Looking Astern

THE AUTOBIOGRAPHY OF

Stanisław Świerczkowski

Cover design: Daniel Apt (based on a photo of the author)

Published privately

Editors' Note

Stanisław Świerczkowski was a prominent Polish mathematician who led a remarkable life on several continents. He passed away 30 September 2015 in Hobart, Tasmania.

This book is the final version of his autobiography that was found by his family on his computer after his death. On page 3 it mentions "Hobart, Tasmania, May 2014". Earlier versions were circulated by the author privately.

The following changes were made in the manuscript by the editors.

- A cover was added.

- The book contents was augmented by three entries:

Academic Appointments 193
Mathematical Publications 194
Index of Names 198

- The author's remark:

``Publications see
http://scholar.google.com/scholar?q=swierczkowski&hl=en&as_sdt=0"

on page 193 was replaced by the list of publications taken from the MathSciNet and arranged chronologically.

- The remark ``(page numbers will be added later)" after Index of Names on page 198 was removed and the Index was completed by the editors using for this purpose an existing index available in an earlier version of the book.

- At the end of the manuscript 43 photos were added. They constituted a separate file. These photos were included in an earlier version of the book.

Editors:
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Foreword

My story is not one of continued success and it is even possible that I have suffered a greater than average number of vicissitudes and personal losses. Yet these were counter-balanced by a few strokes of enormous luck. Thus, I was granted survival in some life-threatening situations – in caves, on mountains, or at sea – and I had the privilege of solving occasionally a research problem in mathematics. This enabled me to leave at an early age the communist-dominated existence in Poland and to earn my money by working at many universities and scientific institutes.

I became a mathematician due to an accidental combination of circumstances and I never felt comfortable in that profession. Accordingly, I often escaped into adventures of other sorts. To them I devote most of this memoir. My main escape, intended to be the final one, occurred after 18 years of my mathematical career: I constructed a large sailing yacht, hoping to spend the rest of my life cruising the oceans.

I have included here some mathematical tales, perhaps just enough to allow the interested reader to get an idea of the kind of problems that could occupy a mathematician's mind. To distinguish these parts from the rest, I have written them in a slightly different font.

The vast majority of people would like to live in harmony with each other. However, unless we able to imagine how others feel and think, problems are likely to occur that make harmony very difficult to achieve. So, to begin with, it may be a good idea to tell each other how we travelled through the years.

Hobart, Tasmania, May 2014

S.Ś.

Between the banks of pain and pleasure flows the river of life. Happiness is incidental. The true and effective motive is love. You need not learn to love for you are love itself – when you are not afraid.

From **I Am That** *by Sri Nisargadatta Maharaj*

☼

1. Earliest memories

The town of my birth, Toruń, in northern Poland, is the one where the great medieval astronomer Nicolas Copernicus entered his earthly existence. And the first years of my life coincided with those of Adolf Hitler consolidating his power a couple of hundred miles to the west. However at that time we were still beyond the range of his appetites.

Just after I was born, Mother still partially under anaesthesia, had a curious dream. God and the Devil were playing chess and the winner would take her child's soul. Suddenly, the game came to a halt – it seemed God will lose. But no, He made one last move and won.

This was a rather peculiar dream because my mother thought the Devil to be just an invention of theologians and, as far as I know, she prayed to God only in times of great anguish.

My earliest memories are those of sitting quietly, alone in a large bright yellow painted room with almost no furniture. Hours were going by. Days, perhaps years, passed like this. Mostly, small children cannot bear long periods of inactivity, but for me this solitary lifestyle was the norm.

Our maid was usually in the kitchen at the other end of our spacious apartment. Occasionally she had a visitor and I could hear voices. When I called her she would come and take me to the toilet, and then she would return to the kitchen.

Sometimes my mother would be at home, dressed beautifully, and smelling of exquisite perfume. My wonderful mother. However, she never stayed for long. Occasionally she gave a party, and through closed doors I could hear many people

coming and going, chatting and laughing. I always waited for my mother and I hoped she would come soon.

A holiday memory. I am carried up to the top of a mountain, and the grownups turn my attention to an aeroplane. The plane is flying below us. I find this utterly strange. I realise that no child in our faraway city in the lowlands has ever been above a flying plane.

I learnt to speak at the usual age but I spoke extremely slowly. My mother was frustrated and worried that I was abnormal. I had an answer to every question, often guessing the meaning when I did not understand it fully. For example, if someone asked me, "How are things going?" I would answer slowly and after deliberation, "Tired horses are going slowly."

My mother employed an endless stream of maids, one after another. I guess she was putting high demands on these women, or perhaps high-quality maids were hard to find. Only one seemed to be very good, and I have memories of her pulling me on my sleigh through the snowy streets and parks of our town. I do not know why she left. In any case, it was another maid who once asked me to wait for her outside a house where she called for a visit. To her excuse, it should be said that this house was next to a park and I had to wait in a lane with plenty of people passing but no motor or horse traffic. After a while I got bored, and when two soldiers asked me if I was lost, I lied blatantly that I was. I must have been about five then and I certainly didn't have enough knowledge of the town to find my way home. Yet, strangely enough, I was able to give them the address. The soldiers offered to take me home. This wasn't far out their way because the barracks were at the far end of our street. Of course, my mother was both surprised and delighted to see me. She began searching for another maid.

Often, when my mother felt tired, she would take 15 minute catnaps. On such occasions I would creep under a table and sit there. Upon waking she would see me sitting in exactly the same spot. I was surprised that she found this unusual. For me, at the age of six, sitting perfectly still, thinking nothing and doing nothing, was natural.

I loved cars. For our summer holidays "Uncle" Severin, a friend of my mother, used to provide us with a car and chauffeur to take us to stay with Uncle John and Aunt Helena who lived in a new villa in the Carpathian Mountains. Uncle Severin was a VIP – chief of the Counterespionage Service for North Poland. During the

daylong drive in the big black Chevrolet I stood for hours behind the driver's seat, watching the road. We passed through towns, villages, forests and cultivated fields. Almost all of the traffic was horse-drawn and the villagers were turning to stare at the beautiful American car. Now and then, the driver had to change a tyre, as the horses were losing nails from their shoes. I once managed to open the door while the car was in motion and I was very surprised that Mother and chauffeur got so upset about this.

"Who is Hitler?" I asked the maid one day. She laughed hilariously – "What a question from a six-year-old?" Another question from the 6-year old: "How did they know at the factory to make gloves that would fit me exactly? They've never seen me!"

Father's visits were always a surprise. I delighted in them. He would take me out for a whole day walking in the city and in the parks. I recall us visiting a little room in the downtown area that must have been his hotel lodging. I did not regard it as unusual that I never saw my parents together. I didn't compare our family with others. We were obviously different in many respects. So what?

One day, whilst I was playing at the pump in the garden, I saw Father walking towards me. He was wearing a smart uniform, with leather straps and insignia, but my attention stayed focused on the pump. He had come to say "good-bye". I did not realise that I would never see him again.

I have only a very limited knowledge of my father's life. Mother never liked to refer to her failed marriage, although sometimes when she noticed some negative trait in my character, she would exclaim, "Typical Świerczkowski behaviour!"

Father was a nobleman. His coat of arms was called "Janina". I think he dreamt of acquiring a country estate and living in a style similar to that of his ancestors.

My paternal grandfather was an apothecary in Warsaw. Most likely, grandfather's business was doing well because he had given my father a good general education although, apparently, not much else in the way of preparing him for any specific profession. His social origin might have helped my father towards a career in the military but after fighting as a lieutenant in the 1919–1921 Polish-Soviet war (won by Poland) he remained an officer of the reserve.

My mother owned a large building, which housed the main post office in the town of Odolanów. Soon after they got married, my father told her that he needed some capital for conducting a potentially profitable business. Accordingly, Mother

took out a big loan against her post office building. As it turned out, the "profitable business" was gambling in a casino, and Father lost all the money. As a consequence, he toyed with the idea of committing suicide. Wanting us to benefit from his final act, he took out a hefty life insurance and planned to go to the Tatra Mountains where he could fall "accidentally" to his death. However, this plan never came to fruition because he met a wealthy owner of a country estate and had an affair with her. My mother found out and a divorced him.

My father married the mentioned estate owner. A few years later my half-brother was born and the two of us would now be the joint owners of the Kłobia estate (district Włocławek), had it not been for the fact that shortly after World War II, the Soviet-controlled Polish government had divided the land up among the peasants.[1])

In contrast to my paternal grandfather's background of city-dwelling nobility, my maternal grandfather was born in a cottage in the Carpathian Mountains. This region was at that time under Austrian authority and when my grandfather grew up he became an employee of the Austro-Hungarian railways. As a *Brückenmeister* he supervised the maintenance of railway bridges. He was mostly on the go and rarely at home.

I know very little about his wife (my maternal grandmother). Before her marriage, she'd worked as governess in the homes of wealthy Russians, so presumably she had been well educated. It is possible that her background was German or Jewish (or both) because her mother's and grandmother's maiden names were Bisanz and Schweitzer.

I went to school when I was six, a year earlier than required in Poland. Mother had probably used her influence as headmistress in order to arrange for this early start of my education. Accustomed to solitude and quietness, I had an adverse reaction to the boisterous school environment. Groups of shrieking children would fill me with revulsion. It is, perhaps, due to this disgust that I have absolutely no recollections of my first year at school. In fact, I spent most of that time in bed. Not having had much contact with children before, I contracted all the childhood diseases, one after another.

The 1939 summer vacations that followed my first year at school were exceptional: We never left town. I imagine that the political situation was tense and Mother, always staunchly pessimistic, was expecting the outbreak of war. I spent

[1] For the pronunciation of Polish letters see in Wikipedia: Polish alphabet/phonology.

most of that summer sitting under the table in my room and reading the *Adventures of Robinson Crusoe.* Thus, although I did not travel physically, in my mind I voyaged further than ever before.

2. The war begins

September 1, 1939: The First Day of World War II. German planes are in the skies. My mother hangs blankets over the windows, to protect us from poison gas and glass splinters. We wait for the explosions, but none come. Uncle Severin's beautiful daughter, Lydia, is lodging with us. I am 7 years old, and I am hopelessly and secretly in love with her. She is a student and much older than me.

Uncle Severin sends a car and driver to take us to the safety of Uncle Casimir's country estate. Uncle Casimir is the husband of Aunt Angela, my father's sister. During the drive, we notice a low-flying German aircraft. The grownups get very agitated. Fortunately, we reach a forest before the plane has time to make a turn and fire at us.

At the estate of Uncle Casimir, we switch on the radio. Bad news. The Germans are advancing. Together with the three sons of my uncle we climb huge haystacks to look at fires in the distance. Polish landowners are destroying harvests so the crops don't fall into German hands. We very much enjoy jumping down the stacks onto soft thick layers of straw.

A car comes to collect Lydia, but after a couple of days they return. The windows of the car are shattered and Lydia is wounded by broken glass. Refugees are clogging the roads whilst German planes are shooting at them.

We return to our town. All of Poland has been partitioned between Germany and the Soviet Union. My father is captured by the Soviets, and he sends us a postcard from a POW camp. He is unaware that he is awaiting execution, together with more than eight thousand officers, and over seventeen thousand other educated Polish people, deported by the Soviets.

These men and women did not fit into Stalin's plans for subjugating Poland after Germany's defeat. Later, the advancing German army discovered the now infamous mass graves of Katyń, and invited an International Commission to inspect them. The Soviets denied having committed this hideous crime, blaming the Germans. The world had to wait 50 years until Boris Yeltsin, the first president of the Russian Federation, made public the pages of Stalin's order for the execution of over 25,000 Polish "enemies of the Soviet State".

Soon after arriving, the Germans order everyone to hand over their radios. The purpose was clear: No information undermining the official Nazi propaganda should be available. (Radios with limited frequency bands could, however, be purchased later). Displaying remarkable courage my mother disobeys. She burns the wooden box and hides the electronic essentials behind a row of books in her study. She is possibly not fully aware that this act of defiance could lead us to a concentration camp and a likely death. However, handing in the radio later (without the box) would have been dangerous. Also, disposing of it in any other way might have been risky, for this could have easily triggered off a police search for its source. So the set remains hidden behind the books for the five years of the German occupation, and my mother has access to BBC broadcasts. I know about the presence of the radio, but I never touch it, and I do not dare to share this secret with anyone.

The first winter of the war is very cold. We have no income. Mother sells the piano but we cannot not buy coal; it has to be fetched from the railway station on the other side of the Vistula (Wisła) River. As the bridges across the river have been blown up by the withdrawing Polish army, we take my sleigh and cross the kilometre-wide ice. We succeed in getting the coal and my feet succumb to frostbite.

Mother is terribly worried and afraid. She burns books and pre-war journals containing anti-Nazi information. Some of her friends visit and the women speak in hushed voices. I sense feelings of fear and foreboding. Many people have been deported. Those still free wished to send the detainees parcels of food and clothing, but nobody knows what is most needed. The true horror of the concentration camps is not yet known.

During that first year of the war I gravitate towards the street where I find companions of my age. We smoke cigarettes, made from butts found in gutters, and we split into bands to fight war games. Although I am not very good at stone throwing or at fistfights, I am a fast runner. Thus, when our side is losing, I always manage to evade bodily harm by running away: *He who fights and runs away may live to fight another day* (Erasmus of Rotterdam).

When my mother discovers I am smoking cigarettes at the age of eight, she panics and gives me a severe thrashing. As a result, I never again touch a cigarette. Somehow, an invisible barrier between me and smoking is created. Her reactions to my attempts at cheating and lying are similar. So, like it or not, I have to better my

ways. On the other hand, Mother's tendency to erupt in uncontrolled fury creates an emotional distance between us. I begin feeling estranged and lonely.

In retrospect, I understand the enormous pressure my mother was under. The Germans had decided to incorporate our part of Poland into Germany proper. In fact, that region, which they called *Danzig-Westpreussen*, was under Prussian rule for nearly half a century until the end of the First World War. So a large part of the older generation still spoke German. After the German invasion in 1939, the use of the Polish language was outlawed. Almost all the indigenous people, mostly members of the working and lower middle classes, obtained a category of semi-German citizenship called *Volksliste 3* which gave them many of the rights and privileges of native Germans. In particular, the men were drafted into the *Wehrmacht* to die from Soviet bullets.

The more educated Poles – i.e., the upper section of the middle class and above, were destined for extinction. They appreciated the kind of life they had in pre-war Poland, and they were the potential organisers of anti-German resistance. Their lot, shared with all the Jews, was to perish in concentration camps. My mother, unfortunately, belonged to that group. Before the war, she was the headmistress of a big school, and she owned a large property. Although my parents were divorced, my father was a landowner and a member of the so-called Intelligentsia, thus from the "wrong" class too.

To explain why Mother and I did not follow the expected path through the gas chamber to the crematorium, I must mention a few more facts about my mother's background. She was born in southern Poland at a time when that region was part of the Austro-Hungarian Empire. Her father was a government employee working for the Imperial Railways, and everybody in the family spoke German. One of her grandmothers, Katharina Schweitzer, was quite likely German. Mother's religion was Lutheran – a faith originating in Germany. Before the Germans overran Poland my mother was the headmistress of a school for the German minority in our town [2]) and she was greatly respected by the children's parents.

This German minority, including businessmen, professionals and factory owners, became very influential after the German invasion. And they wanted my mother to continue teaching their children. So they suggested to the German

[2] According to the Versailles Treaty of 1919, the Polish government was obliged to provide such schools.

Administration that she should be granted a category of citizenship which would allow her to stay in the teaching profession.

As a result, Mother was subjected to harrowing interviews at the *Gestapo*, when for a while our fate seemed to balance on a razor's edge. Some of these were in the town where we live, and others in Bydgoszcz, the city where the Germans had set up their regional government. She asked me to pray for a good outcome of these "visits", and once she told me that she has arranged for me to be taken care of in case she would not return. Finally, she was offered the category of semi-German citizenship called *Volksliste 2*, one that was normally given to persons who had some German ancestry and spoke German fluently. Of course, she could have refused and this would have put us on the next transport to an extermination camp.

Evidently, she was driven by the desire to save our lives. To justify her action she quoted BBC broadcasts urging people to do everything possible to survive, as long as they do not damage "the Polish Cause". She reasoned that no damage to Poles, or to the Polish Cause, could result from her accepting the offered *Volksliste 2*. So, a year after the war had begun, she was once again standing in front of a class, teaching the same children she had taught the previous year, and even in the same language.

I can recall my first day at the German school very clearly. I was sitting in the back of the classroom unable to understand a single word! I had no idea what the teacher was talking about. Worse, the other children seemed to understand. Obviously, it was not their first day. I must have complained bitterly to Mother about this. I do not recall how she helped me but I suspect that she just stopped speaking Polish to me.

The discipline in the German school was horrific. Absolute silence in class was the rule and even a whisper or pulling a face was punishable with the cane. We had no young teachers. All fit and able-bodied people were involved in the war effort. I remember one middle-aged teacher who could not fight the Russians because he had very stiff legs and walked like a stork. This was *Herr Rostock,* whom we called *Rohrstock* (cane). It was a very fitting nickname because he always walked with a cane which he often used on us. To receive the lashes, you had to put your hands flat on the desk, palms up, and try not to scream.

In a couple of years I became fluent in German. Among the boys there were some who came from bombed out homes in Berlin, and I recall an occasion when my

Berliner playmates could not believe I was not one of them. Many years later I learned that at that very time, my cousin, Jan Cholewa, was commanding one of the RAF Lancaster bombers that were turning Berlin into rubble.

Although my name remained undeniably Polish, I made it sound more acceptable by adding the nobility prefix “von”. My Berliner playmates would have been greatly surprised to hear that this distinction apparently was granted to one of my forefathers for his valiant contribution in beating the Teutonic Knights of the Cross (*Kreuzritters*) in the great Grunwald (*Tannenberg*) battle of 1410.

3. In German-occupied Poland

A couple of hours by train and we reach a part of Poland that was under Russian rule before World War I. Here the German language is not enforced. In fact, there are almost no Germans present, except some administrators and directors.

Uncle Casimir's country estate is under German administration, so my uncle left it and lives with his family in a simple clay hut with small windows, a thatched roof and hard beaten soil for the floor.

Before the war my uncle's neighbour was a German landowner and when the war broke out, this man, fearing the peasants might kill him, fled to seek help from my uncle who offered him a place to hide. Now, because of the of this ex-neighbour's influence, my uncle has a lowly job in the administration of a large farm and he can feed his family consisting of two sons, his wife and her sister. The oldest (third) son, Joseph, left his parents, to join the armed resistance: The so-called AK (*Armia Krajowa* i.e. The Home Army). These fighters take their orders from the Polish Government in Exile in London.

My uncle collects us from a small railway station. Then follows a long journey through fields and forests in a horse-drawn cart, of the kind used to gather harvest from the fields. Upon arrival to the cottage, Mother begins to tell stories. My aunt and uncle have no radio and newspapers do not reach them. Their life seems to stand still. However, this is very different in the city. Even though the German media cannot be trusted, my mother listening clandestinely to BBC broadcasts has plenty to report.

Joseph, the resistance fighter, together with his companions, occasionally creep up to the farm under cover of darkness. As a result, some days I am told not to enter the barn, because "somebody is there". Joseph helps us tremendously: His underground connections allow him to provide us with forged ID documents, so that the Russians, when they eventually come, will not treat us as if we were German.

Many years later, when the Russians were approaching from the east, Joseph hitched a ride westward on a truck with fleeing Germans. Polish resistance fighters commanded from London had only one future in Soviet-controlled Poland –

imprisonment, torture, and often execution. Of course, Joseph could have expected a similar treatment from the Germans, had they known his true affiliation. [3])

While in central Germany whole cities are being destroyed by ever more intense air raids, our city is viewed by the Allies as Polish, and we are never bombed. Nevertheless, air raid alarms are waking us at night, and we have to run downstairs to the cold basement, taking the cat with us. Decades later, the sound of air raid sirens still has a spine-chilling effect on me. People expect that sooner or later our turn might come, and the bombs might bury us under the rubble. But the Germans seem to know better. They move many families from their bombed out cities, and give them the houses left by the deported Poles.

For a few weeks a German woman with her young son are lodging with us. I soon discover with delight that I only have to shout "Tommies are coming!" for the boy to be thrown into paroxysms of panic which were acquired, no doubt, during the many air raids.[4]) The boy has a beautiful toy motor boat, and I envy him very much this toy. One day, when he holds the boat over the edge of the balcony, I shout "Tommies are coming!" Sure enough, he screams and drops the toy which crashes onto the stone pavement three floors below. This proves I wasn't born with a noble character!

We have another memorable contact with a German family. They live in a luxurious apartment adjacent to the park. Mother and I are surprised to see all the floors painted glossy white. How exquisitely elegant! Then we hear their only son was killed on the Russian front. We go to convey our condolences and they show us the last photograph of the fatally wounded soldier. He is lying on a blanket in a meadow.

For me this visit is, in a way, a joyful occasion. The dead soldier's parents still have several interesting items that once belonged to their son and I get many of these. I receive a Meccano set. This is a collection of perforated metal strips and other shapes with lots of nuts and bolts to connect them. From these I can make all sorts of structures. Moreover, I get five thick volumes of a richly illustrated history of the world and humanity: *Weltall und Menschheit* (The Universe and Humanity). In these, I find prehistory, history, geography, engineering, sciences, astronomy, and much

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[3] After the war Joseph lived in the USA and perished in New Mexico under mysterious circumstances.

[4] Since World War I, "Tommy" was a nickname for a British soldier.

more. These gifts will influence me greatly: shunning the noisy street games I will devote my time to Meccano constructions and reading.

When I am ten, we have an unusual day at school. Instead of getting lessons all the parallel classes are crammed into one room, and a teacher asks various questions. If you know the answer, you raise your hand and give the answer if allowed to speak. In this way, the more knowledgeable pupils are selected and I am among them. (I correctly name the highest mountain in the north of Poland and give its exact height).

The lucky chosen are sent to a different school: The so-called *Oberschule*. This is a much less crowded place. The classes are smaller; the building is nicer; the teachers are friendlier and almost all the children come from central Germany. At last I enjoy school.

Most agreeable are my lessons of English. I am surprised how often similarly sounding words in the two languages have very different meanings, e.g., *Hose* (trousers, in German) and *house,* in English. Germany is at war with the British, but our lessons don't reflect this. We use pre-war textbooks and the teachers display no hatred. From the books we gather that life in England is peaceful and pleasant. Nobody tells us that just then German planes are bombing English cities, killing thousands of civilians.

At the *Nicolaus Copernicus Oberschule* only one other boy in my class has a Polish sounding name: Labunsky. We become good friends. We have to participate in various activities intended to prepare us for joining later the *Hitlerjugend* organisation. We are called *Pimpfen*. We march, singing Nazi songs. To my great regret, we were not issued uniforms. The German war effort is directed somewhere else. I choose the hobby group related to the air force and spend many an evening building models of military aircraft.

Towards the end of the war Labunsky and I discover that missing the *Pimpfen* meetings does not lead to unpleasant consequences. We find a hole in a large shed where lots of pleasure boats and yachts are stored and our beloved occupation consists in exploring the insides of these vessels.

Labunsky wants to become a precision mechanic, but I am more susceptible to current propaganda and my chosen metier is to become a fighter pilot.

Sometimes I go on excursions with another boy, Erle, the son of an aircraft electrician. On one of our hikes we creep up to a *Junkers 52* transport plane parked at the

edge of the airfield. The soldier guarding the craft is very friendly and places us in the pilots' seats whilst pressing some switches on the dashboard. This causes a few lights to blink and produces buzzing sounds. Erle and I are delighted.

In the autumn of 1942, Erle and I are ten years old, and we are more interested in our childish games than in the war raging hundreds of kilometres to the east. Nevertheless, the war is raging with a vengeance. The largest battle by far in human history has just begun, and the city of Stalingrad (now Volgograd) is mentioned in every news bulletin.

The battle lasts five months, and during the final 72 days, the Germans are encircled by the Soviets. Enclosed in this "pocket" is the exceptionally strong German Sixth Army and parts of the Fourth Panzer Army – in total 250,000 soldiers. Short of food, ammunition and winter clothing, they inevitably succumb to the fierce Soviet attacks.

The total number of Soviet casualties has never been disclosed but is considered to be well over a million. On Tuesday, February 2, 1943, there are still 91,000 German soldiers remaining from the originally encircled 250,000 troops and, starving and frozen, they surrender. (Only 6,000 of these 91,000 will survive the harshness of Soviet captivity to return home after the war).

The loss of the Sixth Army is a great German tragedy and the following Saturday is declared a day of national mourning (*Volkstrauertag*). Upon arriving at school as usual, we are told to go home and mourn. Instead, Erle and I go to the city park, we select a tree overlooking a wide expanse of meadows stretching unto the shores of the Vistula River and we clambered up that tree almost to the top. Then, perched on the branches, we remain for most of the day contemplating the view. We decide this to be our "act of mourning".

Mother and I live in our spacious, pre-war apartment, and since this is fairly close to the airfield, pilots lodge with us from time to time. Once I try to explain to one of them an invention of mine. This is of a boat which has a wind turbine on deck, generating electricity that is then used to propel the boat through the water. "Even in calm weather," I claim, "the motion of the boat will create the wind to rotate the turbine." The pilot says that my idea contradicts some general laws of physics, the explanation of which I find unsatisfactory.

Another pilot, covered in burn scars after surviving a crash landing, tells us Germany will certainly win the war because an extremely powerful weapon is just being developed. [5])

My mother, a school teacher, makes friends with two colleagues, Ingrid Franz and Gerda Grund, both from Vienna. (Fifteen years later, I met them in Austria). Also a limping *Freulein* Pelz (Miss "Fur"), working in the city administration, belongs to this group. For a joke, the *Freulein* risks her freedom and possibly more, by issuing an ID document for Nicolaus Copernicus. The gist: He gets the same semi-German category as we have (*Volksliste 2*). Of course, this pokes fun at the official version that Copernicus was a native German.

The Jews! As far as I know, I never knew one until some years after the end of the war. In Hitler's Germany, for children of my age, the word "Jew" essentially means someone evil and an enemy of Germany. So it is quite normal to say that Churchill, Roosevelt, and Stalin are Jews. When a boy wants to insult another gravely, he might shout "You are a Jew!". We know nothing about race, and only after the War did I learn about the existence and the horrors of concentration camps. Of course, I was a child then, but even as a 12-year-old boy I would have heard something about those atrocities, if anyone had dared to talk about them. Nobody dared. After the Germans were gone, I sometimes heard my mother praise a good pupil by commenting, "Smart as a Jewish child!" I guess, as a teacher, she knew best.

Toward the end of 1944, it should have been very clear to every sane person that Germany was losing the war. The official German radio bulletins starting with *Das Oberkommando der Wehrmacht gibt bekannt…* (the High Command of the Army announces...) were telling us that one town after another had been *planmäßig geräumt* (cleared according to plan) and only a complete idiot would not have read this as a euphemism for "we have been beaten again". To help people maintain their delusions, life in Germany seemed to proceed normally. This might not be so in the cities which were regularly bombed by the Allies but, as already mentioned, our town was regarded by the Americans and British as being Polish and the wailing of the air raid sirens was merely followed by the distant firing of anti-aircraft guns, after which the

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[5] At that late stage of the war this is merely Nazi propaganda.

sirens wailed again to call off the alarm. But this did not happen very often. On the whole we slept peacefully.

In December 1944 the city of Warsaw was still burning after the failed Polish uprising against the German occupying force. During the fighting at least 120,000 civilians and 18,000 Polish fighters had died. Fatalities on the German side amounted to over 17,000 soldiers. One quarter of all homes had been destroyed. Shortly after the fall of the uprising a further 35% of homes were systematically burned down by German platoons as an act of revenge. Yet, such trivia did not find their way into the German news bulletins. So, although all this was happening barely 200km from our home, I knew nothing about it at that time.

My playmates and I were made to believe that Germany was going to win the war and that the proximity of the Soviet Army was merely a passing phenomenon. I even recall that when I came across an advertisement in a magazine for a toy car I fancied, I managed to convince my mother to give me five Marks whereupon I raced to the post office and sent the money to a shop in Berlin. It never crossed my mind that the train carrying my order might have been bombed out of existence or that the shop in Berlin was most likely already buried under a heap of rubble. I waited and waited. The Germans still owe me those five Marks!

All through the War the German propaganda did its best to create an atmosphere of security and normalcy. Thus, barely a month before the Soviet might was to sweep across Poland and push the Germans to the river Oder, their last line of defence, my mother decided to spend the Christmas vacations visiting our family on the other side of Poland. Accordingly, in December 1944 we boarded a train that took us some 400km south to the foothills of the Carpathian Mountains.

In January, however, the Soviets crossed over the frozen River Vistula and a great offensive began. My mother decided to return home immediately. The shortest route was already through combat areas, so we first took a train going westwards heading for Berlin. The train was packed with fleeing German civilians.

During the night, while we were standing at a station (*Ratibor,* now Racibórz), the air raid sirens began to howl. Immediately the train started to move. Having left the station we then came to a standstill in an open field. Shrapnel from anti-aircraft shells was falling with loud clicks onto our carriage roof. The danger of being hit discouraged people from leaving the train. In total blackness we were not visible from the air, however, the bombers dropped bright burning lights which slowly parachuted

down. One such group of lights was gradually driven by the wind towards the train. We prayed they would not cross above our heads but rather would land in the field. Fortunately, that is exactly what happened. The train remained invisible and we survived.

The next big station was *Breslau*, now belonging to Poland and called Wrocław. Crowds of Germans stormed the train. For the first time in my life I saw grown-ups behaving badly towards each other. We didn't want to go to Berlin so we got out.

While we were waiting for our connection, another air raid was announced and we were ushered into a shelter several floors deep under the station. This brightly-lit place was very pleasant as it was well ventilated, spacious and clean.

The railway station was full of bivouacking people. We did not know it at that time but only those who left Breslau by train just then had a good chance of survival. Soon after our departure the Soviet army surrounded the town totally cutting it off from the remaining German forces. The German military command declared the town to be a "fortress", and the city mayor who objected and was executed. The defence of Breslau lasted almost three months during which time 170,000 German civilians were killed. By contrast, only 6,000 German and 7,700 Russian soldiers lost their lives.

The train we finally boarded in Breslau was almost empty as it travelled towards the Russian front. At one station we came to a halt next to a train full of wounded German soldiers (a so-called *Lazarettzug*). This was indeed a very sad view.

Then a fresh-faced soldier entered our compartment. Obviously he was just back from leave and on the way to join his front unit. While our door was still ajar, he leaned out of the window, resting his hands on the door frame. Thinking the train was about to start, I slammed the heavy door shut. His fingers got smashed. "Now I cannot shoot any more," he said, admirably controlling his pain. The station master wrote a report which mother signed and the soldier left the train. Who knows? Perhaps this man owed me his life and possibly I saved some Russian lives, too?

When we reached home, our town was teeming with German soldiers. From the windows of our apartment on the second floor I watched the endless rows of slow-moving, heavy equipment. The German army was withdrawing. The rattling went on day after day; night after night. Sometimes the convoy would stop and soldiers jumped off their trucks. They talked to the children in the street and some offered us sweets. When a vehicle broke down it would be left behind. I heard later that many of

these soldiers had drowned while crossing the frozen Vistula River, as the ice broke when bombed by Soviet planes.

4. The Russians are coming

After the mass exodus of the German army there follow a few days of total lull. Town life comes to a standstill. No uniforms are seen in the empty streets and all shops, except for some bakeries, remain closed.

There was in our town a large depot of food, destined for the German army. When the Germans were leaving, the remaining guards received orders to burn down these storages. They poured kerosene over the sacks and boxes – and then someone had changed his mind. No match was lit, and instead the gates were thrown open for the undernourished townsfolk. People were allowed to enter and take away what they wanted.

Mother and I make a trip to the depot, loading my sleigh with sacks of sugar and flour. While returning we come under fire of low-flying Russian planes. I am impressed by a homeless German Shepherd dog, probably left behind by the soldiers, running for cover faster than the people. Unfortunately, the sugar collected from the depot has considerable kerosene content but my mother melts it down in the frying pan and most of the kerosene evaporates.

Then word gets around that the Soviets[6]) are coming. We stare out of our high windows onto the street below and there, lo and behold, comes into view a horse slowly drawing a sleigh with three Red Army soldiers. They sit relaxed on a stack of hay, submachine guns on their laps, casually scanning the tall buildings to the left and to the right. Some time later marching units arrive, singing unfamiliar songs. And so the Soviets take over.

We children have a great time playing with the abandoned German weaponry. Nobody knows why there is so much ammunition lying around. Perhaps German units, lacking the necessary transport facilities, were forced to ditch it?

We remove the propellant charges from artillery shells. These have the shape of long narrow pipes, like spaghetti, about one foot long, and when lit by matches, they burn rapidly. If one steps on the burning end of such a “spaghetti”, nothing

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[6] We called them “Russians”, even though most of these soldiers were from other Republics, like Kazakhstan, Uzbekistan, etc.

happens for a while, and then suddenly it will shoot out from underneath the shoe sole and fly close to the ground quite some distance, like a rocket.

We particularly value the hand-grenade detonators. They explode with a very loud bang just a few seconds after one pulls the detonating ring. A great game consists of standing on the second floor balcony of our apartment, pulling the ring, waiting a few moments and then dropping the detonator. If the moment of release is judged correctly, the explosion occurs mid-air, hopefully right outside the window of the apartment below. A few boys lose a finger or two.

Some corpses of barefooted German soldiers are lying in the snow. Nobody approaches them. We are quite sure the Russians took their boots. Owing to the sub-zero temperatures the bodies do not decompose and stay there for many days. The Russians do not want to waste resources on escorting small groups of prisoners; it is cheaper to shoot them. Larger groups are valuable as slave labour and have a chance to survive. The outfit of the dead soldiers and any abandoned German vehicles are property of the Russians.

One day I watch a couple of Russians investigate an abandoned utility Volkswagen parked across the street. They threw out a large can which rolls towards me and stops at the curb right in front of my feet. I take it home. There are only numbers on the lid, but we reckon there is food inside. We are right! It contains excellent liver pâté.

Before the Soviets arrived, we thought it would have been prudent to learn some Russian phrases. The first I was taught was a request for food: давайте кушать (davájte kúšat') – give (me) to eat. However, when they arrived, the Soviet soldiers were more interested in collecting wristwatches than in culinary matters. We quickly learned the next phrase: давайте часы (davájte časý) – give (me your) watch. The soldiers demanded watches from everybody wearing one. Some soldiers wore several watches on each arm. I suppose they were looking forward to distributing these to family members in their native villages on return home.

The Soviet soldiers are also interested in vodka. Every Russian army truck will stop to offer a lift to a hitch-hiker holding a bottle of alcohol in his raised hand.

Our doorbell rings. Mother opens to find a Russian officer and a soldier on the doorstep.

"May we see your documents?"

"Yes, of course, please come in and wait in the lounge while I fetch them".

My mother has two sets of identity papers. Her genuine ID is the so-called *Volksliste 2*, issued by the Germans. It puts her in the administrative category one step closer to native Germans than the ID called *Volksliste 3* which the Germans issued to the majority of the local population. In everyday life, there was hardly any difference between the two *Volksliste* categories. The men of both were drafted into the German Army, and sent to fight the Russians. Yet the Russians have drawn a line. *Volksliste 3* is acceptable – almost everybody in Northern Poland has it. On the other hand, *Volksliste 2*, closer to being a native German, is highly undesirable. Undesirable enough to lead to a Siberian Labour Camp. Hence Mother cannot not show that ID to the Russian officer.

The other ID my mother has, would have been welcomed by the Russians. Although that document also looks genuine, it is counterfeit. This is the ID mother has obtained from my cousin who was in the Anti-German Resistance, commanded by the Polish Government in Exile in London. He had access to the means for issuing false IDs and our forgery would go undetected, were it not for the fact that it gives us an address other than that of our present home. Hence, my mother cannot not show the Russian visitors that ID either. We seem to be in a dreadful fix.

The Russians look around our home. We have nice pre-war furniture, and our place probably appears very luxurious to them. They ask if we are German, which my mother vehemently denies. They notice the radio without the wooden box. “What happened to the box?” they ask. Mother is too petrified to think clearly, and instead of answering truthfully that we were hiding the radio from the Germans, she says that it fell off the windowsill during an explosion. They can see that this is a lie, because the delicate glass valves are still intact.

Mother leaves the Russians in the study, pretending that she is going to fetch the documents. In reality, she goes into the kitchen, places the *Volksliste 2* document in the range and lights a match. The Russians follow her to the kitchen but fortunately do not notice the flicker of flame under the (totally cold) kitchen stove. I try not to look in that direction. Our visitors are getting impatient.

Walking about the apartment, the officer notices my father’s framed photograph standing on mother’s desk. Father is wearing a Polish officer’s uniform. The Russian wants to know more about my father, and is told that the latter disappeared somewhere in Russia during the war. “Yes, I knew him!” says the

Russian and continues: “He was commanding a unit next to mine, when we entered Poland last year. But the war has aged him.”

The Russians salute and leave our apartment, expressing their hope that my mother would soon find her documents.

Next day we pack three suitcases, put them on the sleigh and walk miles to a railway station on the outskirts of the town. There we board a cattle train that will take us south – far from the place where people have known us during the war. The train travels towards Warsaw. During the night one of our suitcases is stolen.

In February 1945 Warsaw is in ruins. After the failed Polish uprising against the German occupant, Hitler issued orders for the city to be destroyed. The order was carried out.

We cross the ruined town in a horse-drawn cart to reach a still partially inhabited suburb. En route a passenger points out an exceptionally large heap of smashed concrete blocks and twisted iron bars. “This was the Central Railway station,” he says. I am sitting next to an American soldier liberated by the Soviets from a POW camp and making his way westward. We begin conversing and he teaches me a new word, *truck.* Until that time, I knew only the name *lorry*.

Mother and I travel on the false documents obtained from cousin Joseph. It is a risky business but we have no choice. After a brief visit to some old Warsaw acquaintance, we stay for short periods in two more cities (Kraków and Katowice) with friends or relatives.

5. In post-war Poland

Armistice Day in Europe, 8th May 1945, finds us in the industrial city of Katowice. To celebrate the end of the War, Russian soldiers walk the streets, firing rounds of live ammunition into the air. Nobody is worried about the returning bullets.

We are staying with Uncle Emil's family. During the war, Uncle Emil was allocated the same category of semi-German citizenship as my mother. Then he was given work in a prison, where he subsequently got involved in subversive anti-German activities, smuggling mail to prisoners and helping to organise escapes. After being tipped off by a friend that his arrest was imminent, he went into hiding and spent rest of the war in a coal cellar.

After the war, Uncle returned to his pre-war post as a radio engineer. To supplement his income, Aunt Halina is busy making money as a trader. By contrast, my mother has no income. She is afraid to show to a prospective employer the forged ID papers obtained from the Polish Resistance with the aid of my cousin Joseph. In order to help, I sometimes go out into the streets and sell cigarettes from a box suspended by a string fixed behind my neck. Aunt Halina was able to buy cheaply a large consignment of these.

Schools open and I get enrolled in one nearby run by Catholic priests. At school I have to pretend to be Catholic too because in those times just after the war, all Protestants were suspected of having had some link with the Germans – a suspicion we desperately wanted to avoid. So I learn to cross myself and I attend religious instruction at school like a good Catholic boy, however, danger begins to loom. Every pupil has to serve Mass and my turn is approaching. Having never witnessed a Catholic Mass celebration close at hand, I almost panic. Luckily, just before I start preparations for the ordeal, we receive an invitation from Uncle Casimir and Aunt Angela to join them in another part of Poland.

The new government has nationalised Uncle Casimir's estate, so his family are unable return to it. Fortunately, my aunt, who is a qualified teacher, got a job at a one-and-only teacher school in a village where there never has been a school before. The school is located in a splendid mansion belonging to a large country estate which had

been nationalized. A beautiful park ornamented with ponds and ancient oak trees surround the manor. Farmland belonging to the estate has been distributed among the poor peasants who lived very primitively in clay huts, without running water, with no electricity, and no sewage system.

When it became clear that the owners of the estate would not be returning, the peasants looted the mansion of all its contents. Hence, Uncle's family is inhabiting a splendid building but with almost no furniture. There is plenty of space for all of us as well as for the school, and many rooms remain empty.

My next two years are idyllic. Having just turned 13, I am spending my days roaming the countryside, climbing the trees in the park and swimming in the ponds. In the attic of the mansion I find old letters, some dating back to the 19th century, and I enjoy reading them. I do not attend school because there is none at my level in the vicinity. My mother got hold of some textbooks which I have to study under her supervision. She also helps my Aunt with her teaching. Mother is teaching illegally, as she is not officially employed by the School Board, but we are so far from the nearest hard-surface road that an unexpected visitation is extremely unlikely.

Far more illegal than this clandestine teaching is the regular brewing of *bimber* (moonshine vodka) by the villagers. On certain weekends a homemade still is set up behind the mansion and the masters of the art are busy all day directing the production of the desirable drink. I suppose that if a police officer were to visit the area, he would be invited to join the party and it would have been very unwise of him to refuse. In the evening, when enough *bimber* becomes available, the dancing begins. All night long, music blaring out of the ballroom keeps us from sleeping.

After two years of hiding off the beaten track and out of sight of police control points, Mother decides to send me back to town. She remains in the country biding time with Uncle's family until the Polish legal system will be fully functioning. She also has to gather enough witnesses to testify that she was helping Polish people whilst holding the semi-German citizenship.

Thus, suddenly, at the age of 15, I am back in the city of Toruń where I was born and where I have lived for the first 13 years of my life. But the town does not feel like my old home. True, the houses, the cobbled streets and trams have changed very little, as there was but small war damage, however the people are different. Surely, not everybody I once knew has perished or escaped to Germany, yet those who may have remained I am supposed to avoid. Mother is in hiding and I know

where she is. Therefore, I shun the part of the town where I have once lived. Anyway, there is little chance that someone seeing me in the street, would recognize the boy I was during the German occupation. I speak a different language, I have grown taller and I am dressed differently. Such changes cause one to adopt different behaviour.

I try to locate some of my old school friends, but cannot not find any. Only the family of Alfons Afeldt, the brightest boy in my class, is still living at their old address. A very sad woman opens the door and tells me that Alfons has died.

I live in a rented room and rarely converse with the people who prepare my meals and do my laundry. During the day, I am usually out of the house, either at school or roaming the streets. In the evenings, I am doing homework. When I have a couple of days free from school, I jump on a train to meet Mother at a little station 80km away. If the weather is nice, she comes on the bicycle – one of our few valuable possessions. As we both cannot not fit on it, we take turns in cycling. First Mother pedals on ahead for a few hundred metres, so that I don't lose sight of her, while walking behind. Then she leaves the bike on the ground and walks on until I overtake her on the bike and leave it on the ground for her. We carry on like this until we reached our village.

A couple of days later I return to Toruń. I am lonely there and I have no friends. I don't talk to anyone about my past. Just after the war this is normal. Most people do not want to talk about the five horrible years of fear and loss and they do not ask questions. Can one have a closer bond with the streets, the houses and the trees than with the people one meets daily? Obviously, one can live in this way under very special circumstances such as when the world is recovering from the turmoil of a great war.

I do reasonably well at school because there do not seem to be any problems. In geometry I do well enough to deserve praise from the teacher. Did those two years of roaming the countryside, of hiking in forests and of climbing trees provide me with enough experience of distances, angles and shapes to solve problems in geometry?

About three years after the end of the war, life in Poland became somewhat normalised, and Soviet rule was replaced by a subservient Polish administration. Courts operated again, and my mother asked to be "rehabilitated", that is, to be exonerated of the crime of accepting the *Volksliste 2* category of German citizenship. I was not allowed in the courtroom, so I walked up and down in front of the closed door. Witnesses were called to certify that my mother never did anything to damage

the Polish cause, and that she helped people who were worse off materially. Apparently, some less friendly individuals, who might have testified against my mother, changed their minds when they saw me pacing there, a serious and worried boy. The rehabilitation was granted.

My mother had always instilled in me the conviction that I must get very good grades at school; anything else would have been below her expectations and undermining my self-esteem. Since I was weak in mathematics, and lacked a good memory, I had to make up for these deficiencies by spending a lot of time over my homework. Thus I had virtually no social life. I could not have afforded one either, as Mother's salary was so low. This reminds me of an extraordinary experience.

Stalin was still alive, and his iron grip extended over Poland. There were no private publishing houses, and no esoteric literature was available in the bookshops. However, pre-war books that were not directly anti-communist could be found in libraries. On one of my weekend outings, devoted to swimming and lakeside sunbathing, I took with me a library book about Oriental religions. The stories about the extraordinary mind-body control abilities of yogis were hard to believe. I was impressed by the tales of yogis meditating in caves in the Himalayan Mountains, scantily dressed, even in the midst of the coldest winter and eating almost nothing. Such incredible body control was matched by a mind control which apparently allowed them to communicate with any human being anywhere on earth and to see things happening far away. I found such stories very interesting.

A few days after I read that book, my mother and I went mushroom gathering. We picked these for many hours in a large forest. I had a breast pocket in my shirt where I placed our watch. This was a prestigious Swiss Omega which Mother had inherited from her father who used to wear it on a chain inside a small trouser pocket. She relied totally on this watch, and it was always on her desk while she is teaching. After several hours of mushroom gathering, Mother called out that it must be time to go home. What was the time? I couldn't tell her. The watch was gone! This was a tremendous loss. Not even several months' salary would have allowed her to buy such a watch. Mother's earnings barely sufficed for our survival.

Against all odds, we decided to spend the few remaining hours of daylight searching for our precious watch. Since we had zigzagged through the forest, there was no possibility of retracing our steps, so we had to search randomly. The undergrowth was quite thick in places, and as time passed it seemed less and less

likely that we would find the watch. Then, out of a strange mixture of desperation and curiosity, the thought arose that if a yogi like the one I had been recently reading about was indeed sitting in a Himalayan cave and able to communicate mentally with everyone on earth, I could ask him for help. Maybe he could see me and also see the watch ticking somewhere in the thick greenery? So I asked him for help. My request was like a prayer, though not to a Deity but instead to a possibly existing human being, alive somewhere on earth. My request began: “If you are up there in a cave, and you can hear me now…"

Our search continued, but soon we had to leave the forest because daylight was fading. At one time, it seemed to me that I was in a part of the forest where I had not been before, so I walked without looking for the watch. Then a branch barred my way, and I had to bend low to pass under it. There was no need to bend down further: The watch was right there, within the reach of my hand.

Let me add that the afore-mentioned forest was adjacent to a huge steelworks, *Huta Łabędy*, and a few years later, when I was already a university student, these started producing tanks. This was an open secret, and if you asked anyone what *Huta Łabędy* made, they would answer, with tongue-in-cheek: “prams”. The forest was declared out of bounds for civilians as it became a testing ground for war machinery. Notices prohibited people from entering the woods. Yet no fence was built and no guards were posted, so I still used to hike there. Sometimes, when a roaring tank came crashing through the trees, I had to hide in the bush. In those days I loved to expose myself to dangers.

In my late teens it was time to consider a profession. An academic career was not on my agenda so when mother asked, "What would you like to do?" I replied that I'd like to be a train driver. Mother, a very ambitious woman, must have been quite disappointed to hear this, yet, hiding disapproval, she continued: “With or without a university education?” [7]) She argued that locomotives would be able to wait for a while and that a university graduate could well become a more proficient train driver than most. I accepted her argument and in retrospect can only say that had it not been for that conversation, I might have taken a very different track.

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[7] In those days higher education was paid for by the State.

I was getting good grades at school, so in 1950 I was allowed to sit for the university entrance exam. I was interested in engineering and physics, but I felt my chances of passing the very competitive entrance exam in mathematics were extremely small. So I opted for astronomy, assuming that there would not be many candidates for this field. I found that subject also interesting. In the examination, I had to describe the life and work of Copernicus, and there I was on familiar ground. I passed the exam.

Then I was given the choice of studying either astrometry or astrophysics. I decided that my poor knowledge of chemistry would prevent me from learning astrophysics, so I chose astrometry. Consequently, I had to attend all of the lectures and pass all of the exams for mathematics students, moreover receiving tuition in astronomy.

Already as a second year student, I paid frequent visits to the Astronomical Observatory which I liked very much. There, I would be given various tasks, and one of these was to calculate the movement of the shadow cast by the moon upon Africa during a forthcoming sun eclipse. Mathematically the work was simple. However, it required prolonged calculations to determine rows of coordinates. And I was always hopeless at calculations! At that time computers were at a very early stage of development, and not yet available in Poland. So, instead of facing the delightfully challenging task of writing a computer program, I was confronted by the drudgery of looking up columns of long numbers in logarithmic tables and then adding or subtracting these by means of a mechanical device, operated by turning a handle. My task required endless concentration on numbers, and already during the first 30 minutes of any such calculation I would make a mistake, reading a wrong column in the tables or rotating the handle of the adding machine the wrong way. This occupation was too boring for words – I simply could not concentrate for so long on manipulating numbers. I concluded that there was no future for me in astrometry and hence none in astronomy.

But I did not want to leave the university. I had been granted a State scholarship which I did not want to lose. Moreover, there was a two-year military conscription in Poland, and the army conditions were known to be extremely unpleasant – both physically and mentally. I was desperate to avoid military service and students were allowed exemption. Thus I had to remain a student.

Selecting another subject of study, something close to my heart, like physics or engineering, was practically out of the question because I might not have passed another entrance exam, and neither was it certain that I would have been allowed to take it. On the other hand, by that time I knew that only a minor part of mathematics deals with manipulating numbers. I saw mathematics as being essentially mental acrobatics performed at higher and higher levels of abstraction. Since learning more of those somersaults of the mind seemed to be a worthwhile occupation, I decided to drop astronomy and continue with mathematics. In this way, despite lacking talent or a particular interest in the subject, I became a student of mathematics.

6. *Becoming a Mathematician*

Undergraduate students of mathematics are likely to be overwhelmed by the grandeur of this edifice of abstract thought. They are confronted with ever-longer and more sophisticated proofs, they will aspire to reproduce them, and they will admire the ingenuity of those who found such proofs. It will almost never occur to them that they might be capable of mathematical achievements of comparable depth or importance. There is a commonly accepted criterion of "depth" or "importance" of a newly discovered mathematical proof: It deserves to be called that way if it is accepted for publication in a renowned mathematical journal.

During my third year at the university a most remarkable situation occurred. Another student, Jan Mycielski, with whom I later became well acquainted, showed us that solving mathematical problems – finding proofs of importance – was within our reach. (Jan, pronounced Yahn, is the Polish equivalent of "John"). He demonstrated to us that we were able to understand some publications in mathematical journals, comprehend some unsolved problems described in these and, with a good deal of luck, work and ingenuity, sometimes solve such problems. Jan was publishing his proofs in renowned journals while he was still an undergraduate student. He discussed with us the problems he was trying to solve, and his enthusiasm was infectious. A few years later, when I was still a student, my first joint paper with Jan was published.

So I got the hang of it: How to search for unsolved problems, solve them and write up the findings (mostly in English). If you compare doing mathematics to conducting a war, where the enemy's territory is the "vast unknown", then the kind of work I began to do might be compared to guerrilla warfare. I would find a problem that could apparently be tackled with the mathematical weaponry currently at my disposal, and then I would attack such a problem with all my might and concentration. I would search for a solution practically non-stop for days, sometimes even for months. Occasionally, my efforts paid off and I would solve the problem.

I worked in such a manner throughout my entire mathematical career. This had a disadvantage: I never found enough time for a broader in-depth study of any of the multiple mathematical theories. In other words, I never became a specialist in any

particular field of research. This was non-typical and deprived me of the self-confidence which is so nice to have in academia.

During communist times all schools and universities of Poland were government institutions and there were no tuition fees. However, having completed an undergraduate course, most students were obliged to accept teaching positions at schools. A minority were allowed to stay at the university for a further two years to complete graduate studies. At the end of this period, students were given projects for an MSc thesis. We each had to write an expanded essay on a research topic, though it was not required that students would get results deserving a publication in a scientific journal.

Accordingly, my supervisor, Professor Jan Mikusiński, gave me the task of describing a theorem discovered by the British mathematician Edward Charles Titchmarsh. More precisely, I had to describe the theorem, its placement in the wider context of *convolution theory* and then reproduce the very complex proof. The Professor suggested that I might also try to find a new proof, using certain results from another theory. If such a proof did, in fact, exist, he expected it to be shorter and more elegant.

I wrote my essay and then I attempted to find a new proof along the lines suggested by my supervisor. Alas, this task seemed to exceed my abilities. When the deadline for submitting my work approached, I informed the Professor about the situation but he reassured me, saying he did not expect this level of original research in an MSc thesis. Then, about three days before submission, I stumbled upon the correct path and to my great delight I worked out the new proof whose existence had been conjectured by the Professor. I phoned him, told him the good news and subsequently submitted my thesis. However, he forgot about that phone call of mine, he did not check the details of my work and did not see that I had indeed found a new proof that deserved publication. Only a couple of years later, when I was already a British Council scholar in Scotland, he read my thesis and wrote to me, saying that my proof should be published. He suggested we should include it in a joint paper. This is my only mathematical publication in Polish – with English and Russian summaries.

As a student of mathematics, I had the privilege of meeting some very remarkable scientists. Without doubt, the most unusual of these was Hugo Steinhaus. Outside Poland he was mainly known as one of the creators of the theory called

Functional Analysis, from whence came his international fame. However, his interests and creations were spread over a much wider area of mathematical thought. In the early 1950's he became very involved in applied mathematics. Moreover, he was a language purist. For instance, he would claim "applied mathematics" to be a misnomer, because there is no such kind of mathematics; there are only "applications of mathematics". Every aspect of his behaviour was highly individual. His lecturing was more like a celebration conducted by the high priest of some revered brotherhood. It would be unimaginable to see him nervous, in a hurry or confused.

Many anecdotes circulated about Steinhaus, some illustrating his great personal courage. We lived in a time when the Soviets were dominating our country by means of a subservient Polish Communist Party, a hierarchic structure determining all aspects of social, economic, and political life. The Party could make you or break you – there was no other power to counter it. People would either serve the Party or try to remain as distant from it as possible. The Party ruled by instilling fear. But there were people who, by the very nature of their being, would never succumb to fear. Karol Wojtyła, the future Pope, was one of these. Steinhaus was certainly another. Known was the story of the organisers of the newly created Polish Academy of Sciences sending Steinhaus an invitation to attend the first meeting. Due to his monumental scientific status he certainly should have been there. He did not turn up. This was an affront! He received a letter demanding an explanation for his absence, to which he replied that his absence was justified because certain people at the meeting could not justify their presence. Of course, he meant the Communist Party watchdogs! The Polish government, intent on projecting a positive image to viewers from abroad, did not dare punish Steinhaus for this response.

Steinhaus loved playing with language; he used to invent "word jokes" which he published under a pseudonym. These cannot be translated, but one can think of something analogous in English: What could be meant by the word "meating"? Answer: a gathering of butchers.

Well known was a pre-war story involving anti-Semitism. Steinhaus was a Jew; in fact, his father was a rabbi. He never hid these facts, although there was always an undercurrent of anti-Jewish sentiment in Poland. On one occasion, when he heard a guest in a restaurant loudly proclaiming the superiority of Aryans, Steinhaus asked this man if he would be able to identify a Jew when he saw one. When the other assured him that he certainly would recognise a Jew instantly, Steinhaus suggested

betting on bottle of good wine when a Jew would be presented and not recognized as such. The bet was accepted, and Steinhaus promised to bring an "unrecognisable Jew" to the restaurant. When this guest arrived at the appointed time, he looked around perplexed, unable to identify anyone as being Jewish. He reproached Steinhaus angrily, "Where is the Jew?" – "**I** am the Jew," replied Steinhaus with his usual great calm and dignity, thus winning a bottle of good wine.

I knew Steinhaus when he was already well over 60 and more inclined to invent problems than to solve them. In other words, he would notice certain mathematical situations that appeared to be true but not yet not proven. Many of these were elementary, that is, people with a limited knowledge of mathematics could understand them. Still as a graduate student, I was fortunate to solve one of such problems. This led to the first proof of the so-called *Three Gaps Theorem*, now well established in the mathematical folklore. I tell the story in *The Circle Walk* section at the end of this chapter.

Steinhaus was well known for his witty aphorisms and wise sayings. Some examples (my translation):

* To acquire wealth, one must be lucky – to keep it, being short of fantasy will do.
* It is easy to leave the home of reality and get lost in the woods of mathematics, but only a few know how to return.
* Everybody behaves artificially – this is quite natural.
* Love makes discoveries – lust, inventions.
* Mathematics is an intermediary between spirit and matter.

Towards the end of his life Steinhaus suffered from dementia. In a conversation with my mother he once remarked, " I am almost not here any more".

The most refined among the Wrocław professors, in terms of comportment and dress, was another well-known mathematician, Edward Marczewski. He too was a Jew. The fact that he had adopted a Polish name before the German invasion was of crucial importance, for under his original name, Szpilrajn, he would almost certainly have been killed by the Nazis.

During the war Marczewski was brought to Wrocław, when the latter was still part of Germany (and called *Breslau*), and was forced to do physical work for the Wehrmacht. One of the most infamous labour projects then conducted was the total demolition of a beautiful, densely built city area in order to create a large landing strip

for military aircraft. The town was besieged by the Russians and many thousands of workers perished during the runway construction, exposed to artillery bombardment. For me it was impossible to imagine the abstract algebraist Marczewski, always so impeccable, to have ever been one of those miserable and abused slave labourers.

Interestingly enough, not a single German plane used this airfield. Karl Hanke, the Battle Commander of the Defence, escaped in a little Fiesler Storch plane that took off from a small open space in the city park. He was later captured by the Czechs and shot during an attempt to escape. Eight years later, Professor Edward Marczewski became Chancellor of the University of Wrocław.

Quite remarkably, most of mathematicians I knew in Wrocław were either of Jewish origin (Drobot, Fast, Gleichgewicht, Goetz, Hartmann, Knaster, Marczewski, Perkal, Stark and Steinhaus – to mention just a few names) or descendants of old Polish nobility like the counts Jerzy Łoś and Jan Mycielski. One is tempted to conjecture that natural interest in abstract thought ripens predominantly in "older cultures".

The Circle Walk

Imagine somebody walking along a path that has the shape of a circle, leaving clear footprints. Idealising the situation, let us view these footprints as points, as if the person were walking on very pointed stilts. Hence, by a footprint we mean a point marked on the circle precisely at the place where the tip of the stilt was placed during the walk. We assume that all the footsteps are exactly the same length. After a while, the person gets tired and stops walking. Let us now cut up the circle, using each footprint (which in our idealised version is a point) as a cutting spot. We get many curved bits, each of these being an arc of the original circle. Some may be bigger, some smaller. If we pile up these arcs, putting together arcs that are identical (undistinguishable from each other) – how many piles will we get? "Oh, well" – the reader might say – "who can tell? The footsteps might have been very long or very short (even though all of the same length), and the person might have walked a hundred million times around the circle or not even completely around once. Unless he had stepped into his own footprints, which is unlikely, as these are mere points, the arcs obtained from cutting up the circle may be of very many different sizes. There

could be many piles. The Steinhaus conjecture was that this is never so: There would be at most three sizes. At most three piles of identical arcs! Amazed? Yes, we all were, but it is a fact! Let the reader take a compass and draw a circle. Then, setting the compass to any width smaller than the diameter of the circle, start "walking" around the circle, marking each step. He will observe that there are never more than three sizes of arcs joining neighbouring "footprints"!

I was delighted when I found a general proof of this fact. I presented my proof at a meeting of the Wrocław Section of the Polish Mathematical Society. Then I announced the result in the Bulletin of the Polish Academy of Sciences (No.4, 1956). Four years later I expressed the circle walk story in the abstract language of groups and cyclic ordering relations and incorporated it in my PhD thesis. My thesis was accepted by the Polish Academy of Sciences, deposited in its archives and subsequently lost. I mention these facts because a Hungarian mathematician, Vera Sós-Turán, discovered another proof of this so called Three Gaps Theorem, and since she published her proof before I submitted my PhD thesis, she is sometimes credited with having proved this theorem first.

Now, more than 50 years after its discovery, the Three Gaps Theorem has resurfaced from a new angle: the French researcher Micaela Mayero mechanically checked its proof with the so-called Coq, an interactive system for computer-generated proof verification (see http://coq.inria.fr).

7. *Polish Adventures*

In my twenties I was very shy and lacked self-confidence. Perhaps this was the result of having had an overly domineering mother. In addition, due to circumstances created by the war, I had to absorb two different cultures, firstly pretending to be a German and later to have been always Polish. And when Poland was ruled by the communist mafia, I had to watchfully hide my disgust for their regime. As a result, I never felt comfortable among people. The concept of spontaneity was foreign to me.

I had some mathematical achievements, but I attained these by an incredible input of time and effort, whence they added little to my self-esteem. Young women fascinated me, and there seemed to be no lack of very beautiful girls. I was desperately longing to reach out for one but, totally lacking spontaneity, I was unable to do so.

As I perceived it then, my problem was lack of courage. I had heard many war stories about people who stayed "cool" in dangerous situations and were later praised and admired. "Well," I thought, "I can do this, too. I too can face dangerous situations, get out of them, and perhaps deserve admiration". To some extent, I was right, as the following pages show. However, the courage I learnt in this fashion was not the kind I needed – it concerned survival under physical threat and contributed very little, if anything, towards the confidence needed in dealing with people. Yet, not knowing any better, I threw myself from one dangerous adventure into another.

I felt happiest when I was alone with nature. I took to going on long cross-country hikes in the mountains, ignoring paths and trails – sometimes in the darkness of the night. Then I became a rock climber. I had acquaintances who were caving enthusiasts and my first rock climbing instructors were members of that league. I began participating in the explorations of vast caves that penetrate miles deep into the limestone of the Western Tatra Mountains. Equipped with carbide lamps, electric torches and the usual climbing and bivouacking gear, we would disappear underground for days on end. Sometimes the spearhead of the expedition was a few days climbing away from the entrance which often was just a small hole in the mountainside. Occasionally we would enter underground chambers great enough to house Notre Dame Cathedral.

I became known as a good “Sherpa”, transporting heavy sacks of supplies for the exploration teams that were proceeding further and deeper, to discover new passages, and create detailed maps. I had to pull the supply sacks through narrow winding passages and drag them across the edges of gaping bottomless pits, or up sheer walls where previous climbers had fixed rickety ladders.[8])

The temperature deep inside the caves was at all times constant and equal to the annual average temperature outside. In effect, although we were feeling constantly damp, we never felt too cold or too warm. However, cave exploration was always restricted to wintertime because in the summer there was a chance of sudden flooding after a downpour of rain.

The main danger stalking a caver was the possibility of getting stuck in some tight and twisty passage. Of course, there was also the danger that one could slip whilst negotiating the narrow muddy edge of a deep well, though in such spots we would use ropes for protection.

Roughly 20 to 30 people would participate in an expedition lasting several weeks. Mostly these were university students or young researchers. We all hated the communist regime holding Poland in its grip but deep inside the mountain total freedom reigned. There we were beyond the reach of secret agents and spies. We also had lots of fun at times. Deep in the mountain, food delicacies were scarce. I recall one occasion when in a remote part of a cave there were four of us and we had one small piece of halvah. It was not worth sharing it, so we decided that whoever sang the verse “Arrivederci Roma” most out of tune would get it. The others did not realize that I had never heard that song, so I won easily.

The sun neither rose nor set for us, and after a couple of days underground we were losing all sense of time. Once I overheard the following conversation:

“Do you know what time it is?”

“Yes, it is four o’clock.”

“Morning or afternoon?”

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[8] My efforts were acknowledged by Andrzej Korsak in his book *Tatrzańcsy Kosynierzy*, Warsaw, 1977.

For me, the narrow twisting tunnels, often near vertical, presented the greatest obstacle. To move through these, I had to squeeze myself tightly, grabbing onto the rocks ahead of me whilst pushing with my feet. My fear of getting stuck was usually alleviated by the awareness that others had managed to pass that way before me. However, on one occasion I made an awful error.

After participating in a large expedition, I remained in the area and together with a friend, we went into a lesser known small cave. We wanted to see an underground chamber in this cave that had been recently photographed. At one point, the passage ahead forked; my friend went to the right, but I was convinced the photographers must have gone to the left. So, left I went. Soon the difficulties of getting trough a very narrow tunnel absorbed all my attention. Somewhat absentmindedly, I pulled and pushed myself through the passage until suddenly – like a bolt of lightning – the idea struck me that people carrying big cameras could never have tackled this tight passage. It was simply too narrow, and too twisty.

Then followed what will most likely remain the worst moment of my life: I realised that I was unable to move backwards. I was stuck! Needless to say, I had never planned on returning feet first through this passage. It is a very different matter if you crawl forward, with the headlight showing the way, the hands pulling, and the feet pushing sturdily away from the rock behind you. But proceeding feet first is in some situations plainly impossible. And it seemed that I was in just such a situation! After a while, my further attempts to move would hopelessly scrunch up my damp clothes and add to the blockage. My body, tightly packed into the rock, would swell, and I would be jammed forever.

Then something ominous began approaching me: **PANIC**. It was like a living creature, moving closer and closer from the left and slightly above me. “No,” I thought, “I’m still alive, I’m still capable of thinking and acting rationally, let me not surrender, let me stay calm, let me try”. Thus, systematically and slowly, I started feeling with the tips of my boots for places behind me where I could hook my toe and pull myself back. Finally, I found a small recess and, bit by bit, I managed to extract myself. Some 20 minutes later, I was free.

Then and there I decided to give up caving, and devote myself exclusively to climbing outside in the fresh air. A sudden death, whereby the body gets smashed on the rocks after a fall, seemed infinitely preferable to being entombed alive! I was told

later the gruesome story of a British climber who got stuck in a cave and whose corpse had to be removed in parts.

In addition to caving and rock climbing, I would do things that now appear to me as having been downright stupid. The following story, involving a suicidal girl, illustrates this.

One day, when walking along a riverbank, I came to a forest, and right there, reaching high above the trees, was an electricity pylon. Of course, there was a sign: **Danger! High Voltage**. Immediately I got the idea to climb to the top. I expected the view from there to be terrific, overlooking the forest and the river. The next pylon was on the other side of the wide river. I jumped up and grasped the metal framework, taking care not to connect the steel to the ground by means of my body. A ladder inside the pylon quickly got me to the top. There were four overland cables, the usual three "live" ones and the fourth serving as a lightning conductor which was the highest and screwed down directly to the iron platform on which I was sitting. So it was earthed, and evidently, it could be touched. I touched it to convince myself that my logic was correct.

Now comes the girl. She was a student in the group that I was tutoring, slightly older than the others, as she was doing her second degree. She was also into caving and rock climbing. One day she announced that she had fallen in love with me and would like to be taken out. I told her, "No". In response, she told me that she did not want to live any longer and would commit suicide. She chose the day of her final departure and asked me whether we could go for a hike on the last day of her life. I could not refuse such a request, but set the condition that another girl accompany us.

The three of us walked along the river. We came to 'my' pylon and I invited them to climb it. We went up, but I must have been a bit upset about the approaching suicide, and perhaps somewhat absentminded. Thus, upon arriving at a lower iron platform, I thought that I was already on the upper one and, believing that the cable next to me was the earthed lightning conductor, I stretched out my right hand and shouted to the girls: "This one you can touch!" I never touched it. When my hand was about one foot away from the cable, an arc of bright yellow light appeared in front of my fingers. The current shot through my right hand, across my body and through my left hand, which was touching the metal structure. Eighteen thousand volts, as I later found out.

The sheer horror of that moment evades all description. Then I started falling. Slowly, very slowly, like a feather on a windless day. Eventually, the fall came to a stop. I heard a high-pitched scream. Was it coming from me? Yes, it was. As it seemed rather pointless to continue screaming, I stopped. Then everything stopped. A total stillness engulfed me. I was staring at the blue sky between the rigidly spread-out fingers of my hands, roughly a foot away from my face. I did not feel my body yet I knew I was not breathing, and it seemed that only my eyes and brain were still functioning. “This cannot last long,” I thought, “soon the brain will cut out too”. Yet, to my tremendous surprise and relief, something else happened: In little, rhythmic jerks, my hands began falling away to both sides of my body. My heartbeat had resumed.

A few moments later I discovered that I was firmly jammed, bottom first into a triangle formed by the outer metal bars of the structure. Presumably, the electric current passing through my left arm which I had on the ladder, had caused this arm to jerk and push me off the ladder with a force big enough to make me fly across the pylon and jam between the bars.

I managed to free myself and climb down to earth rather shakily. My hands were badly burned, and when I got home, it was no use telling my mother that I had tried to pull a hot wire out of a bonfire. I needed treatment.

For much of the following month I had to lie in bed and receive glucose injections. Moreover, for several days I was unable to sleep. Whenever I dozed off, I would dream that I was approaching some electrical appliance, such as a fuse box, a radio or simply a wall switch, and then a terrifyingly bright yellow arc would shoot towards me, and I would have the same sensation as I had experienced on the pylon. After that, I would lie wide awake for hours. In addition to sleeplessness, I could not bring myself to touch anything connected to electricity. My mother had to even turn on and off the lights and the radio!

I pondered sometimes why my fall after the electrocution appeared to have been so slow. Perhaps the passage of the current through my body had accelerated the working of the brain?

The girl who wanted to commit suicide abandoned her plan: She was too curious to see if I would recover. I lived on the first floor, and I was told that she used to climb up to the window to check how I was doing. Yet I never noticed this and I never saw her again. A month after the pylon accident, I left Poland. When I returned

two years later and then for a short period only, I heard that she had become a wife and mother.

There was another positive result to my high voltage adventure. It so happened that a distant cousin of mine, Janek Cholewa, visited our town while I was still bedridden. To entertain me, he told me many fascinating stories about his time as an RAF captain, commanding Lancaster and Liberator bombers during WWII. Little did I realize at that time that my visitor was a war hero, decorated with the *British Distinguished Flying Cross*, who flew 110 operational sorties over enemy controlled territories [9]). Five of the planes Janek had commanded became write-offs, and some reached base so seriously damaged by the German *FLAK* (*Flugzeug Abwehr Kanone*, or "aircraft defence cannon") that reporters came to take photographs.

I asked him whether he had ever considered parachuting out of a badly damaged plane. “No,” he answered, “I would have been far too scared to do that”.

[9] The probablity of surviving all these 110 flights was calculated at only 11%.

8. *Scotland: A Taste of Freedom*

After I finished my studies, I received a grant from the Polish Academy of Sciences to sustain me while I was working on my PhD thesis. During the ensuing period the British Council made available a scholarship that would allow a young Polish mathematician to spend a year at a British university. There were several candidates with comparable mathematical aptitudes, so it was decided that the one who speaks English best will get the scholarship. Accordingly, we were invited by the British Consulate in Warsaw to come for a language test. And here I had a clear advantage. Unlike my peers, I had attended a German school as a young boy, where I had been receiving excellent tuition in English.

I won the scholarship but leaving Poland was not a simple matter. Although Stalin was already residing in the mausoleum, lackeys of the Soviet Union still ruled Poland. Ordinary citizens were seldom granted the right to travel abroad, and it was not easy to obtain a passport. Thus, while waiting for my passport to be issued, I was visited by a man who did not introduce himself but told me that I would obtain a passport, provided I agreed to "cooperate". Fortunately, this so-called cooperation was to be very easy. After entering the "rotting capitalist world", I was to look out for military installations and collect information that could be potentially useful in case of an East-West war. To transfer the information thus gathered, I first had to write to an address in London, which this person gave me. The contents of the letter could be arbitrary, provided the word "rope" would appear somewhere. (My visitor knew that rock climbing was my beloved sport.) I was told that after this letter reaches its destination, someone would contact me to receive the "relevant" information. Of course, I did not want to lose my scholarship, and I lied to my visitor that I would "cooperate" – knowing that nothing on earth could ever force me to gather information relevant to a military conflict, even if by coincidence I had the chance to do so. Anyway, how could they verify in Poland that I had not lost the secret address? Naturally, I never wrote any letter with the word "rope" in it, and the whole matter was soon forgotten.

So, in the autumn of 1957, I came to Scotland, as a British Council scholar. I was supposed to work in Dundee, under the supervision of Professor A.M. Macbeath.

After a few discussions with him, I was able to understand a problem that he was trying to solve. Since I had nothing to do all day, I mostly sat in my dormitory brooding over the problem. Then, to everyone's surprise, I came up with a solution, and so our cooperation began.

The only sport I cultivated those days was mountaineering. I loved rock climbing because I considered myself to be good at it and it was an activity in the only environment where I felt truly "at home": in the mountains. To go just hiking or camping would not do, because these "safe" activities did not have the power to stop the never-ending buzz of my mind. On the other hand, when I was clinging to a rock face, looking for the next grip or stance, it would have been totally foolish to let my concentration wander away towards personal or mathematical problems. In such situations the only legitimate concentration was on securing my survival which forced me to be fully present, totally in the "now". I valued this experience and those days I could find it only in climbing!

In Dundee, I lived in a students' residence hall, where I soon found pals to climb with. When Christmas arrived, a friendly shop sold me on credit climbing and camping gear. This allowed me to spend most weekends and the longer winter break in the mountains.

In Poland, among climbers, cursing was common, and almost obligatory. This somewhat questionable habit might have had several purposes. Cursing could release tension and suppress fear, or mobilise the climber to fight to the uttermost. In addition, often during an ascent, the two climbers joined by a rope would not see each other, and the fellow who stayed below (belaying the other one) got valuable information about the difficulty of the route ahead by listening to his companion's profanities. Their intensity told him whether the leader was in a difficult or very difficult place, and a heavy curse might be the first warning that the guy above will soon scream, "falling", whereupon everything would depend on the quality of the belay and the skill of the belayer.

Even worse, really beyond all description, was the language of Polish cave climbers. Sure, in the caves visual contact was more restricted, and it was good to know that the other person was still breathing and in sufficiently high spirits to invent ever new strings of swearwords. There we also had some additional causes to curse, for in the narrow underground passages we never could completely avoid hitting our

heads against outcrops of rock, even though we padded our berets from inside with cotton wool. Miners' helmets came into use later.

Thus, after having equipped myself in Scotland with new climbing gear, I thought the next thing for me to do is to learn how to curse in the local dialect. However, there was a problem: to my ear, most English profanities sounded far too mild! Something like "bloody hell" sounds quite innocent to the Polish ear, yet when I used such language in the university refectory, some eyebrows were raised! In comparison with my Scottish outdoor friends, I was an advanced climber, so perhaps they viewed my cursing as a badge of professionalism. Yet in time, it was not they who learnt to copy my language, but I who cursed less and less – and after some time, only when the occasion would really demand it.

One of the lecturers in the Dundee Department of Biology was a young man of Polish descent; I will call him Dan. During World War II, he flew Spitfires and Mustangs in a Polish fighter squadron of the British Royal Air Force. After the war, he received from the country he so bravely defended a higher education plus a grant to do biology research in Africa. By the time I met him, he was a permanent member of the university faculty. One evening he and his wife invited me to dinner at their home. He showed me an album of wartime photographs. From the pages, there looked out at me many smiling faces of Polish pilots. Dan mentioned their names, and he kept adding, "killed, dead, killed…".. This album was a graveyard! "You were very lucky to have survived," I ventured to remark. "Yes, indeed, I was," he said, adding, "but I was not flying like them." The difference was this: He was flying defensively and they offensively. I was rather surprised to hear this. Was it not his task to shoot down as many Messerschmitts and Heinkels as possible? Yes, this he did, quite a few of them, just by the very fact of having taken part in so many combats. Now and then, he would get a German plane right in front of his guns, and then he shot it down. But he was not searching for victims; his priority was survival. Even so, he once destroyed two planes with a single burst from his machine guns. These were German bombers flying next to each other over France. Dan was on patrol together with another Spitfire, but they were low on fuel and ammunition, and the bombers were rather far from them. So they decided not to chase the Germans but only to scare them. Dan sent a burst of tracer bullets in the direction of the bombers. The bullets passed in a wide arc over the German planes, and his companion joked, "Are you peeing at them?" The

Germans panicked, they went into uncoordinated evasive manoeuvres, hit each other and fell down.

During the air battles, Dan always keenly observed the skies. On many occasions, he would see his friends so engrossed in pursuing German planes as to disregard their own safety. Often Dan would warn them that they were under attack. Sometimes his warning was not heeded, and a friend of his died.

Many excellent drinks were served during that evening of reminiscences, and at one stage, I noticed that I was unable to get up from the armchair. Fortunately, I did not need to. I assumed that my incapacity was temporary, and I talked on. Next, I recall how I was driven back home through the dark and deserted streets of Dundee while Dan was saying, "You can drive faster at night because the headlights of oncoming cars (round the corner) will reflect in the shop windows". When I met Dan the following day, I learnt to my great surprise that I got very drunk the previous night. I could not believe this. To disperse my doubts, Dan pulled out a photograph, showing me sitting in his armchair and laughing hilariously. "Do you remember me taking this picture?" he asked. No, I did not. This was my only experience of getting drunk. Many years later, I consumed plenty of marihuana and I must say in its favour that it never wiped out my memory so thoroughly.

I had no transport of my own in Dundee, so Dan sold me his Corgi for £5, that is, for 1/8 of my monthly stipend. This was a small ex-army scooter, designed to be folded up and dropped by parachute. I had no need to do this, but I used the Corgi often for city errands. The British Council officer I had to visit regularly to report on my work, was of the opinion that a big fellow riding such a small vehicle looked somewhat ridiculous. However, I was quite proud of the machine, unique of its kind.

At Easter time, I decided to drive across Scotland to the Isle of Skye where the gabbro rock offered excellent climbing opportunity. I could not make my journey in one day, so I had to stop in a village for the night. In the early morning, the Corgi had starting difficulties, and the village people had to push me for some distance until the engine fired. An old man remarked, "Lad, if you were travelling like other people, then in a few years you would forget this trip. But this journey you will remember for a long time." Actually this "long time" might never have come, because later that day, when I was rolling down a steep and winding narrow track, the brake cable snapped.

Fortunately, there was just one more bend ahead; I managed to tackle it, and then the track straightened. (The Corgi had only one brake system.)

When I reached the Isle of Skye, it started to rain, and the mountains were shrouded in low clouds. Late in the evening, it was reported that one of the hikers, who left the Youth Hostel in the morning, had not yet returned. Therefore, early the next day, with the weather still cloudy but dry, three other climbers and I went out for a search.

We found the man on the bottom of a rocky outcrop of the main ridge – dead! Traversing that ridge did not require special climbing skills; however, engulfed by fog, he might have taken a wrong turn. The hiker's watch had stopped at 2:35 p.m. and it was obvious from his twisted body that he had broken his spine in the fall; he must have died instantly.

We ran down to fetch a stretcher, and soon we were transporting the body to the road. It was pointless to follow the long hiking trail; we just chose the nearest gully and then a scree slope. We lowered the stretcher in stages, using the full length of the rope. None of us was expected to be queasy, but it surprised us how little the company of a dead body affected us, even though we had this company for many hours. We referred to the contents of the stretcher as "he" (please hold "him", let us put "him" here … etc.), and we ate our sandwiches with a hearty appetite when lunchtime arrived. It is possible that the technicalities of lowering "him" through a steep gully and down the slopes of loose scree absorbed our attention so much that we did not acknowledge the more sombre aspect of the situation.

On the road, an ambulance and a police car were waiting. The police officer started recording our names; we were the witnesses. When my turn arrived, I got the feeling that a fourth witness was superfluous. Thus, when asked for my name, I said slowly and distinctly "Stanisław Sławomir Świerczkowski", stressing the Polish sounds for ł, Ś, and the combination "cz," having no English equivalents. The police officer was a bit taken aback, he hesitated and after a moment of silence, he said, "I think that will do – I have already three witnesses". As a result, my name did not find its way into the police records of the Isle of Skye.

Towards the end of my first year in Scotland, I made a discovery that came to me as a shock and revelation: "I am a free person! No one has the right to tell me where to go or what to do". Now this needs some explaining. Until that time, with the exception of my first 7 years before the War, I had lived under totalitarian rule.

Whether it was Hitler, or Stalin, everybody within their sphere of influence was the property of the state. Under communist rule we had some small freedoms, that is, not in all respects, and not all the time, were we told what to do, but when the state, represented by its all-powerful administrators, made some decision concerning your person, you had either to comply, or face tremendously unpleasant and unforeseeable consequences. Big Brother was always watching. In Scotland, Big Brother stopped watching! Gee – how nice! But I still was not quite free; sooner or later the British Council would demand that I should return to Poland. It did not want to give the Polish communist government an excuse to curtail subsequent travels abroad by Polish scholars.

The contacts with mathematicians I made during my year in Dundee resulted in an offer from the University of Glasgow, to work there for the next academic year 1959/60. The British Council agreed, and I rented a room at walking distance from the University. However, before starting to live there, I hitchhiked from Scotland to Vienna together with a Dutch girl, Ellie Dieduksman. En route we stayed in Youth Hostels, and partly due to the attractive appearance of my companion, we got lifts easily. To see Europe rolling past the high windows of a trucker's cab was enchanting. In Vienna, we forgot on a tram our bag, containing all our documents and money. The Dutch Consulate quickly provided Ellie with a passport and ticket to Holland, so we had to part unexpectedly.

The Polish Consulate ordered me to return to Poland immediately. Having a job waiting for me in Glasgow, all my things there and the prospect of spending another year in beautiful Scotland, I countered this request with a "We shall see!" Then the Consulate issued a passport. I still had no money, but luckily a friend of my mother from the war times, Gerda Grund, lived in Vienna and she helped me out. When I got back to Scotland, the British Council was furious; they had expected me to stay in the United Kingdom as their protégé. I had to write a long letter explaining my motives for leaving the UK.

My first lecture in Glasgow started like this: "Today I would like to talk about complex numbers" – and then I suddenly remembered that I forgot to introduce myself. Thus my second sentence was "My name is (and I wrote on the board) Stanisław Świerczkowski". The class roared. It took me a while to work out why this was funny. I often made language mistakes, like saying "substract", and attractive girls sitting in the front row would correct me.

This brings me to the subject of women. I was young, strong, and healthy, and I was desperately longing for love. Yet, with girls, I was still very awkward. Ellie wrote that she had joined a religious sect. In her next letter, she told me that she had married the priest. This saddened me very much. To meet girls, I considered taking dancing lessons, but this did not seem to harmonise with my profound (and time-consuming) involvement in mountaineering. Then one day in the library I sat down opposite a rather sad but nice looking girl. We smiled at each other. She was called Jeanette. The next day, hoping that she would come back, I brought with me a red tulip. From that time onwards, not all of my weekends were devoted to mountaineering.

During my Glasgow times, my usual climbing companion was Tom Carruthers. I was older than Tom, and I had many more years of climbing experience. So he viewed me as his tutor, and I used to lead the harder pitches. Tom came from a working class background; he was a draftsman in a Glasgow shipyard. Tom was remarkably witty and intelligent, but what surprised me most, was his profound love for the mountains. Perhaps he was more verbal about this love than my climbing pals in Poland, who were reluctant to talk about their feelings for fear of being ridiculed. (My Polish friends came from the university environment where, in response to excessive indoctrination by the communist authority, we viewed with great mistrust any declarations of profound commitment.) Tom waited for the day when, due to his climbing achievements, he would be able to devote the rest of his life to mountaineering.

How can one understand love for the mountains? Tom was just entering society, with a professional career and a beloved wife still potentially awaiting him in the future. Yet he devoted most of his income and all of his free time to mountain escapades. He dreamt of ever bigger mountains and ever more challenging ascents. Several possible explanations for such love come to mind. An initial attraction might be the refreshing experience of being outdoors, in places largely unaffected by people. However, of equal importance may be what mountains symbolise: getting away from the enslavement by desire of personal profit, to face instead the challenges of ascending to ever higher levels of consciousness, while overcoming difficulties and the basic instinct of fear. Spiritual teachers often use expressions also found in the language of mountaineering. Don’t such words as “challenge”, “fear”, “wide-open space”, “height”, “peak”, etc. appear in discourses about one’s inner growth? The

distant snow capped peaks, are they not well suited to symbolise some ultimate spiritual destiny that may be the goal for every human being?

Let me describe one Scottish climb with Tom that might have ended disastrously. This happened in the region of Glencoe in early spring, when the weather was still cold. We learnt from the guidebook that the gully we planned to ascend was often wet, especially in springtime. Yet some water trickling down the narrow bottom part of the cleft did not deter us. After a few pitches, we reached a ledge and Tom stayed on it, to belay me, while I was climbing higher. The ledge was protected from the running water by an overhang. In fact, it was located under a small waterfall, created by that overhang.

Somehow I managed to get past this obstacle but while proceeding further I noticed that my hands, now almost permanently in contact with the cold water, were getting numb. Then, suddenly, I had no more rope; there was no slack. However hard I pulled, the rope remained tight. Most likely it was jammed because I did not have the impression that I had climbed its full length. Whatever the reason, I could not proceed higher. I was shouting and screaming down to Tom, but I never received an answer. We had lost contact! Climbing down under these circumstances was out of the question: A jammed rope would provide very poor protection in case of a fall. Getting increasingly cold and numb, I felt that I had to finish this climb fast. So I did the most risky thing imaginable: I untied myself and continued solo. By that time, the gully had narrowed to a vertical chimney, and I used the standard technique of pressing my feet against one wall of the chimney, my back and the palms of my hands against the opposite wall, thus proceeding upwards – and relying solely on the friction created by this pressure. But there was a snag: My drenched feet and my numb hands ceased to inform me about the amount of force they were transmitting. I lost all feeling in them. Did I really press hard enough against the walls? The horrible thought arose that perhaps I did not and, in these circumstances, the wet rock would not provide enough friction to hold me. Hoping for the best, I continued. Minutes trickled past slowly, while at any second I could slide out and fall to my death.

After emerging from the chimney, I ran down the other side of the mountain to alarm my friends at the campsite; we had to rescue Tom before nightfall. To reach him, we circumvented the lower sections of the gully by cutting into it via a traverse. Then we found ourselves positioned one rope length below the shelf on which Tom was standing. He saw us, and we shouted to him to pull down the rope that was

leading upwards from him, and then use it to abseil. He shouted back that he would not pull the rope because I was at the other end. Of course, he could see me standing below, and the others were also pointing out this fact to him, but he obstinately continued to insist that I was above him.

Then we realised then that due to his long exposure to the dripping cold water, his mind had ceased to function properly. It took him a very long time to understand that I was indeed standing below. Finally, he yielded to our persuasions, although we had to instruct him in detail about every move, hoping that his subconscious would help him to handle the rope properly during the abseil. Later in the camp, it transpired that he did not hear me when I shouted for help to free the jammed rope; the rush of the waterfall drowned out all other sounds.

Sadly, at the end of the 1959/60 academic year, I had to part with Scotland and all my dear friends there; the British Council insisted that I return to Poland.

9. *Farewell to Poland*

Late 1960 I submitted one of my old publications to the Mathematical Institute of the Polish Academy of Sciences in Warsaw and this was accepted as a PhD thesis.

Over Christmas my Scottish girlfriend, Jeanette, paid me a visit, and immediately after her departure, the local police in Wrocław called me in. I was told that I wouldn't be granted a passport for several years to come, so I shouldn't make any plans for travelling abroad.

Almost immediately I began making plans to leave Poland. Having experienced two years of freedom in Scotland, I could not tolerate the thought of becoming again a slave (albeit a fairly privileged one) of the system. By "the system" I mean the absolute dictatorship of the Central Committee of the Communist Party. The Party yielded its supremacy by means of a very comprehensive administration. One needed permission for any activity that was outside the established norm. The bureaucrat, authorized to issue the permission, would, more often than not, wallow in his or her power, creating artificial difficulties and delays. Sometimes resorting to bribery would help. All this was rotten to the core, and I wanted to GET OUT! At that time it was still possible to book coach excursions to some countries, say to Italy or East Germany. The Berlin Wall was not yet built. However, all of my applications to go on such a trip were in vain. The local police in Wrocław would not issue a passport.

In the Summer of 1961, Tom Carruthers, my Scottish climbing friend, came over from Glasgow and we spent several weeks rock-climbing in the Tatra Mountains. We also visited Janek Cholewa, the ex-RAF captain who flew bombers during WWII. Janek was a member of a flying club and he took us for a flight in a *Kukuruznik,* a Russian made plane. This bi-plane, designed some 30 years earlier, was still produced in Soviet factories. Officially known as *Polikarpov PO-2*, it was intended for agricultural purposes and pilot training. It had two open cockpits. I will remember this flight forever – the wind lashing my face, the overpowering noise of the engine, and a cockpit view, normally reserved for balloonists and parachutists. Nothing but air between my goggles and the ground far below!

Who would have thought on this joyful Sunday morning that five years later both of my friends would have been dead? Tom perished two years after the *Kukuruznik* flight, while attempting to climb the North Face of the Eiger Mountain in the Swiss Alps. And three years afterwards Janek went to work one morning, never to return. He died, aged 45, from cardiac arrest.

While Tom was still in Poland, I received a message from the Academy of Sciences in Warsaw saying that they were intending to send me to a mathematical conference near Stuttgart in Germany. The Academy would be issuing my passport, and fortunately they had not contacted the local police in Wrocław who were determined not to let me out of the country.

Departing for Scotland, Tom added my portable typewriter to his rucksack plus a letter to Jeanette, in which I outlined my plan of escape. I could not use the Polish Postal Service for such correspondence because outgoing mail was censored. A short while later I obtained my passport from the Academy of Sciences in Warsaw.

My mother was the only person who knew that I intended to "choose freedom". She was not entirely happy about my decision as she considered me indebted to the Polish State for having received free higher education. I told her that I had received the education because the State viewed me as its property, and asked her, "Should a work horse be grateful to the farmer for food and shelter?" She thought she would never see me again, but she was wrong.

When boarding the train for the Stuttgart conference I had an enormous amount of luggage. My colleagues were surprised, but they kept their suspicions to themselves. In Stuttgart, Jeanette and her father met me at the station and borrowed my passport to take it to the British Consulate. While I was engaged at the conference, my entry visa to England was issued "for the purpose of marriage".

Then the three of us flew over the English Channel towards what then seemed to me the country of my future. Until the wedding Jeanette and I stayed in her parents' home, close to Middlesbrough. On the wedding day there was a strong gale blowing outside, ladies' dresses and men's ties were flapping in the wind and the photographer was frustrated. My climbing friend Tom Carruthers was the Best Man at the marriage ceremony. After that we took a train to Glasgow. I called the Mathematics Department from the Glasgow Central Station, "Can you employ me?" – "Yes," they said, "just come along".

For the next few years, Jeanette continued her medical studies at the University of Glasgow. Due to family involvements I was doing less and less mountaineering, so Tom had to look for another companion to climb the North Face of the Eiger. It was a great shock for us to hear in the radio news one day that they had tragically died on that terrible mountain.

Tom was neither the first nor the last of my friends to die in the mountains. Shortly after I left Poland, two friends, Biederman and Panfil, were swept away by an avalanche, landing atop a frozen lake. The ice broke and no one knew what had happened to them until their corpses were discovered in the spring. I also knew an Australian climber who used to go solo on routes that I would never attempt without the usual protection by ropes, pitons and karabiners. The Canberra newspaper printed an article about him, including a photograph – in memoriam. But Tom's death hit me the hardest, perhaps because I knew him well, having shared together so many days of camping and climbing expeditions. Tom's ashes were scattered from an aircraft over the Scottish mountains.

Having secured a junior lecturing post at the University of Glasgow, I managed to save £100 in order to buy a car. I was advised to try my luck at an auction of ex-army vehicles. These were parked in a field not far from Glasgow, and I went along to select a few prospects. Bidding against a group of farmers, I ended up with a small (short wheelbase) green Land Rover. The top parts of the seats were missing, but it was just possible to drive the car without these – although I was seated further below the steering wheel than I should have been. We subsequently refurbished the seats with foam rubber. Although the battery was in a very poor state, the engine started when I cranked the handle which I had found inside the vehicle. Among my childhood memories were those of watching drivers cranking their cars, so I did not mind to undergo this warming-up exercise before each start.

After a few months I was able to afford a new battery. Otherwise, the condition of the car came as a pleasant surprise – it appeared to be new! The mileage reading was under 16 000, and there was not a single scratch on the chassis. Nor even on the undercarriage. A closer look disclosed the reason. It had been used as a radio-car. So, while the other Army Land Rovers had been driven through mud and over rough terrain, mine had more than likely been parked on some grassy hillock, coordinating the show. I discovered soon why the Army sold it. It was too old. Its

factory number was extremely low, and I was told that those early Land Rovers were less powerful. It was certainly powerful enough for my purposes.

I made some improvements. The tarpaulin cover limited my all-round vision, so I cut rectangular openings in the fabric and glued plastic windows into them. The passengers in the back would still have to sit facing each other, but at least they would have some light and be able to look out through the new windows.

On one occasion while driving through the Scottish mountains, we had taken along an American friend, Oscar Falconi and his charming English girlfriend April. The set-up was romantic. The landscape was beautiful, and they were sitting while facing each other – these aspects and certainly some more must have prompted Oscar to propose marriage his attractive companion. They later lived in California, where Oscar owned for over 37 years a vitamin supplements business called “Wholesale Nutrition”.

Ultimately, I had to change my Polish driving licence to a Scottish one. This required passing a road test. My friends warned me that the “emergency stop” procedure would be a tricky examination component. They advised me to watch for the moment, when the car would be in a street with little traffic, whereupon the examiner would discretely check that there is no car behind us, and then shout, “Stop!” Accordingly, when during the test I noticed that we had turned into an empty street leading to the wharf, and I noticed the examiner glancing back, I put my foot gently above the brake pedal. Less than half a second after he had shouted, “Stop,” I rammed the pedal into the floor, and the poor fellow nearly fell off his seat. (Seat-belts had not yet come into general use). I managed to pass the test with a mere reprimand for driving too closely to some children sitting alongside the curb.

My memory of this driving test contains one disturbing element. I distinctly recall that while I was watching the examiner out of the corner of my eye, he was sitting on my right. Yet we were in a British ex-army vehicle, so the examiner must have been sitting on my left. I think, I have a good visual memory. In particular, I clearly recall that during that test, we were driving on the left side of the street. Perhaps my memory has made a right-to-left reversal of the interior of the car because for the ensuing 40 years I was driving vehicles in which the driver was sitting on the left. Nonetheless, I find it worrying to recall so distinctly a situation, which obviously could not have occurred.

The pristine landscapes of Scotland are exquisitely beautiful. After acquiring the Land Rover, Jeanette and I spent almost every weekend driving to the mountains. On such trips we were often joined by my climbing pals or Jeanette's student friends. Among the latter was Theresa, a tall red-head whose father was a professor of medicine at the Glasgow University. On one of the excursions with Theresa we encountered a friend of her family's who owned a ship docked in a small harbour. We ate supper with the ship owner, and as it was getting late, he invited us to stay overnight. The girls were offered beds in his home nearby, while for me it turned out to be more satisfactory to sleep on the ship. "Unfortunately," our host told me, "the batteries are down, and you will have to find the way to your berth in darkness". Then he added that his son, Danny, might be sleeping in the same (very spacious) cabin, and if questioned, I was to tell him that his dad had invited me to sleep there.

After groping my way to the berth, I heard a voice emerging from the darkness, "Who is there?" I introduced myself to Danny, and we started talking. When he heard that I was a mathematics lecturer, Danny asked whether I was prepared to solve a problem. As I was not sleepy yet, I accepted the challenge. The problem was as follows.

"A factory manager finds it convenient to commute to his work by train and car combined. Each day his train arrives at precisely the same time at a station, where he is picked up by a company car sent from the factory. Not wanting his boss to wait, nor wishing to wait himself, the driver arrives each morning at the station exactly simultaneously with the train. One morning, however, the manager boards an earlier train, arriving at the station exactly one hour before the usual time. Instead of waiting an hour for his driver, he starts walking to the factory and he hikes some distance, until he meets the car sent at the usual time to collect him. He gets into the car, and after a shorter-than-normal drive, he arrives at the factory 10 minutes earlier than usual. *Question*: For how long has the manager been walking?" [10])

Fortunately, in total darkness, I was not in a position to write anything on paper. Otherwise, I might have been tempted to scribble down formulas involving

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[10] As customary in such problems, each person or object moves at its own constant speed, and events such as leaving the train or turning the car take no time.

time, distance and speed, soon to be confronted with a lot of unknowns that could not be determined from the scarce data. After a while I asked Danny quietly, “Are you asleep?” – “No,” he said. Then I told him how long the manager had been walking. The answer was correct, and I was allowed to go to sleep.

Danny’s question is very strange in so far that a person deprived of mathematical imagination (an anti-talent, as professor Mikusiński called such people) will find it difficult to solve it. The reader is invited to work out the answer before comparing it with the one given below.

Danny Ritchie was an interesting fellow and we later exchanged a few letters devoted to general questions concerning human existence. Unfortunately, we lost contact after a couple of years when he moved to London and I left Britain for the United States.

The answer to Danny’s question:

As the manager had arrived at the factory 10 minutes earlier that day, the driver was saved 10 minutes of driving time. This was so because he did not have to go all the way to the station from the point where he met the walking manager and back to that point. This makes the driving time from the meeting point to the station 5 minutes.

Had the driver taken those 5 minutes to drive to the station, he would have arrived there exactly 1 hour after the manager started walking on that day. Therefore, the manager had been walking for 55 minutes.

The data also allows us to determine the ratio of the speed of the car to the speed of the walker. Since the car covered in 5 minutes the distance which the manager had walked in 55 minutes, the speed of the car was 11 times that of the walker – a feasible ratio indeed!

10. A Marriage on the Rocks

Quite early on in our marriage, Jeanette wanted to talk to me for hours on end to clarify her doubts concerning my past friendship with Ellie, the Dutch girl with whom I had once hitch-hiked from Edinburgh to Vienna. As there was not much to clarify, the discussions with Jeanette were endless and fruitless. Her doubts were partly justified by something she should never have done. To describe this incident, I have to go back to the very beginning of our courtship. One day I left my Glasgow digs to go to a shop nearby, and Jeanette stayed behind. This gave her the opportunity to check the contents of my drawers, and there she found an old letter from Ellie. The Dutch girl wrote that she regretted "us having done those wicked things". Yes, she regretted the kissing! At that time, Ellie's statement had puzzled me, but now I think I understand why she had considered even that physical contact between us to have been very wrong. In the religious sect Ellie just had joined, pre-marriage kissing might have been viewed as a great sin. Naturally, Jeanette was unaware of this and only several years later did she tell me about having read Ellie's letter. But even then I did not realize that it must have been that letter which prevented Jeanette believing me when I was telling her that Ellie and I had merely kissed.

One afternoon, when we were preparing to depart for the Isle of Skye, Jeanette wanted us to discuss again the Ellie-kissing issue, so instead of leaving at an earlier hour, we depart from Glasgow very late at night. As we are both tired, we take turns at driving.

While we are crossing Rannoch Moor, Jeanette is behind the wheel of the Land Rover and I am dozing. All of a sudden I hear a terrible rattle of stones hitting the undercarriage! Opening my eyes, I see Jeanette calmly steering as if we were still on the road. But we are not! The car is racing along the shoulder, and loose stones thrown up by the wheels are striking it. Worse, right ahead of us there is a bridge, and the shoulder does not continue over it, finishing abruptly at the edge of a gaping chasm. We are on the brink of plunging into a ravine!

Taking matters into my own hands, I reach to the steering wheel and give it a powerful thrust to bring the car back on the road. We do not dive into the abyss, but I

overcorrect. The car returns to the road, crosses the bridge diagonally, and sails off from the bank at the other end. We become airborne!

For a while it feels like being in the cockpit of an airplane. We fly almost horizontally and I even notice a slight swaying motion of the dashboard, to the left and to the right, just as if we were really in a plane affected by minor air turbulence. We land horizontally, splashing in the bog. Our speed is still large, so the car ploughs through the mud for quite some distance, slowing down gradually, until it comes across a small ditch, where the front wheels burrow themselves in the morass.

We sit stunned. I turn off the ignition key[11]). Presently, I move my feet – thereby squashing a raw egg on the floor. When leaving, we have packed our food in a cardboard box which was placed in the back of the car. How did this egg manage to exit the box, and fly between our heads to the front of the car and then land on the floor without breaking? The only explanation must have been our prolonged gravitation-free, airborne state.

Unencumbered by seatbelts (generally not required in the early 60's) we get out of the vehicle, and are immediately engulfed by a swarm of very hungry Highland Midges. Evidently, they have been waiting there for us all night. It is early dawn, and our position seems hopeless. The road is a long way away and high above us. Without outside help we have no means of returning to it.

Whist we are swatting at the midges we hear a truck approach. The driver notices us and jumps out of the cabin. "Do you have a rope, per chance?" he shouts down to us. "Yes," I reply, "I have my climbing rope". We tie the Land Rover to the truck, which tows us up the embankment. We thank the driver and he tells us that he has been a soldier in World War II and towing vehicles back onto roads was a daily occurrence.

Having established that the Land Rover is still roadworthy the trucker leaves. But we are unable to continue to the Isle of Skye. The front wheels are converging strongly and badly need alignment. They must have taken the brunt of the impact when landing. We are able to drive but only very slowly.

A few miles down the road, we come across a garage where the car could be repaired although, we are told, it would take several days for the spares to arrive. Fortunately there is a campsite nearby and also a lake. We pitch the tent, unload our

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[11] The engine did not stall because the rear wheels are off the ground.

gear and temporarily bid farewell to the Land Rover. Then we spend a few days camping in beautiful surroundings, with frequent boat trips out on the lake.

Mark, our son was born very shortly before Jeanette's final (medical) exams. While she was preparing for these, I looked after the baby. I quickly learnt to change his diapers and prepare the bottle (powdered milk – not too hot, not too cold), but I had big problems getting him to settle. He would scream his head off for no apparent reason. In desperation, and I am slightly ashamed to admit this, I would throw Mark, up in the air and then catch him just before he was about to land on the bed. It worked! Stunned by the sudden loss of gravity, he would stop crying. Perhaps these early flights made a lasting impression, for in his later life he had a dread of air travel.

When the day of Jeanette's final exam arrived, I wanted to be out of the way. The weather was beautiful, and I had no desire to sit with Mark in the dark basement apartment where we lived. So I placed Mark in a cardboard box, well padded, put him and my camping gear into the back of the Land Rover and drove off.

It took about three hours to reach a secluded spot in the hills, where I pitched the tent. I fed Mark, changed the nappies and began pondering what to do next. I had brought some books but decided to go first for a short walk, keeping the tent in view. There were some sheep nearby, and the lambs were bleating frequently. Then, just as I was approaching the tent, a farmer came along. While we were chatting, Mark started crying. "Wow," I thought, "how will I be able to explain what I am doing here, in the wilderness, with a small baby?" Obviously he will suspect that I have kidnapped the child, and will inform the police. In the best case scenario there will be next morning in the Glasgow Herald an article: "Pole takes new-born camping". Fortunately for me, though, just behind the tent there were some lambs, and their bleating was indistinguishable from Mark's crying. The farmer departed, while the lambs and Mark continued to bleat in unison.

Having spent a couple of years in Glasgow, I decided I would be able to do better mathematics in England, where there were more universities, more mathematicians, and more professional gatherings. Accordingly, in 1963 I applied for a lectureship at the newly created University of Sussex near Brighton. Then I took the train from Glasgow to Brighton, to be interviewed by the head of the mathematics department, Bernard Scott. We talked about the newly published book on infinite

dimensional differential geometry by Serge Lang that I happened to have browsed through on the train. My interview was a success, and I got the job.

Bernard Scott was known to interview each student intending to major in mathematics and quiz him on some problem. On such example might be: ”If a hen and a half lays an egg and a half in an hour and a half, then how long does one hen need to lay one egg?” The way in which a student tackled the question revealed lot about his or her mathematical talent. Surely, after having thought a little, the reader will come up with the correct answer: “One hen needs one hour to lay an egg.” There are different ways to reach this answer. A direct one, no doubt the one which would have pleased Professor Scott, is based on the idea of keeping the length of time fixed (at 1½ hours) while varying the amount of hens. We can observe then that the number of hens is directly proportional to the number of eggs laid. In other words, given the data, x hens will lay x eggs in that fixed period of 1½ hours. Now take x = 1. Fortunately, as I was interviewed for a lectureship, I was not required to answer the “hen-egg-time” question. I suspect that in the excitement of my interview I would have come up with some more complicated reasoning.

My best remembered personal characteristic of DBS – David Bernard Scott – was his great sense of humour. Once he replied to a question of mine, “I couldn’t fail to disagree with you less,” leaving me perplexed for a while.

In Sussex my marriage with Jeanette deteriorated steadily. We each carried a heavy burden of fear and insecurity which were disastrous ingredients for our relationship. Jeanette was afraid that our togetherness would echo the miserable marriage of her parents. She demanded constant reassurance of my love for her. In particular, she refused to believe me when I was telling her that my relationship with my Dutch hitch-hiking friend had gone no further than the kissing stage. There was endless pointless dialogue on this issue, and I began to fear that the resulting loss of time and energy would destroy my mathematical career. Jeanette had an ever-increasing need to convince me to “tell her the truth” and I had an ever-increasing resentment against being dragged into discussions that appeared to me totally fruitless, unjustified and nonsensical.

While my marriage was gradually disintegrating, the work I had done in Dundee with A. M. Macbeath attracted the attention of an eminent mathematician, André Weil, permanently residing at the Princeton Institute of Advanced Studies in New Jersey (USA), and he invited me to spend an academic year in Princeton.

Having obtained leave from the University of Sussex for the academic year 1965/66, I began preparing for our departure to the USA. However, my travel documents posed a problem. During the Cold War, Poland belonged to the enemy camp. The validity of my Polish passport had expired, and the Polish Consulate refused to issue a new one. I had an "Alien's Registration" document granted by the British Home Office, but this was not valid for international travel.

I was telling the Polish Consulate in London that I was not a political refugee, and that my decision to stay in England was for family reasons because my wife was a medical practitioner and, not knowing the language, she would not be able to work in her profession in Poland. The Consulate officials pretended to believe this and informed me I would be able to obtain a passport, however, only after certain conditions were be satisfied. These conditions were not spelled out on the Office premises, but instead I was asked to turn up elsewhere for a "conversation". Elsewhere turned out to be Hyde Park. Upon arrival at the appointed time, I was approached by a man who invited me for a walk. He was from the Consulate and, after checking nobody was in the vicinity, he told me I will get the passport, provided I agreed to spy for Poland while I was in the USA.

A dilemma! I did not want to miss the chance of going to Princeton. It would have taken another three years to obtain British citizenship – much too long to wait. On the other hand, the proposition of spying seemed ominous. Who knows what kind of "tasks" I would be given once I reached the United States!

To extricate myself from the situation, I told my companion that my English wife was an abnormally insecure and suspicious person, enormously afraid that for some reason or another – such as an affair of mine - our marriage would collapse. Accordingly, she was keenly overseeing all my activities, and for the sake of peace, I have allowed her to take on that role. Hence any out-of-the-ordinary activity would be immediately noticed. I must have sounded convincing, especially as I was speaking the truth. A few days later, I obtained the passport, without promising anything in return.

During my last semester in Sussex, my marriage became increasingly unbearable. Had I escaped the enslavement by a communist system to become enslaved by a woman? So, in collusion with her father who did not want his daughter to ruin my life, we orchestrated my escape. While Jeanette's father was on a visit, I surreptitiously packed my most essential belongings in two suitcases and stored them

in the car. The following day I waited until Jeanette was upstairs, wrote her a note saying that I was going for short walk on the nearby Sussex Downs – and I walked away, but in the opposite direction.

Next, everything went according to plan. Jeanette, having seen my note, alarmed by the fact that I had left the house without previously consulting her, rushed out of the house, intending to catch up with me. Her father drove my car out of the garage, met me on the road to London, and we sped off. We stopped en route, and I called Jeanette from a phone booth to explain what had happened. Her pleas to return fell on deaf ears.

Hiding from my wife, I spent the following month on a remote Welsh farm, whilst waiting for my US visa. All communication with the outside world was via my lawyer.

The sudden departure from my house adversely affected one of my publications. In those days the teaching of mathematics in the UK was very different from that in Poland. In the UK, students were taught to be well versed in solving problems close to the applications of mathematics, like physics or engineering. By contrast, in Poland a more theoretical, abstract approach was favoured. Young minds were trained in abstract thought as early as possible, and mostly set theory was used for this purpose. This reflected the view, currently held by most logicians and mathematicians, that all of mathematics can be described by set theory. Therefore, soon after I began teaching in the UK, I decided to write a little textbook on set theory. I assumed rightly that this subject would soon find its way into the undergraduate curricula, just as it did in Poland. I completed the book a couple of days before my breakaway from Jeanette and I sent it to the publisher. I had no other copy. The publisher returned my book requesting some minor changes, but, in my absence, his letter was delivered to Jeanette, who simply put it away. I made inquires with the Post Office, and was wrongly informed that the letter with my book had gone missing. So hundreds of hours of work had evaporated into thin air – or so it seemed then.

Seven years later, during a telephone conversation, Jeanette disclosed the location of the “lost” typescript: It was lying upstairs in her attic. She was kind enough to send it to me, and the book was finally published (*Sets and Numbers,* Routledge & Kegan Paul, London 1972). However, by that time several other

introductory text-books on set theory had appeared, and mine was not able to fulfil its original aim.

I found it hard to accept that my marriage had failed so miserably. Previously, as a bachelor, I had been successful in all my major undertakings, be it in climbing or mathematics. Hence, at the beginning of our marriage it never crossed my mind that it might so soon collapse. Jeanette used to tell me she had never met anyone as optimistic as me, and probably she was right. So, in spite of all the mounting difficulties, I persevered for five years.

My final decision to abandon the marriage was based on three events. The first occurred when we were preparing to go to sleep one night. I was tired, and I had to give an important lecture the next morning, but Jeanette wanted an in-depth discussion about love and my past involvement with Ellie. I refused, begging her to let me sleep so I could be fresh the following day. In a frenzy she jumped out of bed, ran to the kitchen and came back with the longest, sharpest knife we had. “Will you talk now?” she asked. The threat worked and so we started yet another pointless dialogue. Maybe I should not have surrendered?

On another occasion, when I could not bear further cross-examination on the repetitive Ellie problem, I told Jeanette to shut up, pushed her out into the garden, and locked the door. She returned immediately, preceded by a brick smashing through the glass pane of the door.

Finally, the last straw. I was proofreading a text for publication, and Jeanette came into my study, asking to discuss a certain inaccuracy in my recollections of the old relationship with Ellie. I told her the issue was dead, and I didn’t wish to devote my time to it. But she insisted, and kept pestering me, until I lost all patience. For the first time in my life, I started shouting at her, and when she shouted back, I gave her a good thrashing.

I cannot believe, I was able to do such a thing. During all my school years I avoided fights, and when another boy attacked me, I made full use of my long legs to run away. Needless to say, the thrashing calmed her down, and perhaps that was the treatment she needed just then, but obviously, the strain of this relationship was more than I could bear. Hence, when soon after the beating incident (and five years into the marriage) her father offered me help in orchestrating an escape, I accepted the opportunity and left Jeanette – and Mark, my four-year-old son.

Jeanette never remarried. She worked as a medical doctor in Scotland, South Africa and Australia. In her late 60s, she succumbed to alcoholism, spending the days at her beautiful Scottish house in Gourock, overlooking the Firth of Clyde and Loch Long – drinking. When our son came to visit her on New Year's day 2010, he found his mother dead. It was not clear whether she took the overdose of sleeping pills, mixed with alcohol intentionally, or by mistake.

It seemed that Jeanette and I had all the external ingredients for a happy marriage. I was well placed in my mathematical profession, and she was a lovely, bright, well-educated and honest girl. She also had an enviable ease when dealing with people. Yet she was unable to overcome her fear that our marriage would turn dysfunctional, like that of her parents. This fear prevented her from believing the truth about my near-platonic relationship with Ellie. Her persistent disbelief lead to our breakup.

11. In and out of the USA and Australia

Just before my departure from Wales, whilst choosing reading material for the flight to the USA, I notice in a shop window *The Art of Loving* by Erich Fromm. The subject seems to be relevant, as my marriage, my family life, my love – are all gone. In 1965 the flight from London to New York takes a long time. One has to refuel in Greenland. This gives me the chance to read most of the book. I am impressed; Fromm's ideas seem to make sense. Yet many more years have to pass before I become seriously interested in psychology and religion.

The Princeton Institute of Advanced Studies is probably the world's foremost research establishment in exact sciences. The permanent members of the Institute are leading scientists in their respective fields. André Weil is probably the greatest algebraist alive. Albert Einstein was once the director of the Institute but he died before my arrival. The present director is Robert Oppenheimer, "the Father of the Atomic Bomb", so called because during WW II he supervised the construction of the bomb. I also meet Kurt Gödel, regarded as the greatest logician of all times. He is a shy and withdrawn person. Visitors, like me, stay at the Institute for one academic year at the invitation of a permanent member. As a guest of André Weil, I tell him that my knowledge of his field is very small, because I have been mainly a "problem solver", and I studied only as much of any theory as was needed to solve any particular problem. He finds nothing wrong with this approach.

During my stay at the Institute I become painfully aware of my lack of specialization. There are research seminars going on, and I am supposed to attend some, but I do not want to waste my time sitting in meetings where I understand next to nothing. Instead, I prefer to walk in the woods nearby and climb trees, the higher the better.

While in Princeton, I exchange many letters with W.T. van Est, a mathematician from Holland. These concern a problem I was once working on, but without success. Van Est, jointly with Th. J. Korthagen, found a solution, and then he began developing a theory expanding the ideas underlying that solution. He has no time to work out all details, so he sends me long letters outlining complicated proofs,

and I then elaborate into proper mathematical publications. Thus my stay in Princeton is productive, but I could do this work equally well elsewhere.

In America I find it strange that at the end of each month I have some money left, and this is so in spite of purchasing a car, skis, and clothing, and making frequent visits to friends in New York and a girlfriend in Chicago. The post-war economy boom is still in full swing and our salaries are generous.

As part of the Cold War policy the US Government is offering grants for almost any type of scientific research, and the universities are well funded. So I am not overly surprised when I receive an invitation from Ed Hewitt to spend the next academic year 1966/67 at the University of Washington in Seattle. I accordingly extend my leave from the university of Sussex by one more year.

The mid-summer drive across the States is a great experience. In Chicago I am joined by Theresa, the read-head who studied medicine in Glasgow together with Jeanette. She too is facing a divorce. She is accompanied by her small son, while her Norwegian husband is in Europe. We drive in two cars but jointly cook meals, rest at campsites in National Parks, and admire the wilderness of the American North-West. Having arrived in Seattle, we rent a houseboat on Lake Washington, a bungalow floating on logs. I start teaching at the university and Theresa finds a job at a medical establishment.

One day Theresa's husband turns up and becomes belligerent towards me. When I try to ignore him by driving away, he pulls me out of the moving car, throws me on the ground and begins to strangle me. With almost my last breath I manage to squeak, "You will kill me". This sobers him up, and he lets go of my throat. Later Theresa allows him to take their son to Norway – supposedly for a short period only.

Just outside the door of the houseboat, there is a small floating platform for sunbathing and mooring our rowboat. A black tomcat moves in with us; he has no claws, and to avoid dogs, Fremont, as we call him (from the bridge nearby), has to jump into the water. Often he comes home with only the head dry. Fremont loves to join me on my rowing excursions on the lake. Sometimes he notices me from afar when I have already rowed away, then he runs to our mooring platform and meows to be taken aboard.

Theresa and I go on frequent excursions, sometimes camping on the Olympic Peninsula, at other times just sightseeing. During one of these we come to the Pacific coast, and I go swimming. Until that time, I considered the sea to be my best friend,

and I enjoyed swimming everywhere and in all conditions. On that day, the breakers are huge, and I have great fun getting through them, further out to sea. However, when I want to return, I notice that I cannot do it. A current is dragging me away from land. Although I am very fit, I do not know how to swim fast, as have not mastered the crawl stroke yet. But to my luck some of the waves in my vicinity have breaking crests. I get the idea to throw myself repeatedly onto these foaming ridges, and these ultimately bring me nearer to the shore. I should have learned then and there to treat the sea with greater respect. I did not; I needed still one more lucky escape, a year later in England, for the penny to drop.

During my year in Seattle, I do not participate in any research seminars, again, due to my lack of specialization. Hewitt does not seem to mind; he is very fond of Theresa and we are often guests in the spacious house he occupies alone. He calls it "the White Elephant", because it is unnecessarily large and expensive to maintain. He loves luxuries, drives a Mercedes cabriolet and knows one sentence in Polish: *Proszę pani, czy można prosić o korkociąg?* (Approximately: May I ask the lady for a corkscrew?)

When Theresa's husband does not return her boy, breaking his promise, she flies to Norway to collect the child. Ultimately, she decides to stay there. I place all her belongings into her Saab and ship the car to Norway.

For a couple of months I stay alone on the houseboat, but soon I become friendly with Phyllis, a graduate student of animal psychology who came from Chicago. She lives on a houseboat on the opposite shore of the lake. We hire a motorboat and move all her things to my place. For the rest of my stay in Seattle we live together very peacefully, although she never joins me on my skiing escapades to Garibaldi (BC, Canada), nor on my climbing excursions. Neither does she share my growing interest in Haiku poetry and Zen Buddhism.

Before returning to England, I visit Australia. My brother-in-law, László Kovács (the husband of Jeanette's sister), is working at the Research Institute of the Australian National University in Canberra and he arranged for a visit of mine.

In Canberra I live in university accommodation, enjoy making friends, and fall in love with Helen, one of the very few "available" female faculty members. Consequently, instead of getting mathematically involved, I drive Helen's Land Rover on long field trips into the wilderness, where we search for yet unclassified ferns. She

is a devoted botanist, and I admire her dedication. By contrast, my interest in spending the rest of my life in offices, classrooms or libraries is rapidly dwindling.

En route to England, I stop over in Seattle, where Phyllis has hired a lawyer to prepare my divorce. Jeanette does not contest, and the divorce is readily granted on the grounds of our long-term separation. When I tell Phyllis I am in love with Helen, she becomes sad and angry. Then I depart for England, leaving Phyllis and the cat Freemont on the houseboat.

12. In England and India

I return to England in the autumn of 1967. The University of Sussex promotes me to Senior Lecturer, and I rent an apartment in a house in Brighton, on a high cliff overlooking the sea. To take a swim, I need only to cross the road.

I swim almost daily, and once I almost drown. A storm is raging, but I cannot imagine that water could possibly endanger me. So I jump into the foaming waves. I am pretty close to the pier, and the sea is very chaotic; oncoming waves meet those that bounce back from the stone wall, and the turbulence makes it almost impossible to swim in any chosen direction. My second realization is worse: The amount of foam-spray just above the water prevents me from breathing! Now the order of happenings becomes clear: First I will suffocate and then drown. I hold my breath and swim frantically back to the shore, barely making it. Finally, I learn to respect the sea.

From my windows, I see distant ships and the ever-changing play of light on the clouds and the water. People are strolling along the beach between boats pulled up on the pebbles. I always hear the rhythmic sound of the waves crashing below. Seeing couples walking hand in hand, I get very sad. They say “distance makes the heart grow fonder” – and there, beyond the sea horizon, is Helena, who answers my letters promptly and would like to see me back.

The drab English winter arrives, and I am longing to be back to Australia, longing to bathe in exquisite sunshine, swim in the warm sea and visit with Helena the pristine landscapes unspoiled by humans. Her parents live not far from Brighton, they like me, and her younger sister likes me too, at least as much as she likes my new Land Rover. We make a few joint small excursions. In retrospect, I think she might have been a good partner for me, but my romanticized image of Helena barred me from making closer contact with her sister.

Fortunately, Canberra wants me back too: I am offered a grant to work at the Research Institute for three years. I quit my job in England, put the Land Rover on a ship to Australia, and instruct the Australian Consulate in London that my entry visa for Australia should await me in Calcutta. Then I fly to India.

I have certainly a month, or possibly more, to visit the Continent that had interested me for years. My luggage consists of one backpack. During my last year in England I made friends with a few Indian students, and they gave me addresses of

their relatives in India. Thus, carrying small gifts from England, I travel in India from one town to another, turn up unexpectedly at the doorsteps of strangers and bring them greetings from their relatives in England. The new acquaintances always invite me to stay in their homes and instruct me what to see in the vicinity.

It is often very, very hot. I rarely see a white face. I drink from water taps and eat whatever the street vendors offer. Surprisingly, I never get sick. I feel in India very much at home. One of my hosts suggests I should take the train from Madras to Tiruchirappalli (see photo in this book) to visit a large complex of temples there. This express train is pulled by a steam engine, and I am soon provided with the opportunity to discover the real advantage of this type of traction. Halfway during this journey the train stops in a town, and it is announced that the break will last 90 minutes. I take the opportunity to visit the town. The streets, as it is usual in India, are crowded with people. I enter a big temple, and I get very absorbed in admiring its interior. When I return to the street, I realize that I am lost. I normally have a very good sense of direction, but I believe I was so fascinated by the temple that I just forgot to memorize my route. So I begin to ask people for directions. But, to my great surprise, nobody understands English. Finally a police officer turns up. “Can you show me the way to the train station?” No, he does not understand English either. Of course, I know that eventually someone will show me the way, after all, I am in a densely populated area, and all educated people in India speak English. But the time is running out, there are only 15 minutes left to the departure of the train. The policeman understands I am asking for directions, but to where? In my desperation I finally get the right idea. Pretending to be a steam engine, I stretch out my hands and start moving my fists tracing two vertical circles (the “wheels” of the engine), so that when one arm moves forward, the other goes back. First slowly, then faster and faster. I add correlated sound effects: First I say, “shoo, shoo, shoo”, and then a long “ooooo…” (resembling the whistle of a steam engine). Now nobody has the slightest doubt that I am looking for the railway station, and with a bit of hand waving and some more sign language, I am told which direction to take and where to turn. Now suppose that, instead, I would have found it necessary to pretend I am a diesel engine. Surely, the police officer would have concluded that I suffered a sunstroke and he would have taken me to the nearest clinic.

Friends recommend I should visit Kashmir. This was before the days of sectarian strife, and visiting the region was safe. Concerning the approach, two recent

stories were in circulation. The first was about a bus: On the way to Kashmir, it rolled down a precipice, and most passengers were killed. The other story: A military convoy was surprised by a snowstorm, while crossing the mountains late in the autumn, and all soldiers froze to death. These tales might have contained some exaggeration, but it was known that the media were not allowed to report disasters of this kind. The fledging Indian tourist industry did not need negative advertising. I take the plane.

My lodging in Srinagar is a houseboat named Young Good Luck. The owner, wearing a long robe, is a Muslim. I have never met one before. He tells me he has the habit of getting up at night, just after a few hours sleep, whereupon he brews himself some tea and then sits down, enjoying the quietness and solitude. Although he is not using that word, I assume he wants to tell me that he practices meditation. He suggests I should rent a gondola (with two oarsmen and a little roof over my head to protect me from the scorching sun). Sitting in that, I am rowed past the floating gardens and then out on the lake to enjoy the views of great mountains.

A bus trip takes me to these mountains. Disembarking from the bus in Gulmark, I hire a horse and a guide. We ride out to spend the day on traversing slopes and visiting valleys. The views of the distant snow-covered peaks are exquisite. I meet some Indian tourists, and one of them asks me to explain the difference between “ice” and “snow”. The question puzzles me, until I realize that in most of India it never snows!

When the planned day of my departure from Kashmir arrives, the skies are overcast, with dark clouds hanging low over the valley. High mountain ridges surround the airport of Srinagar, and a departing plane can clear these only by flying near the ground over a low pass between two mountains. But the passes are in the clouds too. A few days later the cloud ceiling lifts, just enough for a mountain pass to become visible. Our plane takes off and flies into this small hole between the ridge and the cloud. Then follows the worst flight of my life. I cannot believe an aeroplane is able withstand so much bashing: The wings are flapping like those of a bird, and all cabin fixtures rattle and squeak. We are inside the cloud all the time. I realize that if we crash, none of my family and friends will ever know what happened to me.

Somewhere in the middle of sun-scorched India, I have a most remarkable experience. After having missed the bus to the next locality, I am approached by three men, who suggest in very rudimentary English that we should hire jointly a taxi to

follow the bus route. I agree, and we squeeze into the ramshackle vehicle. With all windows open and the hot wind on my face, I doze away and drift into a semi-sleep. My companions conduct a lively conversation. It transpires that they are farmers, and they comment on the crops growing on the fields that we are passing. They talk also about recent prices and all sorts of local news that are of no particular interest to me. Then I wake up, and I realize that I don't understand a single word of their conversation; they are talking in a language totally foreign to me. Was my imagination playing tricks, or did I really understand them? Regrettably, I cannot check this.

My last Indian journey is on a train to Calcutta. By that time I am accustomed to eat with my fingers and sometimes even without a plate. In villages they served me food on a big green leaves. So when the restaurant car attendant asks me if I need a knife and a fork, I say, "No, thank you". Then he brings the food, all people in the compartment are Indian, they eat with knives and forks, and I feel enormously stupid using my fingers only.

In Calcutta, I discover that there is no Australian visa awaiting me. The telephone connection to Canberra is cumbersome – via Europe and America. I have to make many phone calls to sort things out. I am living in a cheap hotel, and after a few weeks, my money is nearly finished. I become aware that the Australians might never let me in. After all, I am still a citizen of communist Poland! I am considering to change my ticket and fly to Tokyo, to spend the rest of my life in a Zen Buddhist monastery. However, finally, the visa does arrive.

While waiting for the departure at the Calcutta airport I see a crowd of white people, who just disembarked from a plane. I am surprised to see so many swollen expressionless faces and clumsy bodies. For the previous two months I was surrounded almost all the time by lean Indian men and women. They were so much more beautiful!

13. Second Visit to Australia

Helen meets me at the Sydney airport. After two months in India I am thin and tired. She is surprised to see how slowly I walk over the tarmac. In India I was never in a hurry. We start living together in a rented bungalow in Canberra, but the memory of an unpleasant experience in her past bars her from sharing my bed. Anyway, soon she falls ill: Hepatitis. For several weeks I look after her and the house. Then a small marriage ceremony is conducted in a circle of close friends. The year is 1969.

Our togetherness soon turns out to be remarkably unrewarding. I discover that Helen ranks people according to their social status and treats rather condescendingly those "below" us. Her language is that sophisticated artificial English used by the upper classes, and taught in private schools. We differ in many respects. She seems to fit society well, while I am becoming more and more an outsider, a "displaced person", as one marriage counsellor puts it. I am searching for the meaning of my existence, turning to oriental philosophies, while she finds joy and fulfilment in discovering new sorts of fern. On rock faces and in big mountains (say, in New Zealand) I am always happy. In such places she is plain scared. We drift apart.

Then I fall in love with Anne, a Canadian-born mathematician living in Brisbane, who is also in search for the true meaning of life. Anne gets me interested in the philosophy of existentialism, and we read books of Jean-Paul Sartre and Albert Camus. We exchange long letters about these, but we see each other only during four conferences of mathematicians. She is married, not happily.

In this situation I feel the relationship with Helen is dead, and I suggest divorce. I move out of the house, and the divorce is granted a year later. Anne does not divorce her husband, whereupon I try to heal my loneliness by climbing in New Zealand where I have many gripping adventures. Three of these are described in the next chapter. I meet Anne for the last time in Tasmania, where we attend a mathematical "Summer School" in Hobart. In the evenings, we take joint walks on the slopes of Mt. Wellington above the town. In her presence I am very happy. But I keep my distance. I feel that I have very little to offer; viewing myself as a social misfit and a likely drop-out from mathematics (which I became two years later).

After contacting some Hobart climbers, I devote a weekend to rock climbing on the cliffs forming the southernmost tip of the Tasman Peninsula. My climbing companion is Karl, a German. We come to three jagged towers, protruding out of the ocean, we name them “The Tridents” and decide to ascend each. After traversing into them from the shore, we are on rock walls dropping steeply into the waves far below us. The sound of the crashing waves reminds me of Polish corn fields rustling in the wind. At a certain moment Karl, just then leading, reaches up to a shelf, and immediately he abandons the idea of using it as our next belaying stance: A big snake is sunning there. We ascend the first tower and decide to conquer the next by simply jumping across. It is like hopping from the roof of one sky-scraper onto the roof of the next one, after taking an initial run. Of course, enough slack of the belaying rope has to be prepared, so the rope does not tighten while the jumper is still in the air. This is a totally desolated place, and if something would go wrong, *im Falle eines Falles*, in the language of Karl (in case of a fall), our bodies would be swept away by the ocean current and then eaten by sharks. The rope might float to Antarctica. We rappel down that next tower to a place from where we can traverse back to the shore.

When I return to Hobart, I feel I have to celebrate the exquisite climbing excursion. Also the presence of Anne makes me want to do something extraordinary. So I write an article to a Polish climbing magazine, the Taternik (No. 210, 1971, p. 30-31), describing the recent climb. This is my first nonmathematical publication.

Anne returns to mainland Australia by an earlier flight, and I see her off to the airport. The jovial taxi driver asks, “Are you married?” Anne sits quietly, and I answer, “No, we are just in love”. There is nothing more to say.

Australia is home to various nasty beasties, as my next excursion might illustrate. Having rented a car in Cairns, I drive to Brisbane, following the coastal road. The trip takes several days. Somewhere on the way, I notice a bench and table at the roadside, and I decide to stop for a picnic. Not more than a mile to the east, the sea glitters in the sun, and I decide to hike to the shore. There is no path, and I have to walk through grass as tall as I am. Suddenly I see right in front of my face a black shape on top of a grass stalk, my lips come in contact with it, and I feel a slight sting. I think some insect bit me and continue to walk. But soon I begin to feel rather strange, I get a skin rash and then diarrhoea. So I return to the car, just in time to realize that I cannot walk anymore. There are no people, no cars. I write on a piece of paper my name and address, and assume death will come soon. Then I get a bright

idea: “Perhaps driving is much less of an effort than walking?” Indeed, after having crawled into the car I somehow drive myself to the nearest locality, a small town. I find a doctor, who gives me a couple of injections and tells me to lie down for the next 12 hours.

I find a tavern and move in for the night. There is rowdy drinking going on in the bar just below the window of my room. So I close the window and immediately the air gets extremely stuffy; this is Queensland summer, and there is no air-conditioning. In my somewhat feverish state, I imagine resting on a sandy beach, with a fresh breeze from the sea that keeps the mosquitoes inland. I decide to find such a beach, so I leave the tavern and take a road probably leading towards the sea. All this happens in the middle of the night, and I am very drowsy, full of various poisons, including those I got with the injections. The road is empty and I drive reasonably fast. I notice a sign indicating that I am approaching a bend, and then I black out. The next thing I know is that I am on this bend, but the speed of the car is so large that it must leave the road. Then the car runs between boulders and trees, fortunately missing them all, and comes to rest in a ditch. I decide I had enough adventures for one day and fall asleep at once (inside the car). Next morning it transpires that I can drive out of the ditch. Feeling fresh and healthy, I resume my journey to Brisbane. Did I have a “face to face” encounter with a poisonous spider?

At the Mathematical Institute in Canberra, I have no other duties than conducting research. I mostly do this by changing rough descriptions of proofs sent to me by van Est from Holland into publishable material. I don’t work in my office but rather inside my Land Rover, where I have installed a comfortable desk. On these occasions, I park the car in the surrounding of beautiful landscapes.

I entered Australia on a Polish passport, thus as a citizen of a communist country, while the Cold War was still raging. The Iron Curtain was separating the Free World from the Evil Empire (of communism), and I had always problems with obtaining visas. It would have been much easier for me to travel in the future as an Australian citizen, but my research grant at the Canberra Institute was for a period too short to allow for naturalization. Then someone told me that perhaps my previous residence in the UK could be counted as a step towards this goal.

I applied for naturalization, and while waiting for an answer I had an encounter with Her Majesty Queen Elizabeth II. I took it as a good omen that my application will be successful. I have to admit that having grown up in Poland, where

the last king abdicated in 1795, I had a very ambivalent attitude towards royalty. Normally, I am not in favour of anything being more pompous and formal than it needs to be, but if a society wishes to keep a tradition alive and is rich enough to afford this, so be it. When I heard that Her Majesty will be visiting Australia, I accepted this fact as one of those pieces of information I can forget about. A day or two later, I drove along a motorway, just outside Canberra, returning home from some errand. The road was deserted, which did not strike me as unusual at that time of the day. Then I noticed a long row of schoolchildren standing along the edge of the opposite lane. "Aha," I thought, "maybe the Queen will be coming this way?" I continued deliberating, "So what? She is not my queen anyway". But then it occurred to me that if such an easy chance presents itself to get an unobstructed view of Royalty, I might just as well spare a couple minutes and witness the show. So I parked my Land-Rover on the grassy median separating the two lanes, and soon I noticed a motorcade approaching. To see it better, I climbed out of the car, and I squatted cross-legged on the spare wheel fixed atop the bonnet. It did not strike me as inappropriate that I should be sitting while her Majesty would be passing by, because I was sure she will be looking at the cheering kids and thus remain turned away from me. Soon I saw her, driven in an open limo. Indeed, she was looking at the children, waving continuously. However, she must have watched me from the corner of her eye, because precisely when she was nearest, she turned abruptly and looked straight into my face. I sat dumbfounded. During a short moment we stared at each other, and then, for lack of a better idea, I smiled and waved. I must admit, it did not even occur to me to rise to my feet. Anyway, there was neither time enough nor would it have been safe to do it. Obviously, she realized my predicament, so she smiled too and waved. A few weeks later I received the Australian Citizenship, thus becoming Her Majesty's subject.

It was during those Australian years that I did my last serious rock climbing. Canberra is close to rock faces several hundred feet high (Baroomba Rocks). At that time these were quite unexplored by climbers. During many a weekend, we had great fun making new ascents and experimenting with new techniques. (Hexes and étriers were new to me then.) Very often my mate was Neil Anderson. He was a devoted outdoor person, spending each weekend on the rocks or on cave exploration, often camping. According to Neil, the best thing that had ever happened to him was his parents' emigration from England to Australia. He was an epitome of calmness. Neil

worked as a security guard in Canberra, patrolling the town at night and checking various premises. On one such occasion he found a door to a tire depot unlocked, entered the place, and saw thieves “at work”. With total calm, very relaxed and firm, he told them they were under arrest. I am sure not a single muscle twitched in his impenetrable face when he was handcuffing them. It never occurred to them that Neil was acting single-handedly.

As I have observed earlier, mountaineering did not contribute very much toward developing my personal courage. But there was one positively valuable behaviour trait that could be exercised and improved by climbing: an optimistic belief that whatever one feels “called to do” will be within the range of one’s possibilities and will not end in disaster. I will never forget the saying of another Australian climber, Sid Tanner: “It is amazing what you can pull off, if you try”. Sid was an extremist who would consider it appropriate to tackle overhangs that demanded spending the night in a hammock dangling over a precipice. Sid’s saying is in the same category as a very useful Polish one: *Nie taki diabeł straszny, jak go malują.* (The devil isn’t as horrible as they paint him.)

14. Mountaineering in New Zealand

While I was being employed by the Research Institute in Canberra, I used to visit New Zealand each summer to do some mountaineering. On one occasion, my climbing mate is a lawyer from Canberra. We plan to ascend Mt. Cook (3754m) from the west side, something that apparently had not been done before. After a few hours of climbing, we come to a long traverse across a steep slope of hard snow. I feel elated; all doubt and fear are left far below. But my companion is in a very different mood; I notice that he is scared. He moves slowly, with undue care, and I become soon aware he is wasting our precious time. After the traverse, already on a mixture of ice and rock, I try to show him that there is no real danger, and I begin to proceed extra fast, displaying a combination of overconfidence and nonchalance. And then, possibly due to my frustration, and the resulting lack of concentration, I allow some of our climbing equipment to slip out of the backpack. It disappears down the slope.

To proceed without that gear appears to be risky, and we decide to withdraw. Soon we have to traverse again the steep slope of hard snow. High above us huge towers of ice are warmed up by the sun, and big blocks of ice are coming loose. They whizz past our heads at the incredible speed gained after a thousand meter fall. We never intended to return that way! For about an hour we are fully exposed to this intense and terrifying bombardment. If any of us were hit, he would be smashed instantly, and the speed of the impact would also pull down his companion, as we are roped together. Realizing I might die any moment, I begin to recall, one after another, all the people I loved during this life. It is a sort of farewell to everything which was dearest to me. Minutes pass slowly until, one hour later, miraculously, we exit the terrible traverse.

Then we descend for as long as daylight permits. At dusk we notice a rocky ledge, and by the time we reach it, total darkness reigns. We place our bivouac sacks on the ledge and fall asleep in sitting positions. The ground is very uneven which makes our “bed” rather uncomfortable. In the morning, we discover that the ledge is quite smooth and flat, but it is covered by many loose stones. We could have removed them last night, had we not been scared to shift anything in the darkness. Then we

descend to the hut. I am so tired that upon the slightest loss of balance I keep falling into the snow, face forward.

My next New Zealand adventure illustrates some specifics of mountaineering in that country. It began in a climbers' hut erected on a rocky outcrop protruding from the vast ice fields of the upper ranges of the Tasman Glacier. This, so called *Tasman Hut* is ideally situated for climbing the surrounding peaks. In the hut, there is only one big room containing several berths, a cooking facility, a two-way radio, and other essentials. The hut is fixed to the rock by steel cables. Whoever could afford it, reached the hut by a small plane. Otherwise one had to walk up the glacier which was cumbersome, because one had to weave one's path between crevasses. Since these were not visible from below until one came close to them, it was often necessary to trace back one's steps to circumvent gaping holes in the ice. Considering we had much to carry (food for a couple of weeks and the usual climbing gear), we took the plane.

The procedure of landing on the curved upper slope of the glacier was something new to me: The plane first "pretended" to land in the **downhill** direction of the glacier. In this way its skis left a trace in the snow, indicating a path along which it can land upwards – after having made a turn in the air. Such a pretended down-slope landing was essential, for if suddenly a crevasse would appear ahead, the pilot had the possibility to pull up and jump over it. As we were not informed about the manoeuvre, we thought the plane was landing while skiing downward, not decreasing its speed and approaching ever steeper regions full of deep cracks – and we began to suspect he had gone crazy. Of course, soon the plane was airborne, made a U-turn and landed uphill.

To begin, we decide to go for a fairly easy climb to a ridge nearby, then traverse the ridge until its abrupt end – and return the way we came. A narrow gully leads up to the ridge. Climbing the gully is like going up a long flight of stairs: our crampons cut well into the hard packed snow-ice surface and provide a good grip. The slope is just about as steep as that of a normal staircase.

The ridge turns out to be "razor sharp", that is, to both sides we have immediately steep drops. So we have to stay roped together. In case one of us should slip on the snow and fall off, say to the right, the other is supposed to jump immediately to the left, and then we would be hanging neatly to both sides of the

crest, pondering how to get back. Fortunately it never comes to that. After having followed the ridge onto its end, we eat our sandwiches and start on the way back.

Soon we met a team of two climbing girls. They ask if it is far to the end, we tell them it is not, and with a “see you later” we part. They too are residing in our hut, and we will meet them in the evening again – so we think.

While we are returning along the ridge, a side wind starts blowing, and this wind is getting stronger with every minute. The rope, usually twisting its way between the rocks, takes off, and forms a U-shaped connection between us, almost horizontally suspended in the air over the precipice on the lee side. This is interesting to observe but not really scary, as we have enough of uneven terrain to hold on in case the wind would try to blow us off.

Anyway, we presently come to the top of the gully. The wind is blowing up that ravine at an incredible force. To our surprise and relief, this makes our descent the easiest possible: It is enough to lean with the full weight of the body against the pushing power of the wind and then walk down the steep ice just as if we were on level ground. The wind is so strong that it makes a fall down the icy slope quite impossible. It simply pushes us upwards. So we just walk, apparently defying the laws of gravity, leaning forward in poses that would be our last controlled gestures in this life, were the wind to stop suddenly. But, of course, it does not. There is a vast empty space in front of us, and the nearest peak capable of creating an air-turbulence is miles away. We reach the Tasman Hut early in the afternoon, and exhausted by the wind, we tumble into our beds and fall asleep immediately.

When I wake up, it is already dark. The hut is trembling in the gale, and were it not for the steel cables holding it to the rock, we would be lying shattered on the glacier below. Driving rain is hammering against the windows. And the girls are not back! There is no point going out to search for them. Visibility is nil, and we had no helmet lights.

In the morning we radio the Park Administration. We are told no air search could be done in this kind of weather. So we decide to form a rescue expedition. A measuring device outside the hut is showing the wind speed of 100km/hr. The gale is painfully pelting us with rain drops. In crouching positions we move slowly across the glacier using ice-axes for anchoring. Having reached the bottom of the gully that has to be ascended, we find a cleft between the rock and the adjoining ice and creep into it for a small rest. And to get rid of the shivering: Each of us shivers and shakes

violently, uncontrollably. The wind has penetrated our clothing, pressed the rain through it, and we are wet and cold. We wait until the shivering will stop, but it doesn't. No – we cannot climb the gully in these conditions. The girls have either found some shelter or their death.

We get back to the hut and when the drenched clothing is exchanged for something dry, the shivering stops. The next rescue expedition, formed by other climbers, met an analogous fate. The day passes without a change in the weather and then a night, and another day, and another night. The hopes of finding the girls alive are dwindling.

Finally, on the third morning the skies are blue, the wind has subsided, and while we are leaving the hut to climb up to the ridge, we notice a helicopter. It is patrolling the ridge, back and forth. At a certain moment it hovers very low above the rocks – suspended in one position for a while. We cannot not see from below what is happening, but something is definitely going on up there. So we go back to the hut and radio for information. And we get it: The girls are alive!

As it turns out, they have found a patch of deeper snow, dug into it a cave and sat in it all the time. They were wet and cold, but at least out of the wind. And fortunately, they have taken for the trip a substantial amount of chocolate, which provided them with much needed calories. When the sun peeped out, they put outside pair of red socks for drying. These red socks were noticed by the helicopter pilot, and when he lowered his flight the girls heard the engine and came out. They were taken onboard and flown to a hospital. Only minor frostbite had to be treated. All this happened in the middle of New Zealand summer. I don't like to imagine what the weather might get like in the winter!

My last climb in New Zealand provides me with a remarkable psychological experience. My Australian friend has already departed back home, when I meet in the hut a New Zealander, Tony, who has no companion. He tells me he prefers rock climbing to the snow and ice ascents that are surrounding us. Since I feel similarly, we teamed up. Our hut was not far from a rock face, overlooking a vast expanse of space. Tony finds in his guidebook a description of a route up that rock. The expected climb is classified as difficult but not extremely so, and it promises to be exciting, due to the exposure and steepness.

In the beginning things go fine. I notice soon that Tony is a confident, good climber. A few hours later we are high above the snows of the glacier, the afternoon

sun is warming up the rock, and we continue to follow the route as described in the book. Absorbed by the climbing we do not notice an approaching cloud. Suddenly we are engulfed by it! Instead of the distant ridges behind our backs, there is only grey mist. And then the worst possible thing happens: It starts snowing. In the middle of the summer! Quite plainly, our situation becomes unenviable. We are not dressed to survive for long in the cold. Also, this is a typical rock-climb, and we have to rely on friction, using minute handholds, cracks etc. No friction – no climb. Very soon the snow-covered rock will not offer friction, moreover our fingers will get numb from the cold and lose their gripping power. We are neither equipped for pulling out: We have no abseiling (rappelling) rope, and the rock face does not provide enough belaying stances to permit abseiling on the climbing rope.

For a while, we proceeded normally, but with every minute the situation is getting worse. It is getting colder, and more snow is falling. Without doubt, our end is nearing.

And then, suddenly, something quite unexpected happens: A mysterious elated mood, genuine and firm, takes hold of me. “And so what?” I ponder, “most likely the show will be over soon, and all the unresolved problems of life will cease to exist”. Judging by his behaviour, Tony is feeling great too.

The next pitch is technically the most difficult. Evidently Tony is in better shape than I. He is younger, and I have a few weeks of exhausting expeditions behind me. So, in the interest of our possible, though unlikely, survival we decide that he will take the lead. I belay him, and soon he disappears out of sight above some outcrop of rock. Then I follow, and while I am climbing that section, the snow ceases to fall, and the sun comes out. We finish the climb without problems.

It puzzles me to this day why, being young and healthy, we were neither sad, disappointed, nor angry, when the gates of life seemed to be closing upon us. On the contrary, there was this inexplicable readiness to accept joyfully our fate.

15. In Papua New Guinea

While living in Australia I did some travelling in Papua New Guinea. This eastern part of the New Guinea Island was under Australian administration from 1906 to 1975. In the 1960-ties cannibalism was already prohibited, though people still remembered which parts of the human body taste best: Apparently the meat just above the heel.

To enter PNG, one needed permission from the Australian government. When a mathematical conference was hosted by the university at Port Moresby a unique opportunity arose to see that country, and I took it. After the conference was over, I travelled for a couple of weeks through the mountainous jungles which led to some adventures worth recalling.

The locals did not speak any European language, but for centuries they were able to communicate with visiting traders (mainly Chinese) by means of the so-called "pidgin English". Some examples: *Wantim pajt*? = Do you want to fight?, or *pikinini belong divai* = children of the trees (that is, fruit). Before my trip I memorized a few pidgin phrases, and then I started my lonely hike with some basic camping outfit in my backpack.

According to the traditional lifestyle, Papuan women took care of the farming, mainly cultivating sweet potatoes and looking after the pigs. It was the task of men to build houses and fences, but more importantly, they would form groups that ascended the mountain slopes surrounding their village and check the neighbouring ridges. When such a patrol encountered an analogous one that came up from the neighbouring valley, there would be a fight. If someone got killed, the body of the dead enemy was taken down to the village and eaten.

The Australian administration put a stop to such practices and ordered the men to build "roads" instead. Working with primitive tools, the Papuans created jungle tracks, extremely rough on cars, but suitable for hiking.

Once I came across a group of men engaged in such a construction, not far from their village. They actually had a tractor with a two-wheeled trailer. I was invited to mount the trailer, and then I was driven triumphantly into the village. Word of the unusual arrival of a solitary walking white man must have preceded me. The last part of my journey was leading between two embankments, and these were dense

with spectators. There I was, standing on the trailer, like a Roman Emperor on a chariot, waving to the crowd. As there was no white person in sight, I could keep a straight face. Then I was led into a long, large shed, probably the meeting place of the village, and I was offered a meal. Mutual communication was almost zero, yet I understood they have a place reserved for me. Finally I was taken to a separated house and left alone, at last. Obviously, that's how the natives were told to treat the rarely visiting white men or women (researchers, surveyors).

I brewed myself some tea on my camping stove and crept into the sleeping bag, calling it a day. And then, suddenly, my room filled with men. They sat in a circle around me and began to watch me keenly. I stuck my head out of the bag, and not knowing any better, I looked at them smiling. Soon a flute was produced, and one of the visitors started playing. This, fortunately, did not last very long. After a while all of them got up and allowed me to go to sleep. Next morning, when I was ready to leave, a much larger group arrived and made me understand they were very sorry to see me go. They filed up on the long balcony, and I took a photograph of the farewell delegation.

The ANU (Australian National University) had a research station half way up the greatest mountain of PNG: Mt. Wilhelm (4509m). I knew from friends in Canberra where to find an airstrip, from which I could hitch a flight in a small plane to a landing spot that was at hiking distance from this ANU station. To my surprise, the flight was gratis. I introduced myself as Dr. Świerczkowski – and this sufficed.

The trip was extremely interesting as our flight was between steep slopes of jungle to the right and left. The airstrip on which we landed was supposedly the highest in the Southern Hemisphere. Probably it never saw any ground levelling machinery. After touchdown, the plane began to jump, wobble, and shake so badly that I expected it to disintegrate at any moment. Yet this did not happen, and we stopped at the end of the runway, surrounded by a crowd of natives, mostly sitting around and watching us.

All females wore nothing above their waists – this was interesting to see and somewhat distracting. Then I hiked up along a jungle path to the ANU research station. There was just one person in residence, and it was John whom I had met once in Canberra. He offered me lodging but I refused, for I intended to climb Mount Wilhelm next day, and my expedition had to start from a proper camp, that is, from my tent (pitched just outside the station). John told me the trail to the top is easy to

find, and my only problem could be a shortage of oxygen at the higher altitudes. However, should I not come back at the expected time, he promised to go and find me. Even remaining overnight on the mountain would not have caused a problem: we were close to the equator (5° latitude) and it was always warm.

I started next morning along the clearly visible trail. By late morning, as it is usual in those mountains, an unbroken layer of clouds filled the valleys, covering everything below me. Only the highest peaks protruded above the milky white ocean. I passed a wreck of a bomber from WW II. The airmen were unaware that these mountains reached so high, and at night they flew right into them.

Then something strange began to happen, probably due to the diminishing amount of oxygen reaching my brain: My thoughts ground to a standstill. I remained fully aware of everything, and I continued scrambling up the rocks, but thoughts, those often uninvited visitors to consciousness, just stopped arriving. This did not worry me too much; the weather was nice, I proceeded steadily and I was sure I am behaving quite rationally all the time. Less pleasant was a persistent headache.

On the pointed rocky top I found a tin can with a pencil and some paper inside. I added my name to the list. While walking down, I was pleasantly surprised that my headache left me, once I found myself low enough, and also my thoughts started cruising normally.

The research station was a very lonely place; for miles around there was no human activity. It had a telephone which was useless, because the line was damaged somewhere in the jungle below. Yet the telephone would ring sometimes. John found it particularly creepy, when the telephone rang in the middle of the night, with winds howling outside the station. I guess electrical atmospheric discharges acting on the telephone cable were responsible for this.

For reasons unknown to me, the Papuans treated me with great respect, akin to veneration. Once when I walked through a village, an old woman approached me, fell to her knees and began kissing my bare legs. (I walked in short trousers.) I found this rather embarrassing, yet all I could do was to smile benevolently. On another occasion, I passed two youths working in the field. When I told them I intended to climb up to the ridge in front of us, they dropped their tools immediately and joined me for the excursion.

I neither had any difficulties in hitching lifts by the trucks creeping along the main central highway. This was a narrow and unpaved road, in places very windy and

steep. The drivers showed me wrecks of trucks lying deep in the ravines; some of their colleagues just did not make it.

Once, at a roadside tavern for drivers, I ordered fried chicken. Only one other person was eating there. And he was white! He was much my senior, tall and had a somewhat haggard look. On the other tables previous guests had left some chicken bones. When the man finished his meal, he went round the room and collected all these bones. Glancing at me he said, "For the dog!" We started to converse. He was Dutch, and he told me he had decided to spend the last years of his life among the Papuans. When he was younger, he used to work for a company that operated in this region, and he got to like the natives and the place.

He invited me to the clay hut, he shared with a Papuan family. The hut had no windows. Its left half was occupied by Theo, my new friend, and his dog. There was neither furniture nor privacy. When evening arrived, the only source of light was a fire burning in the middle of the hut, its smoke departing through the thatched roof. Next morning we walked through the village and Theo told me he found it very difficult to live among the Papuans. They watched him all the time with unabashed curiosity, and in the evenings they would stream into the hut, sit in a circle around him and stare at him in silence. Added to this was his illness. He had a persistent cough, but he did not know why. I tried to convince him to fly to Australia for medical treatment (he had a brother in Brisbane), and I offered to lend him money for the ticket. "*Da öffnen sich neue Perspektiven*" [12]) – he said, as we mostly conversed in German.

Theo's departure from the village was heartbreaking. The people wailed, and unfortunately, the dog had to stay behind. A small plane took us to Port Moresby, where a couple of days later we caught a flight to Australia. After a few months I wrote a letter to Theo, using his brother's address. The latter replied that Theo had died in the hospital. So now I had friend in the hereafter owing me $200! "Perhaps", I thought, "he will help me to never run out of money?"

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[12] Here new perspectives are opening up.

16. In Canada

At the end of the third year of my stay in Australia, when my grant at the Canberra Research Institute runs to a close, I apply for a lectureship at the Australian National University. But the Head of the Mathematics Department, Hanna Neumann, knows me as a mathematical loner, who did not get involved in any of the locally conducted specialized research; she rejects my application. So, when a job offer from Canada arrives, I accept it. I sell the Land-Rover to a crocodile hunter, and a large group of climbing friends sees me off to the airport.

En route to Canada I stop at the French Polynesian island Bora-Bora, where I reside in a *Club Méditerranée* vacation resort. My hut stands on poles that emerge out of the sea. The lazy atmosphere of a South Pacific island suits me very well. I make friends with Kurt Krause, a young German on vacation from South Vietnam, where he sells Bayer medicines to the American troops.[13]) We cycle around the island and we enrol in a sailing course offered by the hotel. Then we get the permission to sail the dinghy by ourselves on the big lagoon between the reefs.

One day we notice a German yacht at anchor, far out in the bay. We swim to the yacht and get acquainted with the two sailors, Helmut Heine and his companion. They are circumnavigating the globe on a boat of their own construction. Such life of freedom and adventure appeals to me very much. We exchange addresses.

Fall of 1971 arrives. I am visiting professor at Queen's University, Kingston, Canada. The autumn weather in this region (Ontario, The Great Lakes) depresses me: It is sweltering hot and the skies are uniformly overcast, day after day. Hanna Neumann pays a visit to Canada, to give a lecture tour. One morning she is found dead in her car. Attending her funeral deepens my gloom. Mathematics does not interest me any more. I consider changing fields. I attend a few lectures in geology, only to discover that I would never be able to memorize so many names of minerals. Then I am playing with the idea of becoming a meteorologist, but this is dropped too.

I live on the upper floor of a house, owned by David Andrew, a professor in the Department of Fine Arts. We have many discussions in the shared kitchen. I am

[13] After returning to Vietnam, Kurt contracts an incurable disease and dies three years later.

very interested in the supernatural, he less so, yet he has an unusual story to tell. This happened on his father's farm in England. The old man dozed away in the armchair, then suddenly he woke up and told David he just had a horrible dream. In this dream, he saw a man on a motorcycle approaching at great speed the road intersection nearby. At the same time a car was nearing this intersection from another direction. None of them slowed down, and the motorcyclist was killed instantly. The strange thing about this dream was that this accident actually happened at the very time when the old farmer dreamt it, and in precisely that way. He seemed to have witnessed it, while sleeping in the armchair.

When Helmut Heine writes he plans to build another yacht, I express my interest in joining him, and we stay in contact. My Canadian appointment is for two years, and during this period I try to save every cent, expecting that perhaps I will be building a yacht. I begin to accept the fact that my mathematical career is running to a close. I still publish a couple of papers, solving small problems I invent myself. Especially one of them gives me a lot of satisfaction, because I solve it using the new university Burrows computer. The program has to be written on punch cards and the computing machine is huge. It is fun to learn a programming language (FORTRAN).

I use the summer vacation of 1972 to fly to England where I buy from the London Ambulance Service one of their old vehicles. It is a Commer, still in good running condition. Commer ambulances were used by the British army already during WW I. Of course, mine is much younger. The vehicle is very spacious and allows me to stand upright inside. It has six large windows (two in the back door). The fact that inside some people might have died, or suffered great pains, does not affect me. I fix a stove and a table and I hang up curtains. A bedstead is already there.

While working on this conversion I live very comfortably in a London suburb as a guest of Mrs. Edith Siekierska. This dignified English widow was once married to an officer of the Polish Army in Exile, engineer Siekierski. The latter was the brother of a very good friend of my mother from her younger years. The "Polish Army in Exile" may be a misnomer. During WW II, many Polish mariners, pilots, and soldiers escaped from Poland and fought the Germans until the end of the war. They were not exiles then, in fact their contribution to the defeat of Germany was considerable and much appreciated. After the war, many did not want to return to Soviet-dominated Poland and began living in exile. Some married English ladies. Edith's husband was one of them. Her marriage was very happy; when I met her, she

used to say she has a life-long obligation to the country of her husband. She was demonstrating this by sending food parcels to the family and friends of Mr. Siekierski, including my mother. And I was offered free lodging at her neat suburban home, whenever I was passing through London.

My first longer drive in the Commer is to Austria. The Polish authorities allowed my mother to visit her friend Gerda Grund in Vienna, and I look forward to see Mom after 11 years of separation. I am leaving London on a Saturday afternoon, when most of the mechanical workshops are closed. During my drive to the ferry terminal I notice something wrong with the brakes. When I ask a by-passer to give me directions to a workshop, he tells me that none in the vicinity is still open at that time, but nearby there is the yard of a free-lance mechanic, called Mo. I find Mo, tell him I am in a hurry to catch the ferry, and he interrupts all other work and fixes the problem. Then he wants to make a test drive and is just about to get into the driver's seat, when he notices that his overall is not particularly clean. So he fetches a towel and puts on the seat, saying, "I don't want to leave a bad impression".

While vacationing near Salzburg, I finally decide to embark on the yachting escapade, (or rather, escape). This decision is greatly influenced by some books I read, notably *The Outsider* by Colin Wilson, and the writings of G. I. Gurdjieff. The latter claimed that intellectuals are people largely devoid of "essence", and to gain this quality, one has to complete a difficult task, never surrendering to obstacles, however large they might turn out to be. Also, I Ching, the ancient Chinese book of divination, approves of the project – my mother less so.

I look up Mo after I returning from Austria and I get to know him better. He is quite a character. His earnings are irregular, but he is known as a mechanical genius, so he seems to have no problem with finding work. He accepts only those jobs that interest him. For example, he likes renovating (totally from A to Z) early Rolls-Royces. He has one of his own too. Once a movie company hired him and this car to record a scene. They did not realize he had put a diesel engine into this splendid vehicle, and when he pressed the accelerator a bit too hard, clouds of black smoke engulfed the scene. The filming had to be repeated. Mo once has been employed by a factory making diesel engines. But in this work he always had problems with his supervisors, who demanded he should work faster. He insisted faster work would mean less precision and he quit. He still keeps one part-time job: The maintenance of diesel engines for the emergency generators in a few hospitals in London. He lives

with his wife on a spacious wooden ship moored at the bank of the river Thames. The old vessel needs many repairs. Mo is always finding planks in the hull, more or less rotten and needing replacement. I guess, at the end they would have a new ship. His wife works at a travel agency, so they can always bridge the gaps between his irregular earnings. They plan to ultimately sail away to the warm sunny climates. One of the uncanny abilities of Mo is to recognize the make of a car by the noise of its engine. Now and then a car passes by on the other side of the tall wooden fence separating his yard from the street, and then Mo exclaims, for example, "Morris Minor!"

Back in Canada, I continue to keep to a minimum my expenditures, but I still go out skiing with friends, maintain a small sailing dinghy and take courses in diesel engines and welding. I join a small group of students meeting for very enjoyable yoga and meditation sessions. I don't attend any mathematical seminars and immediately after delivering a (boring) lecture I usually cycle to the gym, to make a couple of jumps from the highest diving board to "get the cobwebs out of my head".

Towards the end of the academic year, I send to Helmut all the money I have saved with the request to buy everything double (engines, masts, sails, etc.). He told me later, my trustful attitude surprised him: For the money he had saved plus what I had sent him, he could have easily bought a new yacht and sailed away so as never to be found.

While I am still rounding off my Canadian involvements, Helmut contacts a naval architect in Bremen (Gerhard Gilgenast), who agrees to the construction of two identical ships from his design. The hulls have to be welded professionally, and after investigating the possibilities in England, Germany, and Holland, Helmut chooses the latter country as being the most suitable for this job.

I stop in London on the way from Canada to Holland, to collect my Commer ambulance-home. It waited nine months for me next to Mo's ship. Then I drive it to a small place, Schoorldam, just north of Amsterdam, where in the summer of 1973 the welding of both hulls begins.

17. Yacht Building in Holland

My yacht is to be called *Ananda* – the Sanskrit name for supreme, unassailable happiness. The name of Helmut's boat will be *Tiama*, which means "freedom" in Tahitian. For him, this is the second yacht construction and he is by profession an engineer. So I have to learn everything from him. Never before did I work with metal or wood, never before did I handle electric saws, drills and planers. I have to copy Helmut in everything.

My Commer ambulance is very useful. In no time it can be converted into a truck with a large loading capacity. Big sheets of plywood and sacks with sails fit easily inside.

Research conducted by Helmut discloses that almost everything we need is cheaper in Germany. However, there are customs controls on the Dutch-German border, and declaring our stuff would invoke undesirable expenses. I suggest to Helmut that I will attempt to smuggle our purchases across the border. He prefers not to be in the ambulance when this happens, thus we decide to drive in two cars to Hamburg. On the day before my departure, I get the flu, but as Helmut is already in Germany, I prefer not to postpone the trip. Feeling weak and feverish, and in thick rain, I cover the 450km to Hamburg. When I arrive there, I am so exhausted that I don't notice a traffic light until it is too late and I drive through red. Immediately a police officer stops me. He is somewhat surprised to find that the driver of a British registered car with a Canadian driver's licence speaks fluent German. I explain that I have just covered hundreds of kilometres and I do not feel well, and I will take a rest immediately provided he lets me go. He becomes quite friendly and tells me where to park the car so I can take my rest.

In Hamburg we buy various yachting equipment, also two bicycles, welding gear, electric hand tools and various kinds of paint. All this looks very impressive: The ambulance is loaded up to the roof. Then we draw the curtains tightly and I depart for Holland. Helmut drives behind me. On the border a Dutch customs officer examines my documents and asks, "Do you have anything to declare?" With the broadest smile I can produce I answer, "No, I am just travelling." He smiles and returns my passport. Who would expect an Australian guy in a British car smuggle

German goods into Holland? At the next rest area Helmut congratulates me on my achievement. Those days I firmly believed that building the yacht is the right thing for me to do, and hence the whole world would cooperate with me.

A few weeks after arriving to Holland, I pay a visit to W. T. van Est, the eminent Dutch mathematician, who helped me towards many publications. He is the Chairman of the Mathematics Department at the University of Amsterdam, and he offers me a research post. I tell him I was recently involved in writing a large computer program, so we decide that, in addition to participating in research seminars, I will also tutor students in computer science. But already during the first tutorial I discover that the students know more about the subject than I do. I only know how to write programs in FORTRAN, and this is of little use in answering theoretical questions in programming theory. Fortunately, there are more tutors walking around the room, and the tutorial lasts only one hour. Then I face a choice: Either I spend a few weeks on intense self-study to catch up with the students, or I resign from my new post. I do the latter. Have I not decided to leave this society, ruled by money and not by human values? What kind of leaving would that be if I keep a university job? I tell this to van Est and he is polite enough not to show any disappointment. He even tells me, although he most likely does not mean it, that working with one's hands is no worse than with one's brain – adding that his son is a carpenter. During the subsequent years I visit van Est a few times, once with a Dutch girlfriend, dressed like a gypsy. Her appearance visibly shocks van Est's secretary, but he remains his calm and friendly self.

In the early years of yacht building, I am very happy to spend my time in the world of things, seemingly more real than the world of ideas. At 41, I am in excellent physical shape and labouring all day is no problem. What I enjoy most is an ever present, all pervading new feeling of freedom. While working at universities or institutes, I always had the impression that I was being watched, judged and evaluated by those placed higher up in the academic hierarchy. The desire to impress others was ever present, and there was the fear that I might not fulfil the expectations of those who helped me to advance in my career. Now, out of the rat race, and as a social drop-out I can finally relax. I am doing something entirely of my own choice, not caring how the world would judge me.

To save expenses, Helmut and I create a fictitious yacht building company called "Ontario Boats," supposedly located at my previous address in Canada. We

write to various suppliers in Holland, using a “Canadian” letterhead produced in a local print shop. In this way we obtain large discounts on our purchases of wood, paints and various yachting equipment. Of course, “for a start” we buy everything double only.

The small shipyard in Schoorldam (Kuyper, B.V.) needs two months to weld a large hull, and two hulls cannot be welded simultaneously. So Helmut is two months ahead with his construction. This suits me well, because helping him I can learn what I have to do later when working on *Ananda*. Combining the two months lead with his know-how and workalcoholism, Helmut leaves me far behind.

I am not inclined to work long hours, so in the summer evenings I cycle to the beach at *Bergen aan Zee*, swim and do some yoga. Sometimes I take a train to Amsterdam. I discover there a most remarkable institution, called the *Kosmos*, partly financed by the city. It occupies a large building, providing a meeting place for the so-called New Age Youth. There is an extensive library, a sauna, a workshop for artistic experimenting with clay and paints, and a good macrobiotic restaurant. One can participate in yoga classes and attend lectures offered by visiting spiritual teachers. Marihuana is legally available over the counter in various forms, such as hash-cookies or joints. The standard language of communication is English. This institution has been created by the city of Amsterdam to get drug addicts off the streets. It partially fulfils this function though it is mainly a spiritual centre. In the *Kosmos* I meet interesting people, many from overseas, stopping in Amsterdam en route to masters in the Far East. I would be happy to join them, were I not so involved in boat building.

Finally the hulls are welded and launched. It soon transpires that the shipyard made a mistake: Both boats are too wide by about three centimetres. This would not have mattered were it not for the fact that the boats had been launched into a pond, from which they can exit (that is, enter the *Noord-Holland Canal*) only by passing under a small ancient bridge. And the two vertical brick walls supporting the ends of this bridge are not far enough apart. The boats are wider than planned, and the passage under the bridge is impossible. Helmut is furious. There seems to be no way but to arrange for a huge crane to come and lift the hulls out of the water, take them over the bridge and drop into the canal on the other side. The anticipated expense of this operation makes us shudder.

The shipyard feels uncomfortable about the situation, for according to the drawing, the boats should have been narrower. They lend us a floating platform, we

move it under the bridge and make measurements. The two brick walls are too close by 3cm. The sides of the boats are curved, so they are widest about three feet above the waterline. We decide to grind horizontal grooves 1.5cm deep into each of the brick walls, just at the correct height. The shipyard will not engage in this illegal activity, but they are willing to lend us heavy duty angle grinders and a long power cable. So, one morning, Helmut and I dress in identical overalls, put on protective goggles and begin grinding the hard brick under the old bridge. The job drags on all day. We are well visible from the canal and several times the water-police go past in their motor boat. But to them we look more like a work team engaged in bridge maintenance than two foreigners destroying a Dutch monument.

Next day we wiggle the boats through the passage. We get stuck occasionally, scratching some paint off the boats but finally we push them into the Canal, from where they are free to reach to the farthest corners of the world. [14])

For the next stage of construction, the boats are towed to the nearest town, Alkmaar and moored in a canal adjoining to the premises of Transportbedrijf (*bedrijf* = firm, business, company) of Mr. Schot. We rent a strip of adjacent land and a shed, where we locate the bags with sails and various other parts. The four masts (each boat had two) are hung on slings just under the roof of a large parking area, also belonging to Mr. Schot. Helmut and I begin to live in our boats, still quite primitively.

In October 1973, something very unexpected and unpleasant happens: The world oil crisis. The Arab oil exporters concur to use their control over the world price of crude oil – and quadruple it overnight. Soon all industrial products become more expensive and I realize that my money will not suffice to complete the yacht construction.

Our building efforts do not escape the attention of the local community. Hence, in the fall of 1974 we are interviewed by a newspaper reporter. The resulting whole-page article in the *Alkmaarse Courant* (September 21, 1974) contains a few inaccuracies, as misspelling of some names, but on the whole it describes correctly our situation. In particular, it is evident that there is no Canadian yacht-building company involved, but just two guys constructing their own boats. Yet our providers of wood, paints and other products are interested in maintaining business with us and we continue getting discounts as a Canadian boat building company.

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[14] About 10 years later, when I talked to Helmut on amateur (short wave) radio, *Tiama* was in Argentina and *Ananda* had reached the *Canary Islands*.

18. The Construction slows down

On one of my trips to Amsterdam I was introduced to Kathy. Still before meeting her, I was "warned" that she was a very beautiful woman. In the past, she owned a small shop where she made dresses for ladies. When she had to choose between the continuation of her business and LSD, she opted for the latter. She was not a drug addict when I met her, and she still was making colourful dresses (New Age or perhaps Gypsy style) – but for herself and her friends only.

I considered myself to be the most fortunate of men, when she parted with her boyfriend, a Cadbury sales agent, and started living with me on the yacht. Then we made excursions in the Commer ambulance (converted to a camper), visiting friends in Cornwall, Germany and Switzerland, telling everybody we were married.

When we met, Kathy had a market stand in Amsterdam in Albert Cuyp Street, jointly with her boyfriend. After our travels were finished, she returned to the market with one more selling item: second-hand clothing. Next to the place in Alkmaar, where I was working on the yacht, there was a rag transition depot where clothing disposed by people was packed and wheeled away for recycling. We gained access to this depot, and from huge heaps of discarded clothes Kathy was selecting items that could be resold, according to her judgment. These were then transported to the Albert Cuyp market in the car she borrowed from her ex-boyfriend. Kathy was a popular figure on the market. Known was the story when, frustrated by a lack of clients, she shouted, "Everything for sale here!" Thereupon a man came closer, looked her into the eyes and asked, "Really?"

My salesmanship talents are almost zero. So, one day, when I was substituting for Kathy at the market stand, I must have made the impression of a forlorn and displaced figure. Time passed and people passed by indifferently. I looked at my display. For many items I knew neither purpose nor value. I was more confident about the clothing. We were getting it practically for free, so I could set the price as I wanted. For example, there was a military cap, with no insignia but in a good condition. After a while I noticed a ribbon with the inscription "Royal Marine". Suddenly I got an idea: fix the ribbon to the hat! This being done, I displayed my

creation and in less than five minutes I sold my invention for a good price. This dubious success made me quite happy.

Kathy liked to spend time in night cafés, yet I continued to be faithful to my semi-Puritan upbringing and avoided such places. Anyway, I wanted to use all my money for building the yacht. Marihuana was different; it was provided free, since we knew some dealers who would offer it to us as a gesture of friendliness. We also knew a hashish importer who, after having served a short prison sentence, used his savings to open a legal and prosperous business importing cactus.

When "joints" were passed round, I would take a puff or two but without noticeable effect. Kathy told me, it would take about a year of sporadic marihuana use until my mind throws off the rigid programming to which it had been subjected during the previous 42 years of my life. She was right. Just about a year later, during a Christmas party, when hash cookies were consumed in quantities and pot was smoked, I noticed something strange beginning to happen. First came fear, unexplained, and without a tangible reason. This fear appeared from nowhere and began engulfing me more and more, as if a floodgate had been opened. It was not the kind of horrid panic that once approached me when I got jammed underground in a Polish cave. Yet I had to defend myself against it. I discovered the following method. One after another, in turn, I started recalling various old friends of mine, be it from Australia, Canada, England, Poland, or the USA. And this helped. Thinking about the people in whose company I once felt happy made me peaceful.

The party ended and we drove home. While Kathy was driving, I noticed that, as soon as I closed my eyes, I would start dreaming. It was like entering a movie theatre: I would observe the dream like a film. Then, opening my eyes after a large portion of the dream had passed, I realized with astonishment that during this time we travelled only a few hundred metres.

Although the hull of my boat was built by a shipyard, I had to complete many small welding jobs myself. So, having acquired some proficiency in this new skill, I decided to go to Alaska and earn some much needed cash as a well-paid welder of oil pipes. Accordingly, I flew to New York and then took a Greyhound bus across Canada. But in the Winnipeg Recruitment Centre I was told that the oil business was slack and there was no need for extra welders. Since my money was running dangerously low, I had to take the first job available. This was work in a mega-kitchen, where meals were prepared for labourers building a hydroelectric scheme in

the north of the Manitoba province. The construction area was huge, but not a single road connected it to the rest of the world. I was flown in by a small plane. The heavy machinery was brought by a one-track railroad, specially built for this purpose.

Although I met some nice people there, I found my job terribly depressing. Since I had a beard, I was not given neat kitchen work but instead I was placed in a tiny cabin where I had to clean huge greasy cooking pots, too large to fit into dishwashers. Mostly, there was still much good food left in these. The catering company made a surplus of meals because it was paid proportionally to the amount of food prepared. It was my task to dispose of all the leftovers by pushing them through a fist-wide hole in the floor of the cabin. The amount of food thus daily wasted would have fed a starving Third World village for a week.

My cabin had no windows. The winter days were very short, thus I was going to work and returning in darkness. I would see daylight only during a small lunch break. The cold outside was extreme and there was literally nothing around us, except snow and sparsely growing dwarf pine trees. The only beautiful things I witnessed occasionally were the polar lights (Aurora Borealis) and the eyes of a girl who worked in the kitchen. But her boyfriend worked there too.

Soon I felt that living in these conditions for many months would deprive me of the capacity to love anything or anybody. So, after a fortnight's work, I quit and flew back to civilization, intending to try my luck further west. The plane landed in a small locality, rather late in the day, and although I still had a Greyhound bus ticket, as these were valid for a month, I had to wait for the westward bus until next morning. There was only one hotel nearby. Sleeping there would have cost me most of my money. I decided to spend the night outdoors. But soon I realized that it was getting progressively colder, and if I sat down somewhere, I might freeze to death. Then, walking along a deserted lane, I heard the hum of an engine, running on the other side of a fence. Soon I discovered it was a Greyhound bus. I guess they wanted to avoid starting difficulties in the bitter cold morning and kept the engine idling all night. The door of the bus was open and the interior was warm! I slept absolutely wonderfully.

Next day we were on the road to Alberta. While the bus was crossing the endless snow-covered plains, I, an unemployed, unskilled and penniless labourer, drifted in my thoughts to the times when I held a well-paid job, a secure position in society, lived in warm Australia and was in love with Anne. Perhaps she was born

somewhere nearby? In the locality we just passed? My former life as a mathematician was left far behind, like a book once read, and now almost forgotten.

Still hoping I might get work in Alaska, I went to the Recruitment Centre in Edmonton, but to no avail. My money was finished and the winter fierce, so I had to find some work urgently. While searching for employment, I noticed an advertisement seeking truck drivers. I turned up for the interview and was told to change my Ontario Driver's licence to one for the province of Alberta. This change did not present any problems, though neither the clerk in charge of the job, nor I did realize that the classifications of licenses in these two provinces do not coincide. In my case, I had a license from Ontario, which was one class better than the licence commonly issued as the first one to every driver, however in Alberta this looked like a class just one step below the highest. Thus my new Alberta license qualified me to drive just almost any vehicle, including all trucks and buses. So I got the trucker's job easily, not telling anyone that I never before drove anything of that size.

So there I was, driving a big Dodge through the streets of an unknown city. From my (warm) cabin, the vehicle appeared to be wider than the lane into which I was supposed to fit. I delivered the load (ventilation ducts to a building site), and on the way back I stopped at a wayside snack bar for a cup of coffee. But I spilled half of it before reaching my table: My hands were trembling so much after the driving ordeal!

In time, I got to like my truck, and having a job in which no boss could keep an eye on me, suited me well. Parking the vehicle at the roadside, between one delivery and the next, allowed me to write letters to Kathy or read a few pages from a book. Among these was Anne Frank's Diary in original Dutch. This book proved to be a watershed; after I read it, I felt that I can speak Dutch.

Truck driving was paying $5/hour; thus I still continued searching for a job in Alaska. Finally, after two months of trucking, I was hired by a company with offices in Edmonton to work as a purser on a ship delivering goods to settlements along the shores of the Yukon River. But before my planned departure for Alaska, Kathy informed me that she was pregnant, and I decided to be with her when the baby will arrive. I borrowed money from my friend Jan Mycielski, who was professor at the University of Colorado, and I flew back to Holland.

In the early spring, Canada was slowly recovering from the winter, with patches of snow still in places, last year's grass brown, and the trees bare. By contrast,

Holland greeted me with the abundant green of meadows and trees. Kathy collected me from the airport, and then we lived together for a few months. But our relationship was weakening. When she saw that I returned from Canada penniless, and with a debt to pay (for the ticket) she concluded that I never will be able to complete the yacht construction. And as by that time I had drifted away from universities and scientific life, she classified me as a loser and a potential liability.

Summer came. I lived on the yacht, and Kathy squatted in a house destined for demolition in which a number of other hippies were residing. One day, when I was immersed in a job on the boat, a telephone message arrived: The hospital informed me that I had a daughter.

I went to Kathy and found her happy and relaxed. She told me that from her bed she saw fairies sitting on the branches of a tree next to the window. For the rest of that summer, we were together again. Kathy never registered the child as mine. As a single mother, she obtained from the Town Council a neat little apartment in Bergen. Then my cousin from Poland came over for a visit. With his help I renovated Kathy's apartment. We strengthened the loft floor to store my yachting equipment, removed a wall separating two adjoining rooms to create more space and painted the walls. My world collapsed when I found them one evening in bed. She said, "I had to try him out".

19. Amsterdam Days

Kathy had many men friends and she did not shun making new ones. Occasionally she would bring home someone she met on the train, for a chat and a cup of tea. One of her old friends was Alf, a big sturdy fellow, squatting with his small son in a derelict Amsterdam house. This house, now already demolished, was about 400 years old and it was held together probably only because of the support of its two neighbours. The street (Binnen Bantammer Straat) was famous, due to a recent deadly gunfight between mafias over the control of some businesses in the adjoining Red Lights District. Alf was a friendly drunkard. He would spend the nights in bars (cafés), talking and drinking. He was a "Jack of all trades", and the people he met on these occasions would give him sometimes repair and renovation jobs in their houses. Kathy arranged for me to be his helper.

Having had the experience of three years of yacht-building, I was fairly good with handling wood jobs, or painting. Masonry I still had to learn. In fact I was only rarely working with Alf; he just would take me to a location, explain what had to be done and disappear. I had my own tools. Later I found out that he was paid for each job more than he paid me – quite naturally.

First I lived in Alf's house. But living on my yacht was more convenient, so I moved *Ananda* from Alkmaar to Amsterdam, where I moored her next to a barge in one of the wider canals (street address: opposite Oude Waal 43). Living on *Ananda*, I paid only occasional visits to Kathy and my daughter.

I was still using my ex-ambulance Commer (unregistered and uninsured) to transport yachting equipment and construction material. On one of these occasions, I had to drive from Kathy's place in Bergen to Amsterdam (about 50 km). She was giving a hash party, and I was invited to take a puff or two. Whatever it was in the joint, its effect came soon and it was devastating. "Perhaps I should not drive now", I told the assembly, adding, "I can barely walk". But they assured me that driving is a very different activity from walking and that if I wished to drive to Amsterdam, I might just as well do it. So I got into the old big vehicle, and I drove off.

I watched the speedometer in order to maintain a reasonable speed. For it is well known that under the influence of hashish one tends to drive too slowly. The

brain works much faster than usual, and many more impressions are processed. This gives the feeling of travelling faster than one really does. However, during this drive, my brain was not concerned with visual impressions. Instead, it concentrated on the sounds. And what a lot of sounds there were! The noise of the engine, the gears, the springs, the pedals, the brakes, and goodness knows what else. These filled my audio-world with a wealth of sounds greater than ever experienced. As the kilometres passed by, I got more and more immersed in listening to this remarkable "truck symphony", identifying sounds that reappeared in variations of colour and intensity, noticing new ones and waiting for old ones to come back. Driving an old truck for one hour became a powerful and unforgettable auditory experience!

During one of my visits to Kathy, she was instructing a male friend and me in the art of meditation. I asked if it would be OK to perceive during meditation absolutely nothing, except the darkness in front of my closed eyes. Hearing this, Kathy got furious, told me that I am in no way qualified to ask such questions and ordered me to leave at once. She also asked me not to come back until I get out of my mind "the wrong idea that she belongs only to me". I left and the male friend remained with her.

I returned to the yacht, and almost immediately, I fell ill. It was early spring, and for two weeks I did not leave the cold boat, wrapped in blankets to keep me as warm as possible. When the fever departed, I got up and my first steps were to the payphone. I called Kathy, to inquire how she and my daughter were faring and to tell her that I had been ill all this time. But she cut me short and asked me not to phone her any more, because she is living now with her new friend. I wanted to say, "I still love you" – but I only said, "I still …", and then the money in the payphone was finished, and I was disconnected. I had more change in my pocket, and my first reaction was to redial. Then I had a second thought: "Why should I bother? Obviously she does not want to talk to me – do I have to tell her that I am hurt?"

My daughter, Jyoti, as Kathy chose to call her, was far too young to realize that her father had gone. Kathy's new man became her husband. He replaced me in all respects. Moreover, he was Dutch and had a steady income. So he was in position to care for the family better than I could have done. As I learnt later from friends, Jyoti was being told that he is her father, and so it appeared that my role was finished. Only after many years, when a second girl was born to Kathy, did my daughter begin to feel

she was being treated with less affection than her sister. She puzzled over this, trying to find out why she might deserve less love. Would there be something wrong with her? Was she failing in some respect? Naturally this situation undermined her sense of security and for many years, even as a mature woman, when she already knew the truth, she still found it difficult to be confident of her own value and talents. In later years, Jyoti made a career in singing (www.jyotiverhoeff.nl).

One of my last renovation jobs arranged by Kathy's friend, Alf, yielded a car. I had to restructure a fireplace in an Amsterdam house, and afterwards I had to smooth out my work with cement. But I had very little experience in masonry. I was worried the cement would harden too fast, leaving the wall uneven, with bulges. In desperation, I dropped the idea of smoothing; I spread out my ten fingers widely, pressed them into the still soft surface of the cement and drew twisting curvy designs, giving a free reign to my imagination. The owner came home and was astounded – she praised the result, was happy to see my drawings all around the fireplace and asked if I would perhaps take her car for payment. Actually the car's engine was barely working, and the cost of repairing it was quite likely exceeding the market value of the vehicle. Yet, she did not need a car, because she decided to leave Holland and join a spiritual community in Switzerland, after selling her apartment. I accepted the car and only just managed to drive it slowly across the city. Then I parked it next to the yacht.

During that time I was also giving private tutoring in mathematics to a couple of university students from the Dutch Antilles. They became my friends and sometimes we would smoke a joint. On such occasions, instead of having a lesson, we would discuss the fundamental issues of life, leaving the drab study of mathematics to another meeting. During one of these sessions, I must have mentioned I had a car with a bad engine but a good chassis. Surprisingly, these guys had a car of exactly the same make, where the engine was good, but the rest was showing traces of decay – and they were just told by the police to take it off the road.[15]) I agreed to take their car in exchange for a few more lessons. Both cars were of the type 2CV (French made Deux Chevaux) with 2-cylinder engines, the cylinders pointing horizontally, one to the left and to the other right, and the whole engine not being much larger than that of a heavy motorcycle. I needed a month (working in the parking lot next my yacht) to put the

[15] In Holland cars were not allowed to show any rust.

nice engine into the nice body. It turned out that the models were a few years apart and in some details the engines differed, but the slightly tricky adjustment problems could be overcome. Then for years, I drove a good car that was not insured (I had no money for such extras) and was registered in the name of the previous owner, who meditated in the Swiss Alps. Knowing the Dutch police had the habit of controlling mainly old and seemingly dilapidated vehicles, I painted the car the same shiny white as the yacht and kept it very clean. I also knew that police officers did not like to get wet, preferring to check cars either on sunny days, or when it rained, under bridges. So when the day was dry and sunny I minimized my driving and on rainy days I avoided driving under bridges. Many years later, when I had a regular income, I registered and insured the vehicle.

In my Amsterdam times, I always had ample marihuana. Sometimes it was a bundle of dry herbs offered to me by a grower. I experimented with it the following way. After imbibing it in the morning, say in the form of tea, I proceeded as usual with the actions of the day, working on the boat or in somebody's house. And I tried to do everything as planned, just as if I were "sober". However, this "sober" behaviour was pretended, it was played on the basis of memory only. For, under the influence of the narcotic, most of my current activities appeared to me totally unjustified and ridiculous. For instance, I would ask myself, why I am still building the yacht, thus serving a future that obviously was merely an invented idea, devoid of any reality. After all, the purpose of the yacht was to take me to foreign interesting places, meet new people and new situations. But didn't I have these already in Amsterdam? Was I not already in an interesting foreign new place, meeting new situations all the time? The location, where my boat was moored was once part of the medieval port of Amsterdam. On drawings, hundreds of years old, I could see sailing ships at the same place, where I was tinkering with mine. The proximity of the Montelbaan Tower made identifying the location easy. Since those old times, the town had grown, much land had been reclaimed from the sea, but enough of the old was left to make me feel connected with the past. The harbour master classified me as a "foreign ship under repair" and for a fee of $5 per year I was allowed to stay in the canal, year after year.

The extreme sensitivity caused by marihuana allowed me to feel the personality of the yacht. I was indeed surprised to find that a ship can have a personality, until it occurred to me that the five Dutch boys, who were bending the

steel plates and frames for the hull and then for two months welding them, must have transferred to this material some parts of their psyche. Of course, lots of my psyche became imbedded in the yacht too.

It may be worth noting that the intensive use of marihuana I have just described did not seem to have damaged my brain lastingly. For example, I did some of my best mathematical work after having returned (many years later) to academia. I always valued reality, even the drab and seemingly hopeless reality of my days in the Amsterdam canal and I did not want to escape from it. But then, was it reality or just my perception of it? I was in my late forties. I had behind me forty years of conditioning by various social environments, starting from the incredibly powerful one by my mother, a born educator, a woman of strong principles. Marihuana disclosed to me one fact: The way I saw the world and myself was not fixed. A little bit of this mischievous herb, imbibed in one form or another, would change all my perceptions! I had the hypothesis that the brain was a computer, filled to the brim with programming, and the drug can change the programs. We view the world by means of these programs, and if some of them are altered we begin to see the world differently. And in some domains the drug allowed me to see more. Hence I treated the experimenting with marihuana as a means to increase my knowledge and never as an "escape from reality" into the pleasures of lazy day-dreaming. My circumstances permitted me to do this, and in a certain sense I was "old enough" to derive benefit from such experimentation.

I recall well the rainy, overcast autumn morning when I stopped using marihuana. To reach my boat from the street I had to cross the decks of two river barges. On that day something strange happened. While crossing the last barge, I stopped and I looked along the canal, with the bare trees along its sides and the rows of old town houses stretching into the distance. And then, all of a sudden, my link, connection, or relation to this world snapped! My life ebbed away, and I was just standing on the deck, a mere empty shell, devoid of any thought, feeling, or purpose. There was no desire, there was no fear, I was just absolutely indifferent to everything. Although I was still standing, I was a dead man. "Perhaps my body is going to die now", I thought. Actually, I could not care less if it did. Only slowly did this state pass away. I took it as a warning and many years followed without me eating, drinking, or smoking pot.

My Amsterdam mooring spot for *Ananda* was very close to a bridge, leading over the canal. From my deck, I could converse with people leaning over the railing. Sometimes, passers-by wanted to know the meaning of the name "Ananda", and occasionally tourists asked for directions. The deck of the aft cabin was almost under the bridge. When I was resting in the cabin, I could hear the sound of conversations above me. Although I could not make out the words, on one occasion, the modulation of the language appeared to be Polish. My curiosity awakened, I climbed up to the deck and then I became convinced: Sure enough, the conversation above me was in Polish. I greeted the people, and I invited them to the boat.

It turned out that their guide and host, Krzysztof Apt, was a Polish mathematician, who had settled in Holland. He had studied mathematics in Wrocław. After I told him that I also studied mathematics there, graduating in 1955, Krzysztof remarked, "Your year was a very good one – several of the students became known mathematicians", and then he mentioned the names of some of my colleagues, including mine. "Well, I am Świerczkowski", I told him. Of course, he did not believe. A bearded guy of a somewhat scruffy appearance, emerging from an unfinished yacht in an Amsterdam canal, this simply could not be the Polish mathematician, known to have made a career abroad! Fortunately, I had on the boat the off-prints of all my publications written before I left mathematics. I showed these to Krzysztof and after a while he accepted the truth.

Krzysztof lived with his wife in a house at the other side of the canal; in fact, I could see through my porthole the entrance to their home. I visited them frequently and on one such occasion I asked him to solve the puzzle about the walking plant manager I got from Danny Ritchie in Scotland. Thirty years later Krzysztof wrote me that he told this puzzle to a couple of his colleagues, and some solved it immediately. One of these was a noted pioneer of computer science, winner of the Turing Award, Edsger Wybe Dijkstra. The latter liked this puzzle so much that he used it in 1990 in Austin, Texas when interviewing Vladimir Lifschitz for the position of a professor in his department. Lifschitz solved it and got the position. Dijkstra also wrote a short note about the puzzle, to be found at:

http://www.cs.utexas.edu/users/EWD/ewd10xx/EWD1067.PDF

When he mentioned it in a lecture, while visiting the Department of Computer Science at the University of Victoria in Canada, somebody told him that this puzzle can be found in one of the collections written by Martin Gardner. Surely, Professor

Gardner could not have imagined the complicated route this puzzle took to reach the audience on the Victoria Island.

Krzysztof had a doctorate in logic, and ever since I got a very good examination grade from the eminent Polish logician Jerzy Łoś, I took a great liking to this discipline. So I asked Krzysztof to recommend me a book for studying mathematical logic. Without hesitation, he exclaimed “Shoenfield!” I bought the book and began to read it. In this way, my connection with mathematics was re-established, and many years later, when I returned to university life, most of my research was based on the knowledge I gained from studying the recommended text by Joseph R. Shoenfield.

Although the way Kathy sent me off could hardly be classified as friendly, it must be acknowledged that during my stay in Holland, I experienced much friendliness from other people, often more than I could have ever foreseen. I have already mentioned the harbour master in Amsterdam who allowed my yacht to stay in the city canal for a nominal fee. Then there were my dealings with the immigration police that I will describe later, but at this place, I wish to tell about two people, whose help was essential in the building of *Ananda*.

The first was Mr. Schot, the owner of the transport company in Alkmaar to whose terrain Helmut and I had moved our construction of the yachts just after the hulls were welded. Years passed, Helmut left for the South Atlantic, I moved *Ananda* to Amsterdam and my masts were still hanging under the roof above a large parking area that belonged to Mr. Schot. Business is business; I had to pay for that storage. The price: Once per year, during the Christmas season, I had to present Mr. Schot with a bottle of cognac. I was also asked to check occasionally if the slings holding the masts were not chafing, so that there would be no danger of any falling down on a car parked below.

Finally, about five years later, I had to start working on the masts. My workplace was in Amsterdam and I decided to motor along the canals to Alkmaar, to collect them. As the length of the mainmast was just about equal to that of the boat, I had placed on deck special wooden supports to put the mast on top of these, so it could lie above the wheelhouse and all other deck structures. But I had not the faintest idea how to lower the masts from their hanging position in Alkmaar above the cars and to transport them to my boat. “Perhaps something can be worked out”, I though optimistically, ferrying my last bottle of cognac. My optimism was bolstered by a

book about “positive thinking” that I was just reading. Its author claimed that people would be able to achieve more than they do, if they believed more strongly in success. I seemed to be in a good position to test this hypothesis. There were too many unknowns to the approaching operation to allow planning. But generating a strong belief seemed to be an attractive option, so during those couple of hours of motoring along the Noord Holland Canal, I kept assuring myself that I will be soon travelling back this route with the masts on deck.

Mr. Schot welcomed me friendly and was glad to hear that my construction had reached the next stage. Then I told him that I have no clue how to transport the masts from their hanging position above the parked cars to the deck of my boat. I should add here that it required two people to lift one end of the mainmast, whereas I had with me merely one girlfriend and her two dachshunds. “No problem”, said Mr. Schot, “I have just added to my fleet a truck equipped with a hydraulic crane and I believe it will be able to reach out to the hanging masts and also to your deck!” An hour later the masts were lying on the supports I had placed on my deck. I thanked Mr. Schot for his kindness and motored back to Amsterdam. Did I test the hypothesis about “believing in success”?

My second illustration of Dutch friendliness refers to the days when I had *Ananda* tied alongside a river barge in an Amsterdam canal. There are people in Holland desiring to spend all their life on the water, and the old retired captain-owner of the barge was one of them. He resided in a cabin behind his wheelhouse and the huge central hold of his ship was totally empty. He allowed me to use this space for storing the sheets of plywood, needed for my work. When I asked him how much rent I would have to pay, he answered “You need not pay anything”, and added with a twinkle in his eye, “let this be an act of Christian Love”. I was even allowed to put a workbench in the hold of his ship and I was very happy to have a roomy and sheltered working area when the rainy days of autumn arrived.

20. Guru Maharaji (Prem Rawat)

The two years that followed my parting with Kathy were the poorest of my life; there were times when for weeks I would eat only boiled brown rice. I lived on my yacht in the Amsterdam canal. Alf took jobs on ships, and the house where he once squatted was demolished.

Looking for a source of income, I cycled from school to school, informing the headmaster that I can give private mathematics tutoring. Then I gave lessons in a few Amsterdam homes. I enjoyed the ensuing social contacts; occasionally I was treated to some tea and cake.

I could not survive on the money so earned, but I was not really interested in survival. Possibly, as a result of the influence of the Kosmos, the imbibing of marihuana, or my drab material situation, I began with increasing seriousness to analyse the meaning and aim of my existence. In this state of mind, I came across a group of about 20 people who were in the habit of meeting once a week in order to discuss precisely such issues. They acclaimed a young Indian guru, who apparently knew the purpose and destiny of human life. They called him simply Maharaji (presently he is known as Prem Rawat, born in India in 1957). I was welcome to participate in their meetings and I enjoyed the opportunity to make friends and spend a few hours each week in a warm, dry place. The yacht was cold and damp in winter.

Maharaji lived in California, but he had initiated some of my new friends into a meditation technique, called “knowledge”, that was supposed to save them from the “domination by the mind”. He taught that the mind is man’s worst enemy. “Its aims are not yours”, he would say, “it wants to govern you, exploit you and then eat you up”. The meditation techniques taught by the Guru had to be kept secret and never discussed, even between the initiates. However, meditations would not suffice; only the grace of the Guru was the lifeline that could rescue us from the closing jaws of the mind. And his grace could be ensured only by total devotion and surrender to him. It was also required by Maharaji that those, wishing to follow him, should meet once a week and discuss his teaching.

In the beginning, when I joined the group, these discussions were very open. We talked about all problems of life. Later, a more rigid form was adopted, whereby one person of the group would sit, facing others and tell them about his feelings, worries, doubts, or discoveries concerning "the teaching". As a rule, such person was allowed to speak for as long as she or he wanted to, and the speech was never interrupted. Then another person would come forward and say whatever he wished to say, and so on. Such a meeting, called *satsang*, would last for a couple of hours. When an emissary of the guru came to Holland, I too received the secret of meditating in the right way, and I began spending at least two hours daily on this (in)activity. I also began dressing more tidily and nicely, which was one of the requirements of being a *premie* – as the initiated followers of Maharaji were called.

Knowing that I was a "free-lancing" mathematics tutor, the Spinoza Lyceum in Amsterdam asked me whether I would like to stand in for a teacher who was on maternity leave. On their staff they had nobody willing to prepare a senior class for the approaching final exam. I would have been delighted to accept the offer; several months of a regular income (teachers were well paid) would be a tremendous help. I had a Polish document stating that I have a Ph.D. in mathematics, so it was clear that I was sufficiently educated. But never in my life did I get any formal training in pedagogy. And there is a generally accepted rule that those wishing to teach, must first be taught how to do this – at least as concerns giving regular school lessons. But the situation was pressing and the Ministry of Education made an exception. I was issued with an official permission, valid for life, to teach mathematics at all Dutch schools at all levels. Evidently the Ministry did not realize that I knew spoken Dutch only, whilst I was unable to write two sentences without making three spelling mistakes!

But there was yet another hurdle to overcome. I could not take a regular job as an alien, staying illegally in Holland. Being an Australian citizen, I was allowed to visit Holland for three months – and I was in my fifth year of yacht building there. I had to legalize my presence. The matter was far from straightforward, in fact only the Head of the Police Department for Aliens (Vreemdenpolitie) was authorized to deal with this. My interview with him lasted for over an hour. He wanted to know exactly my motivations for abandoning my academic career, for building the yacht just in Holland – and how the construction was progressing. I should add that in Holland sailing is the main sport, a long tradition and a national pastime. I told him that I was

sick of living in a society subservient to the interests of big corporations, that Western Civilization is going in the wrong direction and that I want to sail away from it all. He said, “My dear fellow, if I could do what you are doing, I would do the same”. He issued me a permit to stay and work in Holland for one year. Later the permit was extended year after year.

I have only pleasant memories from my teaching at the Spinoza Lyceum. The youngsters were well-motivated and keen to learn, and for me it was as if I were facing again university students. My Dutch seemed to be just good enough. At the end of the school year I received a parting gift: a set of navigation charts for the Dutch coastal waters.

During the subsequent years I taught, mostly for a couple of months at a time, in four more Amsterdam schools. The money thus earned was used for constructing the yacht. However, I did not like working at those other schools. Neither my personality nor my knowledge of Dutch could cope with the task of maintaining discipline, particularly in junior classes. On one memorable occasion my class was so restless that I was unable to teach them anything for a whole hour. When the lunch-break arrived, I placed myself in front of the door, and I told them that I would not allow the class to leave until they allow me to conduct a proper lesson for ten minutes. Then they opened the windows and jumped out.

The money earned by teaching allowed me to join a charter flight to Miami and attend a mass-meeting of guru Maharaji followers. His speeches were mesmerising. With each passing minute we would feel more elated, and somehow all personal problems were slipping away, until we reached a state of bliss.

At the end of the three days gathering we would be allowed to walk in a long row past the guru and kiss his foot, clad in a white sock. This touch was known to provide a shock, and this is also what I experienced. It felt almost the same as the electric high voltage shock I once received on a pylon in Poland. Having touched Maharaji, I went out and sat for many hours in the shadow of a palm tree, with my mind wiped totally blank. The dazed premies exiting the meeting hall made the impression of people who just have survived an aeroplane crash.

Such mysterious experiences convinced me that Maharaji was genuinely a supreme incarnation, and I tried to surrender myself totally to his leadership. It was natural to offer him also the yacht but this offer was only a promise, made to one of Maharaji’s envoys, because *Ananda* was still under construction.

Perhaps I would have been entirely swallowed by the Maharaji movement, were it not for having met a remarkable woman, a born fighter, someone with a super-powerful personality. She also claimed to have psychic abilities, like aura perception and out of body travel. Elisa (not her real name), ten years my junior, was a somewhat plump lady, not quite my type, but apparently very friendly and helpful. She knew me from the Kosmos, where she was working occasionally. One day, as she told me later, she saw me from a passing bus and noted that my aura was in a bad shape: dark red, all torn, and with black holes. A few months later, she met me, while I was shopping for new clothing and she exclaimed, ”What happened?” When I asked her to explain the question, she said that my aura had undergone a radical transformation: It was clean and light blue. I told her that the only recent big change in my life was becoming a follower of guru Maharaji, attending the meetings with others like me, and meditating a couple of hours daily.

She seemed to be very interested to hear this, and although I had a bad cold, we spent the rest of the day and a good part of the night walking along the canals and talking to each other. She was well-informed about mysticism, psychic abilities, out of body travel, and miracle healings. Suddenly she asked, “How is your cold?” It was gone! The morning had arrived and she invited me to her neatly and elegantly furnished home where she offered me a much appreciated breakfast.

Delighted, to have made such a nice friendship, I returned to the boat. Did she cure my cold? Was she really able to see auras and leave her body? Obviously, I had met an extraordinary person. We maintained our contact and she began attending the regular satsang meetings of Maharaji’s premies. Observing them, she soon identified the four ”secret” meditation techniques taught by the guru. She told me that these are well-known and have been practiced in India since ages.

Then we flew to Rome, to take part in an international meeting of the premies with Maharaji. We attended his spell-casting speeches, but these were in the evenings only, so during the day Elisa and I would walk the streets of Rome, meditate in the parks and go sightseeing. The others were participating in non-stop guru-praising seminars, conducted by various figures of Maharaji’s entourage.

The charter plane taking us back to Holland was delayed by a few hours. In the waiting room, just about all of our companions were sick. Some, quite literally, were vomiting, others were lying down listlessly. “Maharaji stole all their energy”,

Elisa said. And she added, “We have saved ours by spending most of our time away from the group; moreover, I have created a protective sheet of light around us”.

Whether I believed this or not, seeds of doubt were sown and I started drifting away from Maharaji. Because of Elisa, I had now free access to the Kosmos, I met new interesting people, and I began skipping the regular meetings of the premies. Elisa continued surprising me with her abilities. For instance, once we looked through my old photographs, and among these there was a picture of my father. When she reached for it, she screamed: An acute pain gripped her in the back of her neck. She asked me if this could possibly be related to my father, and I told her that it could. For it was well known that the Polish officers taken prisoners by the Soviets in 1939 were later mass-executed by pistol shots in the back of their necks. Some time later, she took this photograph to a clairvoyant. The latter claimed to see a marching column, at night, escorted by guards in long coats. At a certain moment my dad breaks away from the column and starts running. One of the escorts fires and my father falls wounded. Then the guard comes up to him and smashes his neck with the butt of the rifle. The story rings true because in winter, long coats were typically worn by Soviet soldiers. Moreover my father spoke perfect Russian, having attended a Russian high school in Warsaw, when the city was still under Russian occupation before WW I, and he could have thought he had a chance to blend into the population. Finally, the account is in agreement with the fact that his name does not appear in the presently published lists of exhumed victims of the Soviet massacre in the Katyń forest; he would have left the transport at an earlier stage.

My final break from Maharaji came with the help of my mind, precisely the tool I was not supposed to use. One day, when the time of the satsang meeting with the other premies was approaching, I asked myself what would happen if I stopped using my mind, as the guru suggested. Without using the mind, how would I know when to leave the boat or which tram to take? And the international meetings, I was supposed to attend, these costly affairs, with air tickets and lodging to pay for, how on earth, would I be able to make enough money to afford these trips? If the guru had demanded from me to sit down, switch off my mind and then die of starvation, then this might have been at least logically consistent. Instead, he suggested a life of contradictions, and as a former mathematician, I balked at that.

For me, at that time, the experience of “having a guru” was valuable; it destroyed my loneliness and it gave me a purpose in life. The purpose offered by

Maharaji was illusory but my devotion to him was genuine. Of course, now all trace of that devotion is gone. However, I gained an understanding of people who surrender themselves totally to a leader. My story also illustrates that deep devotion can vanish – under suitable circumstances. Under circumstances that are less favourable, say like those of a suicidal terrorist, his devotion might lead him to his last desperate act on Earth.

Comment: Guru Maharaji (Prem Rawat) became enormously rich. He still has a retinue of devoted followers, but there exists also a multitude of severely disenchanted ex-premies, who are convinced that Maharaji is not the Perfect Master he claims to be. These ex-premies maintain an Internet page (http:// www.ex-premie.org) where they discuss their woes and regrets of having spent years of their life and sometimes considerable material fortunes on supporting a usurper. The way I have reasoned myself out of the movement would not have worked if Guru Maharaji had made a distinction between the psychological mind (to be avoided) and the practical mind (needed to carry out tasks). But such level of sophistication was not on offer.

21. Good-bye to Holland

I started living with Elisa. I was again building the yacht for myself, possibly for us both. Elisa knew of a shipyard near her home, small as shipyards go, and we managed to rent there a place for the boat. I was sleeping in her comfortable house, eating decent meals, and the yard supplied electric power for my work. I needed many pieces of iron, and these I found lying everywhere on the ground. After the yard closed down for the night, I would go hunting for bars, pipes, plates, or rods; whatever was needed. When the owner was leaving, he would shout to me jokingly, "Everything has been counted!" Sometimes I operated (after hours) some of the yard's smaller machinery.

Those days I was also earning more money, for in addition to my occasional teaching at schools, I was editing translations for the scientific publishing company Sijthoff & Noordhoff. The originals were written in Czech, Polish, or Russian, and I had to verify the correctness of the translations into English. My scientific English was quite good, as 52 of my mathematical publications up to date were in English.

My last regular job in Amsterdam was driving a VW minibus taxi. Early in the morning each day, I had to collect about eight people from their homes and bring them to their work places. These people were handicapped, physically or mentally, so they could not use the public transport nor drive a car. But they were not so handicapped as to be unable to do some work. The transport company allowed me to keep the minibus all the time, to the effect that in the morning, after the last passenger was brought to his/her destination, I drove to various ship chandlers to collect parts for the boat. In the evenings, I would drive the minibus to the Kosmos, where I ate my organic meal which was part of the payment for Elisa's work there. Of course, I was not supposed to use the vehicle for private purposes, but I got away with it.

There were at least a dozen of such little buses in the company and it was an unwritten requirement that we should be driving fast. We had two reasons for speeding: People wanted to get to their work quickly, so they could sleep longer in the mornings, and in the afternoon everybody wanted to be back home as soon as possible. Of course, having much the same route each early morning, when the streets were still semi-deserted, made it easier to race. The police never gave us any trouble;

our vans had an easily recognizable light blue colour, and we seemed to be in an exceptional category.

Although Elisa and I lived together, our areas of activity hardly ever overlapped. We were together only during weekends. On workdays, I had to get up very early to drive my minibus taxi, and having done this, I would start working on the yacht. In the evenings, she was working at the Kosmos or giving yoga classes somewhere in town, while I was dead tired and went to bed early. Only during weekends did we do things jointly. It was obvious to me that Elisa had a very dominating personality, and always things had to be done her way, but as our weekend activities had nothing to do with boat-building, I did not care where we would go or what we would do.

Once a famous clairvoyant came to town and Elisa enticed me to attend a public meeting with this person. Many people turned up. Everybody put some object on the table. This object had to serve as a link to someone deceased or very ill. I placed a photograph of Tom Carruthers, my climbing companion who perished 18 years earlier on the North Face of the Eiger Mountain. I should mention that I was speaking by that time quite good Dutch, though sometimes people mistook me for a Belgian. Moreover, I never had mentioned to anyone in Holland the names my other Scottish climbing friends.

The clairvoyant picked up Tom's photograph and said: "I hear English language spoken. The person depicted here is deceased. His dying was painful and protracted, somewhere very high and exposed. He sends his greetings to his friend, present in this room. He also asks his friend whether the name Jim tells him anything". Hearing this, I was shocked and flabbergasted. For it was quite certain that I had not thought about Jim Ferguson for years; he was entirely absent from my mind. Actually, I didn't recall having ever climbed with Jim, though I remembered him well as having been one of Tom's good friends.

Elisa was teaching Hatha Yoga, which, to my understanding, is the art of twisting your body into poses that are useless, unless you happen to slip and need flexibility to regain your balance quickly, or land elegantly on the ground. But she was interested also in a different kind of yoga, one that was new to me, called Kundalini. This consisted of either keeping certain postures, or performing rhythmic movements, that take human endurance almost beyond limits. Your breathing had to be suitably coordinated with your movements, and while a posture was being held, or

repeated, the breathing had to be either quick and shallow, or slow and deep, as prescribed by the instructor.

The Kundalini yoga, taught and practiced by a group of devotees in Amsterdam, had originated in ancient times among Sikh warriors in India, and its purpose was to give them strength of body and mind. In more recent times it was practiced secretly in India by a group of Sikhs, until one of them, later called Yogi Bhajan, decided to "export" this yoga to the West. Apparently, while still living in India, Yogi Bhajan observed that there is no lack of good people in Europe and America, but they often do not have the courage and energy to combat selfish individuals who create injustice and suffering.

This teaching impressed me, and I liked the people in the group. I also saw that practicing Kundalini yoga gave me much energy. The message of Yogi Bhajan contrasted strongly with that of Maharaji, my former guru. Maharaji was building his influence on instilling fear, by making us believe that without his protection the Evil Mind will destroy us. By contrast, Yogi Bhajan wanted to give us the strength and courage, so needed to cope with the vicissitudes of life. He called his goal "3H", which stood for Healthy, Happy and Holy. The path towards this ideal was hard. The 3H people, mostly living in small communes, ate only vegetarian food, had sex at most once per month, rose very early in the mornings, and began the days with a series of many hard yoga exercises. There could not have been two more contrasting masters. And I changed quickly from one to the other.

I had once the good fortune to be in a group instructed personally by Yogi Bhajan. He was a tall and large fellow, dressed in white and wearing a turban. He radiated great goodness. On this occasion we were in France, attending a course in Kundalini yoga. At the end of the session I was bursting with energy, having "survived" exercises that transported me temporarily into incredibly potent realms of consciousness. Then some people walked up to Yogi Bhajan and asked him questions. When I stood in front of him, I was only able to say, "Thank you", whereupon he smiled and stretched out his hand with a big golden ring on one of the fingers. I thought it appropriate to kiss the ring.

The determined followers of Yogi Bhajan were accepted into the Sikh community. The men wore turbans and strapped to their bodies they always had a dagger, to symbolize their duty to intervene immediately, whenever they should see injustice being inflicted. I was invited to join the group and be trained as a Kundalini

instructor. I rejected, because I believed that a profound involvement with this yoga would prevent me from building my yacht. However, for many years, when feeling low on energy or being scared of some upcoming confrontation, I would perform a few Kundalini exercises. This helped.

Autumn of 1981 arrived and I felt that the carpentry work inside the boat could be completed in a warm climate, a few thousand miles to the south. I did not want to spend another winter in Holland. Elisa wanted to leave too. Even though she was born and raised in Amsterdam she was sick of being there. Everything frustrated and annoyed her. She was also worried that the Tax Office would discover her undeclared income from giving yoga classes. Officially, she was living on an invalid's pension, which she had been receiving in consequence of a serious car accident. The X-ray picture of her spine showed her incapable of any work. In spite of this, she was extremely fit. For instance, one of her beloved amusements was to hide and then jump at me unexpectedly, while shouting, "Defend yourself!" I did not fancy such games, since I never before fought anybody, not even as a boy, but I had no choice. So there was a real chance that if her earnings from yoga classes had been discovered, she would also lose her pension.

Another reason, why Elisa was in a hurry to sail away was the political situation. Lech Wałęsa had launched the "Solidarity" movement in Poland, and the Soviet army was posed on the Polish borders, ready for invasion. Hence there was some danger of a military conflict in Europe, and she did not want to witness it from nearby. So, one morning, in the late autumn of 1981, we sailed away from Holland.

22. Out at Sea

At the time I started building the boat, I had behind me the career of a mathematician who had taught at five universities, spent four years at research institutes and published 52 papers of original results. Did all this knowledge help me to build the yacht? The answer is: not much. In fact, I recall only two instances where someone with a poor mathematical background might have gotten stuck.

The first problem concerned the ballast of *Ananda*. The substance was not important, but it had to weigh four metric tons (1 metric ton = 1000 kilograms = 2204.62 pounds), and had to fit into an allotted space, the ballast chamber in the keel. The architect foresaw that this space should be filled with lead. Lead was available at scrap-yards, mostly as pipes used in the past for plumbing or as sheets from the roofs of demolished old Amsterdam houses. I could have simply bought four tons of such material, melted the lead into small portions and poured it into the keel area provided. However, by this procedure the steel of the hull would have come into direct contact with the molten lead and the submerged protective paint on the outside of the hull would have been damaged. Of course, that job should have been done years ago, when the boat was still in the yard and not yet painted – but at such early stage I lacked the foresight.

So my first question was: “Could some other material be used, say concrete or iron pellets?” Such material would also be much cheaper than lead. To answer this question it was necessary to know the volume of the ballast chamber. This was a long cavity inside the keel, deep and wide in the middle of the boat and becoming narrower and shallower, as one moved towards the bow. Its sides were becoming steeper, as one went lower down. Such shape was sufficiently irregular to exclude volume calculation by any standard mathematical formula. While pondering about this question I suddenly recalled from old days a procedure, the so-called Simpson’s Rule, providing a numerical way of calculating volumes (actually, integrals). Unfortunately, its application required a large number of tedious calculations. But luckily, just then I was tutoring mathematics to the manager of a small hotel nearby, and this man showed me proudly his new acquisition: a pocket calculator. The device fascinated me. If only I had such one when I was an astronomy student, battling with logarithmic

tables and mechanical adding machines! I borrowed the calculator, I applied Simpson's Rule and obtained a fairly accurate value of the volume available for the ballast. The conclusion was, regrettably, that I had to use lead.

Then I embarked on the backbreaking job of carrying to my boat four tons of scrap lead across the decks of two barges and melting it down to create "loaves". Having previously lined with lead sheets the walls of the keel chamber, to protect the boat's external paint from damage by excessive heat, I lowered these loaves into the keel. Next, I poured some molten lead between them.

The other task of some mathematical sophistication concerned the engine. My first boating excursions were on Lake Ijssel (Ijsselmeer) and along Dutch canals. During these I noticed that the bearing of the propeller shaft was getting hot, in fact, I could not touch it, after the boat had been travelling on engine power for a longer time. I began to suspect the engine had been miss-aligned. Measurements, conducted with utmost care and precision, confirmed my suspicions. The crankshaft of the engine and the propeller shaft of the yacht were not in the same straight line!

The engine had to be moved. It was standing on four supports and these were screwed to bolts that were welded to the hull. I could not move the bolts, but I could change the position of the engine by lifting it by a hoist (borrowed for this purpose), and next placing under the four supports suitable washers of various thickness. Also, the bolts were of a diameter somewhat smaller than the holes drilled in the engine supports and this provided the possibility of moving the engine slightly sideways. The task of calculating the thickness of each washer was not simple. I had to use trigonometric functions, matrices and vectors – and my new calculator. Yet the job proved to be a success and years later, when becalmed at sea, we motored for days, without overheating the propeller shaft.

Ananda left Holland with six people aboard: Besides Elisa and myself there were three Dutch boys without any sailing experience, and Leszek. The latter came from Poland. We met him a year earlier when he was visiting Amsterdam on a sailing excursion from Poland, and he agreed to be our captain. He was the only person experienced enough to sail my yacht at sea. He became my tutor.

In Newhaven (England), we collected a storm sail and a radio transmitter. These items we had ordered previously, while we were still in Holland, where such things were more expensive. Still in Holland, I had fixed an antenna on top of the

main mast, and when the new transmitter was installed, it seemed to work. Who could have known that just a few hours later our lives would depend on it?

When leaving Newhaven, we received a radio message, broadcast on Channel 16 to all shipping: A severe storm was approaching from the Atlantic. We disregarded the warning. A yacht of our size was supposed to cope with a storm. Late in the autumn, the days in Europe are very short. Dusk fell soon, while the waves and the wind kept increasing all the time, so finally we had no choice but to make a turn and run with the gale. In a few hours, already in darkness, we were back, just outside Newhaven. We got the bright idea to try out our new transmitter and ask whether it would be OK to enter the harbour. The answer was a definite NO. The tide was low and the troughs of the big waves were so close to the ground that the yacht would founder. We were to enter four hours later, at high tide.

It was impossible to wait so long at the port entrance as the storm was pushing us towards the neighbouring cliffs. We decided to sail out, away from land and across the raging storm, for two hours and then, hopefully, return exactly along the same route to the harbour entrance. It was essential to keep our course exact; otherwise, this manoeuvre would not work. We had two compasses, one next to the steering wheel and another one, more precise, mounted on a tall column on the aft deck. So, while I was at the rudder, one of us would stand on the aft deck and scream through the noise of wind and waves, “A bit to the right, a small bit to the left,” and so on for 4 hours. In the dark, we could not see the waves, which was perhaps to our advantage. Stars were visible, so I could judge the height of an oncoming wave by the amount of stars that were disappearing behind the approaching wall of darkness. It was a hellish dance! We had to cross two busy shipping lanes, one eastward, one westward. We could not change course, for reasons explained above, so we fully relied on our privilege of having the right of way, as a sailing yacht. After a couple of hours, the navigation light on top of our 10 metre mast went out, killed by the spray. Henceforth, the ships could see us only on radar. Would they give right of way to an unidentifiable small vessel?

After 4 hours of such anguish we began approaching the shore. Plenty of lights were visible along the coast, but which belonged to Newhaven, which to the harbour, and which to other places nearby, no one could tell. Had we been nearing the wrong part of the coast, it might have become impossible to return against the storm to deeper waters, and we would have been smashed on the rocks. Then, to our relief, the

green and red lights of the harbour entrance appeared ahead. I revved up the 3000cc Perkins diesel to top speed, and we slipped through the boiling waters at the gate. We moored the boat on the other side of the breakwater, crept into our berths and fell asleep instantly.

When we left Holland, our plan was to use Elisa's disability pension to finance the trip. An occasional charter of the yacht would provide extra cash. However, this was a big mistake of mine: I should have never made myself dependent on the financial support of Elisa. Right from the beginning of our trip, she proved to be extremely unreliable. For instance, we had very much food on the boat. Theoretically, it could have sufficed for a voyage of many months. The food was bought by Elisa and then she stored it all over the boat: under the floors, under the berths, in lockers etc. Considering the space was rather limited, as it is on every small vessel, the various food items were placed in layers, and one had to know rather precisely where to find the smoked ham, or where the rice was. She claimed that she remembered the locations; moreover, she asked to be in charge of the food and cooking, while the navigation and the handling of the sails would be left to the rest of us.

This worked well for the first couple of days, until the next storm hit us in the Bay of Biscay. In this part of the Atlantic, in the late autumn, many ships find their wet grave, even big freighters. But we were lucky again: Rather exceptionally, the wind was blowing from the land and not towards it, as it is mostly the case in that region. So, for many days, our boat was driven out into the Atlantic, while tossing ferociously. We were all seasick and exhausted and Elisa just lay down in the aft cabin and did not want to hear or see anything. We were hungry. In these conditions preparing a meal would have been a hard task, even if one would know where the food was, but we had to search for it. "I feel sick, don't talk to me about food," she screamed from her berth, when we asked her for information. So we had to do with whatever we could find, say, eating ham with chocolate.

The weather made all navigation impossible. We neither knew our course nor speed. The ferocious rocking of the yacht prevented me from using the sextant. Europe was somewhere to the east, so when the storm abated, we sailed in that direction. A few days later the radio-direction finder picked up signals from Portugal and it was possible to establish our position. We arrived in Lisbon happy and exhausted.

Elisa wanted to visit the town immediately. I was tired and proposed a good night's sleep, first of all. But the lady could not take a "no" for an answer! As a protest, she locked herself up in the aft cabin, laid down on her berth and was unavailable for the next 24 hours. There was a toilet in the aft cabin, but for all we knew, she was lying all the time in the berth. Finally we got worried that something had happened to her, we broke the lock and played to her a tape of gentle music to make her come out of an apparently deep trance.

No one wanted to sail further with Elisa on board. The Dutch boys took a train back to Holland. Leszek, until then our captain, found good work on a drug smuggler's yacht. He decided not to return to Poland since just then (on December 13, 1981) martial law had been declared there. So Elisa went back to Amsterdam, to find a new crew and to fetch her daughter. But no Amsterdam friends wanted to sail with us.

Fortunately, on the train back to Lisbon the two ladies met two Norwegian boys who were interested in sailing. Then the five of us were waiting in the Lisbon harbour until the weather improves. But the autumn storms were raging, one after another. A few trees recently uprooted in the nearby park proved that these storms had to be taken seriously. Madeira was a week's sailing away. Could we manage to slip through between two storms? I was now the captain and I had to decide when to depart. The atmosphere on the boat was getting sour; the people came to sail and not to sit in a cabin, while listening to the rain drumming on the deck. We had to leave as soon as possible.

One morning, the wind abated and the rain stopped. My routine visit to the meteorological office yielded the following information: wind negligible, chaotic waves 4 metres high, and a couple of days of reasonable weather, before the next storm hits. We left at once.

For the first time in my life I was the captain. Elisa could work the sails, provided she was not seasick, but nobody knew anything about navigation. So, while we motored out past the Belem Tower, I had to climb up and down between the navigation table and the deck to mark our progress on the chart. There were some identifiable objects to both sides of the Tagus estuary, and taking bearings on these, I could determine our position accurately. We were approaching the open sea and the boat, just on the motor, as there was no wind, was rolling more and more. So there

was an additional reason for me to commute between deck and navigation table: to vomit over the railing.

Suddenly, to my horror, I realized we were engulfed by fog. I knew that deviating from the navigation channel would be disastrous. There were sandbanks to both sides of the channel and the big waves could easily cause the yacht to founder on these. A glance at the two position fixes I had, showed me that a local current gave us a considerable drift to the north. So I made a course correction and hoped for the best.

The crew had nothing to occupy themselves with, and sitting on the deck all the time, they were not seasick at all. They did not even know how dangerous our situation had become. Suddenly they shouted, “Ship ahead”. And indeed out of the mist there loomed the big hull of an approaching freighter. She went past us and for me this was one of the happiest moments of my life. We were in the shipping channel! (Even though on the wrong side). The course correction I had made was right, and we were out of trouble.

23. Plans go overboard

After a few days sailing we reached Madeira, and while we were mooring in the Funchal harbour, a strong wind was picking up. The next storm was approaching. In Funchal, I had to throw out the Norwegians, who were scheming to rape the two women once we are again out of sight of land. Instead, we offered a passage to a very gentle English boy. He was handicapped, after a serious motorbike accident. The money he received from the insurance company allowed him to travel the world.

Our journey to the Canaries was uneventful. We left by then the stormy northern latitudes, the days were sunny and warm, the winds steady. On Gran Canaria, the English boy departed and we crossed over to Tenerife, where I began working on the boat, anchored in the bay of Los Cristianos. I had onboard a diesel-powered 220V generator, so all my standard electric tools could be used. Most of the needed material was onboard (sheets of plywood, screws, glues, etc), while a few other items could be bought locally.

Our plan was to continue later to the Cabo Verde Islands and then cross the Atlantic, using the seasonal trade winds. If Elisa had not been so afraid of falling overboard and being consumed by sharks, we could have done it, even just the two of us. But in the existing situation we needed crew. Elisa had her disability pension from Holland, but she insisted that whoever should sail with us, must pay for his keep. No such person could be found. Thus, instead sailing further south, we visited the other islands of the Canaries archipelago, and these were indeed enchanting. More often than not, someone from Elisa's family, or from the large group of her Dutch acquaintances, would come over for a couple of weeks, and we sailed with them.

Once, just the two of us, Elisa and myself, were crossing from Gran Canaria to Tenerife. The next day the carnival in Santa Cruz was to begin, and we wanted to see it. There is always a strong wind blowing in the 65 km wide channel between those two mountainous islands. So, having set he sails, we proceeded fast, and Elisa went down to the cabin to take a nap. Only a few hours sailing remained to Los Cristianos. When Elisa came up to the wheelhouse, it transpired she was expecting us to be heading for Santa Cruz. I told her that no, we had been heading all the time for Los Cristianos. I explained that the journey to Santa Cruz would last much longer. We

would not be able to get there by daylight, and I did not wish to enter by night a harbour, I did not know well.

Yet no persuasion helped. She reacted furiously to my refusal to change the ship's course. After all, was not *she* the one to decide, to rule and govern? As a form of protest, she started to throw overboard various items. So, into the waves went the searchlight (essential for entering harbours at night), and the foghorn, and then she disappeared in the cabin to fetch the next item. When I saw her coming up with the sextant, I got horrified. I was not in a position to replace this expensive instrument. And without the sextant there would never be a crossing of an ocean, only coastal sailing, always in sight of land. Now I felt authorized to use force. We started fighting. This was a very regular fight. It might have been worth filming; the yacht under full sail, big waves, quite strong wind, the autopilot keeping the course – and the only two people on the boat fighting each other. She was 10 years my junior and she had a body made flexible and strong by yoga and her love of fighting. But I was more determined to win; my whole sailing future seemed to be at stake. And win I did. Apparently, for the first time in her adult life, Elisa had been subdued by someone else. Unable to accept such situation, she climbed over the aft-rail, ready to jump into the sea. And this would have been the end of her. For it would have taken me a few minutes to reverse the big boat, and quite likely I would not have been able to find her head bobbing between the high waves. I approached her and told her not to jump, because I might not be able to pick her up. Slowly she climbed back onto the deck. And I decided never again to sail with her alone.

Next day, we took the morning bus from Los Cristianos to Santa Cruz. Watching the carnival was a very enjoyable (and recommendable) experience, in spite of the fact that somebody stole my wristwatch (probably by slicing through the leather strap).

Since I was not quite as submissive and cooperating as Elisa would have liked me to be, she was quite capable of attacks of fury and hatred of incredible intensity. On another occasion, after an argument about adopting a homeless cat, Elisa used the cat as projectile, and then entered the aft cabin, where I was trying to meditate. I sat motionless when she came in, holding a long sharp knife and radiating pure hatred. My chest was bare and she placed the point of the knife over my heart. All advantages were on her side: She knew how to cut meat (having worked in her father's butchery), and her knowledge of human anatomy was excellent. I closed my eyes, sitting in the

lotus pose, getting ready for the end. But the jab never came. Perhaps she had realized that there was no way to get rid of my body (we were in a harbour moored alongside other yachts), and it might be hard to convince the Spanish police that she acted in self-defence.

Another time, we went to eat out in Los Cristianos and on the way back we had an argument. This made Elisa very angry, so when we came to the beach, where our dinghy was waiting for us, she ran ahead, jumped into the dinghy and rowing away she shouted, ”You don’t sleep on the boat!”

The night was getting cold, I was lightly dressed and had no money with me. Fortunately, soon an English yachtsman, Jack, arrived, returning from an evening out in town. When I told him about my predicament, he offered me a berth in a spare cabin of his catamaran. In the morning, he rowed me to *Ananda*.

When I entered my yacht, Elisa emerged from the fore cabin, where she probably had slept, and in answer to my “Good morning”, she gave me big blow with her fist, right into my lips. This was of course a rather unexpected welcome. Being punched in my face was a new experience. Soon blood started running down my chin and I began to feel its salty taste in my mouth. In response, I jumped overboard and swam back to the catamaran, where Jack fixed my cut lip with Band-Aid. When I asked Elisa later why she treated me like this, she said, “Because I was sure you had slept that night with some woman.”

How could I stay with someone so determined to dominate me and capable of uncontrolled outbursts of hatred and fury when domination failed? By the third year of living together on the yacht, we parted. Elisa found steady work in a small private hospital nearby. She moved to live on land, although she left many of her things behind, notably plenty of books and some clothing. Also hers were a storm sail and the radio transmitter (bought in Newhaven). From then on, she only rarely visited me, but she insisted that I should not sail without her. In the hospital, she was employed as a masseuse, but in reality, while massaging a patient, she made a diagnose by observing his or her aura and noting the spots where the aura was weaker. Then she would pass this information to the doctors to aid them in locating the source of the malady. At least, this was what she told me, but probably there was some truth in it. Yet some other of her stories were plain lies. She was getting very annoyed when, while present, I would just sit quietly, not confirming what she was saying.

Elisa's work in the hospital was illegal – she had no certified qualifications as a masseuse nor a permit to work in Spain. So it was very convenient for her to have the yacht as means of a quick escape, in case she would get into trouble with Authorities. Such arrangement deviated considerably from our original plan, according to which I was supposed to be the one who provided the yacht (and did the maintenance work), whilst her Dutch pension plus an occasional charter were to finance our trip. This plan was never realized. Moreover she promised me solemnly that if I should dare to sail away without her consent, she would find me and sink the boat. (This is not difficult to do if you know which seacock to open and which drainage hose to cut). To complete the punishment, she vowed to kill me. Knowing her character, I took the warning seriously. For it is not difficult to locate a yacht in a harbour, provided you know in which part of the world she might be. Yachtsmen quite often have two-way radios and they tend to gossip about other ships. Moreover, Elisa needed a purpose in life and a noble one at that. What could be nobler than to punish someone, who (from her point of view) had cheated and hurt her? All her life she perceived herself as having been hurt and damaged by men. Sailing away secretly, I would have provided her with a good opportunity to vent her long pent up hatred towards all those people, who supposedly damaged her, and her revenge might have been fierce.

Time passed. Did I put so many years of effort, and all my money, into a project that ultimately allowed me merely to sail between various harbours of the Canary Islands or possibly to Madeira? I accepted that Elisa had some rights to the yacht, since most likely she had rescued me from the fold of the Maharaji group, and she had fed and housed me during my last years in Amsterdam. Nevertheless, I started thinking about an escape. For some time I was moored next to a motor cruiser, and I was friendly with her owner, an Englishman called Massey. He agreed to take all of Elisa's things to his ship, when I got ready to sail away. But I never sailed away, and there were several reasons for this. The first was financial. After a couple of years in the Canaries, I had enough contacts there to get occasional jobs and thus earn enough money to survive. It would have been much harder to find work in a Third-World country, where unemployment was high and I would not know anyone. Secondly, it would have been very risky to sail *Ananda* singlehandedly (except in calm weather); the ship was just too big. Finally, I did not want to be run over by some large vessel, while I would be taking a nap during a solo cruise.

The natural thing would have been to find a companion (or more) to sail with me and finance the trip. But during my years in Amsterdam I had lost contact with my old friends in Australia, Canada and the USA, and my new friends in Holland either had no money or they were friends of Elisa. I even wrote to my ex-wife Jeanette, asking whether she would allow our son, Mark, to help me sail away with *Ananda*, but she refused to cooperate in my "adventurism" (as she put it).

Elisa would occasionally come to the boat to "control" things. I told her the food we had brought from Holland was starting to rot and hence it had to be thrown away. The truth was different: I simply ate it. Then there was a banana plantation nearby, where each Friday afternoon everyone was allowed to enter, pick up all the banana bundles lying on the ground (these were slightly damaged or had fallen off of the truck), and take away as much as he/she was able to carry. So there were long periods when I lived on fried bananas only. (There was still enough cooking oil on the boat). Once a Polish yacht stayed for a few days in the harbour and they gave me bread sealed in cans for the army. I fried this together with bananas.

24. In the Harbours of Tenerife

I needed money to maintain *Ananda*. Once per year she had to be taken out of the water, scraped below the waterline (to remove the seaweed) and repainted. I had to buy diesel fuel for the engine, the 220V generator, and the cooking range. Occasionally I needed a piece of clothing. The food still found under the floors or free bananas would not solve such problems. I began to search for sources of income.

Sometimes I worked in the shipyard nearby, repairing yachts, painting ships. On one such occasion, together with Matthias Kerkel, a German yachtsman, we were stripping for several days an old layer of anti-fouling (paint preventing the growth of seaweed). This paint was very poisonous, so we worked in masks. Following the advice of Elisa, I smeared my body each morning before the work with a layer of grease. The fine green dust of the dry paint settled on my greased body and towards the evening I must have looked like a fairytale monster. It was not easy to wash off the grease in cold water. So some of the paint dust penetrated into my body and after the job was finished, I suffered a period of indigestion. There was also a long-term effect: for years, I lost nearly all appetite for food and even to this day, I do not understand, why some people, who never have experienced hunger, still find it interesting to discuss their choice of dishes and the preparation of meals. Matthias, who did not smear his body, fared much worse. After the job was done, he returned to his boat, anchored in the bay, and I did not see him for a several days. He told me later that, while I had merely indigestion troubles, he was lying in his berth, shaking with high fever, and even too weak to creep out of his bunk and radio for help.

Among my more interesting and challenging jobs were repairs on *Gypsy Moth III*, the historical yacht of Sir Francis Chichester – the boat on which this famous sailor won the first solo transatlantic race in 1960. Roger Campagnac was the third owner of this yacht. I happened to be on a visit to Funchal (Madeira), when Roger arrived from England and I invited him to tie *Gypsy Moth* to *Ananda*. Roger had to fly back to London and we decided that before that happens we shall sail both yachts to the Canary Islands, where Roger will leave his boat under my care (for 1 £ per day). When departing, he asked me if I wish to have something from London, and I asked

for the book *I Am That* (Chetana Publishers, Bombay 1973) containing interviews with an Indian sage Nisargadatta. I recalled, still from the old Amsterdam days, that the librarian of the *Kosmos*, Martin de Jong, a philosophy Ph.D., had a very high opinion of Nisargadatta's teaching. Roger agreed and later Nisargadatta became my spiritual teacher. After Roger's first trip to England there followed a few more, and during his absences I did many renovation jobs on *Gypsy Moth*.

Sometimes I would spend a few months in the harbour of Santa Cruz. I liked to stroll in the town, and it also provided me with a source of income: I would buy programmable pocket calculators and squeeze into them a small program that was useful for sextant navigation. By "squeeze" I mean that the calculator would accept programs with at most 38 commands and it required a bit of inventiveness to create a program that would do the job in no more than 38 steps. Then I was selling these calculators to yachtsmen and navigators of small ships. (GPS navigation was not common yet).

In Santa Cruz, *Ananda* was moored at the pier, allowing me to step in and out of the boat, receive guests, etc. One of my frequent guests was Alonzo, who belonged to one of the oldest (and richest) Spanish families on Tenerife. Alonzo had just returned from Spanish Sahara, where he had done his compulsory military service. This service was dreadfully boring, unpleasant and depressing. Moreover, it was dangerous, as the weapons would occasionally malfunction and explode instead of firing properly. The soldiers made their lives bearable by consuming large quantities of marihuana. Back in Tenerife, Alonzo started cultivating marihuana plants between the banana trees of the plantations of his father. Of course, the workers knew what was going on there, but his father did not. Apparently the volcanic soil, the climate and the seeds combined extremely well, so we had a few really good sessions, smoking joints or eating hash cookies.

One of these experiences was quite remarkable, so remarkable indeed as to make me conclude that it should be my last. On that day, Alonzo drove up to the pier and unloaded his usual assortment of gifts: bananas and oranges from the plantation and a few big bottles of drinking water (which was better than the one available to ships in the Santa Cruz harbour). From the neighbouring yacht we invited Matthias and his girlfriend Heidi for a cup of tea and some hash cookies. Then, while our guests were still down in the cabin, Alonzo and I went to the wheelhouse, where I began to instruct him in navigation.

At a certain moment, I noticed that the colours of the ships around us were getting brighter and more intense. I looked at Alonzo and he nodded: The cookies started working on him too. He had no wish to concentrate further on navigation. And for me continued instructing became impossible, because I found myself inside a brilliantly white cloud. I knew that I was not alone in this white realm, for whenever I asked a question, an answer would come immediately. I cannot tell what kind of voice spoke to me, whether it was male, or female, young, or old – but I could hear it very clearly. I still held in my hands the notebook used for drawing navigation diagrams. With some effort, I was able to see this notebook and the pencil, although the background was a uniform shiny white. I started writing the questions and the answers.

When Matthias and Heidi emerged from the cabin and saw me like this, they exclaimed, “Carlos Castaneda!” Then Matthias declared emphatically and with great sorrow that he did not realize hitherto, what an utterly selfish individual he had been – “such a bad man,” as he put it. Next, our friends departed to spend the rest of the day inside their yacht.

My immersion in the white light felt extremely pleasant. In fact I wanted to remain in that state indefinitely, and I asked whether I would be allowed to do this. The answer was, “Yes – if you decide to do so.” However, when I pondered what in such case would happen to my body and mind, the conclusion was that either the body would die or it might go on existing, but as an automaton only, without my conscious participation. The resulting situation certainly would present a sad picture to other people; in particular my mother would suffer greatly. So, I decided “to come back” to this world.

But the cookies had not done their job yet. Alonzo and I walked to nearby San Andrés, took a snack in a terrace restaurant, walked back to the yacht, and then we drove into the mountains. These mountains, mysteriously, became very much higher, the landscapes wider and the valleys deeper. We stopped at a lookout atop a high coastal cliff, and I smelled with utter delight the refreshing natural perfume of the many herbs growing on the rocks below us. (Normally, I am not very sensitive to smells). Then I thought, “It is incredibly beautiful here, but ahead of us there is a ridge and if we hurry, we might be able to watch the sunset from there.” I looked at Alonzo, but before I could open my mouth to share with him this thought, he nodded

and turned towards the car. In this state of increased sensitivity, we were communicating telepathically!

We made it in time to the ridge and later we drove down into the valley, crossed the town of La Laguna and then had supper in a restaurant on the mountain slope on the other side of the valley. Finally we drove back to Santa Cruz, crossed the city and came to the yacht, where I brewed some tea. And suddenly I was back in plain and normal consciousness. I was amazed; could all this have happened in the span of four hours? Perhaps we were sitting all the time in the cabin, and I was dreaming up the whole trip? I shared my doubts with Alonzo. “No,” he said, “we were out there; you can check the car engine.” I climbed out of the boat and checked the engine; it was hot.

Two further aspects of this excursion are worth noting. Firstly, none of us remembered a single detail of driving through the town of La Laguna. Apparently, our minds did not record a rather uninteresting episode (dense, slow moving car traffic). Secondly, I observed during the trip that Alonzo was driving fast and cutting bends on the mountain roads, but I believed he knew this route well, and I was feeling safe. Only much later did he tell me that at that time his awareness was not in the car, as he saw the car from high up. He travelled above it, and of course, this allowed him to see round the bends.

After that experience I decided to stop using marihuana. It seemed to me that if a similar situation should occur again, I might decide to stay in the “white realm”, where I felt so good. And then, this my incarnation might possibly continue as a zombie, a show I would rather spare the world.

I owed my last regular income in Los Cristianos to my knowledge of German. Josef Hermann had a car rental business, and he also possessed a yacht in which he liked to “get away” during the weekends. Possibly, he found it pleasant to have on these trips a companion with whom he could converse in his native German, so quite often we sailed together. The waters around Tenerife can be very choppy and frequently there is a hard wind blowing. Josef’s yacht was not strongly built, and after each excursion a few items needed repairing. Of course, this was my job. We agreed on an hourly wage, and during each sailing trip, we made a list of things for me to do.

One day, while I am working on his boat, Josef comes along with an Englishman, called John, and asks me whether I would like to look at John’s diesel engine that refuses to start. As it turns out, John has a “floating gin-palace” – one of

these huge motor launches designed to provide the rich owner with a maximum of luxuries. (I learned later that John had a business in London, employing over a thousand people). I am shown into the engine room and left there. I walk around the two colossal 8-cylinder Ford engines and, of course, I have no idea what to do. To satisfy my curiosity, I identify the injectors, the high pressure pumps and the high pressure fuel pipes. Then I notice that one of these pipes is glistening more than others, and it turns out that it is wet with fuel. I tighten the bolts at the two ends (pump and injector) and nothing more comes to my mind. Hermann and John are still in the wheelhouse, so I ask them to try starting the engines. They start![16]

My miraculous repair of John's engine had profound consequences. John would come up from London roughly once every two weeks and he wanted his boat ready to sail, all clean, supplied with fuel, etc. A day or two ahead, he would call Hermann, order a car to await him at the airport and tell him to inform me about his planned arrival. Upon coming to the boat with his friends or family, John would introduce me to them as his "chief engineer", and we would go out for a weekend of cruising, swimming in sheltered bays and eating excellent food, supplied by caterers in Los Cristianos. During the long periods of John's absence, I chose to live on his motor yacht, whose interior was more like that of a house, providing me with a wide bed, bathtub, refrigerator, and other amenities. And I had always small jobs to do on his ship, because he was getting ever new ideas of improvements.

Having introduced John, I should devote a few words to the other two millionaires, whom I had the pleasure to meet during my yachting days, David and Steve. Steve owned oilrigs in the North Sea. One day he arrived to the harbour of Santa Cruz, alone, sailing a big, modern and totally new yacht. He was able to sail her single-handedly because electric and electronic devices were replacing the crew. He had collected the ship a couple of weeks earlier from a Dutch shipyard and set out for the Bahamas, where his wife was supposed to meet him, so they could celebrate Christmas together. About half-way from Holland to the Canaries, the engine refused to start. Hence, there was no way to re-charge the batteries that were providing electricity for all his navigational needs. Also, without engine power, a risk arose of

[16] To this day I do not understand why the misfiring of one cylinder has prevented the remaining fifteen from working.

causing damage while entering a harbour just under sail. When I asked him how he managed to repair the engine, he answered, “I have lots of diesels on my oil rigs.” After removing the fault (blocked fuel filter), he reached Santa Cruz and moored alongside my yacht.

It transpired that during his crossing from Holland a few more things had malfunctioned, and it was not advisable to cross the Atlantic before repairing them. As there was quite a large community of yachtsmen in the harbour, Steve let it be known that he needed repairs to his vessel and he will pay well for these to be conducted fast. Then various Dutch, French, and German guys started commuting across my deck to Steve’s boat and worked on her for two days, practically non-stop. All repairs being done, Steve decided to leave early next morning, and he invited us all for a good-bye dinner to a restaurant nearby. Each could order the meals he (and his girl) would fancy. The dessert however, was a surprise. John said, “To save time, I have ordered all the desserts for everybody – you will eat what you like and leave the rest.” Then I ate the biggest dessert of my life. In retrospect, let me add that the Dutch shipbuilder was not to blame for Steve’s problems; his boat should have tested at sea before it was delivered, but these trials were skipped, because he was in a hurry to meet his wife on the other side of the Atlantic.

I do not know how Steve acquired his oilrigs, but David is an example of someone, who by the labour of his hands became rich enough to buy a yacht and cruise the world without the need to ever earn money again. David’s past had much in common with mine. By training he was a mathematician, but unlike me, he did not choose to face the challenges of university life. Instead, he entered the career of teaching at high school. He used the money thus earned, and his spare time (evenings, weekends and vacations), to renovate one London apartment after another. He started by buying a somewhat dilapidated accommodation, spruced it up, sold it for a higher price and then he bought a more expensive one, and this he repeated over and over again. Of necessity then, he had to live for years in somewhat messy surroundings, but this was certainly not as uncomfortable as my life on a yacht under construction. Thus, in some respects, his work resembled mine on the boat. However, with some big differences. His activities were pleasantly indoors, his workspace was not confined, he could use many prefabricated elements, and instead of dealing with curves and the irregular shapes, which tremendously slowed down my carpentry, he could operate in the easy world of straight lines and right angles. In this way, having

worked less than I did, he made enough money to last him until the end of his days. David spent a few weeks in Los Cristianos and we made some hiking excursions in the mountains nearby. Surprisingly, he knew me by name, because once he was teaching set theory from my textbook *Sets and Numbers*. He also liked rock climbing and we sometimes scrambled up some rocks (quite risky without a rope). Then David met an attractive girl, and they sailed away.

Many Dutch yachtsmen visited the Canaries, and as I knew their language, I got to know some of them quite well. One of them strikingly resembled the movie star Paul Newman.[17] When he entered a bar, all eyes would turn upon him and whispers could be heard. Then he would introduce himself, "Good evening, I am not Paul Newman". In Holland, Paul (not Newman) was a salesman; he would visit homes and convince housewives to buy whole new kitchens of latest design. He told us that he was sorry for these women who, unable to withstand the combination of his personal charm and his salesmanship skills, had ordered kitchens they did not need. His commercial successes allowed him to buy a yacht and spend long vacations on the Canary Islands. He had no female companion on the yacht; that is, not the same one each night. Once he was rowing an inebriated girl to his yacht and she was in such a hurry that, to the great amusement of onlookers, she began dispensing her clothing overboard, while they were still in the rowboat.

At some stage Paul felt that it would be nice to have a new yacht, so he went back to Holland, sold many kitchens, and returned a year later in a brand-new vessel. Then some of his Dutch friends wanted to combine their hiking holiday with a sailing excursion. They made an appointment with Paul to meet him on the beach at the end of the valley trail leading from the village of La Masca to the sea.

At the expected time of their arrival, Paul anchored the yacht, put the kettle on the stove to boil water for tea, jumped into the dinghy and rowed to the beach. He met his friends, but no sailing awaited them. When they looked towards the yacht, they saw to their horror that she was engulfed in flames! Most likely, the butane stove malfunctioned, and there was no one on the boat to extinguish the fire. The fibreglass boat burned down to the waterline and sank. Later the anchor and chain were recovered. And Paul went back to Holland to sell more kitchens.

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[17] Paul Leonard Newman, American actor, film director and entrepreneur (1925-2008)

Let me conclude this chapter with two little stories I owe to our dinghy, the rowboat used extensively for the transport of people and things, when the yacht was lying at anchor. The dinghy was ideally chosen for this purpose, no doubt by Helmut, because in the early stages, when equipment was being purchased, I knew practically nothing about these matters. The little boat was wide enough to sit two rowers side by side, and the aft bench could seat two passengers. Closer to the bows there was room for cargo. Yet it was short enough to fit across the aft deck of *Ananda,* where it would be roped down during the sailing. It had an outer and an inner hull, and the space between these was filled with Styrofoam, thus it was unsinkable. On one occasion I had to capsize it, or at least so it seemed to me then – though now I feel my action was foolhardy. We were in the Los Cristianos bay and *Ananda* was one in a long row of yachts, lying alongside each other. She was tied to two other yachts, one on each side. Normally this was regarded as a secure position, but one late afternoon a powerful wind picked up and started pushing all the boats towards the shore. So we decided with my German neighbour, Hans, that *Ananda*, being a larger boat and offering more wind resistance, should get an extra holding power from her big anchor. Accordingly, we lowered the anchor into the mentioned dinghy, and while Hans was paying out the chain, I started to row against the wind, hoping to get reasonably far ahead of the yacht and then drop the anchor. Yet to my frustration, I could not row far enough because the hanging portion of the heavy chain, between me and the yacht, was pulling me back, and there was the added force of the wind and the waves acting in the same direction. Soon I could not gain any more distance from *Ananda* and further rowing became pointless. But as soon as I would put down the oars in order to reach for the anchor, the dinghy started to move quickly backwards and it was clear that by the time I would have the anchor dropped, much of the gained distance from the bows of *Ananda* would be lost. So I chose the only manoeuvre that would instantly get the anchor into the water: capsize the dinghy. I attained this without problems; the anchor went down instantly, but considering the erratic movement of the dinghy, the wind, and the waves, I could have easily become entangled in the anchor chain and gone down as well. (To make matters worse, I was wearing a loose fitting rain jacket). At the depth of over 10 metres it was quite dark under those weather conditions, and it is doubtful whether I would have been able to free myself in time before starting to inhale water. But I was lucky, the anchor was dropped at a

reasonable distance from *Ananda*, the wind pushed the upturned dinghy to the yacht, and after a short swim, I could relax for the night.

The dinghy was one of the most frequently used pieces of equipment, and if lost, it would have to be replaced without delay. Once it nearly came to that. We were anchoring in one of the bays of the island of La Gomera. A strong wind was blowing from land to sea. The anchor was holding well, so when the evening came we removed from deck everything that could be blown off and went to sleep. The dinghy was dancing on the water, tied to the yacht by a rope. The wind blew hard all night, then the morning came, bright sunny and still very windy. Quickly we made a horrible discovery: the dinghy was gone! Obviously, the repeated jerking of the rope tying it to the yacht had caused the knot to open. The dinghy was white, and the sun was behind us, so it should have been visible for many miles, but apparently, it had already disappeared behind the horizon. The loss was great. I did not have the money to buy a new dinghy, nor was it possible to get a rowboat of this kind in the Canaries. In desperation, I decided to embark on a search, although the chances of success seemed to be minute. Fortunately the wind was still blowing. I measured its direction, started the engine, hoisted the anchor and set the course to agree with the direction of the wind. We motored for a couple of hours, checking through binoculars the sea around us but it remained empty. And then, far away, close to the horizon, I noticed a white spot. A slight change of course and one more hour of motoring brought us there. It was indeed our fugitive dinghy, on its way to the South Atlantic! If the sun had not been behind us, or the dinghy white, it would have become the first part of my yacht to cross a big ocean.

25. Sailing Adventures

When one looks down over the ocean from a high flying plane, the ships appear as little specks. So it seems that there is only a very small chance of an accidental close encounter of any two. Every solo sailor seems to rely on this fact when he or she goes down to the cabin to take a nap, while the boat is steered by a wind vane or some other autopilot. Yet, strangely enough, experience shows that the probability of an accidental meeting of two ships at sea is quite large; they seem to attract each other, just as if they would enjoy making contact. Let me describe two such incidents.

The German yachtsman Matthias and I had spent a long time in the harbours of the Canary Islands and the Spanish customs officials could have become troublesome, for according to their rules, such a long stay in Spain would require importing our boats. So we decided to sail to Madeira, let our passports stamped there and then return. For this trip, we chose my yacht, the bigger one, and Matthias assumed that, in case of need, he could pretend he was there with his boat too. We sailed, changing our duties every four hours, whereby one of us would always be in the wheelhouse or on deck, while the other was free to sleep, prepare a meal, or just rest.

Ananda had a compass-linked autopilot maintaining a pre-assigned course. This did not consume much electricity and anyway, there was a small diesel generator on board to charge up the batteries now and then. So, for the person on watch there was not very much to do, just checking the sails and looking out for ships. Day after day would pass and only very rarely some ship, far in the distance, would be seen for a while. And when a ship was noticed then there was plenty of time to take several bearings on it and determine whether we were on a collision course.

One day, when the end of my watch is nearing, I check that there is no ship visible, just the empty sea, as far as the eye can reach, and then I go down to the cabin to prepare some tea and wake Matthias. Then we chat and drink tea. Suddenly Matthias feels that it may be a good idea to go up to the wheelhouse and check the horizon for ships. I stay in the cabin. Immediately he shouts down to me, “Stash, I have a surprise for you!” So I come up, and I get the shock of my life. Right in front of us, only about a hundred meters away, there is a freighter of considerable size,

crossing at great speed our intended route. The ship looks well-maintained and is brightly painted. No one is visible on deck nor on the bridge. She carries a Dutch flag, and her name can be easily read. Since it is customary for ships to make radio contact when a close encounter occurs, I run to the radio and call this ship, by her name. I call out in Dutch. Nothing but silence – no answer. I call in English. This should always work. But they do not answer either. Moreover, they are on a very weird course: heading east toward a stretch of the African coast, where there are no harbours. No shipping line leads this way. Her speed is impressive; this freighter is going full steam. Is she ferrying some clandestine cargo to Morocco? But why did I not see this vessel heading for us when I checked the sea a couple of minutes earlier? We easily could have been run over. Or, have we met the legendary *Flying Dutchman*?

The other close encounter happened in the very early hours of the morning, when the eastern horizon was becoming just faintly visible. The story began the previous day. An Australian yachtsman asked me to help him sail his boat from Los Cristianos to Santa Cruz, both harbours on the island of Tenerife. His was a large boat. Most likely he had some help during the voyage from Australia, but at the time of our meeting, only his wife and his daughter were aboard – and they were not sailors.

We left Los Cristianos in the afternoon, expecting to arrive in Santa Cruz early the next day. For most of the night we had to beat against a strong wind, much stronger than I had expected. Suddenly an extra wind blast caused one of the mast stays to snap. The next to break could have been the mast, and to avoid such disaster, we had to change course immediately (to get the wind to the other side of the sails). Fortunately this happened late in the journey, so we could stay on the new course practically for the rest of the night.

The women were sound asleep in their cabin and they did not know that the ship was handicapped. I stayed with the captain/owner in the wheelhouse and we watched the distant lights on the islands. I was getting increasingly thirsty, but it turned out that there was no drinking water on the yacht. There was plenty of wine, so the skipper was not thirsty at all, and he offered me wine too. Of course, I refused; those days I was a teetotaller and probably even a small amount of alcohol would have impaired my functioning. So, suffering from growing thirst, I was much looking forward to the end of the journey.

Only a few hours of the trip remained. The darkness still reigned, but in the east the delicate line of the horizon began to appear – separating the blackness of the sea from the deep dark-blue sky. Then I noticed something on the horizon. Evidently, in this place there could have been only a ship, yet ships are obliged to carry lights at night and it was still so dark that any light would have been well visible.

As time passed, I gained certainty: A very large ship was heading in our direction. And she definitely carried no lights. Since her silhouette could well be seen against the slowly lightening sky, I was able to take bearings, to determine whether we were on a collision course. And we were! Normally this would not have been a problem; by going about (changing our course almost to the reverse) we would sail away from the expected point of collision. But we could not afford to get the wind to the other side of the boat because a stay was missing, and the mast could break.

One obvious solution was to get the sails down, start the engine and thus gain full manoeuvrability. I asked the owner, who was far from being sober, to start the engine. He went down below decks to emerge soon again, declaring that the batteries are too low on power and the engine would not start. Although there was a generator on board, we did not have time enough to charge the batteries. There was still enough electricity to operate the radio, so I called out to the ship. There was no answer.

To my increasing concern, a series of consecutive bearings confirmed that we could collide. Of course, such measurements are not precise: The yacht is rocking, and both the direction and speed of her travel undergo slight changes all the time. So we only could have the certainty that soon we shall be very close to the ship. In case of a collision, our yacht would go down instantly and only a life raft – quickly released – might save us. The ship was getting larger every minute and a sober captain would have brought the women up on deck and prepared the life raft. But he was too drunk to do any of these things.

I realized that in these circumstances I had no choice but to watch intensely the approaching ship and then, at the right moment, stop our boat by turning her into the wind. Such stopping would have been almost instantaneous, but after this manoeuvre we would become a sitting duck – unable to change our position. If I did this at the wrong moment, we would be run over. So, glued to the rudder, I observed vigilantly the big hull approaching, hoping it will pass in front of us.

It did. Barely 25 meters in front of us a vertical rusty wall of iron slid by, and we were spared. We could see that there were no lights whatsoever on this vessel;

everything was dark, everyone asleep. Most likely, the crew had set their autopilot for the Cabo Verde Islands, some 1500 km to the south and then they rolled into their berths. Moreover, they were just too drunk to remember to switch on the navigation lights. It makes me shudder to imagine what could have happened if we had this encounter an hour earlier, for in the total darkness of the night, we would not have seen the ship approaching.

There are many ways to lose one's yacht. For me this would have been disastrous, because *Ananda* was all I possessed. And apparently, the land presented as much danger as the open sea. The following two adventures illustrate this.

After returning from a short cruise with some friends, I decide to drop anchor in the bay of Los Cristianos. The weather being calm, I judge that 40 meters of anchor chain will be ample. Letting out more chain would cause the boat to swing out on a wider circle when the wind changes direction, moreover, there will be more work to hoist the anchor before the next trip. So, while I am operating the rudder and the throttle, I ask a friend on the foredeck to release the anchor chain, telling him to count markers, painted on the chain every 10 meters and stop at the fourth marker. So far, so good.

A few days later, a strong wind picks up and I decide to let out the remaining 10 meters of anchor chain. This chain is very heavy, so the more of it is let out, the bigger is the part lying on the bottom and bigger is the holding power of the anchor. I knew that I can let the chain run fast for 10 meters until the fifth marker is reached, and then there will be still a couple of meters left to slow down its passage, before I have to stop it with the winch brake. The chain's end is fixed to the boat by a nylon sling. So, I let it out fairly fast, waiting for the fifth marker to pass, when to my horror, already the sling appears and the kinetic energy of the fast running heavy chain breaks it. Chain and anchor are overboard! The boat starts drifting towards the rocks!

I run to the wheelhouse, I turn the starter key, and I hear a single "wau" – and nothing more: the battery has been used too much while we were lying at anchor, and it cannot start the engine. The situation begins to look dreadful. The boat will be on the rocks before I can drop the spare anchor, a much smaller one. Anyway, I would have to fix it to a rope, and a rope is not really a replacement for a chain, it holds much worse. In desperation I reach out again to the starter key. Now the engine starts! Next, it is no problem for me to motor towards the pier and throw a rope to some

passer-by. Next day, some friends of mine from the neighbouring Las Americas, who enjoy skin-diving, recover anchor and chain.

Somewhat later, I witnessed the total destruction of a French yacht that had broken away from her anchor. Apparently, when the anchor slipped, there was only one person aboard, and he lacked knowledge of yachts. That boat, a fibreglass construction, hit the rocks, turned to her side and then was bashed by waves, disintegrating painfully for many hours.

The last sailing adventure I wish to describe occurred during a charter. Elisa's friends found four Finns, who wanted to go sailing for a week. For me engaging in charter was illegal; it meant earning money in Spain, and I had no permission to do this. Of course, we assumed that nobody would find out. Our Finns brought boxes filled with bottles of various alcohols. They arrived totally drunk. While climbing from the dinghy to the yacht, some fell into the water. So we had to hang up their wet clothing on the deck. We removed the (paper) money from the pockets and fixed it with laundry pegs to the steel cables of the railing.

The next morning the Finns continued drinking, but Elisa and I could handle the boat without their help. We left Tenerife sailing west, with the intention to reach the island of La Palma on the following day. Towards the evening the Sirocco hit us. This is an extremely powerful seasonal storm that destroys concrete breakwaters supposed to protect harbours and no one in his right mind would choose to be out at sea in that weather. But we had no choice; we were already out there. Night came and we continued sailing in pitch dark. Nothing at all could be seen – the spray tossed up by the churning sea cut visibility to zero. The technical name, "dead reckoning," may present unpleasant verbal associations, but this was the only type of navigation I could do: judging our location by the distance sailed (measured only very approximately under these sea conditions) and the (rather unsteady) direction of travel. Then there was, of course, an estimated correction for the inevitable drift caused by the powerful wind.

This was the only night in my life, when I did not close my eyes for a second. The roar of the waves was such that even if we were to hit immediately the rocks of La Palma, my ears would not have been able to pick up the noise of waves pounding the shore ahead. And going "wrong" under these conditions was quite possible – there was just too much guesswork involved. So, all night, watching the course and the sails

(reefed to the minimum), I half expected to hear suddenly a tremendous jarring noise, masts falling and then the inevitable cold end. Well, this did not come.

After the arrival of bleak daylight, we could see a few hundred feet ahead, and there was nothing but the churning sea around us. But at least the danger of an immediate impact was gone. Possibly, we had passed by then the southern tip of La Palma. Not knowing any better, I turned north and ran with the storm, assuming we were sailing along the west coast of the island. This was just a hypothesis. Somewhat later, according to my hypothetical estimates, there should have been exactly to the east of us the small harbour of Tazacorte, which we knew from a previous excursion. So we turned east. It would have been nothing short of a miracle if, after 24 hours of blind sailing through turbulent seas, this little harbour had been in front of us. But suddenly it appeared, just a couple of hundred feet ahead. We could not believe our eyes.

Although the storm made it impossible to enter the port, at least we knew where we were. So we chose to continue running with the storm along the now visible coast, then we rounded the north-western tip of the island, until we reached some shelter from the wind and waves on the lee (northern) side. We dropped anchor in rather deep water. The bottom was rocky but the anchor held.

We stayed at anchor for a couple of days. Although we were not sailing, our guests were not unhappy, because the boat was well supplied with alcohol, food, and water. Not too far from us we saw lying at anchor some small Portuguese trawlers (fishing boats using dragnets). They were also seeking refuge from the storm. Four men from a trawler dropped a boat and rowed across to us. These unshaven and untidily dressed guys scared us a bit, but all they asked was food. They were counting on the caught fish to feed themselves, and because of the storm, fishing was out of the question. We gave them a sack of rice (with little white worms), and they were very thankful.

To kill time, we lower our rowboat too and investigate the shore. It is unfriendly: steep sombre rocks rising out of the water, no place to land. The next night, Elisa wakes me, “Something is happening to the boat!” Indeed, it transpires the wind has changed direction and big waves are trying to push us toward the shore. The bows of the boat are held down by the anchor and soon the waves will be over the deck. That is, if the anchor holds; if not, we will crash on the shore. Obviously, we have to raise the anchor and leave the spot as fast as possible. However, hard as we

try, all our attempts to lift the anchor fail. As soon as we hoist a couple of feet of the chain through the winch, the next wave lifts the bows of the yacht so powerfully that the chain slips through the winch, down into the water, by as much as we hoisted it a moment ago.

I get the Finns out of their berths and they try to help, but to no avail. No one can touch the wildly jerking chain without exposing his fingers to serious damage. The situation is becoming bad. In the darkness, we cannot tell if the anchor is still holding, or if we are already drifting towards the rocks. Trying to motor against the wind and waves with the anchor dangling 50 metres below the yacht would be sheer madness; there would be no manoeuvrability, also the anchor could be caught any moment between the rocks and cause the boat to capsize.

Suddenly an idea from my old climbing days flashes through my mind: the Prusik knot! This is a knot used by climbers to lift their bodies up a vertically hanging rope. The climber has a sling, one end of it he puts under his armpits, and the other end of the sling he ties by this special knot around the rope. When the weight of the climber is on the knot, it tightens, so the climber can hang on the sling and the rope, while tying the same kind of knot on another sling placed under his armpits. Then he hangs on the other sling, while shifting the knot of the first sling as high up the rope as he can reach, etc. Instead of a sling, I take a rope, place in its middle a Prusik knot around the chain and position two men at each of the ends of the rope. As soon as the bows of the boat begins to lift, I command them to pull back on the rope, the knot tightens, and their force, together with that of the anchor winch, suffices to prevent the heavy chain from slipping back into the water. When the bows go down, I loosen the Prusik knot quickly, move it along the chain, while the latter is hoisted a couple of feet by the winch operated by Elisa, and then the procedure begins anew. Finally, the anchor is lifted and with the throttle on “full forward,” we escape the cliffs that began to loom dark above us.

Who would have thought then that this charter held another dramatic surprise in store? Yet there was one. As we still had a couple of days of the charter left, we sailed to the Island of La Gomera and tied the boat at the quay of Puerto de Vueltas, hoping for a restful and quiet night. The Finnish guests went ashore for a drink. On the way back, already late at night, one of them slipped, fell and hit the back of his head on the edge of a concrete step. The others led him back to the boat. There was a deep cut in the back of his neck just below the scull. No essential nerves seemed to be

damaged, yet the situation was unquestionably serious. A clinic that could have taken care of such a wound was on the opposite side of the mountainous island. Many hours would have to pass before an ambulance could bring him there. And our illegal charter would be discovered!

It was decided to clean and dress the wound as soon as possible. We boiled water to disinfect scissors, tweezers, etc. After starting the generator, I placed the patient on a chair and directed the strong search light into the wound. Then Elisa cleaned the cut, removed the bits of hair and grains of sand, disinfected it and joined the two sides with elastoplasts. The patient was not allowed to lie down while resting at night. At daybreak, we sailed back to Los Cristianos and the wounded man was brought to a hospital. It was stated there that he did not need further treatment, and our help was qualified as having been professional. Our first and last charter was over.

Although my sailing career gave me a variety of experiences, regrettably I missed out on one: sailing solo. Of course, long-distance solo sailing is dangerous, because one has to sleep sometimes, and then there is a risk of being run over by a ship. But a short trip would have been theoretically possible and fairly safe, as long as everything functioned properly. For example, it would have been essential that the self-steering device kept the course, while I was engaged in other activities. This device was electrically powered and if something went wrong with the batteries, it would stop working. So Elisa had justifiable reasons to object against me sailing alone. But there were times when she was away in Holland, and on one such occasion I entertained the idea of sailing on my own from Tenerife to La Palma. Yet for reasons I do not recall, I did not go.

Later I discovered that my intended trip most likely would have resulted in a disaster. For just then *Ananda* had been recently out of the water for repainting the hull. The yacht had a large cockpit, and to prevent it from being flooded by spray during a storm, this cockpit had drainage holes in the floor, connected by plastic hoses to seacocks in the hull. Any water, splashed by waves into the cockpit, was supposed to flow out through the hoses and the seacocks. Of course, a plastic hose cannot serve as the only barrier between the interior of the ship and the sea outside. So, in case of an emergency (say, if the plastic hoses were to crack or slip off), the seacocks at the lower ends of the hoses could be shut. During the painting process, I loosened the worm-gear clamps tightening the plastic hoses to the seacocks, and I removed the hoses. Then I pushed back in place the hoses, but, probably being in a hurry, I forgot

to tighten the clamps. I discovered this oversight much later. However, when I was contemplating the solo sail I was unaware of the situation. So this is what might have happened.

I sail out, the boat leans to one side (as every sailing vessel does), one of the mentioned seacocks gets submerged, and the drainage hose attached to it fills partially with water. The rocking movement of the boat and the rhythmically changing weight of the water inside the hose cause it to slip off the seacock, and the boat starts taking water. This happens down in the engine room and I am unaware of the situation. The engine gets flooded, batteries get flooded, the self-steering mechanism fails, the two-way radio fails, the radio-direction finder fails, and I have no light anywhere. Then I have to stand behind the rudder, while the engine room floods completely. Two bulkheads separate it from the front and back of the ship. These reach right up to the deck [18]). My bulkheads are supposed to be watertight, and maybe they are but perhaps only partially so. Thus, in the very best case, in calm weather and with winds favourable, I am able to sail the sluggish (now more deeply submerged) vessel into some sheltered bay and drop anchor. And I am stuck there on a yacht needing extensive repairs. I prefer not to imagine what could have happened in worse weather.

[18] Unlike those of the ocean liner *Titanic*, which might not have sunk if her constructors had led the bulkheads right up to the main deck.

26. Parting with Ananda

My work on the ships became more pleasant after Sławek Moch arrived one day in Los Cristianos on a Polish yacht and decided to leave for good the communist paradise. Then he dwelled on my yacht, while I lived on John's luxurious motor cruiser, but we worked together, cooked our food jointly, and during the weekends we discussed the meaning of life (or the lack of it) with the help of a few glasses of gin (alcohol was very cheap in the Canaries).

Yet, as the years went by, I was becoming increasingly aware that I was walking down a blind alley. There was no future in this type of existence. The money I was earning (illegally) sufficed to feed me and to maintain the yacht, but what would happen if I got ill or injured? My teeth were in a bad condition after 13 years of avoiding dentists. Of course, when toothache became unbearable, I went to a dentist in Los Cristianos, only to leave quickly after being told how much it would cost to set my mouth in order. Sometimes I slept with slices of garlic pressed against my gums, to alleviate the pain.

Such life would have been perhaps justified if it had been part of a great sailing adventure, but there was only local sailing, and even that was rare. I was in my 50's and my academic past had not prepared my body for continued physical effort, be it while working on ships or sailing. And I was alone again; the relationship with Elisa had totally disintegrated. Yet I knew she was possessive and jealous and would have reacted with uncontrolled fury if she had discovered I had a new girlfriend.

My grand attempt to find happiness in the company of nice people while sailing the sunny southern oceans had obviously foundered. I had chased happiness all my life, I had given to this chase an incredible amount of energy and devotion, yet my past seemed to have been mainly a series of escapes. Perhaps I was on the wrong track, doing things wrongly, seeing things wrongly, going in the wrong direction? I was reading the book of Nisargadatta's teachings, brought from England by Roger Campagnac. The Indian master claimed that the principal purpose in life is to discover one's real being. Was I just body plus mind, as I had assumed hitherto or possibly something more? This sage seemed to know with absolute certainty and from direct experience that mind and body were merely transient expressions of one's true being,

while the latter exists beyond time and space, and cannot be described by words or ideas (see framed list of Nisargadatta's sayings.) I found this teaching strangely appealing. It told me that a mathematical career "thrown overboard," a failed sailing career and an aging body are not a cause for despair. It allowed me to look at my failures as irrelevant, in comparison with missing the real purpose of my life. Perhaps there was the discovery of some fundamental truth, the main truth, still ahead, within my reach? And if so, the question arose whether life in society could help me better towards attaining such goal than my current solitary existence. Next, I thought that if there were forces, ready to help, if one tries to go in the right direction, then perhaps these will help me to live on land again, meet many people and confront a greater variety of challenging situations. Accordingly, I started applying for jobs at universities.

First I wrote to my ex-colleagues, to those few whose addresses I still had, and I asked them for suggestions. But getting a university job seemed terribly difficult. Gone were those post-war years, when academic posts for mathematicians were easy to get. And what did I have to show in terms of scientific achievements for the past 13 years? Absolutely nothing! I received only one suggestion which held some promise. This came from my former boss at the University of Sussex in England, Bernard Scott, who advised me to apply for work at the newly created Sultan Qaboos University in Oman. I applied, and while waiting for the answer, I was trying to find out more about Oman. But in Los Cristianos information about that small Arab state was very hard to come by. Then the following remarkable event occurs, confirming my belief that great changes in one's life have a tendency to announce themselves beforehand.

One evening, Josef Hermann, the owner of the car rental business, contacts me with an urgent request: "Could drive someone quickly across the mountains to the west of Tenerife and then to the airport?" My potential passenger is an Englishman, retired Colonel Williams. He was on vacation with his wife and now they are in the airport, already on their way home. Unfortunately, a piece of their luggage had been left at the hotel, but if one drove fast, the remaining two hours before their planned departure might just suffice to collect that item and catch the flight. I agree to do this, Hermann gives me a car, and I speed off. In the beginning, the Colonel and I sit in silence and I concentrate on driving fast. It is late in the evening, the mountain roads are semi-deserted and I am assuming that on sharp curves I would see the reflection of

the headlights of an oncoming car earlier than the car itself. Generally, my assumption is correct, however, on one curve such advance warning does not suffice. Suddenly a car appears right in front of us. Both the other driver and I make a last moment swerve to the right and miss each other by inches. I say, "Whoops!" and continue to drive as before. The Colonel, sitting next to me comments, "I liked your whoops."

We begin conversing and it transpires that the Colonel knows the Sultanate of Oman very well, and even had the privilege to witness the historical moment when the rule of the country was transferred in 1970 from the father to the son, the current Sultan Sayyed Qaboos bin Said. Colonel Williams tells me much about the history, geography and the people of Oman, which before this power transfer was almost totally isolated from the outside world. He also asks me to convey his greetings to Sultan Qaboos. We collect the forgotten piece of luggage and make it in time to the Reina Sofia airport. [19])

The Foundation Professor of Mathematics at the Sultan Qaboos University was Les Woods, an old friend of my former boss in England, Bernard Scott. No doubt, Bernard recommended me strongly, and Les Woods offered me the post of an associate professor. Since I still had to wait three months for the beginning of the academic year, I borrowed money from Jan Mycielski, got myself some decent clothing and bought a ticket to visit him and his family in Colorado. By that time, the Spanish customs regulations required that *Ananda* should be either imported, or leave the Spanish territory, or "put on chain" – that is, not used for sailing. The latter option was available for the duration of one year and I chose it. So my yacht stayed behind, lying at anchor in the bay of Los Cristianos and providing a home for Sławek, who continued working on boats – henceforth without my company.

After arriving to Colorado, I discovered several things. First, it was almost impossible to get a fax or telephone connection to Sultan Qaboos University in Oman. On the rare occasions when I got through and enquired about my visa and ticket, I was told to wait.

SOME TEACHINGS OF NISARGADATTA

What you are cannot be described. You are nothing perceivable or imaginable. What you can point out as "this" or "that" cannot be yourself. (7 May 1970)

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[19] Regrettably, I never had the opportunity to meet personally His Majesty Sultan Qaboos.

If your desires are personal, for your own enjoyment, the energy you give them is necessarily limited; it cannot be more than you have. When you desire the common good, the whole world desires with you. Make humanity's desire your own and work for it. There you cannot fail. (6 June 1970)

Whatever you do for your own sake accumulates and becomes explosive; one day it goes off and plays havoc with you and your world. (15 August 1970)

Desire is devotion. By all means, be devoted to the real, the infinite, the eternal heart of being. To imagine that some little thing – food, sex, power, fame – will make you happy is to deceive yourself. Live your life intelligently, with the interests of your deepest self always in mind. You do not want perfection, because you already are perfect. What you seek is to express in action what you really are. Do not pretend that you love others as yourself. Unless you have realized them as one with yourself, you cannot love them. (20 March 1971)

If you want peace and harmony in the word, you must have peace and harmony in your hearts and minds. Such change must come from within. (30 March 1971)

We are the same, we are equals. It does not matter that you cannot believe this, my words are true and they will do their work. (31 July 1971)

The real you is timeless and beyond birth and death. The body will survive as long as it is needed. It is not important that it should live long. (14 August 1971)

Whenever love is withheld, and suffering allowed to spread, war becomes inevitable. Our indifference to our neighbour's sorrow brings suffering to our door. (11 December 1971)

Sooner or later, your physical and mental resources will come to an end. What will you do then? Despair? All right, despair. Then you will get tired of despairing and begin to question. (19 February 1972)

Stupidity and selfishness are the only evil. (24 March 1972)

There can be no life without sacrifice. In nature, the process is compulsory; in society, it should be voluntary. A sinner refuses to sacrifice and invites death. (1 April 1972)

There is a vastness beyond the farthest reaches of the mind. That vastness is my home, it is my self. And that vastness is also love. (29 April 1972)

Little did I realize that Les Woods had *merely recommended* me to the Arab administration, while the final decision was theirs and not made yet. They could have easily rejected me on the grounds that I had spent the first 26 years of my life in communist Poland. (I learned later that job applications were rejected on such

grounds.) But at that time I was unaware of the situation, and I was merely puzzled why things proceeded so slowly.

The second thing I discovered after my arrival was that Jan and his family were just about to depart for a long trip to Europe, with the intention to leave he house, the cat, and the dog under my care. (The children were being looked after by a nanny.) The third discovery was of importance for the resumption of my mathematical career: Jan had just written a paper on the theory of learning and left the manuscript with me. He intended to submit it for publication after returning from the European trip. There followed several very restful weeks. I got very friendly with the cat and the dog (we both loved to walk in the hills nearby) – and I also read Jan's paper and pondered about it. Then I got ideas how to add some more theorems that seemed to be relevant to the subject. I wrote them down in detail and presented this to Jan upon his return. He was very glad to see my work and I became co-author of the paper. So I came back to mathematical publishing after a break of 13 years.

As the new academic year was approaching, I decided to move closer to Oman and I flew to Holland. Staying with the family of Elisa's sister in Hilversum, I awaited word from the Sultan Qaboos University. Weeks passed and no word came. I tried to phone, but no contact could be established. (I did not know it was Ramadan time, when offices in Oman were working short hours.) The house of my host was for sale and it needed some small repairs. So I tried to make myself useful and helped with these. But my situation was becoming increasingly untenable. Winter was approaching, and I had only the summer clothing I wore on Tenerife and in Colorado. In addition, the money I borrowed from Jan began to run out. All I could do was to plod on with the small house repairs, hoping for the best.

And then the best came. One rainy cool Saturday morning, when I had just unscrewed an old wall contact to replace it by a new one, the telephone rang. It was from Schiphol – the International Airport of Amsterdam: My plane for Oman departs in three hours. Just four hours later I was in this plane, cruising under blue skies, with the rain-swollen dark clouds left far below. Being a first-class passenger, I ordered champagne and roast duck (Peking style). All of a sudden my social status had risen from beggar to king. I still wore a seaman's beard and the many years of intense sunshine in the Canaries had darkened my skin. The passport controllers in Oman greeted me in Arabic.

27. At Sultan Qaboos University

Before sharing my memories from the Arabic Peninsula, let me record what happened after my departure to *Ananda* and some people I knew on Tenerife. Since I felt that Elisa had some rights to the yacht, because she had encouraged me to break away from the Maharaji movement, I wrote to her from Oman suggesting she might use *Ananda* for a few years (for instance, sail with her friends). Then – I proposed – I would have the use of the yacht for the same amount of time, whereupon the ship would be sold and the sum obtained would be split between us half-half. I thought this was a very generous offer.

Accordingly, I went to Tenerife during my first summer vacation and arranged with the customs that *Ananda* be set free (of the so-called "chain") to sail away. It would have been no problem then for Elisa to find some friends who would get the yacht temporarily out of Spain (for instance, by sailing to Madeira). After this, the yacht could return to Los Cristianos for one year or sail elsewhere. During my short visit to Tenerife I called on a few friends, but I had no wish to spoil my summer vacation, so I did not go to see Elisa. I suppose she must have gotten offended by my demonstration of disrespect. She broke off all correspondence, and next year I heard from friends in Amsterdam that she had **sold** *Ananda*.

I was asked later why I did not react at once by taking her to court. I did not do this because the result would have been predictable: She would have denied knowing anything about *Ananda's* fate. She would have said that the yacht disappeared from the bay, and for all she knew, I might have been the one who sailed away. Of course, to conduct the formalities of the sale, false ownership documents must have been created. So the only way for me to recover the yacht would have been to locate the boat, then attempt to "steal" her and if caught, allow the courts to decide who was the genuine owner. But how could I find the yacht? I certainly did not have time enough during my summer leave from Oman to organize a worldwide hunt for the boat. Instead, I wanted to visit my aging mother in Poland and "beef up" in USA my mathematical research projects. My well-paid job seemed secure, thus the financial aspect of the theft did not hurt me much. Yet sometimes it pains me to think 13 years

of hardship and deprivations, strenuous physical work and great efforts to build and maintain a nice yacht gave me nothing but memories.

Elisa, having sold my yacht, bought herself a house in a picturesque setting on the Tenerife island. She also opened a massage parlour in Los Cristianos. She also shared the income from the yacht sale with her daughter, who married Alonzo. Also those two bought a small house in a charming place on the coast of Tenerife.

Even to this day, I am unable to perceive clearly how the loss of *Ananda* has affected me. During the many years, devoted to creating the ship, I had the conviction that we shall stay together until our (most likely joint) end. Sometimes I feel the boat is still a part of me, and will always be that. *Ananda* keeps appearing at night in my dreams. At other times, I doubt whether the idea of "possession" has any meaning beyond the realm of social conventions.

Massey, the Englishman, who once offered to store Elisa's things on his motor yacht, when I was planning an escape, asked Sławek Moch to accompany him on a cruise to Gibraltar. Massey was not feeling quite well and Sławek was ready to help. When they got into a storm, their engine broke down. Massey, having a professional knowledge of engines, could repair it, but he was getting increasingly unwell. Finally, he had no choice but to work in the confined space of the engine room, while the boat was wildly tossing, until he got the engine going. And by then, he was so sick that they had to call at the nearest port, Casablanca. Massey died in the car taking him to the hospital. Some members of his family arrived, took his ashes to Europe, sold the engine of his boat and destroyed the rest. So Massey's boat died with him.

After returning to Los Cristianos, Sławek joined the crew of a yacht sailing to America. He settled in New York, became a US citizen and enjoyed life in the States while maintaining lively contacts with Poland.

Roger Campagnac hoped that cruising on *Gypsy Moth* would help him to overcome his alcohol addiction, but things did not work out that way. He permitted alcohol to destroy his body and died only a few years after I left the Canary Islands. His yacht fell into a state of total neglect. Later, due to her historical value, *Gypsy Moth* was acquired and renovated by a university in the south of England.

When I visited Los Cristianos after an absence of 17 years, I went directly to "Hermann's Rent-a-Car." The business was still there, under the old name but with a new owner. I traced Josef and he invited me for a nice dinner in town. He told me that he was very ill, only surviving due to the help of powerful medicines, and he lived

alone, as a divorced man. He knew where Elisa's massage parlour was and he said he skirts that place in a wide arc, for fear of running into her and spoiling his day.

Les Woods, the Head of the Mathematics Department at Sultan Qaboos University, was the son of a New Zealand fisherman, and he loved sailing. So when my former boss, Bernard Scott, recommended me to him, he almost had no choice; he just could not refuse helping an Australian yachtsman in need. These were the very early days of the Oman University and the procedure of appointing new faculty was not yet fully established. Otherwise I would have never slipped through the net of the appointment committee. Les also took the liberty to recommend me directly to the Arab administrators (the ultimate decision was always theirs), not waiting for the approval by the dean of the College of Science, an Englishman, who was just then on leave. The latter was very much a "play safe" guy and would have almost certainly blocked my application.

Many people seem to have heard about Oman's neighbours: Yemen, Saudi Arabia, or the Arab Emirates. But Oman is a very peaceful country and thus not often mentioned in the news. The most important geographical feature of this kingdom is its long coastline; Oman has always been home to seafarers. Oman's ruler, His Majesty Sultan Sayyed Qaboos bin Said, holds absolute power. His reign appears to be benevolent and enlightened. He used the oil revenues to modernize the country in a very short span of time. Medical services and education (including university) are free for all citizens. There is a good road system and many amenities have been imported from abroad. This modernization required the skills and the know-how of numerous foreigners. Most of these came from Egypt, India and Pakistan, but England, United States and Turkey were strongly represented too. Among the University employees I met also Australians, Algerians, Germans and New Zealanders.

When I arrived, the University was very new: a series of low and widely spread-out structures forming a very harmonious combination of modern architecture and traditional Arabic style. The plan was symmetric to both sides of a central axis pointing towards Mecca. Shaded two-level passages joined the various buildings, the upper level being walked by the girl students and the lower by the boys. The first students came a few weeks after my arrival. All the boys were dressed in white gowns (dish-dashes) and most of the girls were dressed in black. The girls had to cover their bodies, except for the face and the hands. They entered the lecture rooms through other doors than the boys and they had to sit in the back rows. (In every lecture room

there was at least one row of empty benches, separating the boys from the girls.) Years had to pass before I saw a female and a male student talking to each other; they were comparing results of a calculation. We suspected that placing the girls in the back rows had a negative effect on their performance. How otherwise could one explain the fact that in junior classes the girls performed just as well as the boys (and often better), whereas in senior years the boys scored higher grades? Our hypothesis could not be tested, as we were not allowed to introduce a right-left division of the class by gender. (I tried this once and I was told quickly to return the girls to the back rows).

Les Woods was a straightforward and courageous man. When he was told that some of our future students are so talented, as to have learnt the whole Quran by heart, he commented, "Such one I would not touch with a barge pole." He meant to stress that someone who had spent so much time on developing his memory, would have surely neglected developing his ability to reason logically. Yet, if his words had been said on another occasion, they might have cost him his job – for it is certain that some over-zealous official would have interpreted them as an insult to Islam.

Ours was the first university in Oman, so it was understandable that our hosts imagined an academic institution to be some kind of government office, like a ministry – or possibly something akin to a big business. Hence, they established a hierarchical system, whereby the academic staff had to obey the administrators, and on top of the ladder stood an all-powerful Vice Chancellor. (A Chancellor did not seem to exist.) Working in an atmosphere of submission and rigid obedience was nothing for the ex-fighter pilot Les Woods. (He flew *Corsairs* in the South Pacific during WW II; see his book *Against the Tide*, Institute of Physics, Philadelphia, 2000.) Soon after my arrival, Les Woods told me he does not want to be a "hired gun", and he returned to Oxford.

During the first few years of the University's existence, mathematically talented students were rare. The boys and girls entered the university with the conviction that mathematics consists of many rules (*kanoons* in Arabic), suitably coded in formulas, and these had to be memorized. Mostly they stuck to this view all through their studies. They would not realize that mathematics is primarily a deductive science, based on the idea of a *proof.* A proof can be learnt by heart and then repeated without understanding. However, it also can be understood and then reproduced in one's own words, with a personal choice of detail. The vast majority of

our students were only able to learn proofs by heart. Possibly, their less than perfect knowledge of English was one of the obstacles. So, to cover the curriculum, we issued for most of the given courses special booklets, calling them *Lecture Notes*. In these the material was presented in simple words and in a straightforward fashion; moreover, proofs were kept down to a minimum. We discovered also that the spatial imagination of our students was very poor. For instance, it was far from obvious to most of them that the altitude of a flying airplane has to be measured along a straight line leading through the plane and *perpendicular* to the ground. Perhaps spatial imagination begins to develop early in life, when a child looks at pictures, and probably our students did not have any books or coloured magazines when they were children. For until 1970, when Sultan Qaboos ascended to power, Oman was a very isolated country, where the lifestyle had remained unchanged for hundreds of years. Some examples: During the reign of the previous Sultan, the wearing of reading glasses or riding a bicycle required the Sultan's permission; also the gates to the capital Muscat were shut three hours after sunset, so no one could enter or leave the town before sunrise. Under the reign of the present Sultan Qaboos, the country underwent modernization at a tremendous rate. For example, it would take me about an hour to drive along the motorway to my preferred beach. Sixteen years ago, a drive to that beach would have taken a whole day.

The university campus was located in an area marked on maps as a "gravel desert." The surrounding hills were littered with stones of various sizes; bigger rocks protruded here and there. Vegetation was very scarce. This landscape was not devoid of a harsh beauty, but it was rigid and monotonous. On cooler winter days I used to hike there, but nobody else seemed to do this. The sky was nearly all the time an unbroken uniform blue. An occasional cloud would introduce some much wanted movement and variety, but such appeared rarely. Once or twice the sky was totally overcast and I was so overcome by feelings of homesickness that I had to cry.

We lived only eight miles from the airport. The big low flying airliners arrived mostly in the evenings and we enjoyed watching them, because they provided an emotional link to the countries we came from. On their way back these planes took off at a much steeper angle, so above the University they would be already quite high and not noisy. (The angle of descent for an airliner is small, always between 2.5^{o} and to 3.5^{o}, whereas, depending on its weight, it may take off quite steeply, even at 15^{o}).

No foreigner was allowed to settle permanently in Oman. In fact, during the eleven years of my sojourn in the Sultanate, I encountered only one exceptional case: an English doctor, whose work was once linked to the Royal Court, was allowed to retire in Oman at his seaside villa. The thousands of expatriate workers like me were subject to periodic contract extensions. Each of us had a permanent domicile somewhere overseas. Since I applied for my university job from Los Cristianos on Tenerife, the University presented me each year with a first-class air ticket to that destination. This was fortunate, because flying from Oman to the Canary Islands was expensive, and I was able to change my ticket to a tourist class ticket for a round-trip to USA via Holland and Poland. The University administrators did not seem to know Spanish, so nobody ever questioned the strange fact that my "permanent residence" was a Post Office Box (officially, *Lista de Correos*, *Los Cristianos, Tenerife, Spain*).

During my first summer leave, I decided to refresh my acquaintance with Jill, the ex-girlfriend of my Canadian landlord David Andrew. Jill worked as a secretary at the Buddhist Monastery at Great Gaddesden (near Hemel Hempstead in Hertfordshire, England). We decided that I will stay in this monastery for two weeks, provided I can withstand the rigors of monastic life. I accepted the challenge. Jill knew my real reason for turning up there, but nobody else did. (The "rigors" turned out to be bearable, though the bed was on the hard side, the early morning get-up gong sounded much too early, and the endless chanting sessions were boring). When I arrived, a monk welcomed me and we started discussing spiritual matters. After a long conversation, this monk (born to American Jewish parents in Manhattan) asked suddenly, "Have you read Nisargadatta's book *I Am That*?" The question surprised me, for this was indeed the only book in this field, I knew quite well. "How come *you* have read it?" I asked. Then he told me *I Am That* is among the top ten books, recommended as reading material to contemporary Buddhist monks. I expressed my disbelief at hearing this; it seemed to me that rituals are important to Buddhism, but none are discussed in *I Am That*, and Nisargadatta refers to Buddha not more than twice. But the monk assured me, rituals are inessential; they serve mainly to unify a community like the one in the monastery. Rituals aside, he assured me, the book contains the essence of Buddhist philosophy. And he declared me to be a Buddhist – which I accepted with joyful surprise.

While visiting England, I took the opportunity to see my son Mark, studying law at the Liverpool University. We did not know each other, but he was informed

about my pending arrival. So when I rang the doorbell, he emerged saying, "Presumably, you are my father?" – reminding me of the famous meeting of Mr. Stanley and Dr. Livingstone in Africa in 1871.

It was news to me that Mark had changed his name to *Thornton.* Quite understandably, having no visible link to Poland, he preferred not to be called *Świerczkowski*. But surprisingly, by selecting the name *Thornton*, he created a link not only to Poland but even to the town of my birth. This town, presently called Toruń, was founded in 1231 by the Teutonic Knights, a German crusading religious order (formed in Palestine in the 12th century). The Knights called the town *Thorn* (from the German *Toren* = gates), which name it retained until the Knights were defeated by a joint Polish-Lithuanian force in the greatest battle of medieval Europe (Grunwald, 1410). Since *ton* is a traditional abbreviation of *town* (e.g., Princeton, Washington), Mark's name means "the town of Thorn," that is, my birthplace. My son had no idea that this name connects in any way to my past, and when I asked him why he chose it, he told me that some ancestor of his mother was *Thornton*, and somehow this name appealed to him.

28. Life in the Sultanate

For us, the first professors at the University, life in Oman was extremely lonely. Those having families fared better; they had a reasonably normal existence. But the bachelors were regularly starved of human company. The Omani are a friendly lot, but leisure time contacts with them were practically nil; we knew nothing about their personal life and they most likely knew very little about ours. Such cultural isolation of ours may account for the fact that in spite of having worked in Oman for 11 years I did not learn to speak Arabic. Surely, I made an attempt. The University offered a free course for its employees. Our instructor, Harridi, came from Egypt. I expected him to begin by teaching us how to pronounce the sounds of the letters of the Arabic alphabet. This would have been very useful, because further from the Capital Area the names on signposts were sometimes written in Arabic only, whereas our maps often showed these names in the Latin alphabet (rendered so that an English speaker would read them approximately correctly). But not so; Harridi insisted to teach us speaking first, and he used the Latin alphabet (with modifications) to render the sounds. Many of us did not like learning Arabic without the use of the appropriate letters. Finally he succumbed to our pleadings and towards the second year of the course I was able to sign my name in Arabic and write the name of the University. Then I dropped the course. With a steadily increasing teaching load, I had less time for hobbies, like learning a language that did not seem to be very useful. In fact, all the Arabs I knew, and all expatriate workers, spoke English. Knowing the local language would have benefited us only on those occasions when, after driving far from the coast, we would enter a secluded village in the mountains, and the people would bring out a carpet, place on it plates with dates, halva and thermos flasks with coffee and invite us to sit down with them and partake in the snack.

On such occasions I could say, “Ana ismi ustez fil gamiat al Sultan Qaboos” and also “shukran jazeelan” meaning respectively, “I am a professor at Sultan Qaboos University” and “thank you very much.” Of course, very often, one of us was an Arabic speaker and he acted as an interpreter. In time, I mastered a few more Arabic phrases. For example, it was impolite to take photographs of people without asking for permission and “Mumkin sura?” meant “Picture possible?” It was also good to understand “Kaif halek?” that is, “How are you?” and the reply “Zain,” or “Good.” Yet the most important phrase was “Inshah Allah,” meaning “God willing,” because in those parts it is customary to conclude with these words every sentence announcing plans for the future. Thus I said often “Inshah Allah” in front of the class, for example, when announcing the date of an upcoming test or concerning other arrangements. I also found it convenient to use sometimes “mish mumkin,” which meant

"cannot be," because many students were not sure what I meant by saying "does not exist." And, considering it was often too hot to walk outdoors, I was very dependent on my "sayara," that is, the car. I entered each class saying "Salem aleikum" ("Peace be with you") whereupon many mouths replied "Wa aleikum salaam," ("And with you too.") I had Arabic friends among the professors, like my boss Ibrahim Eltayeb, but he had his doctorate from England, he was married to an English lady and he had mastered her language better than I did. With another colleague, Samir El-Seoud from Egypt, I mostly conversed in German because he had a German wife and at home they spoke her language.

In the beginning of my stay in Oman, I had few students, our teaching load was small, and I had plenty of free time. My body was recovering from the hardships of physical work on boats and I found it extremely enjoyable to sit for hours and just think. Correspondence with Jan Mycielski provided me with unsolved mathematical problems. I threw myself wholeheartedly into research. I could order books and copies of currently published papers via the University Library, and there followed some of the most fruitful years of my mathematical creativity.

For this work, it was also essential for me to visit Jan during every summer leave, so I spent several weeks each year in Colorado. The remainder of the summer vacations, I devoted to visiting friends and family in Europe. Normally, we were not allowed to leave Oman during the academic year; permission would be granted only in cases of extreme need, like the demise of a parent. Even for a weekend excursion to the neighbouring Emirates, we had to obtain a written permit from the University, to be presented at the border crossing.

Halfway through my seventh year in Oman I had the opportunity to test the effectiveness of Chinese acupuncture. It all began with a severe neck problem: I was not able to tilt my head backwards without experiencing great pain. Writing formulas on the board is an essential part of every mathematics lecture, but in my condition I could use only the lower half of the board. I took my problem to the University Clinic. This was a very good clinic, run by professors from the College of Medicine. Several X-ray pictures were taken and a doctors' seminar was conducted, entirely devoted to my neck. Verdict: senile deformation of neck vertebrae, incurable, except possibly by complicated surgery. Not a nice prospect!

Then someone suggested I should try acupuncture. There were many acupuncture clinics in Oman. In spite of enjoying free Western-style medical care, about half of the ailing people in Oman preferred to be healed by Chinese medicine. This might have been largely a matter of tradition – but perhaps not only so. I began visiting a clinic run by Chinese doctors; in fact the doctor who treated me was a professor at the Shanghai University. None of them spoke English, and even the interpreter, a girl from Shanghai, well versed in Arabic, was not a fluent English speaker. I explained my problem, and needles were stuck into my body (once, in the tip of my nose). These were not just needles; they were electrodes, wired to devices

delivering regular pulsating shocks. The power of these shocks (the voltage applied) was as big as I was willing to bear. The sessions did not cost much, but my visits went on and on, without end. I got to know the doctor and the interpreter quite well; in fact, I started to take out the latter for evening walks and to the beach. She was a good swimmer but knew nothing about sailing. So once when I rented a sailing dinghy and we went out to sea, I had to explain to her the procedures, in particular the manoeuvre of "going about." At this command she was supposed to jump quickly from one side of the dinghy to the other. But when I shouted "going about," she did not budge, merely asking, "What?" and of course we capsized. Fortunately, I did not need to tilt my head backwards to put the boat upright and climb back into it.

After a few months, I got somewhat bored with the endless visits to the acupuncture centre. When I asked how long the treatment is going to last, I was told, "Until you are cured." That was not very promising, particularly as the pain persisted. Then the summer vacation arrived, and I left Oman to make my usual circular trip, visiting Holland, Poland and the USA. During these travels, my life was always very interesting; I saw my mother, some old friends, and I made new contacts. I became so absorbed in all these activities that I don't even remember when the neck pain left me. *It never came back.*

The salary I earned in Oman was large. This allowed me to save some money for the future, to pay Jeanette the overdue alimonies and to hire a nurse to look after my aging mother. In my eighth year in Oman, my mother was taken ill and rushed to a hospital, where she died at night, apparently with nobody present. I was allowed a one-week's leave to fly to Poland, to attend the funeral.

In Oman, I visited all places of interest that I could reach during one weekend. The beauty of the country is sombre yet very appealing. Sometimes there was no trace of human activity as far as the eye could see. Once, following a dry riverbed (a so-called *wadi*) in my SUV, I stopped and looked at the rocky mountains all around me. There was no vegetation, no water, no sound, nothing, but the silent majesty of ancient rocks. Were it not for the blue sky, I might have been on the moon or at some place in the universe, where no human being has ever been nor will be. Such a landscape of harsh and severe beauty makes man look inward. The great religions were born in countries where rocks and deserts reign.

I spent a few weekends each year on excursions to the Emirates, and the one visited most frequently was Dubai. Quite often we went in a larger group. We usually did some shopping, and then we would enjoy a lavish meal in the rotating restaurant on top of the Hyatt Regency Hotel. From our dining tables we could look down at the city, the river estuary, the harbour and beyond. On the memorable occasion I wish to describe, I went to Dubai with my boss Ibrahim, the Head of the Mathematics Department, his English wife Christine and their two teenage children. To reach the town centre from our hotel, we had to take one of the many small motorboats, plying between the two banks of the river. The crossing lasted about

ten minutes and the boats were usually packed with passengers. The fare was very small, so Ibrahim hired the whole boat just for us five. During the crossing the boat was rocking slightly, and as there was a mast, I leaned against it while filming the cityscape along both shores. The architecture of a large building caught my eye – so I zoomed in. Through the viewfinder I could see a tall man, all dressed in white, standing on one of the balconies. Then, lowering the camera somewhat, I saw soldiers running from the building to the shore, their guns pointed at us. And immediately my boat companions shouted that I should stop filming.

The ferry man steered his craft to the shore, where I was promptly arrested and taken into that large building. It turned out that I was filming the main Office of the Dubai Police. My camera was taken away, so were my documents, and I was put in a small room where I was told to sit down and wait. There was a large TV set and the not-unfriendly guard turned it on for my benefit. The program was about some sporting event, so there was no need to understand Arabic in order to watch it. (I find watching sporting events utterly boring, but the guard could not know this.) I sat there doing nothing, for a very long time. Finally there arrived a tall, large fellow, dressed in an impeccably white robe and wearing a big gold ring. He asked me in very educated English why I was filming the Police Station. I told him that I found the architecture of the building rather interesting and I did not know what I was filming. We started to converse and I explained that I am on a weekend excursion from Oman where I am a university professor. Of course, my Oman ID card confirmed this. The Chief, as I should call him, said that he understood my position and that he will let me go free. He offered me a refreshing drink and told me I have been rather lucky, for he was just about to leave for the weekend, and if I had been brought in later, my release would have had to wait two days for his return. I thanked him for his kindness and he in turn asked me if I still had any wishes. I had my camera back by this time, but the film was missing. So I asked him if I may get my film, too. “Yes, of course,” he said, and he sent someone to fetch it. Then he wished me a safe journey home and I was led to the main entrance. There, to my surprise, I saw Ibrahim and his whole family sitting on the stone steps. They were chatting with the guards. Ibrahim told me later that while they were waiting for me, some guards approached them and in a seemingly informal conversation extracted from them exactly the same information as I had offered to the Chief. This served the police for a confirmation that my story was genuine (and that I am not a Mossad agent in disguise) – so they let me go. Of course, if I had been kept at the police station over the weekend, my Saturday (beginning of the Arabic week) classes would have fallen into disarray. When I visited Poland during the next summer leave, I discovered that somehow word had spread that I had been imprisoned in Dubai. This sounded dramatic, but it was not true. Yet, I could show to my cousin a film ending abruptly with a scene of a soldier running and pointing a rifle at me!

In Oman I became friendly with Aurelia, a Polish woman living among the Arabs. I was introduced to her very soon after my arrival to the Sultanate. I was a bachelor and someone must have thought that she might have been a good partner for me. Perhaps she was thinking along these lines too. She had two daughters, twins, aged about seven, a little white dog, and a large villa, surrounded by a tropical garden. Hidden among the trees was a small building containing the laundry room and the living quarters of her housemaid.

After six years of yachting, I was so tanned that upon first contact, Arabs viewed me as one of them. During this outdoor period I made friends with other sailing men and women, mostly very energetic and with bodies lean and strong. Aurelia seemed to have been the opposite. Her skin was white as chalk. She must have shunned the sun, which in Oman, close to the equator, was not easy. Her languid behavior and speech gave the impression of passivity. Thus, we never became very close friends, even though she was an attractive woman, and as a widow, she would have been free to start a relationship. She would invite me occasionally to her house for a meal, a chat, or to meet some of her acquaintances. From such conversations I learned the story of how she came to live alone in Oman.

While the communists ruled Poland, some politicians thought that they could make ideological forays into Africa and the Middle East by offering free professional training to students from countries, where there were no institutions of higher learning. Such visiting students would be given one year to learn the Polish language, and then they were expected to acquire a full training, say as engineers, or medical doctors, etc. I know from my own experience that the best way to master a foreign language is to find a girlfriend among the natives, and this is precisely what some visiting students did. Occasionally marriages resulted. This was how Aurelia married an Omani studying architecture in Poland. After he graduated, they moved to Oman. At that time, the whole vicinity of Muscat, central to the Sultan's administration, was one endless construction site. Buildings grew in rapid succession, new streets and roads were constructed, and Aurelia's husband was very much "the right man at the right place". He probably designed the villa and the garden that I got to know later. Two daughters were born.

Then disaster struck. One weekend, the young architect went out to sea, in a motor boat, with some friends, fishing. The weather suddenly broke down, a storm hit, and their boat sunk. One of them, a good swimmer, made it to the shore. A few

days later, the bodies of the others, including Aurelia's husband, drifted up on the beach.

The family of Aurelia's husband asked her to leave Oman. They claimed to be the sole inheritors of everything her husband owned, including his two daughters. Aurelia was a foreigner and the only justification for her presence in Oman was her marriage to an Omani. This man was no more, and she had to go.

She was in despair. Suddenly fate was robbing her of everything she had possessed. She knew other Polish women who came to Oman having married visiting students just as she did, and she turned to these for help. Their husbands, being among the few locals of higher education, had positions of influence. But none of these Polish women did anything to help her. What was worse, instead of providing her with at least some sympathy and consolation, they all turned away from her, claiming that her life in Oman was finished, and she should go back to Poland.

Surprisingly, she received moral support from the Russian women she happened to know, and who were in Oman for reasons like hers. These women encouraged her to keep fighting, to use her knowledge of Arabic and English to find someone influential who would support her attempts to keep her daughters, and stay in her house. By a stroke of luck, she found such a helper. He had been once an officer of the Polish Army in Exile which fought under British High Command in WW II. In Oman, he was the private secretary to a minister in the government of the Sultan. After he had talked to his boss, Aurelia received the permission to stay in her house and keep the daughters.

When I knew Aurelia, she seemed to have arranged her life very well. She had an office job in one of the ministries, and she was earning enough money to spend her vacations in Poland, to send her daughters to a good school, and to keep a Philippine servant girl. Aurelia was demanding fiercely from her daughters that, apart from English and Arabic they should also speak correct Polish, which they did.

Aurelia never resumed contact with the Polish wives in Oman. I will never forget a Christmas party in her house, where I could not join any conversation, because all the talking was either in Arabic or in Russian. At 60, I was not keen to learn two more languages. This too might have been another reason why I did not marry Aurelia.

29. Among Expatriates

During my 11 years in Oman I spent many a weekend on the beach of the exquisite Al Bustan Hotel, sitting under palms, reading books, swimming, or sailing a dinghy. We heard that there are sharks, but there were no reports of any bathers having been attacked. Occasionally a shark would bite the hand of a fisherman, but this hand might have been holding a fish, and apparently, such attacks happened only further out at sea. So we assumed that near the beach we were safe from those beasts. What I did not know was that at night the sharks come much closer to the shore. One evening we swam out (actually from the neighbouring beach Bandar Jissah) with my Egyptian colleague Samir El-Seoud, and while already returning, I swam backstroke. Samir was slightly ahead of me, but at a certain moment I seemed to have caught up with him, because swinging out my arm backwards, I hit him rather strongly. I must have given him a good bash over his belly; it felt rather soft and big. I said, "Sorry Samir," and then to my surprise there arose a big turbulence next to me and a fountain of water splashed high. To check what Samir was up to, I turned round and, to my great surprise and horror, I saw him standing already on the beach. It was not Samir whom I had for a companion on my night swim. (I heard later a shark is easily scared away when hit.)

Apart from the sharks, there lived also other potentially dangerous animals in Oman. No one I knew had ever seen there a wild tiger, but biologists claimed there were some – very sparsely distributed in secluded areas. Plenty of people saw scorpions. One evening I stood outside my house chatting to my neighbour, Samir Hanna, an Egyptian geologist. He noticed something creeping along the wall towards my brightly lit open entrance and I remarked jokingly, "perhaps a scorpion." It was one! It had to be killed promptly.

There does not seem to be a custom in Arab countries to keep dogs as pets. In fact, most locals I met seemed to be afraid of dogs. This fear might have had its origin in the past: In a very hot climate, in times when antibiotics were unknown, a dog bite could lead to a bad infection. The free-roaming dogs in Oman appeared mostly in small packs of roughly five animals of a light brown colour (like tea with plenty of milk), and they were not aggressive. Often, wagging tails, they approached white

people, but they would keep a safe distance from non-whites. I believe the former would sometimes give them food, and from the latter the dogs could expect a flying stone. These dogs certainly presented a danger to smaller animals, and I suspect they ate my first cat that once left the house in the evening, proudly walking away with its tail pointing up, never to come back.

Many feral cats lived on the University Campus. During the day they hid from the heat in the shrubs, but in the evenings any food placed for them on the doorsteps was gratefully consumed. A very shy black kitten was coming regularly to me for supper, so I started placing its plate inside the house, first close to the doorstep, then deeper and deeper inside my residence. In the beginning, the kitten was so shy that at the slightest movement of mine, it would dash out through the open door. Ultimately though, it became my cat, and it lived with me for many years. The cat would sit on the desk, where I was working, and I felt less lonely. It liked to be stroked, but it would not allow itself to be picked up. For a long time, I was the only person the cat was not afraid of. I called her "Kota" because the Polish name for cat is "kot" and it was a female. (Much later, I discovered that the Arabic name for a female cat is in fact "kotta".) She had very long legs, long pointy ears and a narrow triangular face. She reminded me of the cats immortalized in ancient Egyptian sculptures.[20]) I allowed Kota to have kittens once (afterwards she was spayed). The six little siblings were simply terrific to watch in their games all over the house. I took lots of photographs, and when the time got ripe, I placed the best of these pictures on supermarket bulletin boards. Almost immediately five of them found homes. The last one stayed a bit longer with Kota and used to sit on top of its mother like a rider on a horse.

This last kitten was taken by Lucy, one of the Philippine secretaries at the University. The kitten was a female and I had to promise Lucy (who had no car) that when it grows older, we shall take it to be spayed. Then we took the little cat to the vet, but for a reason I do not recall, we did not go to the government establishment where Kota was treated, and instead we drove to a small private veterinary clinic. But the little feline somehow could not recover after the surgery. Days passed, its condition worsened, we went back to the vet who gave the cat some medicine, but nothing seemed to help. Then Lucy phoned me and said the cat was dying. In

[20] When I left Oman, I took Kota to Poland, where she lived for many years with my mother-in-law. There she lost all fear of people and was admired by many for her noble features.

desperation, I started asking people for help and I was told to contact the professor at the Animal Science Department of the University, an Englishman. He was just about to quit work in Oman and I believe it was his last day in the lab when he opened the cat and found its intestines sown together and badly infected. He did his best, yet gave the cat only a very small chance to survive. The evening came and I felt rather bad about the whole situation. I could not fall asleep. Finally, I dozed away and I had a dream: The cat was walking towards me, and with a characteristic short purr, it jumped on top of a table. The dream put me at peace and I went to sleep. Next morning I phoned Lucy. The cat was fine and recovering well. And I have learnt which veterinary clinic to avoid.

The feral cats on the University Campus had one great friend, Delia Taylor. She taught English. (All students were obliged to take English language courses). Delia would drive early in the mornings to the nearest small town, Seeb, where small fishing boats landed on the beach to unload their catch. Bags of very little fish were sold there, and Delia would take these to the University Campus to distribute these small fish among the feral cats. The animals knew the sound of her SUV, and they would leave their hiding places when they heard her approaching. She was even able to catch some males and have them neutered, to control the population.

Delia considered cats to be better beings than humans, she had six in her house and she was determined to help cats, whenever this was possible. Fortunately for these felines, it was believed that Prophet Mohammed liked cats and thus His Royal Highness Sultan Qaboos prohibited killing them. One day Delia got a letter from the Vice Chancellor of the University, asking her to stop feeding the homeless cats on the Campus. She wrote back she would do it, provided the Vice Chancellor takes over the task. She was not fired. Yet the University wanted to control the cat population, so traps (cages with fish) were placed, some cats were caught this way and then driven out to the desert – to die of thirst and starvation. Once, when Delia saw a truck full of cages with cats leaving the University Campus, she overtook the truck, blocked the road with her vehicle, jumped out of her car, climbed up the back of the truck, opened all the cages, and released the prisoners. [21]) It must have been a sad day for the feral cats of Oman when Delia left the country (with six cats only). She departed a year after I did and settled in France.

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[21] Of course, the Indian driver and his assistant did not dare to touch a white lady.

I helped Lucy to acquire a cat, yet of a very different nature was the assistance I once rendered to another secretary, Tessie (Teresita Tampus). I knew Tessie well, because for a long time she worked in the Department of Mathematics and I had daily contact with her, sometimes bringing her some work, or asking for information, etc. A few years after she had already moved to another post at the University, she turned up unexpectedly at my home, all in tears, asking for help. The issue was as follows. Hoping to make some money, she invited a music and dance group from the Philippines to perform in a hotel where she booked rooms for the dancers and a hall for the performance. But fewer spectators turned up to the show than she had expected, and after having paid for the lodging of the visitors, she had no money to buy their return tickets. She claimed to have money enough in the Philippines, but the transfer procedure would take at least a week, whilst the hotel bills were mounting. She asked me for a short-term loan of $2,000. This surely would not have been a problem, but the bank was already closed, and in the evening of that very same day, I was departing for my summer vacation. From the money I had at home, I scraped together about $1,000 and then we drove to the teller machine, where I intended to take out $1,000; however, this proved impossible: the daily limit was $500. I was very sorry that I was unable to lend her more than $1,500 and she promised to pay it all back to my account two weeks later. When I returned from my vacation, I discovered that no money had been paid into my account. There was no trace of Tessie either. Then I learnt that, having borrowed money from various people (the total amount was never disclosed, though people estimated it was in excess of $30,000), she flew to San Francisco and was never heard of again. One may wonder if, after such a spectacular start, Tessie ever became a very prosperous businesswoman.

Loneliness is generally considered to be a very unpleasant feeling. In Oman I was at times extremely lonely. My mathematical career, recently resumed, brought me in contact with only very few people and these were far away. (Letters from Oman took a long time and e-mail was not yet used). Contacts with students were formal and restricted to the teaching of elementary mathematics. This is how it was supposed to be. Most of my colleagues at the University did not come from Europe or America, so my contacts with them were limited too. Anyway, often they had their wives and children in Oman, and they devoted their out-of-work time primarily to family life. So I called my stay in Oman a “well-paid exile.” There were times, when having delivered my last lecture on a Wednesday afternoon, I came home and for the whole

weekend (Thursday and Friday), I would not speak to any other human being. Such abundance of peace and quiet was very restful, it was conducive to mathematical research, but it created problems. The foremost was often the lack of motivation to do anything whatsoever (exacerbated by the heat, for even with the AC full on, I often could not bring the room temperature below 28ºC). All my important activities were related to Europe or USA, but many months had to pass before I would be allowed to travel again to these countries.

In this situation, there loomed a real danger of wasting my time on irrelevant and escapist doings. To avoid this, I often proceeded as follows. I would make a list of the possible things to do. The length of such a list was variable. For example, it could read as follows: write a letter, listen to a BBC program (I had a short wave receiver), read a particular book, go for a swim, study a research publication, work on an unsolved problem, prepare a lecture, or study Spanish. In this example there are eight items. I had a small programmable calculator capable of producing random numbers, and I programmed it so that upon the input of the number 8 it would return a number *randomly chosen* from among 1,2,…,8. (At any other input of a number N, it would select *at random* one of N possibilities). So, if the calculator would select the number 3, I would embark on the third activity, i.e., read the book. In general I allowed myself only 32 minutes for any particular activity so chosen. (I liked 32 because it is 2×2×2×2×2). Even if some engagement did not attract, it was not too hard to devote to it my attention, knowing it would last only 32 minutes. And things got done that way.

As foreigners, we had *no rights* in Oman, but we had various *privileges*. So there was the privilege of driving a car (European driving licenses were automatically converted to Omani ones), buying alcoholic drinks (strictly rationed), visiting the neighbouring Emirates, or inviting guests from abroad. To alleviate my loneliness, I would occasionally invite a woman I had met during my summer vacation in Europe or America. Such visits were not always very entertaining because sometimes I did not know well enough the person invited. Also, the visits were of short duration, because my guests could not leave their work for too long.

Notable exceptions were Marie, a Colorado rancher, and Halina, a Polish mining engineer. I met

She was 15 years my junior and I met her on one of those occasions when I was visiting my mother in Poland. Halina was a bit of a workaholic, so when I invited

her to Oman, she had accumulated four months of unused leave. Moreover, her boss had just tricked her out of a large sum of hard earned money, so she felt bitterly disappointed and wanted to forget it quickly. She was a quiet girl, had a smattering knowledge of English and was keen to join me in all my activities, even in the marking of mathematical tests (which was done by applying a fixed scheme).

Once, when we were walking in the evening through the crowded streets of the town Seeb, I chose to illustrate to Halina how isolated we were and I promised to pay her $10 for each sighting of a white face during the following hour. Having mixed with the crowds for almost an hour, and not seen a white face, we sat down in an open air restaurant to have a snack. And then, one of the Omanis, in a long white dish-dash, stepped out of his SUV, approached our table and said in perfect Polish: *Jak się masz Stasiu - jak zdrówko?* This was a familiar Polish greeting between good friends (”How are you Stash - how is your health”). It turned out that this was someone who had studied electrical engineering in Poland, and whom I had met a couple of years earlier. He had a Polish wife and occasionally I was a guest at their house. Although the white face was only by proxy (his wife), I parted with $10.

In March 1997, His Majesty granted the Protestant Church in Oman (run by an American Priest) a permit to conduct marriages. Ours was the first. We lived in Oman until the end of the year – my last year in the Sultanate.

My departure from Oman was indirectly related to a scandal involving the dean of the College of Science where I worked. Apparently he had homosexual inclinations, and some students were involved. So he was fired. We did not regret seeing him go, for he was a devious type, always scheming to increase his power. He was not an academic but merely a politician. His incompetence and inefficiency were obvious to us but less so to the Omani administrators, whom he tried to please in all possible ways.

The new dean was a (white) South African, and he seemed to be a very open and friendly person. But it soon transpired that he too was mainly concerned with securing his big salary. Part of his scheme was to replace the professors of the college with his friends, assuming these would subsequently support him in all respects. He had to fire us first. Various reasons were invented. In my case, it was my age and the climate: I was approaching 65 and Oman is one of the hottest countries of the world. It did not help that in the recent years I had published good research results; a New York foundation gave me an award for scientific achievements; the University

promoted me to full professorship; the students liked me very much, and I was writing a mathematical book jointly with Jan Mycielski. Like all other non-Arab mathematics professors, I was fired too.

Six years later, a friend wrote me from Oman that the appointment of the dean from South Africa had been disastrous for the College. Academic activity had almost ceased, because nobody wanted to work for him. Due to his bad reputation and poor advertising policy, it became difficult to appoint new staff. Fortunately, he was soon to be replaced by a very able Omani scientist.

30. In Poland and the USA

We moved all our things to the house in Wrocław (Poland) that Halina had shared with her parents for the first 50 years of her life. But a problem arose with the car. This was an almost new SUV, so instead of selling it in Oman, we brought it to Poland too. In 1997 many Polish roads were still in a very bad condition (a legacy of the communist past), thus an SUV seemed to be an ideal mode of transport. On the day of completing the import formalities, we tarried for a while in the city and were driving to our suburb late in the evening. There were not many cars in the streets, so I noticed, just casually, that one car behind us had three lights: two headlamps and one sidelight. After we turned into another street, I saw in the back mirror that a car driving behind us had three lights. "Must be the same one," I thought. There was still nothing unusual about this, as there were plenty of houses nearby and someone else was obviously returning home. The next side-street, somewhat narrower, was ours. We took the turn and that car took the same turn. Our house was right at the end of this narrow street, so I was sure the other car will stop somewhere on the way. But it did not. Now our suspicions were raised. Fortunately there was still a possibility to turn right at the end of the street and that's what we did. Three further right turns brought us again exactly opposite our house. The other car followed us all the time. Having heard many stories of car robberies, we had no doubt: the people behind us were after our vehicle, either to take it when we stop or to find out where we live and steal it later.

We had no choice but to drive back to the city. Our "friends" followed us all the way, until we passed the armoured cabin at the entrance to a heavily guarded car park. They stopped outside its perimeter (an electric fence) and observed us from some distance. On our cell phone (still a clumsy big machine those days), we called for a taxi and got home without being trailed. I have to admit that, when I had to stop at traffic lights and the three-light car was just behind us – otherwise the street being devoid of traffic – I had the inclination to put my heavy diesel SUV into reverse and press the acceleration pedal to the floor. This, of course, would have been very stupid,

because trailing another car is not prohibited in Poland; moreover, there was a big chance the police were good friends of the prospective robbers.

Our SUV made only two more trips in Poland: in broad daylight and in dense traffic from the aforementioned guarded parking to the indoor garage of the house I had inherited from my mother, and then from there to the German border. This last drive was done a year later by two friends, who said they were trailed too.

Had it not been for the defective sidelight of the car following us on the first evening, I most likely would not have noticed it. And then our SUV could very well have enjoyed a glorious future ferrying some mafia boss along the streets of Moscow or serving a like figure in far-out Siberia[22]).

We now had this problem: where to live and what to do? The small town of Boulder in Colorado seemed to be an obvious choice. Jan Mycielski resided there and from previous visits with him I got the impression that this was a very good place to live. The climate is nice; big and beautiful mountains are nearby and the people are friendly. Going to America promised to be also advantageous for Halina: She could polish her English and learn to drive. However, the University had no regular job for me: I was over 65 and, in spite of having written a few good publications in Oman, I never became highly specialized in any particular area of research. So the Department did as much as in these circumstances it could: I was given an office room and library privileges, and we were allowed to move into inexpensive University Housing. For one semester I was a visiting professor, with a proper salary, and later I was loosely described as a "visiting scholar." During this time, I also did some regular teaching, until the expiration of my US visa that allowed me to take employment.

In Boulder, I had very good working conditions and two projects were completed. The first one concerned probably the most famous theorem in logic, the so-called Second Incompleteness Theorem of Kurt Gődel. Many proofs of this theorem existed in the mathematical literature, yet none of them seemed to be complete. Due to overbearing difficulties in notation, all authors skipped some parts of their proofs (describing in general terms what should be done), whilst leaving the details to the mathematical imagination of the reader. I found this situation unfair to the student and unsatisfactory in general and I began to look for a proof that could be

[22] Car robbery in Poland has noticeably decreased since those days, largely because of tightening the controls along the borders with the former Soviet Union.

written down in detail, without omissions. A new approach was suggested by Jan Mycielski. It took me three years to find and write down the desired proof. It was published in *Dissertationes Mathematicae* in 2003.

The second project I had the good fortune to complete was a translation into Polish of 584 sayings of Nisargadatta (from the book *I Am That* which Roger Campagnac brought me once to Los Cristianos). I thought that if the teaching of this Indian Master did help me to overcome many vicissitudes, then it could be also of some help to a few people in my country of origin.

After 1997, Halina and I visited Poland annually, but the prospect of settling there for good held little attraction for me. In fact, I could not help feeling that during the nearly 40 years of my absence the evident material progress in Poland had not been matched by an improvement of the quality of human contacts. What saddened me most was a noticeable deficiency of natural and mutual trust. Accordingly, I decided to give a good example and show people how to trust each other. The following three stories illustrate that there was no lack of opportunity to exercise my newly found hobby (see also the end of my marriage).

Once, at a petrol station, a young couple approached us, asking to lend them money, so they could reach their home. Their car was powered by natural gas and also by petrol. A leak caused the natural gas to escape, and now they needed petrol. I lent them $15. The couple promised to turn up at an appointed time and place to repay the loan but they never did.

Another day, someone introduced himself as a student, saying his wallet had been stolen from his car, and as the academic year was just over, he had to leave the student digs to return to his family home. But all his friends had left already and he needed to fuel his car. I lent him a few dollars, he took the address and telephone number of my mother-in-law, and he even allowed me to photograph him. I never heard from him again.

My third example introduces an intellectual whom I called the *Archangel* (his first name was Gabriel). This was a poet who owned a small publishing company (*Arhat*), devoted to “serious” literature (like less-known stories by Franz Kafka). He seemed to be enthusiastic about my Polish translations of Nisargadatta’s sayings but he was broke. So I lent him the money to publish 2000 copies of my work. Sixteen months later there was still no trace of the book. In the meantime, I became friendly with some people who knew Gabriel well, and they assured me that he had already

spent all the money I had lent him. He was still planning to bring out my translation and was busy looking for some other publishing company that would take over the task – but not the money. Then I decided to relieve him from his "duties" and I asked for my money back. I never saw a penny. Our agreement did not specify any particular time for the publication, so in court my case against him would have been weak. Being fully aware of the leniency of Polish judges, who typically classify such cases as causing "small social harm," he bragged to his friends that I will "never get him." In addition, I heard from acquaintances that the Gabriel was permanently broke. Thus even a court decision in my favour would not yield anything tangible. "You cannot squeeze blood out of a turnip," as the saying goes.

I had no problems with finding another publisher and early in 2007, my translation of Nisargadatta's teachings found its way to the public. Concerning Nisargadatta, I should add that by a strange coincidence, his book *I Am That,* which I have partly translated, owes its existence to a Polish exile Maurice Frydman (1900-1976), who evaded the Holocaust by escaping from Poland in the early 1940's. Then he settled in India, learnt the language Marathi in which the discourses with Nisargadatta were held and translated them from tape recordings into English. It was always Frydman's deep wish to make these teachings available to Polish readership – so his wish has been granted now.

In the USA my SUV saga came to a conclusion. As I mentioned before, some friends had driven the car to the Polish border, having been trailed by an unknown vehicle. Next, I obtained the permission to park the car for one year on the grounds of the CERN Nuclear Research Institute in Switzerland. After that, my intention was to take the vehicle to Holland and store it the disused barn of a friend.

This plan, however, almost did not come into fruition. After collecting the car from CERN, my wife and I decided to take an overnight rest in a cheap French hotel, before driving the next day to Holland. In that place the shower room was next to the public telephone, and while towelling myself, I overheard a conversation, conducted on the other side of my door. It was in a language I understood only fragmentally, but obviously Slavonic. It definitely concerned a car. One sentence struck me, as I seemed to be able to translate it: "Yes they are still here". After emerging from the shower, I checked the hotel parking place: Next to my vehicle, there was a car with a foreign registration plate, and it had a platform-trailer, exactly of the size to fit under our SUV.

Dusk fell and we decided that we had no wish to wake up next day deprived of our transport. So we left the hotel, and, sure enough, we were trailed, until the Swiss border. Then we drove right through Switzerland and checked in (somewhat late) to a German hotel. I had the impression that among all the Guardians of Order, *die Deutsche Polizei* is the most efficient. The prospective thieves of our SUV thought the same.

Next year, when we visited our SUV, standing lonely and covered by cobwebs in an ancient Dutch barn, we took pity on it, drove it to Antwerp and shipped it to Baltimore. There was no problem in obtaining a permission to use the car in the United States, while driving with Polish registration plates, but for one year only. After that, the vehicle had to either leave the country or be imported.

A few months later, I came to the conclusion that importing would not be desirable. This would incur expenses and a loss of time, since the car would have to be "adjusted" to US requirements, by replacing the windows by the approved sort (most likely of lower quality), and possibly fitting other tyres, brakes, and what-nots. "No", I pondered, "if my SUV is good enough to tackle the stony deserts of Arabia then it should be safe to drive it on US highways".

To understand, and perhaps not disapprove of what I did next, the reader must realize that I grew up in Poland at a time when the country was ruled by a communist mafia and there was an unwritten and universally accepted social agreement to cheating the State. In practice, whatever those in authority demanded of us, had to be followed by every possible attempt to avoid compliance. Almost everybody had to work for the State and the standard joke was: "We pretend that we work and the State pretends that it pays". Indeed, the salaries were very low and the dollar/zloty exchange, enforced by the rulers, made a "good" monthly salary exchangeable for about $16. So, slipping into my teenage Polish mode of behaviour, I invented the following way to "legalize" forever my SUV's stay in the USA.

First, I found at the Car Registrations Office an inexperienced clerk, who accepted erroneously the landing bill from the Baltimore harbour as a certificate of importation. Thus I received Colorado registration plates. The next step proved more difficult: within a year I had to provide the US Customs Office in Baltimore with a certificate confirming the vehicle's exportation via some American harbour or border crossing.

To achieve that goal, I found a friend who also grew up in communist Poland and who liked adventures. We drove to the Canadian border, strictly speaking to the ferry leaving USA from the Olympic Peninsula, WA, and arriving in Canada at Vancouver Island, BC. Just before leaving the States, we exchanged the Colorado registration plates for the old Polish ones. Then we legally exported the car, which was officially certified by the US Customs in Port Angeles. After entering the ferry we stayed with the car below decks just a bit longer than the other drivers, to replace the Polish registration plates by those of Colorado.

From then on it should have been “plain sailing”. Well, not quite. The plate replacement encountered problems with two drivers. First, there was a lady in a vehicle parked next to ours. She also stayed behind, long after the other drivers had left, because she had to paint her face before emerging on deck. It was not advisable to let her see our changing of plates. Finally she was gone, and we did our (well prepared) job, to happily join the other passengers. Then, after having arrived in Canada, we went down to the hold to fetch the car. And my heart sank: behind the vehicle stood a uniformed fellow with his eyes glued on my registration plate. Upon closer inspection, his uniform proved to be that of a forester, yet danger began to loom. I approached him with a broad smile, and we started conversing.

He: “I see, you have changed your registration plates.”

Me: “Yes sir, I must congratulate you on being very observant. The reason is my insurance; the car is registered in two countries simultaneously, but only the US insurance is comprehensive”.

This was a lie, but he swallowed it, or at least pretended to have done so. He proved to be a decent fellow and did not inform the Canadian Customs that a car changed nationality “at sea”. Next day we took the ferry to Vancouver. The land border between Vancouver and Seattle, with the Polish plates hidden deeply inside the car, presented no problems.

Do I have qualms about this (hopefully last) cheat of mine? Not really. I have spent hundreds of thousands of dollars of my Omani savings while we lived in the USA, and I preferred to spend the money on activities which promised to be more meaningful than destroying a perfectly good and almost new car.

31. Farewell to the USA

We lived in America twelve years. Our original intention was to settle there. This was based on my outdated and limited impression of that country I had gained during my stay in the mid 1960s. Those days, the economy was in bloom, jobs were plenty and everything seemed to function well. That picture of a healthy, affluent and easy going society was erroneous even then, and after my second arrival to the States in 1998, it began to disintegrate.

The moneyed Americans can have a comfortable life, and we were feeling in that category. Indeed, never before and since did I have so many assets as just after finishing my work in Oman. I had my money invested mostly in property, thus I possessed a new apartment in the centre of Amsterdam, a new house in Longmont (a township near Boulder), and an apartment in Boulder (of which, at the time of purchase in 1999, I gave immediately one half to Halina). Add to this an apartment in Poland I inherited from my mother.

For the first two years of our stay in Boulder, I held the appointment as Visiting Scholar at the University of Colorado, and Halina took a job in a department store to improve her English. Our future looked bright and I applied for permanent residence. At that time I was already at retirement age, but Halina, 15 years my junior, was planning to work as a mining engineer. For this, and a continued stay, we needed the so-called “green cards” (permanent residence).

The process of obtaining the green cards dragged on for years. Firstly, I had to collect recommendations from colleagues all over the world telling the Immigration Services that I was an excellent scientist (!) and it would be advantageous for the USA to let me immigrate. But mathematicians are often conceited. My old professor, Hugo Steinhaus, was of the opinion that if a problem is given to a group of non-specialists, the mathematicians among them will come up with the best solution. Because of such *Besserwisser* abilities, some of my colleagues would sometimes provide opinions that in their view were excellent, but flawed in the opinion of my Immigration Attorney.

Finally, all recommendations were in, but by that time Islamist Fundamentalists destroyed the World Trade Centre in New York (2001), President

G.W. Bush declared “War on Terror”, and the FBI was instructed to conduct assiduous checks on all immigration applicants. Thus, although the Immigration Services approved my application in a record time of less than three weeks, the FBI kept refusing to give me clearance. Congressman Mark Udall (D) got interested in my case, but it was not until Obama took over the Presidency, and Udall became Senator, that the FBI gave me “green light” (in 2009).

The delay in obtaining our US residence permits caused us to lose precious years during which Halina, still below retiring age, could have worked as a mining engineer. (She even attended courses at the Colorado School of Mines in Golden, near Denver, to brush up her knowledge). The extra income would have easily balanced our finances, but this never happened. We lived on a par with our upper-middle class friends and I had to sell one property after another in order to maintain this life-style. This “style” included yearly visits to Poland, sometimes lasting for up to half a year, where we attended to all our medical problems, renovated the house of my mother-in-law (which was of the same age as I, and thus in need of repairs), etc. We had two cars in Colorado, kept another one in Poland, and one can say that we had a double existence: in Europe and the USA.

Unfortunately, we also had a double existence in another sense: Halina and I were living in different worlds. My efforts at building a bridge between these were repeatedly collapsing. Halina seemed to be so confused, distrustful and insecure that she would immediately interpret any attempt of mine at finding some shared values or goals as a criticism of her behaviour. Such conversations would quickly and inevitably end with her exclaiming, “Again you want to destroy me!”

Our contact was nil. I began to see that having a fat bank account would have been much more preferable to Halina than a husband who was somewhat reluctant to spend his dollars on stilling her insatiable hunger for pleasures and acquisitions. At the same time, she seemed to cling to me like a child, unable to face the world with courage and responsibility. Finally, our marriage became almost a father-daughter relationship, with the father too stingy to support gladly the daughter’s spending wishes, and the daughter refusing to mature. As a temporary situation, this would have been acceptable. Many families must have passed through such a stage, until the daughter would grow up, and/or leave the family home. I could not hope for anything of that sort: Marriages are supposed to last “until death us do part”. Of course, I was free to leave, but how could I abandon a child clinging to me, for whatever motives?

It seemed I was stuck in an energy-draining and very unsatisfactory relationship. Then rescue arrived in the form of dollars, or rather their lack. For, not only was the marriage draining me of energy, it was also draining me steadily of the money I had saved while working in Oman. We had the coveted “green cards”, but American economy was already suffering the recession triggered off by the financial (sub-prime mortgage) crisis of 2007. Thus Halina never found work as a mining engineer. In effect, by 2010, I was left with just (half) the ownership of the apartment in Colorado in which we lived, and barely enough money to continue our hitherto life style for at most three years. And what then? A personal financial crisis to match the national?

The USA is a not a country where an impoverished octogenarian should immigrate. People of this kind are not welcome. This has to do with US politics, both the external, allowing colossal military expenditures, and the internal, favouring a grossly unequal wealth distribution and offering almost no support to the poor and unemployed.

A personal financial crisis had no attraction for me, and there was only one country that could save me from it: Australia. I knew that when my income (from bank deposits a small pensions collected from Canada, Holland, USA and Poland) would drop below a certain minimum, the Australian State will give me an Old Age Pension and free medical care. I did not need more than that!

Halina would not agree. She had a Polish pension, and all her friends and family lived in Poland or Colorado. Starting a new life far from familiar places, and without assurance that I would continue funding her annual visits to Poland, was not acceptable to her.

In effect, we parted in January 2011, when I boarded a plane for Brisbane, and Halina stayed in Colorado. I gave her an authorization to sell our apartment, and a certain amount of cash, roughly equal to 6 (six) years of her Polish pension (which she was receiving from the State for having worked for more than 30 years as an engineer). But instead of selling the Colorado apartment, Halina rented it out, and then went to Poland for half a year to live with her Mum. Then she came for half a year to Australia. We looked at apartments in Tasmania, where property prices were lowest, but came to the conclusion that nothing acceptable could be bought from the money I had. I still needed the income from selling my half of the Colorado apartment. So Halina flew there in order to conduct the sale.

Having sold our apartment, Halina decided that it would be more profitable for her to keep all the money and stay away from Australia. Thus ended our marriage, almost 16 years after we made the vows in the little Protestant Church in Oman.

I have been living by now for several years in Tasmania. Here I met some wonderful people, enjoyed beautiful landscapes and found many new engagements, including meditation – as never before. But that's another story altogether.

Having started this writing with a dictum of Sri Nisargadatta Maharaj, I can do no better than conclude likewise:

> ***After all, what is there to remember? A flow of events, mostly accidental and meaningless. A sequence of desires and fears and inane blunders. The person is but a shell imprisoning you. Break the shell. Reality is beyond consciousness.***

32. Postscript: Theorems only

The previous chapter must of necessity remain unfinished, because the future is unknown. But one chapter of my life seems to be closed for good: my persistent attempts to prove new mathematical theorems. This type of activity has been of a very special nature. It made me dwell for many thousands of hours in a world, accessible only to those who have learnt the exact vocabulary of mathematics, a world apparently enclosed within itself, sufficient unto itself and perhaps even able to exist beyond matter. Of course, the last statement must be taken with a grain of salt; mathematics was created by our very material brains, organizing themselves due to their contacts with the material world. Yet without a doubt, the mathematical activities of the brain appear to be independent of the rest of its involvements. So one can ask, how central and important should be the place allocated to them in the lifespan of one human being? Various individuals have given to this question various answers.

There was Paul Erdős, a mathematical genius, who devoted all of his life to proving theorems (and presenting his proofs at seminars). He worked until the moment of his death, when he collapsed while writing on the board (at a Warsaw seminar). Erdős was a Hungarian Jew and while I was still a graduate student in the 1950's, I acted as his interpreter (English-Polish) whenever he visited my university. A great many anecdotes were in circulation about his very peculiar and very charming personality. For instance, he had his own vocabulary, which he applied quite consistently. Thus, instead of saying "child," he would say "epsilon" (because the Greek letter ε is mostly used in mathematics to denote small quantities). The word "God" he replaced by "The Great Fascist," and when someone ceased to be creatively involved in mathematics, he was designated as "having died." (This led sometimes to misunderstandings.) I heard that Erdős very much liked epsilons (the human sort) and he was also warmly interested in the family lives of his friends. He had many friends, because universities all over the world sought the privilege of his visits, be it for a few days, weeks, or months. Any such visit would give a fresh impetus to the research work done at the hosting institution and inspire the young and the old in their quest to seek and solve new problems. Often joint publications with Erdős resulted (509 such

have been counted). Accordingly, playful mathematicians have invented the so-called Erdős number, indicating one's co-authoring distance from Erdős. All the mathematicians who have co-authored a publication with Erdős are assigned the number one, all those who don't have number one but have co-authored a paper with someone who has number one, are given number two, etc. (My number is three.)

As I have mentioned earlier, I have been mainly a problem solver, always trying to find proofs. This activity was very much like that of a climber confronted with the self-chosen task of ascending a rock face and finally reaching the top, provided his imagination suggested a feasible route, and his strength, endurance, and good luck allowed him to realize his goal. For me, finding a proof, sufficiently difficult to merit publication, meant always a stroke of good luck. There is a Polish saying, "He succeeded like a blind hen that found the grain." Whenever I found a new proof, I always saw myself as such a lucky hen. For the reader who might wish to see what kind of issues have occupied my mathematical mind, I have given below four examples of problems that for a while resisted solution by others and then were cracked by the "blind hen." These are presented in a non-mathematical language; hence, of necessity, somewhat vaguely.

Euclid and Descartes

When I visited Colorado during my first summer vacation from Oman, Jan introduced me to a new concept in logic, largely invented and developed by him and his friends. The name of the game is *interpretations*. This name is very suitably chosen, for it associates with the idea of translation work done by interpreters. In mathematics, this concerned translating one theory into another (or a part thereof), while the requirements were more strictly specified than for interpreters of human languages. In particular, mathematical interpretations had to be absolutely effective; that is, their rules and principles had to be so clearly defined as to be, at least theoretically, within the learning capabilities of a machine (computer). No aid from a third theory was permitted when one mathematical theory had to be interpreted into (translated into a part of) another.

Before proceeding further, I should say a few words about the general concept of a mathematical axiomatic theory, to be called here shortly a **theory**. A theory has three ingredients: its language, its axioms and its theorems. The language is composed of the logical symbols (common to all theories) and of the symbols characteristic to the given theory. The axioms of a

theory are statements regarded as fundamental (mostly, intuitively evident). Axioms are chosen somewhat arbitrarily, but so that all those statements, one wishes to adopt as true, are logical consequences of the axioms. Once a statement is shown (proved) to be a consequence of the axioms, it is called a theorem. (In particular, the axioms are also theorems.) In a philosophical sense, and for many applications, a theory is fully described by its language and its axioms.

Historically, the first theory to appear was *geometry* (now called *Euclidean* to distinguish it from other geometries), dealing with points, distances, and figures composed of points. No important theory was ever created by specifying first its axioms; in fact, any attempts to select the axioms can begin only after our knowledge of the subject has grown to a considerable size. Thus, by the time Euclid wrote down his axioms (very primitively, from the modern standpoint), many geometrical facts were already known. The precise definition of Euclidean geometry (selection of language and axioms) was worked out by David Hilbert (1862–1943), and in a more modern fashion, by Alfred Tarski (1902–1983). For *number theory* (dealing with the numbers 0, 1, 2, 3, …), the first one to propose a set of axioms was Giuseppe Peano (1858-1932). Somewhat later there arrived on the scene *the theory of real numbers*. These numbers can be thought of as the mathematical tools for measuring lengths, areas, volumes, and physical quantities like time, temperature, mass, etc. They had been used for centuries before mathematicians ventured to describe a theory encompassing their essential properties. The exact definition of what should be meant by the theory of real numbers is a matter of choice, depending on which of the multitude of properties of the set of real numbers one wishes to bring to the forefront and which one wants to relegate to some other theory. And then, from among those that are not "relegated," the axioms must be chosen. This work was proceeding gradually during the second part of the 20-th century and ultimately one particular version of the theory of real numbers has been adopted: it is called RCF – the theory of *Real Closed Fields*.

An interpretation of one theory into another consists of an interpretation of the language of the first theory into the language of the second theory, accompanied by a verification that by this process the axioms of the first theory become (are interpreted as) theorems of the second theory. The strange fact is that almost 400 years before the concept of interpretation was introduced into mathematics, and before Euclidean geometry and the theory of real numbers (RCF) were precisely described, the philosopher-mathematician René Descartes proposed an interpretation of the first theory into the second; moreover, this interpretation proved incredibly useful for the development of physics and engineering. Descartes interpreted a point in 3-dimensional Euclidean space as a row of three real numbers, and he did this by a procedure now well known to scientists and engineers: the three numbers are called the Cartesian coordinates of this point. In this way geometrical figures (sets of points) became sets of triples of numbers and these sets could be described by equations. Consequently, lines, planes, spheres, etc. were translated into equations, and geometry became a part of algebra. The resulting algebraization of space was absolutely essential to the work of scientists and engineers in the centuries to come.

During my first summer leave from Oman, Jan told me about a question, he and his colleagues were unable to answer. It ran as follows: "Does there exist an interpretation of the 3-dimensional Euclidean geometry into the theory of real numbers (RCF), where every Euclidean point would be interpreted by two (a pair of) real numbers, instead of the usual row of three?" This

was a very precise question, because both theories and the idea of interpretation were rigorously defined. After a few months of work in Oman I came up with the answer. It was: NO. The interpretation discovered by Descartes cannot be improved; in other words, a reduction from 3 to 2 is not possible. Mathematicians love generalizing, so to complete my work, I had to prove the more general theorem: if k < n then there does not exist an interpretation of the n-dimensional Euclidean geometry into the theory RCF such that every Euclidean point is interpreted by a row of k numbers.

Racing with Alan Stern towards the Connectedness of RCF

During another summer leave from Oman, I was presented with a very interesting document: the recent Ph.D. dissertation of Alan S. Stern. The work was entirely devoted to interpretations (in the sense discussed above). It was a joy to read the script, for it was elegantly written and it included many sophisticated and difficult proofs. However, there was a problem, a seemingly important one, which remained unsolved.

Let me describe the problem. Consider any two mathematical theories A and B and suppose each of these theories is expounded in a book. So we have two books. If someone reads both books, more or less simultaneously, trying to learn both theories, he might get into trouble very quickly. Because some object of the theory A might be denoted in the respective book by the Greek letter δ, whereas in the theory B there might also be an object, denoted by the same letter δ, but these two objects considered by these two different theories might be quite different. One way to avoid confusion would be to change the notation in the book describing the theory B, and replace the letters and symbols naming various objects of B by letters and symbols that do not occur in the book describing the theory A. (Symbols belonging to the universal language of pure logic should remain unchanged and be the same in both books.) After those changes, there would be no harm to combine both books, the one for A and the new (with changed notation) for B, into one volume composed of two parts. In fact, some newcomer might view the new thicker volume as describing one theory, albeit presented in two parts. No important mathematical theory splits in the above fashion into two non-overlapping parts (each being a theory in its own right). But new possibilities arise, if we consider interpretations. First of all, let us denote by A+B the theory expounded in the thicker book (where the second part contains the theory B, with changed notation). This theory A+B deserves to be called *disconnected*. Next, let us call two theories *interpretationally equivalent* if each of them can be interpreted in the other. The name is justified by the fact that such two theories have the same expressive power: whatever can be said in one of them, can be also said in the other, albeit after a translation into the other language. It is now natural to extend the concept of disconnectedness, so that a theory interpretationally equivalent to a theory like A+B is also called disconnected. For a mathematician it would be natural to ask whether the important theory RCF of real numbers is disconnected. One should expect it not to be

so, for if disconnected, RCF would be interpretationally equivalent to a theory of the form A+B and the (of necessity simpler) theories A and B would have been discovered long ago. The problem was posed already at the early stages of interpretability exploration, and then it was published in a paper co-authored by Jan Mycielski and Alan Stern. I devoted many an hour in Oman to attempts at finding an answer. To my enormous surprise it appeared one day that my constructions led to a complete proof: RCF was indeed not disconnected!

My proof was long and complicated, so to make sure there were no mistakes in it, I wrote it up as a complete publication, ready to be sent to the editors of a journal. I used a slow, presently outdated word processor for writing mathematics, but I was not n a hurry; after all, the question had been posed about ten years earlier and nobody came up with a solution, so probably no one was searching for it. How wrong had I been! When I had my paper fully typed, and I found no mistake in it, I proudly faxed to Jan in Colorado the message that I had a proof that RCF is not disconnected. Jan called me back immediately and told me that on that very same day he had received a message from Alan Stern; the latter had just obtained the same result.

A few faxes later it transpired that Alan's proof will be shorter, although it was not yet written in the final form, ready for publication. So it seemed that I was not going to publish my proof and my euphoric state was replaced by disappointment. Still, assuming Alan might be interested to see my efforts, I wrote down my proof in outline (being certain that Alan could fill in the easier details), and I sent this to him. After some time he informed me that: (a) when he started to write his proof in detail, it turned out to be longer than he had originally expected, and (b) both proofs (his and mine) can be combined to yield one proof, shorter than both. So we published a joint paper.

It never ceases to astonish me how the two of us, barely knowing about each other's existence and living on opposite sides of the globe, would *on the same day* come to the conclusion that we have solved a problem posed ten years ago. Perhaps ideas swirl in some mental space and when the time ripens, they make themselves accessible to our brains, wherever these might be located.

The infinite Games of Steinhaus

Not many people know that in the game of chess, one of the players has a strategy telling him how to proceed, so he never loses a play. This strategy is not known, we do not even know which of the players (the one playing with black, or the one with white chessmen) has such a non-losing strategy, but the existence of such a strategy can be proved by purely theoretical considerations.

This situation is a special case of a general theorem about two-person games, where the players make alternate moves (obeying specified rules), while they have perfect information all the time, so that the status of every play at every moment can be seen by both players. The theorem says that in such case one of the players has a non-losing (win or draw) strategy. With one more

proviso: the game should be essentially finite; meaning, there must be an upper limit on the length (number of moves) of all permissible plays. This latter condition can be fulfilled by agreeing that no play is allowed to last longer than a prescribed duration of time. (Of course, the maximum permissible length of the plays could be chosen so large as to be of no practical significance.) Games like this are called *finite two-person positional games with perfect information*, and the (proven) fact is that one of the players has a non-losing strategy. This is technically expressed by saying that such games are *determined.* In the late 1950s, Hugo Steinhaus got the idea to investigate two-person positional games with perfect information, where the players are making their moves in turn, one after another, *endlessly*. For most considerations, the only restriction would be that each player chooses his moves from a once and for all established (possibly infinite) set of permissible moves and that the permissible moves are numbered by 0, 1, 2, 3, … etc. (The need for numbered choices is a technicality, too cumbersome to explain here.) So the players are, in turn, choosing one of the numbers 0, 1, 2, 3, … (whilst respecting the rules of the game), and a play is the infinite sequence of numbers, resulting from these choices. To conclude the description of the game, we have to consider the set of all infinite sequences of numbers, constituting all possible plays, and split this set in two subsets, say subset ONE and subset TWO. Then player ONE will be said to win, when the sequence of numbers, constituting the play, belongs to set ONE, and otherwise player TWO wins. Of course, no play ever stops, so to a non-mathematician it would appear that no outcome is ever possible. This would be a valid objection if one insists that plays are played in real time. But the issue of time can be dropped, if players choose strategies. For suppose each of the players has chosen to follow a strategy: then the players can go home, because the strategies will play against each other, without the need (or opportunity) for human intervention, and the issue of time becomes irrelevant. Having been informed about the strategies of the two players, a mathematician can find enough information about the resulting play (which is an infinite sequence of numbers), to work out which of the players will win the play. (Note that in this type of game, not losing means winning.) In this context, Steinhaus raised the following question: “Does one of the players have a strategy that will always guarantee him a win?” In a more mathematical language, “Is every infinite 2-person positional game with perfect information (and numbered choices) determined?”

Some 40 years ago, we picked up the challenge and jointly with Jan Mycielski we began to look for the possible consequences of the assumption that every game of the above kind is determined. We proved that some of the consequences of this assumption contradicted the hitherto accepted axioms of mathematics. So the whole issue could have been dropped then and there, but Steinhaus suggested something else: drop one of the time-honoured axioms (the so-called General Axiom of Choice), and assume instead that all infinite positional games (as described above) are determined. It turned out that one gets then a “neater” mathematics. For example, in a not quite elementary parlance, one can prove in this new system all linear sets are Lebesgue measurable.

Our discovery pleased Steinhaus very much, and this is how I found my way into his memoirs (*Wspomnienia i zapiski* – apparently never translated into English). We published our findings in a joint paper with Jan and although the latter kindly

proclaims that I found the proof, things are not as simple as that. For, if two people work jointly on a mathematical problem, various approaches are tried, various small discoveries are made and various ideas are tested. Of course there is always one last step to be made, one last gap to bridge, and this is done by one person. But this person can hardly take the credit for solving the problem, because all the work that led up to this last step was absolutely essential – and he might never have been able to do it on his own.

The Steinhaus chains of Pyramids

The vast majority of mathematical discoveries, currently published in professional journals, cannot be described to a non-specialist. Any attempt to do so would soon grind down to a halt, because of the mind-boggling amount of new concepts, names and notational devices that would have to be explained. Of course, there remains a small percentage of recent discoveries, amenable to a description in a story like this, and the next one belongs to this category.

When I was still a young budding mathematician, having just finished my basic university studies, Steinhaus presented to us the following question. Imagine a pyramid built on a triangular base. (Those in Egypt have square bases.) Such a pyramid has three straight edges along its base and three straight edges converging at the top. Suppose all of these 6 edges are exactly of the same length, say, 1 kilometre. (The pyramid is thus almost 6 times higher than that of Cheops.) Let us call this pyramid P^1, where the 1 indicates that it is the *first* pyramid to be looked at. Clearly, its faces (the sidewalls) are triangles of exactly the same size and shape as its base. We imagine now a *second* pyramid of exactly the same size as P^1 (thus, with all the 6 edges 1 km long), and such that its triangular base exactly coincides with one of the 3 faces of P^1. There are three choices for this second pyramid; we select one of these and call the second pyramid P^2. So the base of P^2 is a face of P^1. Before constructing the next pyramid P^3, it is better to do away with the Earth (temporarily), for otherwise a part of P^3 may have to be dug into the ground, which would create lots of unnecessary labour. So imagine our **next** pyramid P^3 to be any such whose base coincides with one of the faces of P^2. There are again 3 possibilities; we select one of those 3 pyramids and this will be P^3. Evidently this process can be continued endlessly. (Though not always all three choices will be possible for the next pyramid, because no pyramid of the chain may enter inside a previously considered pyramid.) The chain of pyramids so obtained may be twisting and curving its way out of our planetary system, out of our galaxy and then, having curled round some further galaxies, it might come back to earth, in fact, ending close to the first pyramid P^1, still standing there. Question: Can a face of the last pyramid in the chain coincide exactly with one of the faces of P^1? Answer: **Never.**

I thought out the proof (using matrices, free groups of rotations, etc.) while travelling on a Polish train. The train was shaking, noisy and filled with tobacco smoke. What else could I do than

close my eyes and think? When I "woke up," my mother, sitting opposite, remarked, "I see you had a good nap." "No," I answered, "I have just proved a theorem." After my paper with the proof was published (*Indagationes Mathematicae*, 1958), the Steinhaus chains of pyramids returned to my life three more times. First, still the same year, the Dutch mathematician Th. J. Dekker extended the result to n-dimensional pyramids (with n > 3). Then, 36 years later, when I was living in Oman, I got a letter from Jan Mycielski. He reminded me that in my 1958 publication I included a remark that my method could also render a theorem of some interest to algebraists. In 1958 I did not pursue the subject further, because my main aim was the solution of the problem of Steinhaus. But it was Jan's opinion that the proof of the algebraic fact, I had once mentioned, is worth publishing, and – please – could I do it? First I got quite worried. How could I recall a proof, I had in mind 36 years ago? This proof had never been written down, never checked – it might have been wrong! But I was very lucky and after a few weeks I could write to Jan that his request will be granted. The corresponding paper was published in 1994 (in the same journal as the 1958 paper). Finally, in 2005 I received a letter from the Italian mathematician Flavio D'Alessandro, informing me that jointly with a friend of his, they had "utilized" my 1994 construction to get another interesting (still more abstract) algebraic theorem.

Mathematical problems have the peculiar property that usually the solution of one problem gives rise to another. So here is a possible continuation of the above pyramid story. Granted then, that the last pyramid in a Steinhaus chain never can have a face in common with the first pyramid P^1, it still may happen that all observations and measurements indicate that these two pyramids do have a face in common. This would not contradict the mathematical result; it would only illustrate the obvious fact that no measurement is 100% accurate. So, a new problem is born: Whatever threshold of accuracy is selected, say, represented by a (small) distance ε, will there be a Steinhaus chain of pyramids, returning to P^1, such that within the accuracy of the distance ε, the last pyramid of the chain has indeed a face in common with P^1?

This problem has been attacked in 2013 by Michael Elgersma and Stan Wagon. They gave an exact description of a Steinhaus chain of 174 pyramids, such that a face of the last one coincides with a face of P^1 so accurately that only an instrument that that can measure distances less than a quarter of a helium atom could detect that this fit is not exact. More precisely, they answered the above question with a YES for ε = 0.019 nm (where nm abbreviates a *nanometre*, which is the distance obtained by dividing 1 metre 9 times by 10, so that 1m = 1000000000 nm).

Yet, in spite of there being now a positive answer to the posed problem for this small value of ε, the general answer (for arbitrary ε) remains unknown [23]). It is hard to tell if anyone will ever want to devote her or his time to finding that general answer. In any case, it is unlikely that this would be easy.

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23 See also: Stan Wagon, Closing a Platonic Gap, The Mathematical Intelligencer (2014).

Academic Appointments

1955-1958	Teaching Assistant	University of Wrocław, Poland
1958-1959	British Council Scholar	University of Dundee, Scotland
1959-1960	Research Fellow	University of Glasgow, Scotland
1960-1961	Senior Research Fellow	Mathematical Institute of the Polish Academy of Sciences, Warsaw
1961-1963	Research Fellow	University of Glasgow, Scotland
1963-1965	Lecturer	University of Sussex, Brighton, UK
1965-1966	Visiting Member	Institute of Advanced Studies, Princeton, NJ
1966-1967	Visiting Associate Professor	University of Washington, Seattle, WA
1967-1968	Senior Lecturer	University of Sussex, Brighton, UK
1968-1971	Senior Research Fellow	Institute for Advanced Studies, Australian National University, Canberra, Australia
1971-1973	Visiting Professor	Queen's University, Kingston, Ont., Canada

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1986-1990	Associate Professor	Sultan Qaboos University, Sultanate of Oman
1990-1997	Professor	Sultan Qaboos University, Sultanate of Oman
1998-2001	Visiting Scholar	University of Colorado at Boulder

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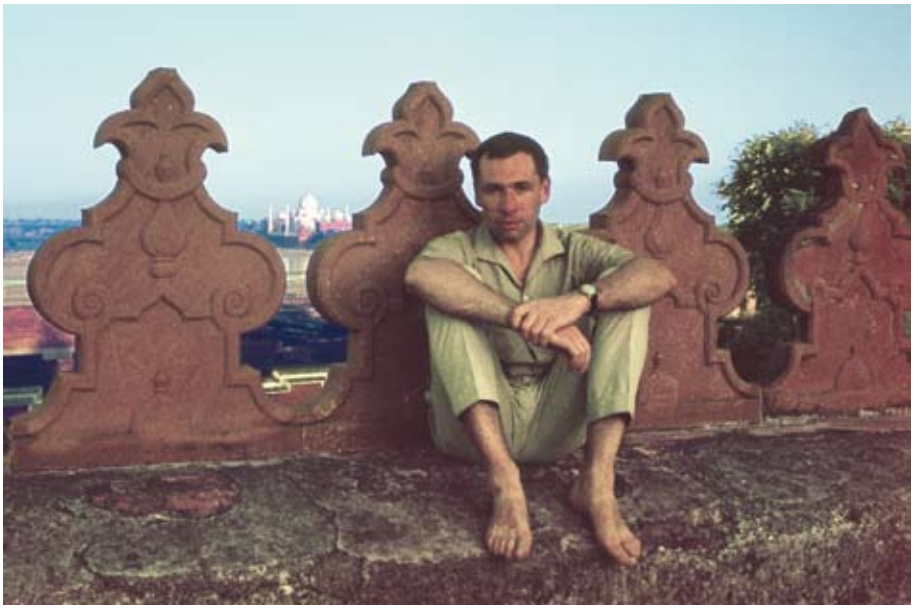
2. With Mother (1932)

3. With Father (1937)

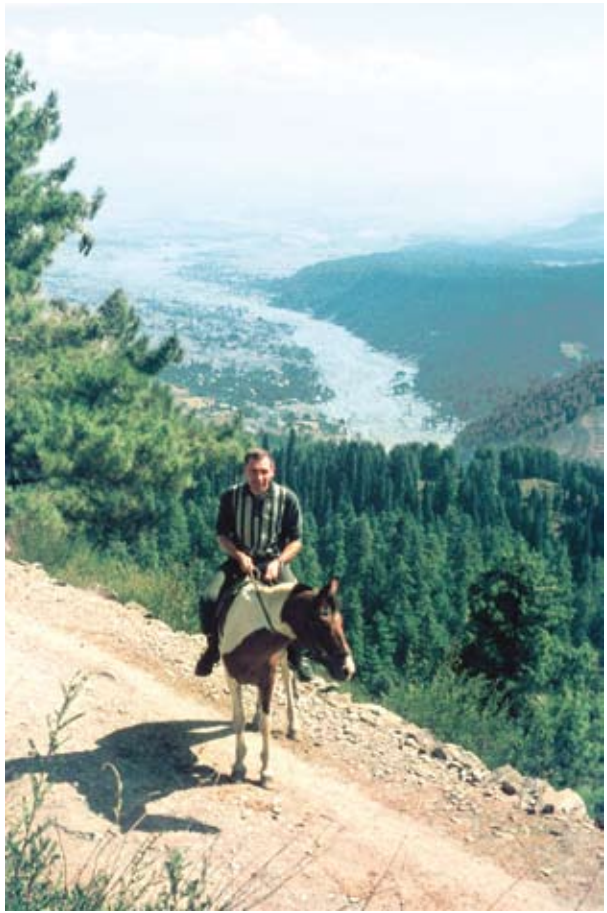
4. My son Mark with my mother (UK 1964)

5. With cat Fremont on Union Lake (Seattle 1967)

6. A steam powered Express (India 1968)



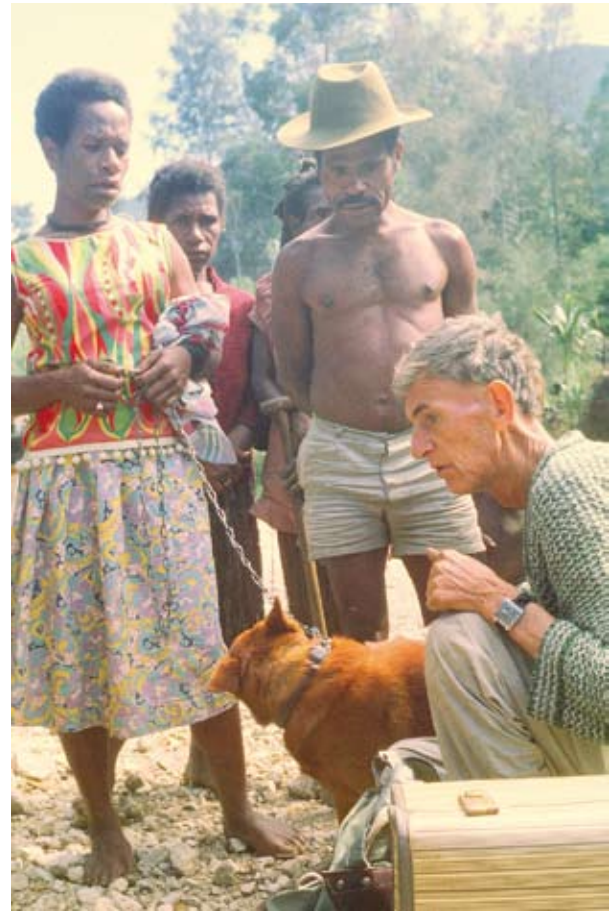
7. Taj Mahal from Agra Fort (1968)



8. Riding above the Vale of Kashmir (1968)

9. With stone ax and boar's fangs (New Guinea 1970)

10. Remains of WW II (New Guinea 1970)



11. Theo parting with his dog and Avari (New Guinea 1970)

12. In Avari's cottage (New Guinea 1970)

13. A Papuan farewell delegation (New Guinea 1970)

14. Tasman Hut (New Zealand 1971)

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25. Anchored near La Gomera (1986)

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28. Sultan Qaboos University (Oman 1987)

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30. My boss Ibrahim relaxing (Oman 1988)

31. Summer solstice in Oman (1988)

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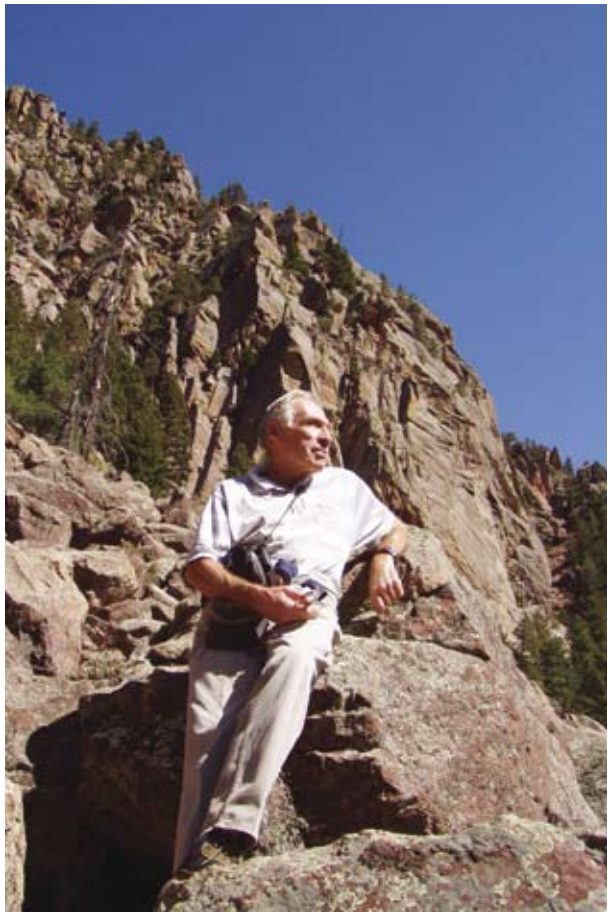
36. Muttrah Harbor (Oman 1995)

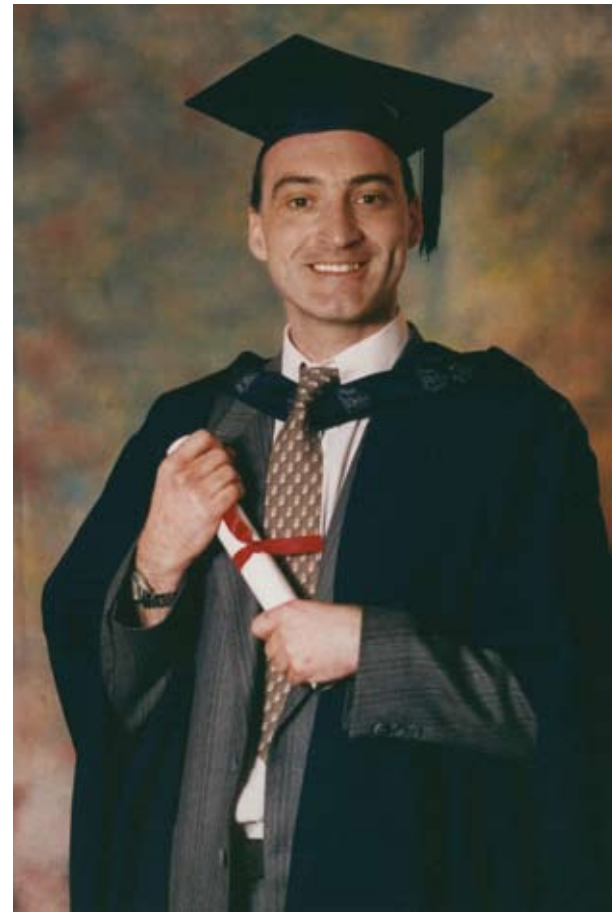
37. Expedition (Oman 1995)

38. The mountains of Oman (1995)

39. Al Bustan Hotel and beach (Oman 1997)



40. On the rocks of Eldorado Canyon (Colorado 2003)



41. My son Mark (Liverpool 1988)

42. My daughter Jyoti (Holland 2006)

43. The Family Crest Janina (since 1246)