly drawn a grid of squares

expanding across a segment of near-featureless land. As the smoke lifts, this grid of squares reappears, pinching to a point in the middle of the indicated trunk road – from where stems the corner of another square, leading to others spreading outward across the land and penetrating this bog in which we shelter from the rain. Rhatigan pencils diagonals through an interlinking line of squares; then, he hopscotches his pencil tip across the drawing, ending at a pillar – the entrance to a house burnt down fifteen years before, or so they told me one day, with barely concealed ardour, almost as if they had done it themselves. A ‘planters’ estate’ they called it.

The rain passes and brings with it a weight of air. We pull on our wax jackets and step down again into the glistening bog.

Two hours have passed and the sun is shining. Our coats lie in a mound to the left of Rhatigan who is stooping, in the distance, to the tripod. We have set out fifteen equilateral triangles across this parcel of land and Mehl and Kolim now trudge back to the auto to collect further armfuls of stakes.

It was fifteen years ago when I first met Rhatigan. He was on a state research trip to Kirov, visiting the largest of Glav Torf’s peat-extraction works and power stations. He came with another Irish engineer, referred to as Oleeri, and their chief, a large man called Glenin. They had flown in some days earlier from Berlin and had been brought on a tour of institutions in Moscow, then Leningrad, then east to

us. I was the de facto receiving dignitary at Kirov. The vice-minister for peat had fallen ill and I was dispatched to take his place. I was then instructed to stay there – one of many confusing and paranoiac demotions during that decade. In Moscow they met Minister Malenkov, then a senior state official, a brute, for whom a few years later I would work briefly at the Special Committee on Rocket Technology. At Kirov, we received message ahead that none of these visiting Irish men drank alcohol, but that luckily they all smoked. We wondered what strangers from distant lands might say to each other over the course of an evening if they cannot drink together. This Rhatigan was with us to learn how to ‘win the peat’, as he said often.

Each day he’d wake at four, call us from our rooms and would not relent until after ten in the evening. Each night, as if marking the day’s progress, he’d drink, with a militant moderation, a glass of milk in our company, before retiring to bed. On his first evening, as if trying to impress on us the special difficulties he faced back in his homeland, he pointed to his glass of milk and claimed that ‘there is more dry matter in that glass than in most of the bogs we are aiming to win’. The men from each department at Kirov were glad to see him go. They found his innocent diligence irritating. I accompanied him each day around the land, drainage-systems, railways and works, translating our ideas, processes and problems into English, for him to nod to and make endless notes. I’d observe him as he wrote his lengthy jottings, his head and abdomen bowed into a hunch

over his raised thigh, scribbling with a stub pencil into his yellow notebook. On his final night in Kirov, he and I stayed up late, after all of the other delegates had retired to bed. Rhatigan told me about his homeland, the ties they hoped to forge with us, his pride in his new country and the sacrifices they had made. He then told me that he had killed his brother during the Civil War. He and two of his comrades walked this brother, Charles, to the side of a bog and put a bullet into the back of his head. Rhatigan's hands trembled on his lap as he relayed this to me. And as he stood and clumsily made to embrace me, before he left silently for bed, I realized that he had not spoken of this to anyone for some time, if ever. He and his two research colleagues, this Oleeri and this Glenin, left the next morning before I could speak to him again or bid him farewell.

Then, one day some years later, while I was returned to Leningrad once more – this time to revise and re-translate into English a paper my great-grandfather had composed over three-quarters of a century before, on the geometry of curves – I decided to write to this Gunter Rhatigan. I wanted to know how well he had learned from us. I wanted to know how their research trip had served them. I wanted, in truth, to make contact with him again because I had then lost the second of my two only friends – Matvei, a scriptwriter. His passing had compounded the loss of my other friend from years before – Gusev, a sculptor of abstract forms, who had perished in a camp in the north. Some weeks after I sent my letter, Rhatigan responded, informing me that he and

his Irish colleagues were doing well, that they had ‘drained and won over a large bog in Offaly, and a smaller one of fifteen hectares near Kildare’, and that their work, railways, machines and housing projects were on schedule and that they hoped to extend ‘into the Midlands’, where they intended to continue enacting what they had learned from us in Kirov years before. I wrote back immediately; and this began our years-long correspondence, which has culminated in Rhatigan’s recent request for my help in measuring this troublesome piece of land.

Rhatigan approaches flinging his cigarette stub into a puddle.

‘Nikolai,’ he says, in his thin voice, ‘you know you’re not obliged to accompany us here all day; we can easily report to you in the office.’

I tell him that I can really only advise on the processes of measurement I see.

‘And what would you advise, Nikolai?’ he asks. ‘Dublin’s getting impatient.’

He is smiling a pained smile, the large gap between his front two teeth showing.

‘Can you make available an hour in my hotel bar this evening?’ I ask, to which he nods.

Kolim and Mehl return and drop their armfuls of stakes at our feet. I pick up the twenty-two yards of chain and we string it out into the wet land. Rhatigan returns to his tripod, steps in behind, pulls focus and indicates Kolim left, then right, then left once more, all the while his head obscured

behind the glinting theodolite eye. I wonder, from there, can he see dejection in our expressions. He gestures Kolim to stop with the upraised palm of his hand. It shines white in the sun. Then he points his index finger downward and Kolim pushes a stake into the ground; Mehl thumps it with the sledgehammer, and again. We pin one end of the chain to the stake and walk at an angle out twenty-two yards, until it pulls taut, then we look back to Rhatigan in the mid-distance, still leaning into the tripod, his hand in the air shuffling Kolim over and back in tiny steps around a point somewhere in the black peat below.