Time Echo

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Chapter 1

The November wind bit with cold, savage intensity, as it whistled round the ancient houses-houses so old that their very style of architecture was lost in the mists of antiquity.

Within the boundary of what had been the prehistoric Brandenberg, the tiny townships fifty miles to the northwest of the ancient German capital of Berlin had beeD. largely passed by. The savage, soulless armies of Rajak the Magnificent, dictator of Eurasia, had found little in that historic comer that was considered wocthy of plunder. From Perleberg to Pritzwalk, from Whistock to Kyritz and Havelberg, life continued in much the samc pattern as during the last thousand years. Governments had changed, dictators had come and gone, the ghastly three-cornered fight between the major powers had raged, with and without atomic interludes, for nearly twenty years-but that was two centuries ago. Now there was peace, if such a subsistence as had clamped itself down over the whole area could be caned "peace."

Rajak himself was a strange individual,a giant, austere demi-god or demi-devil, dependingg upon a man's political convictions. By his own inner party of supporters, this strange, aloof, thinking machine of a man was regarded as a savior whose excellence exceeded even that of Jesus of Nazareth. To the vast majority of his "saved" subjects, Rajak was delineated as something out of the pit of hell. He was the great beast, the aggressive, murderous monster.

A very remote observer would, perhaps, nave found something in favor of his. legislation It terminated anything m the nature of mterstate nvalry m Eurasia,in the same way that the coming of the Norman Kings and the production of the Domesday Book had ended the petty Anglo-Saxon rivalries of prehistoric EnglRnd. But in that northwest corner of Brandenberg at 53.5 degrees N by 12 degrees E there existed a kind of transient paradise, a corner of an ancient civilization, like a living monument to the past. And yet a few thousand simple townsfolk and outlying rustics, who inhabited the land between the little townships, knew, deep down within themselves, how pre carious their existence was, and all the time there hung over them, like the sword of Damocles, a great fear that the full attentions of Rajak the Magnificent would be focused on to the tiny, partially explored comer of his multimillion square mile empire.

There were strange doings beneath the streets of Perleberg. Ancient cellars had been enlarged into a network of honeycombed secret passages that would have done justice to the long-dead denizens of the catacombs. And if there was any shape or form of organized resistance to Rajak, it was here, beneath these ancient cobbled streets" that that resistance was concentrated.

Whispers spread, even through the great Eurasian empire, and if any of Rajak's victims ever escaped from tho dreaded security guards, it was to PerJeborg that they fled.

The jet was old. To be precise, it was nearly three centuries old. Mike Grafton had found it purely by chance in a hangar that had miraculously escaped bomb damage of a prehistoric war. Vast piles of dusty rubble had covered the hangar, and there, in that isolation of man-made wilderness, Grafton, fleeing desperately from the pursuing security men, had stumbled across the entrance to the hangar

Despite their super-electronic probes, their stellar vision intercoms, and the thousand and one relentless devices by which the security forces ferreted out Rajak's enemies, Grafton had gone temporarily undiscovered. He lay low, surviving on a few scraps of food that he had brought with him, until hours turned to days and days into a week. He felt certain that the security men had temporarily called off the pursuit. . . .

He was a tall, well-built man, was Grafton, with dark, penetrating eyes and black curly hair. His muscles were hardened to steely whipcord by months of rough living. They rippled on his powerfully built frame. His mind was as quick as the brain of a fox. He had learned his scoutcraft in the hard school of do-it-right-or-die. Like an old fox, Grafton knew all the tricks of a pursued man, and like a young fox, he had speed and agility, which enabled him to carry out his subterfuge, and fast, daring moves, moves that meant the difference between life and death; between light and darkness; between freedom and extecmination.

He felt' the wind whistling round him as he looked from the doorway of his ruined hangar to the south of the ancient rail town of Rhinow. Less than two miles to the west he could see the broad expanse of an island lake, and away to the north of him the ruins of an ancient canal crossed the railroad-the iron tracks overgrown and rusted almost beyond recognition. He stepped out into the freezing November air, and from the heavy pack on his back began selecting a bundle of deadly sticks. . . an essential part of his saboteur's stock in trade. Among his many other nefarious pursuits, Mike Grafton was an explosives expert. In the superb destructive technology of the 24th century, explosives were one of the finest arts practiced by man. He looked at the rubble, and he looked at the ,hangar door. His brilliant mind made a series of rapid calculations; calculations that took in blast, shock wave and clearance direction. And as he calculated, he began planting the deadly little sticks. He checked the time fuses carefully, and then began to walk swiftly to the south. On the brow of a little hill, beneath the rubble of what had once been a very stalwart wan, he lay flat and began counting the seconds before the explosion. Even at that distance, his index fingers pressed firmly into his ears and he crouched, with every muscle tensed, as he waited for the dull reverberation which would prove to him whether or not his calculations had been correct. Even as he waited, he knew that that prehistoric jet would be his only chance of reaching Perleberg without being detected, for the security forces had already thrown their cordon

around the area, which was still marked as "semi-developed" on the huge map in their headquarters. . . . There was a low rumbling in the distance; a rumbling which grew to a mighty roar as chro.ge after charge picked up its message of exploding violence. And then there was nothing to be seen but a vast cloud of rubble and dust. He waited a few minutes till the vast cloud settled, wondering as he waited whether it would bring the security forces around his ears, like a pack of angry and destructive' hornets.

That was something that would have to be chanced. The dust was clearing now, and he began running purposefully in the direction of the buried hangar. As the last of the debris floated back to earth, he realized with a wildly beating heart that his calculations must have been the best he had ever made. The thought crossed his mind that it is very often dark necessity which brings the best out of a man. It tempers his innate abilities and focuses his powers.

The hangar lay wide open before him. In front of it. a rough rubble-strewn track opened out. between an avenue of bomb-damaged houses and mounds of blackened. stunted vegetation. He was reminded of the fantastic stories he had heard of the long-dead city of Pompeii, and of how the volcanic ash had protected and preserved everything within it. Such was the case here. The ancient jet might have been left there only yesterday. Now the way to freedom lay open before him. Whether or not any of its chemical fuel remained was a matter for conjecture. But then. reflected Grafton, so were so many other things. It was these million-to-one chances that had saved him so often in the past. It was a wild gamble that beat the croupier on the roulette wheel: the staking of everything on one number, with thirty-three chances against it coming up. and yet it appeared. And it was a fortune. not suicide. that awaited the gambler. Grafton had a crude stairway of boulders. bricks. packing cases and assorted debris leading up to the cockpit. He scrambled up it with urgent haste. knowing full well that the electronic detectors of the security guards would pick up that telltale explosion all too soon. He reached the cockpit and climbed in. The ancient controls were almost unbelievably simple for the man whose mind was attuned to the technological complexities of the 24th century. He did a brief calculation, wondering what the date could be. He had been in hiding for over a week. That brought it up to November 25th. He repeated it to himself. "November 25th. 2309." Strange how dates. how time itself. were almost meaningless to a man on the run. Yet he liked to keep track of them. It was a tiny shred of normality in a frightening and abnoimal environment.

He got to work on the control panel with deft. skillful fingers. and to his delight and amazement, the engine roared into life. "Three hundreds years. almost." he whispered. "and it works. By thunder. they built things to last in those years." Whether or not his new-found airship would crash, as the pressure of that November wind cut, and shook its antique fuselage and airelons, he had no manner of knowing, but so far the miracle was paying unexpected dividends. There was no time like the present

to take the rest of the gamble. Bumping over the rubble-strewn causeway, the jet lurched out of the hangar. Time after time, as he taxied down that road, he averted disaster by inches; and yet SOOlehow the old airship hung together, and the roar of its engines grew louder as the iliJottle opened and it ga~ered speed. Straight into the teeth of that biting November gale he flew. The airelons held. He gave a great sigh of relief as the bumping gave way to the smoothness of flight. He was airborne; airborne, in a machine that had not seen the light of day for nearly three centuries, but airborne all the same. There was a wonderful feeling of freedom and exhilaration, and for just a few brief seconds his mind escaped from the toils of the knowledge that the security forces were everywhere. Here in the air, alone, piloting his own machine, he was safe, and if only for a few seconds, it was a freedom from pursuit more real than anything he had previously known in the whole of his struggle against Rajak. . . . Even the ancient compass was still working perfectly, and already he found himself flying in a northwesterly line, leaving the great lake like a shimmering block of rippling silver below him. The ancient canal wound its murky, bomb-blistered way over to his right and disappeared into the distant east. He opened the throttle still further. Northwest, -ever northwest, he flew, and almost before he realized it, his airspeed indicator and milometer told him that he must be within five miles of his destination. He throttled back. So far the sky was still clear. . . he throttled back still farther and began to circle in, looking for a landing. Down . . . down. . . down. . . he took the antique jet, until it cut like a knife the tracery of the low November clouds, and the,re below him lay the city of Perleberg. Already he could feel his feet pacing those ancient cobblestones. It seemed too good to be true. It seemed that there could not have been such a loophole in the apparently inescapable network of the Eurasian powers. But here he was, flying over Perleberg, the town of mysteries; the town which, if legend spoke truly, held the secret of escape from that vile totalitarian machine which Rajak the Magnificent described as his Eurasian Utopia.

The problem was to land; to land as quietly and unobtrusively as possible; to land somewhere within reach of the town, somewhere within the deadly cordon he felt sure must surround it. And as his gaze was concentrated downwards, in his search for a landing strip in that grey November day, one of the huge anti-grav warships of Rajak the Magnifice-nt plummeted out of the sky above him, like an eagle decending on its prey. The great warship fell quite silently. There was no roar of engines to give it away. It fell like a descending thunderbolt of Nemesis; and yet somehow, just before the mODlent of destructive impact from its huge, reinforced ramming edge, that would shatter his tiny plane into a thousand fragments, Grafton glanced up and saw it. It hung over him like a huge, black, steel cloud. . . . Faster than thought he flung the jet into a screaming power dive. Lower and lower it screeched, as fast as the dropping menace- above him. Now faster. The gap was beginning to widen, and suddenly he saw a tiny ray of hope. Surely the commander of that huge anti-grav warship wasn't going to make the one

fatal mistake which would enable his prisoner to escape . . . surely he would realize. . . ?

The ground was hurtling up to meet Grafton. Still he kept the stick forward, and still the antique jet screeched its way earthward in a superb power dive, a breathtaking spectacle of speed and power. Less than a thousand feet separated him from the enormous warship, the huge iron-clad destruction machine above. The ground seemed frighteningly near; he was dropping at terrifying speed, dropping faster than a bullet. There were .only split-seconds in which to act. . . . He calculated his own mass, and the mass of the huge juggernaut trying to crush him out of the sky. He realized that unless some new modification, of which he was unaware, had been made in that mighty warship, then, in his excitement at the prospects of destroying this saboteur, the captain had made the fatal error. Grafton took a long, deep breath. The ground was so close that he could almost have touched it. With all the power of his arm, he yanked the ancient stick back, hop.. ing and praying that the antique machine would answer to her controls in time-that he had not miscalculated her maneuverability.

There was a terrible shuddering Vibration as he came out of the dive. He leveled up and screamed away at full speed, banking swiftly, aware of the vibration in the loosened joints of the wings and fuselage; he knew that he would be airborne for only a matter of minutes, if not seconds. Air and earth shook in a tremendous crash behind him, and glancing quickly to the starboard, he realized i that he had been right. The captain of the huge Eurasian anti-grav warship had plummeted to his death. These anti-gravs had no gliding surfaces. Like prehistoric craft, they relied purely upon their ability to move upwards and sideways very swiftly. . . . The vast and essential difference between the anti-grav warships and the pre-historic hover craft lay in their propulsion unit. The anti-gravs were not powered, except for their lateral movement. They were like huge battleships of the sky, and their motive power lay in the shielding beneath them; shielding which worked on a series of shutters.

It had been discovered that a combination of very rare alloys, none of which was to be found on the earth itself, had the strange power of shutting off completely, and shielding from any object above them, that strange accident in the space-time continuum which terrestrial scientists had long dignified by the name of gravity. When the folding metallic shutters were closed, shielding the actual anti-grav alloy from the surface of the planet, then, like i any other heavier-than-air body, the huge battleships would sink; would more than sink-would drop like a " stone at ever increasing speed, until the shutters were opened once more, the anti-grav took over, and the vast weight of the aerial juggernauts would become completely insignificant. The dead commander in his heap of wreckage had forgotten that it takes a certain time for the anti-grav alloy to operate. He had been insulated from all thoughts of safety, caution, or plain common sense by the possibility of destroying Grafton, or whoevec it might be in the antique ship. He had paid dearly for his indiscretion. . . . Not until it was too late had the anti-grav

shutters been snapped back to allow the alloy to operate and remove the weight of the hurtling projectile. The hurtling ship had fallen like a meteor. She and her proud crew were twisted and mangled beyond recognition on the cold grey stones. The vibrations in Mike Grafton's antique jet became increasingly more pronounced. . . .

His one thought now was not to get down in Perleberg but to get down anywhere at all . . . alive. He guessed that the security forces would be fully occupied with their shattered comrades, and that the damaged ship would command most of their attention. He hoped that in the ensuing confusion, one fleeing fugitive might sneak through the Perleberg cordon. Below him there was a wide open field. Holding his breath, he eased the stick slowly forward, the jet nosed downwards, shuddering and coughing as she went. He knew It was only a matter of seconds now before the gallant old plane would disintegrate. . . . However, he decided, she had certainly served her purpose.

The landing wheels touched the field; he throttled back immediately, and as he did so, the port landing wheel buckled and broke. The port wing came down and snapped clean from the fuselage. The jet rolled over three times and lay like a stricken bird, smoke pouring from her gigantic exhaust. Battered, bruised and shaken, blood dripping from his forehead, Mike Grafton hung across the controls, feeling more dead than alive. He could smell the acrid fumes of the highly inflammable chemical fuels as they poured from the wreckage of the plane, and he knew that he had at most a matter of split-seconds to get clear before the whole of the debris exploded into an engulfing sea of destructive flame. His dazed fingers struggled with the strap for what seemed like hours. In desperation he tore the stout clasp knife from his pocket and slashed through the thick leather. He was free. He was out. He was staggering away across the field, ten yards. . . twenty . . . thirty. . . . He was fifty yards away from the hot, smoking, stinking, wreckage, when there came a roar of thunder and the jet disintegrated in a great sheet of flame. Behind him in the distance he saw running figures, and those sombre grey uniforms told him 'without a second glance that these were the dictator's security forces.

Battered and shaken as he was, he ran with the mad strength of desperation. He ran as Horatius once swam . . . in Macaulay's famous poem:

"Never, I ween, did swimmer in such an evil case,
Struggle through such a raging flood, safe to the landing place."

He made it; made it to the ancient city wall, with hiS grey uniformed pursuers less than a hundred yards behind. He could hear the crackling staccato echo of their small arms as the electronic bolts from their hand guns flashed and smoked through the walls around him. At any second he expected a lncky shot to stretch him helpless in a heap of blistered flesh, at the feet of his ruthless pursuers. He only hoped that if they did hit him, it would be completely fatal, for he had no wish to fall alive into the hands of Rajak's secret police.

Perleberg was a mass of narrow alleyways and ancient

houses. Like the Casbah, it was a perfect spot for fugitives. He wondered as he ran why they had left it as long as they had, why the dictator had not considered obliterating it completely. For surely his spy network must have drifted the news to him. Yet, he wondered as he ran, perhaps the hatred was so widespread that no information' had gone out. He hoped that his own wild, flurried escape would not be the clue that would bring the hordes of destruction down upon the last drainpipe--the last escape route--the last little pocket of freedom in a corrupt conti nent.

He could hear pounding footsteps and the rattling of guns around the comer behind him. His head swam; the pulses in his temples pounded like hammers. His heart hudded against the waIls of his chest, and he felt that he was almost done for.

Quite suddenly a tall white stranger steppea out from a door in front of him, seizing his arm, dragged him inside and slammed the door. As he stood leaning on the lime-washed wall, gasping faintly for air, he heard the sound of bolts being driven home. With a clang, a huge steel shutter slammed back over the door. For a second he wondered whether he had fallen into the hands of the security police but one glance at the stranger told him that this tall civilian had no more love for the dictator than he had. A swift jerk of the other's head, and the one interrogative word "Police?" and he knew he was with friends. He was safely in the hands of the resistance.

Pounding feet sounded in the street. The tan. gaunt old man was sparse in his use of words, "Hurry. This way." Still holding Grafton by the arm, he ran on down the lime-washed corridor. Outside, the security men were' flashing their electronic detectors. He heard confused shouting, and the smashing of rifle butts against the door, as they pounded with the hilts of their electronic disin-tegrators. He wondered how long the steel would hold. Not long against the power bolts, he knew, but possibly long enough. It depended how many bolt holes there were in this particular neck of the warren. "Name?" asked the old man suddenly.

"Grafton," he panted, "Mike Grafton."

"It was you who destroyed the airship?"

"It was," he grunted.

"Well done." The old man patted his shoulder with al-most paternal affec1ion: "Very well done. That will cost Rajak a'millioo international credits, at least."

There was a tearing, reverberating, grinding sound, then a flat, rather frightening clang as the protective shutter yielded to the blows of the weapons and the disintegrating force of the energy bolts from the security men's power blasters. There were pounding footsteps in the lime-washed corridor behind them, and then the air suddenly grew choking hot, as bolts of pure energy flashed and crackled past them, in the narrow confines of the ancient house. "Hurry," ordered the old man, leading Grafton downwards. Another steel door fastened behind them as they sped on. And now they found themselves at the he~ of a flight of steps. The hammering behind them grew loud and insistent, and they could hear the power blasts against the last of their steel shutters. The flight of steps ended in

a small circular room. In the center was a cylindrical glass cabinet.

"Ask no questions. Trust me. Inside, quickly," gasped the old man. And with a lever, he raised the tall glass cylinder. Grafton trusted him instinctively. Anything was better than falling into the hands of the dictator's sadistic guardsman. He found himself standing on something rather like solid crystalline quartz. He looked down into it, and saw that it had been cut with particular skill and care. Its strange ' crystalline surface reflected like a million prism.s of finest glass. It gave him a strange hypnotic feeling, almost of drowsiness, to look down into the strange depths of th~ crystal.

"Take a deep breath," shouted the old man. His voice sounded strange and far away. There was a tearing clang, and the steel door at the head of the stairs burst open

"Now," roared the old man, and pulled a lever at the side of the glass cylinder. A great sheet of flame shot up~ like a burst of natural gas, and obliterated everything from Grafton's view. . . .

The next thing he knew he was enveloped in a strange gray, weird holocaust. On the side of the glass cylinder in huge red print appeared the date, November 25th, 2309. The brightness of the red lettering turned progressively fainter, and more blurred in outline, as it melted like the wax of a red candle which had been caught in the sunlight; melted and was gone, so there was nothing but the greyish white translucency of the glass.

Grafton touched the confines of his prison and found that it was strangely warm, and vibrated as though charged with many millions of volts of power. As though from a million miles away, separated by enormous leagues of time and space, he could hear what sounded like rifle fire and confused shouting. And then the hypnotic effect of the crystalline flooring seemed to overcome him completely, and he sank down with his face against those reflective, translucent angles, and was mirrored a thousand times in the depths of the strange cylinder. The grey mist got denser and denser, and he was aware of a strange humming, whirring noise in his ears; a noise as of a thousand dynamos, puffing relentlessly on, as though he were enmeshed in the bowels of some maChine, some superb technological masterpiece. And yet there was nothing to be seen but the grey opalescent light that rose and fell in intensity, and Grafton in his semi-conscious state was filled with a feeling of complete andntter unreality. What was this weird cylinder? Where was he? There was a strange sensation of motion, and yet it was not motion as we understand it. It was rather the hallucinatory feeling that we get when sitting in a train at the station, waiting to pull out. We watch another train pull past us, and we get the feeling that it is us, and not the other train, that is moving. The greyness. grew deeper, became tinged with purple, and the purple in turn gave way to the blackness of night. The blackn~ grew thicker and darker and deeper, until it became Stygian in its intensity, until it became almost as tangible as black velvet. He felt that it was crushing him, suffocating him, forcing itself into his lungs and his eyes. He felt like a man who js drowning in a barrel of darkness. It was thick, terrifyingly thick, and it was

everywhere. He realized that was largely psychological; it was largely in his own mind. Yet he had the weirdest obsession that the intensity of the blackness was so great that it was impeding the movements of his body. He felt like a paralyzed sleeper. His pulses and his heart slowed down till he felt that he would surely die of the sheer inertia. Then, imperceptibly at first, gradually more noticeably, the darkness began to lift. It was less gripping, less velvety, less tangible. It became more like the darkness of a subterranean cave, and from there it thinned and was diluted till it resembled the darkness of an ordinary night. From the darkness of night it became the pale grey darkness of dawn, and now the purple tinge was discernible once more.
The purple gave place to grey, and the grey to a.greyiSh white. The greyish white became a kind of opalescent translucency once more. . . and strange red blobs appeared on the wall for a split-second in the place where the date had previously been. They did not remain long enough for him to clarify the outline. Vaguely through the greyness he heard the sound of horses champing restlessly at their bits. It was a sound he had difficulty in identifying for some time, and then he was quite Sure it was horses. " Through the greyness he saw the outline of an antique carriage.

Chapter Two

Projection Point

The security guards seized the old man, and the grim-faced captain handcuffed him with ruthless efficiency.

"Identification number," he barked savagely. The old man raised his hands to the pocket of the simple tunic he wore and produced the metallic identification disc, which was compulsory for all Eurasian citizens. "I see," snapped the captain. "Eric Rhinegow. You are to come with us. Yon will be interrogated. In the meantime," his eyes flashed to his minions, "search the rest of the passages. The other: can't have gone far."

The search was over even before they got Rhinegow to the top of the stairs.

"There was no one else," he said softly, "and there are no passages, Captain."
"You are lying," replied the security man quietly. "We have ways and means of making you talk, of making you tell the truth." He licked his narrow, sadistic lips, as though the anticipation of the interrogation was pleasant to him. The old man was as gaunt and as aloof as the last of the Mohicans. . . .

"You will get no information from me," he said softly, "you can do what you like." The security officer laughed. It was not a pleasant laugh. It was cold, metallic and inhuman.

"This way." They reached security headquarters, and Rhinegow was strapped into a heavy leather-backed chair.

"You are under some misapprehension, no doubt," said the captain, "when you foolishly decide-you have nothing to tell us. Believe me, we are not so primitive as

you--er-liberation people--" he spat out the word "liberation" as though it was a ,dirty sound-"as you liberation people would like to make out," he concluded.

"We are familiar, of course, with all the historic forms of torture. Indeed, at the beginning of our regime we had several methods of our own, but such things are old-fashioned, and Eurasia is a modern power, a very modern power. As far back as the beginning of the twentieth century, the narcotic and hypnotic drug research was going on. It has been perfected in the secret laboratories of Rajak the 'Magnificent." He bowed his head as he spoke the dictator's name. "Our scientists have now produced drugs of an intensity and a concentration far beyond imagination. You will see a demonstration in a few minutes.-in fact, you will not only see it; you will take part in it. We are only waiting for Dr. Korblenz to arrive to administer the necessary injection. You will then be completely subjugated to our power."

Something that might have been the first flicker of fear shadowed the old man's eyes, but he gave no other sign.

"And what is to prevent me from committing suicide before you can apply these drugs, even if they do work, which I very much doubt?" His voice was cold and cynical; as cold, in its own way, as the sharp metallic voice of the security captain. The guards officer laughed.

"I will tell you what is to prevent you from committing suicide." He banged one great fist down on a thick blanket..topped table. "The vigilance of my men. If you die, they will die also. You must remain alive till the troth drugs have been administered; after that, they may do with you as they will. You will be squeezed dry like an ancient sponge, and after that, when you can be of no further use to the glorious powers of Eurasia, you shall suffer the penalty for having opposed us. Then as an old and withered sponge you shall be cast away, as human refuse."

"Have you ever heard of the powers of the mind?" asked old Eric. "Don't you know that it is possible for a man to will Wmself to death?"

A look of apprehension crossed the captain's face. "Thank you for your kindness," he said swiftly. And before the old man could speak again, a rubber truncheon thudded down with stunning force at the base of his skull. "The doctor will be here very shortly," said the captain. "At the slightest sign of his regaining consciousness, you will administer a mild blow at the same spot." The guards nodded, and the security officer stormed out.

Old Rhinegow was just opening his eyes when the Eurasian security doctor walked in. Their gazes met for long tense seconds, and before the old man could move, think, or speak, he felt the sharp jab of a hyperdermic syringe in his arm.

"It will take about two minutes," said the doctor quietly. "At the end of that time, you will find yourself completely in our power. Not only will you answer our questions, but of your own free will, you will tell us everything you know, everything that could be of any interest. You are anxious to talk to us," his voice droned on. "You have a burning desire to communicate all your knowledge to us, because you know how wrong it was of you, how

very, very wrong, how evil, how wicked, ,to oppose the great force of right; which is Eurasia. How could you be so treacherous as to oppose the will of the great and holy dictator, Rajak the Magnificent? Soon your conscience will begin to stir. . . ." The hypnotic voice went on and on, like the murmur of a distant waterfall, and struggle as he would against it, Eric found himself sinking down into a kind of oblivion; a pit of little dancing red and blue lights, in which the only thing he could hear was the voice of the security doctor. "You will tell us everything you know, tell us all your ideas, hopes and plans, confess to us every-thing that you have done wrong. You will then be able to take your place in this great and generous society-the people of Eurasia, followers of Rajak the Magnificent." Every time the dictator's name was mentioned the security guards bowed their heads forward in a gesture of obeisance. It was a scene of revolting humility.

The doctor glanced at his watch, "The drug should have taken effect now, Captain," he said quietly. "Proceed." He packed his implements, sterilized his hyperdermic, recharged it, and began making for the door.

"Must you go so soon; Doctor?" asked the captain.

"I have other appointments.. We are, as you know, working at full pressure, for the benefit of our great and glorious society." His voice rang with fanatical en-thusiasm. "Glory to Rajak." the captain said. He raised both hands in the air; the doctor returned the salute and echoed the words. The door closed behind him, and he was gone. The security officer turned his attention to the trance-like figure of old Eric Rhinegow, as he sat bolt upright in the interrogation chair. His voice had lost its sharp, whip-like, bullying tone. It was soft and fatherly as the doctor's had bt'.en as he intoned his hypnotic sugges-tions.

"Tell us," he began. "Tell us all you can about the world of the resistance movement, and by doing so you will clean your inner self, your very soul, of all that dark stain of treason that you have put upon it. You are sorry now that you have worked against us, but we will forgive you, and you will be able to start again. Speak. The more you tell the happier you will feel."

The old man's lips moved, but at first no sound came out.

"Don't be afraid," persisted the captain gently. "Just speak quietly to us. Tell us all that you know; talk . . ." His voice, like the doctor's, had assumed a semi-hypnotic quality. "Talk. . . talk . . ." he said the word with a resonance that made it sound like a sharp saw going through a dull old log. "Talk," he repeated again. Eric Rhinegow's eyes opened very wide; he stared before him with the glassy gaze of the hypnotized subject. It was as though mind, body and soul had become separate entities, as though there were no consciousness left to defend the memory at the back of his once magnificent mind. The fiendish truth drug was beginning to work only too well. It was disintegrating his personality. He was as easy to ex-tract information from now as a filing cabinet. If anything it was easier, because the suggestions had taken effect. He was all too anxious to reveal all that he knew, everything which might be of possible interest to the Eurasian security

office. His lips moved again, and the officer motioned for the recorder to be brought. A microphone descended in front of the old man's face, and while one of the technical assistants controlled the volume intake, the old man began speaking.

"You must follow me very carefully. I shall have to convert one or two ideas which are almost universally accepted. I shall have to modify them for you, if you are to understand in any degree all the principles of the machine." The security men exchanged glances. "What machine?" interpolated one of the minions.

"Quiet," commanded the captain. "We shall find out; probably something to do with the disappearance."

"Your geometry, and to a large extent, your mathematical presuppositions are founded on misconception," went on the old man softly, intently. "I do not wish to accept anything without reasonable ground for it. You will soon admit as much as I need from you. You know, of course, that a mathematical line, a line with no thickness at all, a line of thickness nil, has no real existence. They taught you that in college, I know. I know." He repeated himself, as is the way with the old who are verging on senility. "A mathematical plane has no existence either. These things are mere abstractions, mere abstractions," he muttered to himself. He drew a deep breath, and the old head lolled over to one side. His hand attempted to make pictures in the air, but they were tied securely to the chair. "Nor, having only length, breadth and thickness, can a cube have any real existence." Again the captain and his men exchanged glances. "Of course a cube can have existence," said the captain quietly. "It's a solid object, and a solid body does exist. It's a real thing. . . ."

"So most people think," interrupted the old man. "But wait a moment, and think carefully. . . ponder -. . . concentrate." He paused dramatically. "Can an instantaneous cube exist?"

"Say that again," said the captain.

"Can an instantaneous cube exist?" repeated the old man. "Can a cube that doesn't last any time at all have a real existence?" The captain was silent. "Clearly," went on the old man, "any real body must have extension in four directions. It must have length; it must have breadth and duration. But through natural infirinity of the flesh, which I will explain to you in a moment, we are inclined to overlook this fact. There are really four dimensions. There are three which we call the three planes of space, and a fourth which we call time. However, we have a tendency in our very finite minds to draw an unreal distinction between the former three dimensions of space and the fourth dimension, which constitutes time. . . . In our consciousness we move intermittently in one direction along the latter, from the beginning to the end of our lives. We are therefore unable fully to comprehend it for what it is. We are moving through it so relentlessly-rclentlessly," he repeated senilely. The officer snapped his fingers. "It is clear to me now; please continue."

"It is very remarkable iliat it is so extensively overlooked," went on old Eric Rhinegow. "Really this is what is meant by the fourth dimension, iliough some pe0-ple who talk about the fourth dimension do not know that

iliey mean it. It is only another way of looking at time. There is no real dilierence between time and .any of the three dimensions of space, except that our consciousness moves along. But some fools have gotten hold of the wrong side of that idea. You know what they say about this fourth dimension, don't you?" He might have been addressing a class of students; it was tragic to see the shattered remains of that majestic intellect spilling its knowledge like a flood of liquid gold at the feet of these pagan, savage, boorish Philistines.

"Well, it is simply this," he went on. The pld professor was throwing his choicest pearls at the feet of the swine who were destroying him. "Simply this," he muttered to himself. "Space, as our mathematicians have it, is spoken of as having three dimensions, which one may. call length, breadth and thickness. It is always definable by reference to three planes, each of which is at right angles to each oilier. But some philosophers have been asking why there are three dimensions particularly; why not anoilier at right angles to the oilier three? They've even tried to construct a four-dimensional geometry. Ah, there was a professor once, many years ago, expounding to the New York Mathematical Society how, on a flat surface, which has only two dimensions, we can represent the figure of a three-iimensional solid. And similarly they think that on a model of three dimensions they could represent one of four, if they could only master tIle perspeotive of the thing. I'm sure iliat must be clear to you." There was a long pause. The old eyes closed, and the professor's head lolled forward on his chest as though he were exhausted. . . .

"It's tIle effect of the drug," said the captain shortly.

"It's narcotic as well as hypnotic; he'll continue soon. Just switch the recorder off for a couple of seconds." The guard obeyed. looking up expectantly for the first sign of movement from their prisoner. . . . Rhmegow's lips began to twitch again. "On," snapped the captain.

"I've been working on this geometry of the fourth dimension for a very long time--a very long time indeed," went on Rhmegow. "For instance, I had a collection of portraits, a portrait of a child about six years old, another at ten, another at fifteen, another at seventeen, another at twenty-three, another at twenty-five and so on, right through the life of the man until he was well over forty. All these in my opinion are sections--cross sections--of his three-dimensional representation; a three-dimensional representation of his four-dimensional being, which is in its completeness a fixed and unalterable thing. We scientists know that time is only a kind of space. Think again of that very simple thing, the weather record. If you trace the line made by the movement of the barometer with its little ink pencil, you will see that yesterday it was at a certain height, that during the night it fell, and this morning it rose again. And so it goes up and down, up and down again." He leaned forward as though to emphasize his point, while his voice droned on in the same semi-dazed monotone. "The mercury in that barometer did not trace that line in any of the dimensions of space generally recognized, but certainly it traced such a line. That line, we must therefore conclude, was alon.2 the time dimension."

"I have a question," interposed the captain quietly, "if time is only a fourth dimension of space, why is it, and why has it always been regarded as something different, even by the magnificent scientists of the Eurasian technological colleges? Why can't we move about in time as we move about in the other dimensions of space?"

"Are you really sure that we can move about in the other dimensions of space? We can go to the right and the left; we can go backwards and forwards freely enough. Men have always done so, from prehistoric times; I admit we move freely in two dimensions. But how about up and down? Gravitation limits us there, you know."

"Gravitation limits us?" ejaculated the captain, astonished in spite of himself. "When our battleships, equipped with their anti-grav shielding, can fly into the depths of the solar system itself? When we can transverse the universe in all directions, you say we are limited by gravity? You're living in the past, old man; you're living in the past."

"But before anti-grav, before airplanes, before balloons," went on the old man, "before these scientific marvels appeared~xcept for jumping up and down, and but for the inequalities of the surface of this earth, man had no freedom of vertical movement."

"Yes, but he could still move up and down a little."

"Would it not be easier," said the old scientist "far, far easier for him to move down than to move up?"

"We can't move at all in time," said the captain. "We can't move away from the present moment. . . ."

"That's just where you are wrong," said the old man. "That's just where the whole world has gone wrong. We are always getting away from the present moment. Our mental existences, which are immaterial and have no dimension, are passing along the- time dimension with a uniform velocity from the cradle to the grave. Just as we should travel down if we began our existence fifty miles above the earth's surface. . . ."

"But the great difficulty is this," said the captain. "Surely you can see this-you can move about in all directions of space, even though I will agree with you that before the invention of mechanical assistance, some of thOse dimensions were limited. Some of our movement in those dimensions was highly limited. On the other hand, we could quite definitely move in them all, but you cannot move in time." The old professor scratChed the arm of the thick lea.ilier chair with his fingertips.

"But you are wrong to say that we cannot move about in time. That is th~ essence of my great discovery. It is the germ of my idea. For instance, if I am recalling some incident in my past life very vividly, I go' back to the instance of its recurrence. I go back in my mind, in my memory, in my recollection. I become absent minded, we say. Just for a moment, I jump right back into time. And I live once more the moment that I lived ten, twenty, thirty years ago. Of course, we have not the means of staying back for any length of time,' any more than a savage animal would be able to jump into the air and stay six feet above the ground. But a civilized man, a member of the great Eurasian community."

The: captain noted with pleasurable triumph how far the

indoctrination of the doctor's hypnotic suggestion had been successful--old Rhinegow was now doing his best to bestow the benefit of his entire knowledge upon the Eurasian community. . . .

"Of course," he repeated, "we have no means of staying back for any length of time--but a civilized man-" He was becoming confused; he was wandering a little; his head was dropping onto his chest. "If a civilized man can go up and down in his anti-grav machine, surely he may be able to stop or to accelerate his drift along the time dimension; he may even turn about and travel the other way."

"Do you really believe this?" asked the captain.

"But of course," said the professor simply. "It's the truth."

"It's against all reason and all science," said the captain.

"What science? What reason? What logic?" asked the professor.

"Oh, but you can prove black is white by arguing," said the captain, "but you'll have a job to conVince me. . . ."

"Possibly I will, and possibly I won't," said old Eric. "But now you begin to see the object of my investigations, investigations into the reality of four dimensions. Long ago, when Eurasia was still a young power, I had a vague inkling of a machine; a machine that could travel through time; a 'machine that could travel indifferently in any direction through space and time, as the driver determined. But I had to modify my original hopes and plans, and confine it to movement into time itself."

"By the asteroids: that great glass cylinder that we couldn't understand! The disappearance of the other man, with no passages, no secret tunnels, nowhere he could have hidden. Our electric devices proved that that room was as empty of that man as this old fool's head is empty of will-power."

"Experimental verification," muttered the old man. "Experimental verification."

The greyness cleared completely; the glass cylinder had gone. So had the underground room; so had everything except the ghostly semi-material horses. And even as he watched, Mike Grafton saw them grow increasingly more solid with every passing second. He was aware, too, someone had passed him, a man of about his own age and build with a white, strained, frightened face. Passed him at tremendous speed and then seemed to dissolve into a patch of grey mist before Grafton's unbelieving eyes. But before the man vanished, there was a rustle, as of something falling.. Grafton stooped and snatched it up. It was a small leather package. which from the feel of it, contained papers or documents.

It was carefully sealed at both ends. Unthinkingly, he thrust the packet into his pocket and. with the instinct of a fugitive, fled into the dark shadows at the other side of the horses. There was something vaguely familiar about the little town in which he found himself. A dozen things here and there made sense; others didn't. . . . With a start he realized that the town in which he found himself was almost, but not exactly, like the town in which he had taken

sanctuary when the prehistoric jet crashed. He knew suddenly with a terrifying shock, just exactly where the greatest differences lay. The whole place seemed somehow smaller, the old buildings more numerous, and with a flash of blinding inspiration, he had the ghost of an understanding of the meaning of the strange grey mist.

"No," he breathed, "it can't be." Yet how elSe could,it be? How else could he have escaped the relentless pursuit of the security forces of Eurasia? How else could he have drifted through nothingness, and then suddenly found himself outside--when he had previously been inside a cellar? At no point had he lost consciousness, though he had been very close to it. Yet he knew that at no time had his consciousness slipped so far from him that he would have been aware of being carried out of the cellar into the street beyond. And this wasn't just the street beyond. It was the street beyond with certain essential differences. He made his way quietly back over the cobblestones in the direction of the horses. A group of anxious men surrounded them and appeared to be looking for someone. He thought at once of that fleeing figure that had passed him and vanished. Who could it have been? Where had he gone? How? And why? And what of the mysterious package which he carried? The package the stranger had dropped in his frightened flight?

He made his way toward the group. One of them crossed to him and asked him a question of some sort. He knew German reasonably well, but this was not the German that was taught in the linguistic colleges of Eurasia. This was an old, archaic German. which he had some difficulty in comprehending. Finally he shook his head and shrugged his shoulders. He pointed down the road. The questioner seemed satisfied, though he notiCed that the ostler beside the horses was eyeing his strange clothing curiously, He made his way to the inn door. He must hide, he- told himself, away from prying eyes; mix with the crowd, find out who and what they are; study tbeir habits, blend in among them. like a pebble on the beach. . . . That was the way to escape recognition and detection. It was the fugitive instinct. very strong in his mind. . . .

The landlord was a broad-shouldered, thick-set individual running a bit toward middle-aged spread; a powerful man for all that. Matching his modern accent to the colloquial German that he had heard outside, he asked for a room. The inn-keeper looked at hiM suspiciously.

"Do you have any money?" he inquired. It suddenly struck Grafton that he hadn't. At least he hadn't anything that would satisfy these people.

"I have just come from abroad," he said suddenly. "It had slipped my. mind." He flashed a roll of intercontinental credits. By the standard of printing that the innkeeper had seen, they looked magnificent. . . but he shook his head. "What bank are they issued on? What credit house?"

"They come from the other side of the Atlantic," said Grafton, lying desperately, and trying to think of somewhere sufficiently reIttote to conviJIce the simple Perleberg inn-keeper. "But if you do not wish to accept them, perhaps there is some other way, maybe something that r could sell to you? I have a very fine wrist watch."

He took his watch off and showed it to the inn-keeper. It was an electronic masterpiece, operated by a battery about the size of a match head, which would run for about tenor fifteen years. The ghostly fear that had gripped him, that had told him the dreadful truth about what had happened, warned hiM that if, as he feared, he had indeed gone back through time, he must not allow the watch to seem too marvelous. "There is a special winding device inside which fits right to the back of a man's wrist," he lied plausibly. "It is a most wonderful watoh, and will not require winding for many years. The actions of your oWn hands will wind it as you move about. If you keep it sufficiently wound, and put it in the drawer at night, it will not stop until you put it on again." The inn-keeper's eyes opened in honest astonishment.

"It has no tick. It runs so silently," explained Grafton.

"It is the most beautiful piece of machinery I have ever seen anywhere," exclaimed the inn-keeper. "How much do you want for it?"

Grafton indicated a thick gold chain suspending the man's own watch. ,"How much did you pay for the watch you have?" he asked.

"Many guilders," sighed the inn-keeper ruefully.

"You look an honest man to me," said Grafton. "I'll accept twice the price you paid for that-"

"But I am a poor man and Cannot pay so much money."

"I'll tell you what I'll do," said Grafton suddenly. "Give me a thousand guilders and let me stay with you as long as I wish. A thousand guilders and a month's free board, and the watch is yours-what say you?" The inn-keeper n(Jd-ded immediately. "If it were not that you cannot change my notes, I would not dream of parting with so wonderful a watch," said Grafton, "which you can well understand. However, until I can visit Berlin and change my currency for gold or guilders, I must be prepared to make some sacrifices." He,leaned forward and whispered confidingly in the inn-keeper's ear, "One has to be very careful these days. Very often a man has to travel with great speed and stealth, but of course you understand. You must see many such." The inn-keeper nodded.

"The English gentleman who just left was another such. He was a coUriec, I believe, not traveling under his own name. They do say," his voice dropped to a low whisper, "they do say the gentleI11an has disappeared. They're looking for him now out in the inn yard. It's my belief the others have got him. . . ." ,

"The others"?" inquired Grafton eagerly, seeking as much knowledge as possible of his environment. The one thing he wanted to find was the date~ for history had never been his strong point. He knew that he was somewhere in the past, but the thing was-where? and when? That this place was still recognizable as Perleberg he had little doubt, but the Perleberg of which period?

Horse travel took it back a considerable way, yet the people were not primitive, as you wquld have expected from genuinely medieval types. Jt was difficult to know. He listened intently to the landlord's account of the wars. And suddenly the name Napoleon nailed the date as near as need be to Grafton's inquiries.

"We are such an unconscionable time coming over," he said suddenly, apropos of nothing, "and rve come straight from the coast." He laughed a little bit sheepisly. "You know, this may surprise you, but rm not sure of the date--is it Wednesday or Thursday?"

"Why, good gracious me, it's Friday," said the inn-keeper, not a little surprised, but apparently fully comprehending the reason. "Friday, sir, the 25th November, in the year of our Lord, 1809."

"The 25th November. . ." echoed Mike Grafton. "I had no idea it was so late." He looked staggered; his miAd felt 3S though it had been kicked by the foot of some evil deity. . . . "Twenty-fifth of November," he whistled over to himself, "1809." He had gone back into the past five hundred years. Gradually, through his shock-dinlmed consciousness, he became aWare that the inn-keeper was speaking again.

"You can have the room the English gentleman came out of, if you like, sir. If you're not superstitious about that, with him disappearing."

"No, no, not at all. I don't mind in the least." A room, thought Grafton, any room, to get out of the sight of my fellow men for a few moments.

"You haven't such a thing as a change of clothes you can set me up with?" he asked the inn-keeper.

"I'll have a look, sir. Are they the new fashion over the Atlantic, now?"

"Yes, they are, and I had to oome in a hurry; there was no time to stop for clothing. I was lucky enough to get a ship."

"I dare 'say you were, sir. What are their feelings there about the war?" Grafton shrugged his shoulders. "They're pretty mixed, as they always are."

"Yes, I can understand that," said the inn-keeper. "Surprising how a simple man like myself gets to know about politics-you'd never think a little town like Perleberg could have so much excitement one way and another. Oh, tis very strange. . . .

Oh, thought Grafton, we've got the date and the place. I was right. I haven't traveled in space, at least not very far, but I've traveled in time. By the gods, how I've traveled . . . five hundred years, 1809. He shook his head sadly, "1809," he whispered. . . . "Five hundred years, five centuries before the Eurasian dictatorship. Five hundred years before anyone ever heard of Rajak the Magnificent." He recalled what little history he did know. He realized that looking retrospectively at history, looking back into the past, was like looking down into the lions' den from the safety of the parapet rocks. But looking forward to a horror that he knew must come, be it five centuries away, Was like being chained to a railway track while a distant express gathered its destructive speed, an, force.

The inn-keeper took a rtlassive ir9n key from the boar< above the bar and showed him the way up to tlle rOOD overlooking the courtyard. "Here you are, sir. I hop you'll be very comfortable, and I certainly hope you won leave us quite so suddenly and unexpectedly as the prf vious gentleman."

"I hope so, 'too," said Mike Grafton.

The inn-keeper brought some clothing. "I hope these' fit you fairly well, sir, but you're a considerable sight taller than I am. However, they're the best I can find, and in these circumstances I don't suppose you'll mind very much."

"Not at all," said Grafton. "I assure you I appreciate your help. There are times when clothes are worth more than gold, my friend."

"Aye, that's very true, sir," said the inn-keeper. "That is very true indeed." They exchanged glances.

No doubt he's written me off as a spy, thought Mike. No doubt he has seen so many spies, what with England, Austria, France and Russia all involved. But as long; my money or my watch is good, he'll be happy. He locked the door and slid home the heavy iron bolts, taking the candle which the inn-keeper had left and looking.' carefully around the room.

He was struck with curiosity by some little fragments of paper in the fireplace. They had obviously been burnt, yet not with any purpose of lighting a fire, for there was neither kindling nor logs available. They had been burnt with one purpose only. Somebody wanted them safely destroyed. There must have been some pretty interesting contents in those papers. Grafton found one, the edge of which was only charred and not completely consumed. . . . He picked it up and found to his amazement that it was written in good, legible English. It was an educated hand that had written the words, and he remembered that the man who had so mysteriously disappeared, and for whom a search of the inn yard was progressing at thAt very mo-ment, had been an English gentleman. He wondered who he could have been. And then he remembered something else--the sealed package which he now had in his own pocket. He wondered if there was any connection between them.

Chapter Three
The Manuscript

With trembling fingers Mike Grafton broke open the seals of the package which the vanished man had dropped. It contained two or three sheets of closely written parch-ment. The writing matched the writing on the fragmelnts he had taken from the grate, in every possible detail. Grafton began to read by the uncertain light of the flicker-ing candle, and as he read, his interest grew with every paragraph:

"Whosoever may find these documents, I wish it to be known that my name is Benjamin Bathurst. I was born in London, 14th March, 1774, and in the year 1807 I was sent to Vienna with important dispatches by the British Government. But I am getting ahead of myself, for I wish to give first some more details of my family background, so that the finder may be able to inform my parents and my beloved wife Phillida should anything un-toward happen to me on this mission. I am surrounded by enemies on every hand, and my fear of treachery, both within my own party and from outside, grows with every

passing day. My father is Henry Bathurst, the Lord Bishop of Norwich, and I was brought up in Norwich Episcopal Palace. Our family home is at Cirencester, in dIe beautiful old English peace of Bathurst Park. As I sit in the room of this miserable inn, writing what may be the last words my pen shall ever set down, I am all too aware that I would exchange all my worldly wealth to be back once more in the sanctuary of our ancestral home. But fate has decreed otherwise, or so it seems to me, and as the noble Bard of Avon says, 'Some have prominence, if not grea1ness, unwillingly thrust upon them.'

"There have been prominent men in our family before. My ancestor the Earl of Bathurst, who was born in 1684, was a noble scholar, a friend of Swift, Addison and Prior. The third Earl was born in 1762, and is now one of our great and prominent statesmen. My father was Canon of Christ Church, Oxford, and was later an Incumbent at Durham. He is a wonderful, godly old man, and has traveled extensively during the course of his ministry. Now, as to myself, I will go back to the purpose in hand.

Every footstep outside the door warns me that time may be running out. How strange time is-but I digress again." The words sprang up and hit Grafton with the force of living things. It was odd, he thought, that this Benjamin Bathurst had written that phrase, for it was time which had somehow swirled him back into the past by the ingenuity of that 24th century scientist of the Resistance Movement. It had indeed saved him from the attention of the security police, but placed him in a predicament stranger-and even more terrible.-"in spring, this year, Lord Mulgrave appointed me as Secretary of the Legation at the Court of Stockholm, and afterwards I was made Envoy Extraordinary to the Court of Vienna, on an important secret mission, which as you may well guess, concerned our present struggle with Napoleon. I enclose at this point a copy of a letter which I sent to my friend Williams. I wrote the letter at the beginning of June when I was' in the city of Pest and I copy it simply because I fear that the original has not reached my friend. Should this prove to be the case, perhaps you, the unknown finder of this package, will convey my words to him. Here, then, is the letter.

My dear Phil,

It would be useless going over what has happened to me since my being on this station, where I have hitherto witnessed scarcely anything but distress and misfortune; I got to Vienna the very day of the terrible account from the Danube, and have seen little since to cheer the scene. The desperate resolution of the Austrians keeps pace with the military blunders they improve upon daily. No reverses can correct, no experiences instruct them. A cause quite sacred, pursued with fanatic zeal. An incomparable army and resources without end, an yield to the - ascendant of our abominable opponent and his superior military skill. A miracle, or another battle of Aspern-which was little less-may restore us, but scarcely any other effort. I cannot say, my dear Phil. I am quite in Paradise through a very flattering situation, and immediate action in events which inspire the deepest in-

terest atone a little for the separation from PhiIlida and a variety of other inconvenien~.'

"It may not mean much to you, but my friend will understand it. Perhaps I am lacking in modesty, but my friends tell me that I have promise. Some indeed have gone so far as to say that as a diplomat I show occasional flashes of brilliance. They tell me also that my disposition is sanguine. Yon, who have never met me, will have to judge what little you can from these words I leave behind. I have heard no word from my parents and my family for some long time. for I have been traveling incognito by a circuitous route, tQ avoid being recognized by the French. Before sitting down to write and seal this message, I have gone carefully through all my diplomatic papers, and burned anything which might be of use to our abominable opponent. I haye many suspicions of my enemies, and perhaps, unknown finder, should you turn out to be a friend, you will make those suspicions known. There is Kraus, the messenger who travels with me; I neither like nor trust the man. Yet I may be misjudging him. Above all, if you who find this package, especially so if you find it upon my corpse, on no account make Kraus your confidant, for I have my suspicions that he is secretly in the pay of the enemy. Also, very foolishly, I pulled out my watch and my purse, which is wellstocked, in the kitchen of this inn, not so very long back, and I saw the avaricious greed in the eyes of an ostler and a postillion. I wonder if they plan some mischief against me. I have also quarreled, understandably, with one of my servants, and he, in a fit of temper, has sworn to revenge himself. Perhaps I may fall by his rebellious hand. To try and throw them off the track, two nights back I rode, secretly and alone, to a Consul I know several miles away, near the seacoast. When I reached his house, a girl carrying a candle opened the door to me, her hand on her forehead, shielding her eyes against the light of the candle she bore. I wore my cap and had my roquelaure wrapped around me. As she opened the door, a keen wind blew out the light she carried. I asked if the Consul was at home, and she replied that he was not. She then asked me my name, and I answered, 'Never mind that, but tell your master that an English gentleman has called and will see him at the Post House tomorrow, early.' I went to the Post House and waited as long as I dared, but he did not arrive, and I rode back to Perleberg. I heard, in the very hour that I penned this, that the boat in which I had intended to cross to Sweden is reported to be lost. There is another fact which I must state. Should my body be found with marks of violence upon it, or should it be found in circumstances which might lead the unknowing to suppose that I took my own "life, I write here, as solemnly as I could aver anything on the great Day of Judgment, that I have no reason so to do. I have lost no money at play. I have been guilty of no dishonourable misconduct. If I do not reach England safely, I shall certainly die by a hand other than my own. I fear the French, I fear the Russians, I fear my own party, above' aU I fear the Count d'Entraigues. I fear him, master spy that he is-who knows which side those bloodstained hands work for? And here I must copy another letter in case the original did not reach its destination. To me, it is the most

important part of this document. rpray that you who find these last words, wheilier you be friend or foe, that you convey this, at least, to my beloved wife, Phillida Bathurst. I dispatched the original letter from Buda on October 14th of this year, and I give a copy here below:

My dearest Phillida,

I am able to give you a few words of intelligence of me, my dearest, by Heliogoland, though hardly more, by the smallness of the package 1 am obliged to send by this channel. Things are in the most desperate condition, and if Bonaparte can be removed from Vienna without some very signal catastrophe to Austria, the utmost of our hopes will be fulfilled. My fate, of course will be decided among the other Articles of the Peace. If the intercourse with England is put an end to, which is next to certain, tonight I shall try to make my escape. But should I prove unsuccessful, I trust that this package may reach its destination.'

"There is one word more I would wish to say to you, the unknown finder, and that is this. As a last rose of de-coy, to throw my enemies off my track, I have written a letter, whose contents are much the contents of this package, and have hidden it in an old pair of oVa" trousers. Those overalls I have entrusted, together with five guineas in English gold, to an old woman of thiS village whom I believe I can trust, not so much for her character's sake as for the gold that I have given her. Her task is simple, should I disappear, as I intend to of my own volition and not at the hands of my enemies. Should I disappear and be able to make my way safely through the clutches of my foes to the sanctuary of England once more, to give me a little more time, she is to produce these trousers, after my disappearance has been spread abroad, and she is to say that she found them in a wood on the banks of the Elbe. I shall, of course, by traveling in a completely different direction, a direction which must re.. main a secret even from you, my unknown friend-or my unknown enemy. Time has gone. There is so much left un-said which I wish to say. But time is time, and waits for no man. The worst master and the best servant in the whole of creation is the clock on the wall of the Palace of life. And so, I wilJ sign myself, dear sir, or madam, whoever you may be, hopefully yours,
Benjamin Bathurst."

The manuscript ended, but Grafton read it through again and again. His heart felt strangely touched, by the outpouring of the young English nobleman's very soul into what must have been his last message and he felt a strange fellow feeling, and a bond of sympathy with this man who had died five hundred years before his own time. . . . Yet as he read, he thought of the fleeting figure who had flashed past him in the grey mist, dropping its precious package as it Passed. He knew that whatever else may have happened to the diplomat, Benjamin Bathurst was by no means dead in the commonly accepted sense. Vanished from the world of men, beyond their ken and their con-tact, yes, but M had not gone through the door by which his fellow 91ortals were all destined to pass. As he sat in the silence of that upper room, which the missing diplomat had so recently vacated, Mike Grafton pondered many

things. And as he pondered, with a strange feeling of guilt, he realized that his own precipitous flight from the powers of the Eurasian dictator were, in all probability, more than partly responsible for the disappearance of Benjamin Bathurst in the cloud of grey mist. He tried the best he, could, for he was a fine technician and scientist in his own right, to understand the principles of the time machine, but it was far beyond his comprehension. It occurred to him however, that in all principles of science, nature and the basic laws of the universe abhor a vacuum above all else. It was therefore very necessary for a vacuum to be filled-to be filled by an equivalent amount of either mat. ter or energy, depending upon the exact nature of the empty valency to be taken up. If in some strange way the old freedom fighter sci,entist, back in the Perleberg of 2309, had created a machine which could produce a tem. porary rift in the time dimension of the continuum, that rift, fault or vorrex-eall it what you will-had to be filled. To use a physical analogy, he, Mike Grafton, had been displaced from his own natural environment in the 24th century. He had been standing at a preciSe spot in space at a precise instant of time. Rifts, geologically, he knew, had a tendency to run in sharp vertical lines. They ran with precision. They responded to certain inalienable laws.

Therefore, if he was to disappear, he must disappear at the extremity of a certa,in time cycle. Anything which would fill his place must, in all probability, be standing at the other end of the vortex, the anipodes of the cycle from which he had been drawn. At that precise spot five hun- dred years ago stood Benjamin Bathurst. He had walked around the head of his horses, with his sealed document half in and half out of his hand. He had been caught by a strange fourth-dimensional time vortex, and he had never been seen again in his own world. It was a terrifying con- clusion, but a conclusion which Grafton had to accept.

Chapter Four
Double PursuIt

Grafton had no more time to spend pursuing the manuscript. There was the sudden sound of footsteps on the stairs; heavy footsteps, footsteps which in any age could meam only one thing . . . trouble! There was a thun- derous knocking on the door.

"Who's there?" he asked in his best approach to archaic German.

"Les douaniers," roared a harsh voice from without. "Francais. Vive Napoleon."

Devil take Napoleon, thought Graftoo, and quite sud- denly he realized what had happened. Either the inn- keeper, or one of those in the bar who had seen him ascend the stairs had tipped off the local Guardier Poste, and the captain had put two arid two together and made five. The mysterious Englishman they had been watching the previous night disappears, another man appears, just as mysteriously, comes to the inn, and is now ensconced in the room which the previous man occupied. Some secret message has probably been left in a pre--arranged hiding place in this room. The men are working hand in glove; If

one is.an English spy, so is the other. . . . If one is on a dangerous diplomatic mission, so perhaps is the other; indeed, it might even be a clever ruse--the first man returned in disguise. Grafton realized the thoughts that would go tbIough the nasty suspicious little mind of the local French guard's captain. He had had enough experience with the Secret Police in his own century not to wish to repeat it here. Methods were probably much auder, possibly much more effective! But after all, he told himself, it matters very little whether a man meets his end by a rough lead musket ball, or whether he fries as a power charge hits him.

The ultimate result is identical. . . " The thunderous knocking became even more thunderous, and Grafton raised an eyebrow in appreciation of the fortitude of the door. But he knew that, tough as it was, it certainly could not last forever. The heavy old four-poster was the obvious barricade, and luckily he was a strong man. It was the work of two sweating minutes to haUll it across the room and fasten it securely against the reverberating door. He looked out the window. In the dim, lamplit courtyard, he could see the ground scarcely fifteen feet below him. There was no one guarding the window, as far as he could see. He crossed the room in tbIee quick strides, flung wide the narrow casement, and scrambled hastily through the window. A short drop and his themlo-plastic boots contactedthe cobblestones, and with a light athletic spring, he was racing on his way.

As he ran tbIough the darlmess, he heard muffled noises behind him, and realized that his barricade had parted company with the door. He saw dark figures silhouetted against the window, and a fuselage of musket shots rattied around him in the darkness. Friendly bunch, he thought, as he ducked into the shadow of a tree, and a cold savage anger began to grow within him as ball after ball snicked the ground around his cover. The thought of being injured in an age when medical scie.nce was primitive, to put it mildly, did not appeal to him particularly. He had no particular quarrel with these guardiers on the other hand, and they had no particular quarrel with him, if they had taken the trouble to find out. The thought only served to increase his anger. "I'll give 'em muskets," he muttered savagely and, hauling the power blaster from his belt, he loosed an energy bolt in the direction of the inn window. The effect was eleotrifying, both literally and metaphorically. The offensive group of militia seemed to be flung back from the window as though they had been struck by lightning-which in effect they had. Man-made lightning; deadly lightning; the ultimate destructive weapon in the field of hand arms that the technology of the 24th century could produ.ce. The douanier reeled back amid the smoking wreckage of the room. Some were dead on their feet; others were dying. Two survived. There were no more musket shots. . . '.

Grafton felt a fleeting pang of regret after he had fired the energy bolt at the French guards. He felt that he had taken an unfair advantage of the day and generation, that he had no more right to fight them with the weapons of his own technology than a man could in fairness fight a child. It was like a heavyweight taking on the smallest of light-

weights. It was like a mechanized armored unit cutting through a trench full of light infantry. It was unchivalrous, somehow. And yet he had had no option. He crouched in the darkness among the trees, trying to decide on his next move. He knew no one. He knew little of the terrain. He was uncertain about the politics of the time, and how the combatants were ranged. He felt in every sense of the word that he was a stranger in a strange land. All his survival data, the information which his subconscious had carefully picked up from the moment of his birth, was geared to life in the 24th century. It was not geared to the vastly different problem. of life in the early 19th century, and yet, as he stowed the hand blaster carefully back in his belt, he knew perfectly well that there were many aspects of his own generation and his own environment that would be an advantage to him here. He wondered just how much of his superior technological skill he would be able to employ in the struggle for existence. He drew a small phosphorescent torch from his trouser pocket and glanced at the charge meter on the hilt of the blaster. The weapon ought to be all right for several weeks at least. He was glad then, in a way, for the superior technical skill that his century possessed in the arts of war weapon manufacture. He thought of the great weapon shops of Eurasia, the pride of Rajak's government; the favorite toys of the sanguinary dictator. The principle of the power blaster was comparatively simple; the heavy shielded butt contained a chemico-atomic element mixture, which had latent within it the power to reach a point just below critical mass and remain at that point till released. Having been fired, the charge slowly built up again, so that, providing the weapon was not used too often in quick succession, it would last for a very considerable period. The energy released by the action and inter-action of the elements concerned was transmuted into an electrical power charge, coupled with an additional thermal devastation. Anything that got anywhere within range of a Eurasian hand blaster was not usually ranked as a particularly good insurance

Mike Grafton put both blaster and torch away again, and set off carefully through the darkness; he had decided that in view of the attention which Ie douanier and his men were paying, it would not be a bad idea to put as much distance as possible between them. . . .

It occurred to him that Bathurst's suspicions about both the inn-keeper and his staff were-probably well justified. It now looked to Grafton as though the rather lecherous hostler had sold him out for the sake of the watch, not wanting to provide a free month's board as his side of the bargain. He still had the remains of the thousand guilders, however, and was glad he had at least that much. However, he missed the watch, and with a stubborn determination that was typical of the man, he decided that when an opportunity presented itself he would relieve the inn-keeper of his ill-gotten gains.

Had he been an historian, he would probably have noted the extent of the underdeveloped woodland in the vicinity of early 19th century Perleburg. However, not being an historian, he was glad, as a practical man is glad that it provided him with adequate cover.

It had not occurred to him until then just how tired he was. He realized that it was going to take -all his will-power to keep his eyes open for very much longer. He plunged deeper into the scrubby undergrowth beneath the trees till he came to a secluded place where he thought he would be safe till the moming. He remembered the Indian proverb, "The hunted man sleeps with one eye open," and it was with every sense on the verge of consciousness that Mike Grafton slept that night.

Light and troubled though his sleep was, he did manage to sleep. -But he was 'troubled by many strange weird dreams. From out of the midst of one of these dreams he saw the misty features of a strong, dark-haired Corsican face; a face that was moody, yet flas.hed with a look of keen intelligence. . . . Mike Grafton heard a voice.

"I am Napoleon Bonaparte," said the voice from the misty countenance. "Not a drop of French blood flows through these veins, for all that I am the master of France and Europe." The lips parted into a thin enigmatical smile. "I am scarcely even a Frenchman by birth, for my native town, Ajaccio, is situated in the island of Corsica, and Corsica itself was only handed over to France by the Republic of Genoa in 1768, just one short year before I was born, on August 15, 1769. They tell me that I am a typical Corsican, that I am moody, exacting, yet brave and constant. They say what they will, but I am master of France and of Europe. That in itself is a strange thing. For years my most intense emotion was hatred of France, ha-tred of the oppressor of my native land. This feeling was strong within me when I went to the French Military School at Brienne. I was only a boy of nine then, and at fifteen .I began Service in the French army as a second lieutenant of artillery-until the time of the French Revolution. I spent much of my time in Corsica on leave, during the early period of that Revolutioo, and I studied the great French philosopher Rousseau, and at last, after I had read enough of him, I accepted his new political doctrines. For I knew that they were right. First, being a strong - Irian with strong views, I came into conflict with the Monarchist faction on that little island, and with my family I was forced to escape to France in 1793. I remem-ber that summer well. . . .." His eyes regarded Grafton coldly in the dream, and Mike tossed restlessly. . . . "In that same year at Toulon., I showed them what my energy and genius could do, I showed them the power of my ambi-tion. It was I, Napoleon, who directed the artillery at the siege of that rebellious French city. It was I who brought about its downfall. . . but Fate was against me." His proud, brooding face floated above Grafton's. The eyes looked upward as though to the inscrutable heavens, "Fate was against me," whispered this dream of Napoleon again: "It was Robespierre and the Jacobeans with whom I had established friendly relations. It was on those I placed my bet. But they fled from power. I had staked a dying horse. . . . In 1795 I was back in Paris, deprived of my command without money, under suspicion by reason of my Jacobean connections. But that was the last year of misfortune. In September, with only a whiff grape shot to help me, I defended the Republican government against a Royalist uprising in Paris . . . and the Directory rewarded me by

making me the Commander of the French army in Italy, against the Austrians and their allies. In the meantime," the eyes grew misty, "I had fallen in love with a young widow, Josephine de Beauharnais." There was a long pause, and the ghostly face floated in front of Mike Grafton's closed eyes. . . . "The Italian campaign showed my full military genius, and it stirred my great ambition to life again. In 1796 I defeated the Sardinian troops five times in eleven days. I threatened Turin and compelled peace. Then I turned eastwards against the Austrians, and I had advanced to within eighty miles of Vienna when they offered peace. In 1797, by the Treaty of Campo Formio, France was given Belgium, which was then called the Austrian Netherlands, and accepted the Rhine as a frontier between the Republic and the Sisalpine Republic which I had established in northern Italy. By way of compensation to the Austrians, I gave them most of the territories of the old Venetian Republic which I had destroyed. . . ." As the recital went on, Mike Grafton had been getting more and more restless, tossing and turnmg like a man in a fever. . . . "Next the government sent me with a large army to Egypt, and there on the banks of the Nile I hoped to strike a blow at France's most powerful enemy, England, by opening a route to India. I seized Alexandria and, at the Battle of the Pyramids, fought near Cairo on 17th July 1798. I defeated the Egyptian army-" the great powerful jaw closed like a steel trap; the lips trembled for an instant, "-but my fleet was destroyed by the British in the Battle of the Nile at Abukir Bay, and I was cut off from my reinforcements. . . . But what of it? I succeeded in evading the British frigates, and I landed in France on October 9th, 1799. When I returned, I found the government had been discredited, so I joined in the plot, which in November, 1799, overthrew the old Regime and set up in its place a government called the Consul, with myself, Napoleon Bonaparte, as the first of its three Consuls. In 1802 I became First Consul for life. Now I grasped political power and became master of France. MyoId ambition was realized. But new ones were already forming. . . . In a mind as brilliant as mine there must always be progress, always ambition-ambition that never ends. True, I had failed to build up an eastern Empire; now I aspired to restore the western empire of Charlemagne. At the Battle of Meringo in 1800 I defeated the Austrians, and by the Treaty of Amiens in 1802, I obtained peace with Britain. But even in peace I continued to carry out my ambitious plans. In the fourteen months before the conflict began anew, I became Prt:sident of the Italian Republic. I annexed Piedmont, Parma, and the Island of Elba. I planned the partition of Turkey, and the foundation of a Colonial empire which was ,to include America, Egypt, India and Australia; the other European powers felt compelled to renew the conflict against me. But still victory smiled upon me, Napoleon the Great. . . . At the Battle of Austerlitz, on December 2nd, 1805, I defeated both the Austrians and the Russians. I dealt the Prussians a crushing blow at Jena on October 14th, 1806, and by the Battle of Friedland fought against the Russians on June 14; 1807, I brought most of Europe to my feet; only one obstacle barred my way to complete mastery of

western Europe, and that obstacle was Britain. . . . In 1805 I planned to invade Britain and reduce it to submission, but my favorable moment has not yet come. For in the Battle of Trafalgar in 1805, the English Navy destroyed both my own and the Spanish fleet. . . . When I think back to the momenm of the height of my greatness, I think of all that I have done for these great lands of mine. . . . Look what I have done for the Roman Catholic Church which had been repressed in the Revolution. I re-established it by an agreement with the Pope, the Concord Act of 1801. The old confused legal system was swept away, too, and I founded a new system, the code Napoleon. Step by step I built up my own position. In 1804 I secured a popular vote, sanctioning the change from the Consulate to an Empire, with the title Emperor of the French, and the right of handing down the throne to my descendants. In 1809 I said farewell, divorced poor Josephine and married Marie Louise, the eighteen-year-old daughter of the Austrian Emperor. I thus allied myself with one of the oldest royal families of Europe. . . . I set myself to the work of reorganizing Europe. The Sisalpine Republic was now changed to a monarchy, and I myself was crowned King of Italy. And do you know what the English Prime Minister Pitt said after the battle of Austerlitz? 'You can roll up the map of Europe; there will be no need for it for ten years to come.' And I have had Europe at my feet ever since. My stepson Eugene was made Viceroy of Italy. My brother Louis received the kingdom of Holland, Joseph became King of Spain, and General Murat, my brother-in-law, succeeded to the vacant Napoleon throne. The shadowy Holy Roman Empire I dissolved in 1806. Now the high point so far in my career, following the Peace of Tilsit, in 1807, was on a raft on the River Niemen, when the Czar, Alexander of Russia, was won over to my plans. Alexander and I are to divide Europe between us; in return, he will aid me in my Continental system. The object of my system is to close Europe to British goods, and so destroy Britain's trade

Every state in Europe except Turkey and Portugal will be forced into my oommercial system. But there is one small dark cloud on my horizon. The patriotic fire is being lit in Spain. For a few short months ago the British sent troops to help the Spaniards, and the Peninsula War has begun A few inches at a time, our forces are being pushed back beyond the Pyrenees, but we shall subdue the Spaniards again, of that I have no doubt. Austria has renew the struggle, I crushed her at the Battle of Wagram in July only a few short months ago, but I have my doubts about Alexander of Russia. I fear that he will desert my system It may be necessary for war between us. It is difficult to tell." The ghostly face of the great Imperator faded away into a green translucent mist, and as it faded Mike Grafton awoke. . . awoke in a strange sweat of terror.Indeed of vanishing away into the depths beyond memory, the dream stayed clear and vivid in his mind. He recalled every word that the ghostly voice of the Emperor had said and he knew from what little history he could remember that it must all be true. But whence had the voice come? Why had this strange dream singled rum out as he lay in the leafy comer of the forest? It was, he decided, prac-

tically inexplicable. As he lay in the leafy darkness, thinking over this strange ethereal visitation, he began to wonder whether or not he had just the rudiment of an explanation, the embryo, the germ of an idea forming at the back of his consciousness. It occurred to rum that his mind, although he was just an average citizen, must be five hundred years ahead biologically, in the natural evolutionary process; must be half a millenium in advance of the minds around him. He had that addition of sensitivity which they had not. He had intellectual power which was above theirs, and he probably had greater depths of mental sensitivity than had been vouchsafed to them. He thought of the tension and of the conflicts that were taking place around rum at this particular time; he thought of the anxiety that must be in all the minds around him, the anxiety concerning Napoleon, concerning the great Emperor's history, the great Emperor's future. He thought of the great minds of Europe, some that loved and some that hated Napoleon Bonaparte. He thought of the great mind of Bonaparte himself, brooding on the future and the past, considering how his subject must feel, considering how they would react to his every wrum, to his every word, to his every order. . . . And as he pondered on these things, he realized that in all probability, nearly every mind in France and in Europe, in Germany, in Perleberg, must be thinking to a greater or lesser degree, consciously or subconsciously, of Napoleon. And that Napoleon himself must be thinking of his people, so that to a sensitive mind the whole atmosphere was alive with thoughts of Napoleon. And because his mind, from the 24th century, was sufficiently sensitive to pick up that concentration of thought forms, he had received a concentration of this conglomeration of mental images. It accounted for the dream; the dream was the condensed reception by his subconscious of all the loose drifting thoughts that floated through the continental ether, the thoughts that appertained to the great dictator.

It. struck him as a rather odd coincidence that, although separated by five hundred years, there was a certain similarity between the two worlds, in which he found himself an unwitting and an unwilling subject. He had not asked to be born into the Eurasian "Utopia" of Rajak the Magnificent. He had never asked to be one tiny cog in a vast sociological machine. He had not asked to have within him that vital spark of freedom, which detested dictatorship and struggled for liberty. These things had come upon him unasked, as night and day come upon a man . . . as hunger and thirst, tiredness and wakefulness. . . as dreams themselves come upon a man. He thought of all the events in his own life that had come upon him in the same way, as he had been dragged relentlessly down the one-way street of existence. . . which we call the time track. This had lasted for the first thirty years of his life, and then, with cataclysmic suddenness, his own particular time track had dissolved, and now he had no time track at all. Everything that he knew and understood and comprehended; everything to which his survival data was geared had suddenly. been taken away from him as completely as if it had never been, and here he was back in the weird, incomprehensible past. His mind was a confused jumble of

thought as he lay sheltered among the leaves. . . .
He cocked his head on one side, listening intently.
There was noise. . . a noise which he dreaded instinctively. The noise of footsteps. Someone was approaching. Grafton peered through the foliage, unable to penetrate its leafy opacity. His every sense was alert. His nerves screamed a silent warning in the body's own internal language. There was danger in the darkness, dreadful, intangible danger. He realized as he crouched there in the thicket that the whole hypothesis of fear consisted of the question "What if?"
What if there were an invisible enemy, sneaking stealthily closer? What if some fiend, graced with nocturnal vision, were poised to strike him down at that very second? What if a musket was even now leveled at his unprotected chest? What if? A thousand ghastly probabilities, each more terrible than its predecessor, loomed above him like multiplicities of the sword of Damocles. Suddenly a voice broke the tension of the whispering forest.

"Grafton, Grafton, can you hear me? Don't shoot; I'm a friend."

"Is this some sort of trick?" answered Grafton suspiciously. . . .
The first thing that Ben knew was that he had dropped his precious package and he swore quietly, with the refined manners of a first-class English gentleman, politely, Under his breath. At all costs he did not want that particular package to fall into the hands of the French -or any of Napoleon's other minioos, come to that . . .
Of course, it contained nothing incriminating, nothing which would be of value to an alien government All the same, he would like to have gotten it to the coast All thoughts of the coast were receding from his mind as he found himself in this uncanny grey mist Hm first thought was that he was the victim of some diabolical trap-the fiendish invention of the Count d'Entraigues, or the douaniers. Napoleon's scientists, perchance, had stumbled on some devilish new invention that could suck a man off the face of the earth and cast him into heaven alone knew what ghastly package. Just for a second he could still hear his horses; and he was also aware that there was a man somewhere near him, perhaps the scientist in charge of this horrible machine. He had no means of knowing, and yet the man looked as frightened as he himself felt. He was wearing a strange dark tunic, unlike any clothing that the young diplomat had seen anywhere before. It crossed his mind for a moment that perhaps Napoleon had secret allies, some hidden race that the Emperor bad discovered in North Africa. . . . Yet the men's skin was not dark. Perhaps he had come across a hidden village in the mountains whose people had developed a strange tedtnology of their own. Perhaps-for even to an educated man in the nineteenth century, witchcraft and magic were not impossibilities-there was some supernatural power behind this weird mist. . . . And yet to Bathurst's brilliant mind, this hardly seemed a genuine possibility; it was one of the wild semi-civilized thoughts that lurk at the back of sophisticated minds. Before he had time to ponder any longer, the stranger had gone and the horses were gone.
And strange red markings appeared on a curved surface

which was gradually solidifying out of the mist in front of him. Cautiously Ben put out his hand and touched the surface. It felt for all the world like thick glass. He was aware, too, that his feet were no longer on the cobbles of the inn yard. He stooped and looked down at them. He found that he was standing 00 a surface that looked like highly polished quartz, cut in strange prismatic formations. The effect made him think of the strange experiments of Dr. Mesmer, of which he had heard. It seemed to him that the weird prismatic glow was almost alive and looked back at him with a thousand wicked eyes of its own. He felt like a bird, captivated and charnled by a snake. He felt for the pistols he was never without, and found that both they, his powder horn, and his stock of balls were still intact. At least, wherever they were taking him or whatever had happened to him, he would sell his life dearly. He wondered if he would be able to destroy this strange machine, or whatever it was; he wondered if it would respond to the impact. . . . The red markings on the walll had cleared and solidified,' until they now formed a date, November 25th, 1809. As he watched, the solidification gave place to an amorphous change. The letters melted as though they had been made of wax; now even the red coloring had gone. He was surrounded by nothing but a grey mist, which grew rapidly deeper in shade, tinged with purple. Translucence gave place to opacity, and he found himself surrounded by darkness; the purple gave way to blackness, a blackness such as he had seen tains whose people had developed a strange tedtnology of their own. Perhaps-for even to an educated man in the nineteenth century, witchcraft and magic were not impossibilities-there was some supernatural power behind this weird mist. . . . And yet to Bathurst's brilliant mind, this hardly seemed a genuine possibility; it was one of the wild semi-civilized thoughts that lurk at the back of sophisticated minds. Before he had time to ponder any longer, the stranger had gone and the horses were gone. And strange red markings appeared on a curved surface which was gradually solidifying out of the mist in front of him. Cautiously Ben put out his hand and touched the surface. It felt for all the world like thick glass. He was aware, too, that his feet were no longer on the cobbles of the inn yard. He stooped and looked down at them. He found that he was standing 00 a surface that looked like highly polished quartz, cut in strange prismatic formations. The effect made him think of the strange experiments of Dr. Mesmer, of which he had heard. It seemed to him that the weird prismatic glow was almost alive and looked back at him with a thousand wicked eyes of its own. He felt like a bird, captivated and charnled by a snake. He felt for the pistols he was never without, and found that both they, his powder horn, and his stock of balls were still intact. At least, wherever they were taking him or whatever had happened to him, he would sell his life dearly. He wondered if he would be able to destroy this strange machine, or whatever it was; he wondered if it would respond to the impact. . . . The red markings on the walll had cleared and solidified,' until they now formed a date, November 25th, 1809. As he watched, the solidification gave pl3£e to an amorphous change. The letters

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He crossed the cement-floored cellar in four quick strides, his hands never straying far from the butts of his pistols. He noticed that the walls were blotched and darkened in places as though they had recently been subjected to intense heat. . . . He touched one of them, which was still warm, and his fingers tingled as they came in contact with the stone. He drew back, wondering what had caused the strange burnings on the concrete. The only exit was a flight of stone steps leading upward, and with a final quick glance around the small chamber, Bathurst set his foot upon the lowest step. He ascended quietly and stealthily, every sense on the alert for the first sign of attack. Apart from the fact that he was in what looked like an adapted wine cellar, he had no idea at all of his whereabouts. At the top of the steps he noticed an iron shutter, twisted as though it had also been subjected to the same tremendous heat that had blackened the walls. Beyond the broken shutter were the remains of a door. He had just set foot across the threshold when he heard footsteps slowly approaching.

He froze motionless where he was and heaved the pistol from his belt. He could hear voices, and his keen ears told him that there were two men approaching the underground room. He cocked the pistols with grim determination, and pressed his back flat into the dark recess beside the doorway. The footsteps grew closer. The air was electric with expectancy. Around the corner walked two figures dressed in grey. He had never seen either before, but there was something decidedly odd about them, he felt. They looked perfectly normal in many respects, yet something in the contour of face and head showed that though they were men, they were men of a type he had never encountered before. Just as racial characteristics are noticeable in every day and generation, so they are noticeable in every epoch and era of time. Five centuries cannot roll by without making a physiological difference in the appearance of homo sapiens. The faces were cruel, cold and hard, and Bathurst felt an instinctive dislike of these grey-uniformed newcomers. He listened intently and heard their speech. To his ears it seemed fast, almost vulgar and uncouth in its use of words, and yet he had little difficulty, linguist that he was, in making sense out of it. That it had been derived from at least one of the European languages which he knew, he had no doubt, but

its variation was wide, and here and there an occasional word flew by him uncomprehended.

"The old man will tell us everything of importance in time," said Dr. Korblenz, "but I have an impatient tendency; that is why I left the interrogation room early. I wish to see the room in which you tell me that the man you suspect was Grafton made his miraculous disappearance. I have studied many faculties of science besides that of pure medicine, and' I have a suspicion that I may know at least part of the answer to the mystery."

"The room is down here, Doctor," said the security guard beside him. "It is just around the corner. You will see the remains of the door which we had to break." The footsteps were almost on top of Bathurst now; he drew back still further into the shadow, his pistols leveled. The figures came within four feet of him as they rounded the corner of the doorway. He knew that these were not men with whom he could take chances. For if the man who had just addressed the other as "doctor" had indeed broken through that steel door, then he must have considerable power at his fingertips. Bathurst was a man of brave intellect and swift, decisive action. He could, when the necessity arose, be ruthless. It was him or they. His piSctols barked simultaneously, and both men fell without a sound.- For like most English gentlemen of his day, Benjamin Bathurst was an expert shot. He stooped swiftly over his fallen adversaries, stooped long enough to be quite satisfied that they were both dead, and as he did so his eyes fell interestedly upon the strange weapoos both men carried at their belts. It was obvious to him that they were some form of firearm, for they were roughly pistol-shaped. And the projection under the hand guard could be nothing less than a trigger. How they worked, and by what principle, of course, he had no idea. But it occurred to him that there must be a connection between those hand weapons and the melting of the steel door. He decided that, effective as his pistols were, it would not be amiss to arm himself with the weapons of this strange race among whom he had fallen. He withdrew the blasters from the dead men's belts and thrust them into his own. Pausing only long enough to reload his own pistols, he continued on his way along tOe corridor. He had no sooner reached the door than he decided that, in the daylight outside, his clothing would single him out a mile away. . . . He stood undecided for a second, looking out into the street beyond. Everybody was wearing the same kind of tunics, though of different colors. The two grey uniformed men he had just dispatched were obviously in the militia of the power into whose territory he had come. He ran swiftly back down the corridor and stripped off the dead men's uniforms. He noticed that the one addressed as "doctor" had been car": rying a bag, and although he did not understand the purpose of half the surgical instruments or the drugs within it, he decided it might be a useful asset in case of emergency. The bag was by no means full, and he had no difficulty in stuffing the uniform-which was constructed of some light materials, whose basic component he could only guess at-in with the surgical implements. Five minutes later he emerged, wearing one uniform and carrying the bag. His pistols were secured inside the tunic jacket, and the pair of

hung one on either side of his belt. He knew that bluff and braveness were far better than timidity; nobody thinks twice about a man in the uniform of the period, walking swiftly and decisively across the street, as. though bound on some errand. On the other hand, a timid man in strange outdated clothes would attract immediate attention. . . .

Bathurst made his way across the narrow cobbled street, wondering what his next objective should be. More than anything else he longed to find some place of security, where the comparatively uninterrupted peace and quiet would enable him to sit and try to work out what had happened. The experiences which had recently been his were whirling round inside his mind like an enormous, disjointed jigsaw puzzle. He had to find an answer, or he felt that his brain would burst. Yet without long, careful reflection, there did not seem to be any answer. He had remembered walking out of the inn yard, around the heads of the horses, and next minute--phutl-the grey mist, the glass cylinder, and all that had happened since. It made no kind of logic or material sense. Bathurst was intelligent enough to realize that there was far more to the universe than the straightforward, scientific, material side of things. Science was. beginning to realize that it probably held the key to most problems, and yet it was a key which as yet was only being tentatively tried in the lock; while he himself had more of a romantic turn of mind, preferring the intrinsic glories of rinspoilt creation to the mechanical enormities that were blotting the fair escutcheon of earth. He tried to work out a logical sequence of events, in which humanity might have developed since his own time. For it was. obvious to him, deep down in his subconscious, although the higher levels of his mind were unwilling to accept the fact that he had, in some miraculous way, transcended both time and space when he passed through the weird grey mist.

There had been a cess~tion of movement during that period, when he lay paralyzed upon the crystalline quartz floor and yet knew that the movement was by no means through any of the physical dimensions. He had traveled neither up nor down, sideways nor back. He had moved along a path; that path could not be described geometrically-at least not in the geometry which Bathurst had learnt. He moved a hand inside his jacket and rested it on the pistol butt. There was a certain comfort in the hard cold touch of the polished wood. He tried to make his mind grasp and realize the faCt that he had been, in some miraculous way, transported either forward or backward through time. It must have been forward, he was muttering to himself; it must have been. He was so engrossed with his thoughts that he did not see the gnome-like little man who had suddenly appeared on the cobbled pavement beside him. He just suddenly glanced down, and the man was there. He wore a loose-fitting cloak of brown, unlike the other citizens that Bathurst had seen, and this brown cloak obviously disguised an unpleasantly twisted and malformed body. Yet the man's eyes were bright and kindly. They reflected a soul that looked bigger and taller than the twisted vessel in which it was stored.

"Are you lost?" said the little gnome suddenly. Bathurst

looked down at him.

"Why do you ask?" he inquired suspiciously. He slackened his pace as he realized the little creature was having difficulty keeping up with him. The little man could not have been more than about four feet eight inches tall, and yet, by the bulges beneath the cloak, it looked as if that twisted spine had once been much straighter and taller. His shoulders were still quite broad, although they were twisted and sloping now. Bathurst had the sickenmg impression that this gnome-like creature with the bright eyes had once been as tall and erect as he himself, perhaps even taller. The creature was quite hairless; and its scalp bore evidence of several long-healed scars. It occurred to Bathurst that the man had been in some kind of terrible accident in the distant past. . . . The gnome was regarding him again, intently. It seemed that the bright eyes were boring into his very soul.

"Why do you ask?" repeated Bathurst.

"I'm a very curious little chap," replied the gnome.

"Very curious indeed, you see. There's something just a little bit 'wrong' about you, and I want to know why, I want to know, whether perhaps it is because you aren't what you seem. You see, if you are what you seem, then you had better go away quietly. But if you aren't what you seem I will stay and talk to you. We may be able to help each other. Let me just take a guess. H what I say means nothing to you," he chuckled, "then perhaps we shall find that you are not what you seem and I am not what I seem, and that nothing is what it really seems." Bathurst shook his head-this was strangely bewildering. "You see, you mustn't take too much notice of me because," the gnome laughed a strangely frightening laugh, "my brain isn't all there. They took parts of it away, you know, in the Big House. It was a doctor just like you who did it. They thought I was in the liberation movement, Funny things people think. but of course, they've got all the new truth drugs now; they don't need to take people's brains away." He twiddled his fingers as a child would play "cat's cradle," "They tried several ways to make me give them information. I wish they'd had the truth drugs ready. It took a long time the old way, but since they did things to my head I don't really mind, It's just that I wonder if you are what you seem." Obviously the unhappy creature had difficulty concentrating, Bathurst looked down at him with a mixture of wonder and pity. "What would you be able to tell me if I wasn't what I seemed?" he asked smilingly, and quite suddenly the twinkling mischief had gone from the gnome's eyes, and they were the cold, sober, earnest eyes of a highly intelligent mind. "I could take you to a place where you'd be given all the informa-tion you need to orientate yourself to this strange environ-ment. I'll ask you one thing only, and I warn you now, if you are a doctor in the security Guard, which your uniform tells me, then I shall shoot you down in cold blood. I have a power blaster under this cloak. H you are not, then you mayt:ome with us."

This was no village idiot, decided Bathurst; this was something completely inexplicable. "H you don't respond to the key word, you're dead," said the gnome. Bathurst noticed one of the bulges under the brown cloak had the

sinister appearance of a pistol barrel, and he realized that it was a weapon similar to the two which hung at his own belt. "The thing I noticed about you," said the little man, his voice stilI deadly serious, "is, of course, that your face isn't quite like ours. I don't mean there's anything wrong with it-it's just different. The shape of your head is different. It's only a little thing, but one has to be trained to look for little things. You carry a doctor's bag and you wear a doctor's uniform, but you carry two blasters- Now, why? No one ever carries more than one. . . it's not necessary. It's like a man driving two cars at once. The only explanation is that you're pretending to be something different, in order to worm your way into the inner chambets, or you genuinely are something else. Here are the key words: "Mist, glass, darkness." He spat them out one after tlte other. "Well?" Bathurst could see the bulge under the brown cloak, pointing straight at his chest. He remembered the blackened heat stains on the way. . . the little man's eyes were fixed unshakably on the blasters. Bathurst's hand rested on the butt of his reloaded pistol. He edged round a trifle sideways, wondering whether he could pull the trigger before the otlter. He decided that they could both bargain from a position of strength.
"I notice tlte bulge under your cloak," he said, "and before I give you the reaction to your key words, I'd like you to notice there's a bulge under my tunic. I don't carry only the two blasters you see at my waist. My hand is resting on the hilt of a weapon which is rather older, but equally deadly. I can pull the trigger just as fast as you can, so the slight tremor from beneath the folds of that cloak and we shall both be dead. . . ."
"You're cool," said the little man suddenly, "If you are what I hope you are, and not what you look like, I think we shall get on extremely well together, but I can't afford to take chances. Now then, as I see that the cards aren't all qn my side of the table, you'd better tell me what the key words mean to you. Then we can decide what we are going to do afterwards, if you give me the right answer." He eyed the bulge beneath Bathurst's tunic. Bathurst eyed the bulge beneath his cloak.

Bathurst's face broke into just a suggestion of a grinl, fighting man's smile. "Well," he began, "this is my story. My name is Benjamin Bathurst and I'm an English diplomat. I have been to the court at Vienna, with secret dispatches, I was returning from that court, on the 25th day of November, in the year of our Lord, 1809, and I'll swear to that on my dying oath, I stopped at the little town of Perleberg, in Germany, and I was on the verge of departing again. My coach and horses were in the yard; ostlers and postillions were standing around me. I was just checking the horses for my own satisfaction, for no man can afford to have horses that will run out on him when he is in such a dangerous predicament as I was, chased by the French, Russians, and various other international espionage agents, not least among them the Count d'Entraigues. So, as I said, I checked my horses for myself. As I walked around the head of the horses, I became aware of a strange grey mist. I dropped an important package I was carrying, and the next minute, I can't explain it, I was enveloped in this mist. The mist turned purple and then

black. The blackness became as thick and intense as mud. I felt as though I were drowning. The next instant it began to ease up. I felt the stress being alleviated a little; gradually it grew lighter. It became purple then grey, and finally as a kind of opalescent light filled the place I saw as a round glass cylinder. It lifted at the touch of my hand, and I stepped off the strange floor of what looked like crystalline quartz and found myself in a room, an underground room with concrete walls. I made my way up some steps and heard two men coming toward me. I didn't like the look of them. They struck me as evil men, though I had never seen anything like them before. I also heard from their conversation that they were coming down into the cellar to search it, to look at the machine, or whatever it was, that I gathered was responsible for my being here. I wasted no time; secreting myself in the doorway, I fired my pistols and killed them both. One of those pistols, the effectiveness of which I have just recounted to you, is leveled at your heart, and I would like to remind you of that fact, in case your finger is growing impatient upon the trigger of your blaster--or whatever you people call them. They seem to throw lightning from heaven."

"More likely lightning from hell," gritted the little gnome. "But continue with your story, if you please."

"I put on the uniform of one of the men because I looked so conspicuous. I then picked up their hand weapons and thrust them into my belt and made my way across the street, wondering what to do next. That in outline is what has happened to me. You can tell me now whether you believe it, or whether you can explain it."

"Very strange indeed," said the little gnome. "You're not the man I took you to be. I'll tell my side of the story now and put you in the picture. I think perhaps we had better go somewhere a little less open." With strange jerky movements the diminutive figure with the brown cloak led the way down a side alley and through a lengthy conglomeration of warren-like doors and cellars. The ancient town of Perleberg was without doubt the perfect hide-out for the resistance move:ment of the 24th century . . . a perfect 'warren in which the enemies of Rajak the Magnificent might breed and multiply and hatch their plots for the destruction of the ruthless dictator.

After what seemed miles of walking, the diminutive gnome called a halt outside the door of a tall building hidden deep within the maze of passages and alleyways leading off from the main street in which he had first met Bathurst. They walked forward into the depths of the mysterious building. Bathurst realized that without the guidance of his companion it would be utterly impossible for him to make his way back to the High Street of the town, for the maze was labyrinthine in its complexity. The old house was illuminated by phosphorescent strips which cast a cold, rather eerie glow over the jagged stone corners of the room in which the young diplomat now found himself. It was as bleak and barren as the original chamber in which he had extricated himself from the cylinder of the strange device, which he now knew, deep down within himself, must have been a time machine. The method of its working was utterly beyond him; he only knew it did work. The gnome was looking at him very intently.

"In a few minutes," he said startlingly, "you shall meet the leader of our organization, and he will then explain everything to you. Just wait here." The twisted figure went away into a darkened corner of the room and disapp,eared into what seemed to be a doorway. Bathurst's eyes remained on that dark comer. There were strange, furtive, shuffling sounds, and less than ten seconds later, from out of the darkness of that corner, strode a tall, broad-shouldered individual; taller and broader even than Bathurst, a powerluI, athletic man. As he looked at the awe-inspiring newcomer, Ben felt his throat suddenly contracting in dread, for despite the tremendous ~hangein the physical proportions, the head, and the eyes in particular were those of the gnome-like creature who had led him into the secret place.

Chapter Five
Crossfire

Old Eric Rhinegow had talked until his throat was dry and until his tongue was cleaving to the roof of his mouth. He had poured out every shred and scrap of information to the avaricious mechanical ears of the police tape recorder. He had gone through every scientific technological detail of the manufacture of the time machine, and Captain Ertzmann was quite confident that the regime back-room boys could easily reproduce it whenever they wished. He was a man who did not believe in taking chances of any kind whatsoever, and he at once had the magnetic recording duplicated, a copy locked in the safe, and three transcriptions taken from the remaining one. The transcriptions on their microfilm were immediately rushed to regional headquarters in Berlin. The wheels of Rajak's magnificent Empire would go into operation, the gears engaged, the clutch released, and the machinery of autocratic government, the weapon of tyranny, began to operate. . . .

As far as Ertzmann was concern his job was done until further orders reached him. He looked at the pathetic brain-washed old creature, who had once been a prominent scientist 'in the liberation movement. He laughed, a short, callous laugh, for there was in him a streak of savage sadism that typified most of the security guards in Rajak's empire. .. All right. He's yours; we're finished with him," he said to the guards. "He's of no more use to the Empire; destroy him as you think best. . . ."

Half an hour later, when he returned, he was interested only partially by the writhing figure pinned to the floor by bayonets. As he looked in for a final inspection a few hours later, he noticed that the writhings had ceased. He made arrangement for a disposal detail, and the last mortal remains of Eric Rhinegow were disintegrated as thoughtlessly as though they had been so much garbage.

It was the following day when the party from Berlin arrived. A double security cordon had been thrown around Perleberg, for the scientists had come at Rajak's own personal instruc~ons, and they were considered significantly inlportant to the success of the Eurasian Empire. With the

information that the truth drug had extorted from the dead freedom fighter, it took them less than thirty-six hours fully to comprehend the machinations of the time traveling device. The process was copiously noted, and copies filed in all principal security check points, and time travel had become an ultimate fact in the arm of Rajak the Magnificent. . . .

It seemed to be yet another seal; a seal with which he fastened the doors of his empire; a seal with which he bade a last grim farewell to any hopes the freedom fighters might have had. . . .

And that tiny isolated township, which had been the last pocket of resistance, became the place at which, to all mtents and purposes the complete immutability of Rajak's tyranny was finally and irrefutably established. Captain Ertzmann was very pleased with the commendation given to him by the visiting scientists, but his pleasure waned with a sudden, though understandable alacrity when he received special orders. "You will take a party of security guards selected by you and, at the direction of scientists A34 and A36, you will be transmitted with your men through the time vortex. It will be your duty to seek out and destroy Grafton the liberationist, who is suspected of having made his escape by this route."

It was with a strangely sick feeling at the pit of his stomach that Ertzmann realized that there was no provision for a return, for either himself or his detachment. However, being a loyal and obedient servant of the Empire, he tried to persuade himself that such a minor detail was bound to have been taken care of by the superbly efficient scientists, who controlled the destinies of their inferiors in Rajak's forces. He also knew, with a streak of almost rebellious realism, that there would be no earthly use in his endeavoring to disobey the order, for the slightest sign of distrust of one's superiors, the slightest hesitation in carrying out an order, particularly by a security officer, could have only one logical conclusion: the devitalizing chamber. It was a process as irrevocable as the process of day and night. If one obeyed Rajak in every respect, one lived-that is, until Rajak decided that one had lived long enough. H one did not obey Rajak in every respect, one died-swiftly, ruthlessly very often painfully. It was not so much a question of choosing between life and death as of choosing between a protraction or an extinction of life. Sooner or later, by Rajak's weird code, everybody in the society became redundant. When a man's turn came and he was no longer regarded as being of any use to the community, he was dealt with. If he had served the community well, he could have a few extra years of life. H he was one of the inner party, he might be allowed to die naturally of old age. But with the majority of the citizens of Eurasia, old age had ~ to become a problem. They knew with grim certainty, and accepted as one of the facts of life, the knowledge that they would never be an embarrassing burden to the community by reason of their white hairs. Rajak, in his own way, could solve any problem. He had been faced with a problem of over-population. He had solved it with a ruthlessness that might be expected of him. He had set a series of physical and mental tests for the citizens of his community. The

twenty percent who failed to pass were declared "unsuitable." They met their end within twenty-four hours of the time the results were known. Should the population figures again prove a problem, there was little doubt in the minds of Rajak's subjects that he would deal with them in the same swiftly ruthless, efficient manner.

Ertzmann looked grimly at the thirty men comprising the Perleberg detachment. There was an almost frightening sameness about them, he decided, and as he looked from one to the other he knew that they would obey his orders with the same resigned, unquestioning acceptance as he in turn obeyed the orders of those higher up the ladder. The Rajak's Eurasian "Utopia" was a masterpiece, if one liked one's masterpieces neat and well-disciplined. Nothing was out of place. Nothing so untidy as human desires, human wishes or human rights were allowed to protrude their heads above the neatly disciplined framework of the state and the community. Ertzmann himself realized that had there ever been any possibility of a rebellion, it had gone. It had gone, at least as far as he could ascertain, from the second that the truth serum was pumped into the old scientist's arm. The dictator held within his grasp the power to traverse time. Ertzmann was not an imaginative man by any means, but he could see what it meant.

He could see that any rebellion that looked as if it were getting out of hand could be nipped in the bud, and once the rebellion had started, one knew who the enemies were. One sent a small, highly trained suicide detachment back Into the past; one destroyoo the leader of the rebellion in his cradle, if necessary. The rebellion would not take place. And then, even as he made his selection of the men who were to accompany him into the time machine in the search for Mike Grafton, he became aware of another thought. He wondecoo if any of the other Iiberationists knew the secret of the machine. . . he wonderoo if that had been its original purpose. Of course if time travel could be used to stamp out the enemies of the Republic, it would also have an equally sinister purpose in the hands of the revolutionaries themselves. For if one could destroy the infant Rajak, the Republic, the whole police state as such would cease to exist. The thought was a deep and metaphysical one. It was beyond the comprehension of the stolid and rather mundane police captain. . . . He wondered how many other things would be affectoo. He wondered what difference the man from the future would make when he went back into the past. These were tltings he would have likoo to discuss with the scientists.

When he had gotten his men groupoo together, the area sub-officer, who was Ertzmann's superior by about eight degrees in the security promotion scale, came to brief them on the mission.

"The position, " he said coldly and mechanically, "is this." His face, thought Ertzmann, is like the face of a robot. He wondered if they all got like that when they went higher up the scale toward the leadership of the security force, and the leader himself was perhaps nothing more than an automaton, answerable to every whim of the dictator.

"It will be necessary for you all to assume the costume

and weapons of the period. You will, of course, carry with you our more modem weapons in places of concealment. We have succeeded in tracing the exact historic background and period into which Grafton has disappeared. There we have a considerable advantage over him, insofar as he was probably quite ignorant of the point at which he would be jettisoned, due to the magnificent technological advance of the supreme scientists of the Eurasian Utopia. That magnificence in turn is entirely dependent upon the magnificence of our glorious Rajak." Again the bowing of the head and the two-handed salute.

As I have said, the superior science of our own technologists has succeeded in comprehending far more about that machine than the original liberationist inventor." It did occur to Ertzmann to wonder, if these scientists were so superior technologically, why they hadn't invented the machine before the liberationist whose body had so recently been disposed of; . . . But he wisely kept these thoughts to himself,

"The period was the early 19th century. The uniforms have been carefully copied from the museum, and are now being flown to you by airograph transport and will be here by the time this lecture is completed. You will then don the uniforms and receive an intensive course in the history of the period, and in addition, the French language of the times. This course will be ele:ctrically interprete4 to your brains, by the new process with which you are no doubt reasonably familiar. . . . It is of course an adaptation and reversal of the 20th century telegraph."

The officer's voice was a clipped staccato as he went on with their briefing. "You will then present yourselves, as the encephalograph machine will instruct you, as members of the Douanier Guard, and to the local inhabitants you will say that you are in pursuit of a spy who has been working in close collaboration with another spy who has mysteriously disappeared. Fortunately our records at this point are extremely good. Through the brilliant research work of the Archeological Institute, we have at our disposal the complete records of the mysterious disappearance of one Benjamin Bathurst in the year 1809. Our scientists have shown us that the machine is set to project someone from the future into the year 1809. The original designer did not know at the time that he was creating a deal vacuum vortex in the time continuum. This, of course, our glorious scientists have already discovered." Ertzmann found the repetition of the propaganda phrase extremely irksome. It was a feeling that had never troubled him before.

"Our glorious scientists," went on the officer as though dleliberately to irritate Ertzmann still further, "are now in a position to say with accuracy that this mysterious Bemjamin Bathurst, whose disappearance has mystified historians for centuries, was sucked through the time vor tex, and is now loose somewhere in our present day and age. Unfortunately, it was not until too late that we discovered where he had made his arrival. The bodies of our late colleagues, Dr. Korblenz and Fritz Muller, have been found in the chamber containing the liberationists time machine. The bodies were not destroyed by modern means. Post-mortem has proved that they were destroyed

by a lead ball discharged from an old-fashioned gunpowder pistol-a pistol such as would have been common in that century. . . . All our efforts to locate the man from the Past have not so far met with satisfactory results although success is expected at any moment." Again Ertzmann felt like wrinkling his nose in disgust at the repeated propaganda phrases. "Are there any questions?" snapped the officer suddenly. Ertzmann's attention jerked back from the present m<Xnent to the matter in hand. He looked down the line of men, none of them, he knew. ! would dream of posing a question. They were still at that stage where if the dictator said so, one did it. Ertzmann - realized with a tremor of excitement that he had begun to think. He was in danger! His sympathies lay, although he himself would have been the last to admit it, more with the liberationist principle than with the principle of his own government. Yet he knew that one false move, one false word, one false gesture, even, would be more than enough to bring swift and ruthless destruction on him without a second's hesitation. He too shook his head as the officer's eyes bored, gimlet like, into the entire row.

"No questions, sir," he said sharply on behalf of the letachment and himself. "Thank you for the briefing, sir. Most concise; most helpful." Soft soap, he told himself. Soft soap and grease is the only way to live in the dictatorship. Keep on telling him how wonderful the party is, keep on repeating the old parrot phrases. Lay it on, with a trowel. Don't let them suspect anything. They've got to keep on believing that I'm as indoctrinated as the rest; otherwise my life isn't worth a tinker's curse. Odd thoughts were shaping at the back of his mind; thoughts about what he might be able to do when he got back into the past. The past is a big place, and even if they could send other detachments of guards in pursuit of his own, he had little doubt that they would be able to elude capture in so vast and untrammeled an area, as they would be in the limited confines of his own day and age and generation . . . with its eloctric mind-probes and its two-way stellar vision relays; with its hidden microphones and its hidden T.V. cameras. A world in which the Secret Police are everywhere. A world in which the Secret Police know everything. A world in which security has become something of a god; an evil deity, an omniscient badness, that evaded and infiltrated. . . .

Living in the Rajak Eurasian Utopia was rather like living on a microscope slide. It was like existing all the time at the viewing end of a telescope. One was constantly under the glare of the footlights, constantly under observation. Every word and deed were subject to scrutiny and analysis. They were checked and rechecked, certified, verified. It was an accountant's paradise and a human being's nightmare. The whole sociological stratum was gradually becoming a kind of civiliZation machine, a machine in which there was no room whatever for irregularities. And as the society pressed on remorselessly to its ghastly ultimate, so it became narrower and tighter. Thought, even secret thought, became channeled down. A man's looks, his very vocabulary, could cause him to be suspected of espionage against the state. Even the mildest form of suspected espionage was a capital offense in the

Eurasian Utopia of Rajak the Magnificent. . . .
This was "1984" a thousand times more terrible than George Orwell ever envisaged it. This was the day of the Dictator. This was an earth that had been turned into hell. This was Milton's "Paradise Loot" with no trace, not even the faintest suspicion, of any redemption. There was no savior-at least none, as far as the people could see; none, as far as their fear-conditioned minds were able to imagine, who could ever deliver them from the ghastly-subsistence into which life had degenerated. . . .

The guards marched out with Captain Ertzmann at their head. Even in his own thoughts he had been Ertzmann for so long now that he had forgotten his Christian name. Christian names were frowned upon; one had a surname and a number. If one was a sufficiently high rainking officer, one could drop the surname and be known by one of the priority numbers only. So far he had got. as far as being "Ertzmann." Until the last few hours he had dreamed of dropping the Ertzmann and becoming one of those super-efficient numbers; a super-efficient cog in tho machine; one of the inner wheels, one of the major gear, that ground the huge complex, civilized structure along, to a conclusion which he could now see was nothing other than ultimate destruction. His face was completely imo t passive, but his mind was a mass of brilliant thoughts, that had lain dormant for so long that he himself had been unaware of their existence until that moment. He glanced over his shoulder at the line of guardsmen behind. him-men who would follow blindly into the glass cham->her in that room to which they had now descended.

A36 and A38 stood waiting by the firing mechanisms. A strong guard of other security men lined the doorway and the walls. The area sub-officer saluted in the official way.

"May success attend you, in the name of RaJak tne Magnificent," he intoned. The fanaticism had become almost a religion with the automatons who carried out its every dictate. Ertzmann suddenly remembered his Christian name. It had been Paul. Paul Ertzmann. He liked the sound of Paul. It was somehow vaguely individualistic. "Individualistic." A forbidden word, part of the old forbidden vocabulary. He knew that the liberationists used it. They often used it when they were questioned, or at least when they had been questioned by the old physical torture methods. Nowadays the truth drugs seemoo to knock it all out of them. It even swept their vocabularies away. . . . It made them speak like members of the New Order. He thought carefully again about this trait of individualism. Men were not cogs in a machine, turned out with the same precisjon that men turned. out ball bearings and gears and electronic relays. Men were considerably more than that.

They had personalities. Personalities. Another forbidden word! He knew now that these words meant something. When he himself had been fully convinced, he had been as certain and fanatical about the doctrines of the New Order as all the other members of the security guard were, and as the high ranking officers above him were; in the recent past, he himself had been convinced that these things were so right and correct that they were the only way of life. Then he had felt that the unfortunate liberation forces

were poor deluded fools who prattled meaningless words, simply because they were maladjusted to the society. And that explanation had actually satisfied him. He realized now that the long arm of coincidence did not stretch so far, that it was impossible for a whole group to have exactly the identical maladjustment. . . .

He found himself breaking off short in his train of thought, as A36 gestured toward the glass globe.

"Before you take your place, the machine will be shown briefly to you; then the electro encephalograph reversal treatment will implant the necessary survival data for the epoch in which you will find yourselves, as I explained in the briefing," said the officer. They looked carefully at the machine. Paul looked carefully at the guards with him-his select band! Deep down inside himself, his real personality was laughing grimly. He remembered the words of some historic religious song that he had come across somewhere in some ecclesiastical premises that had been raided-funny how things stick in your mind, he told Himself. . . . !

"O happy band of pilgrims." That was it. "O happy band of pilgrims." He looked round at his own hand-picked thugs, his sadists, his hired automatic killers. Men in name only. Simply obedient flesh and blood. Machines that need rood and water instead of oil and grease. Deep within him ais heart sank. In a few years this would be all that was left of humanity. For the first time in his life he felt a genuine pang of regret and remorse. He felt a tremendous sense of shame when he thought of the part he had played in the death of old Eric Rhinegow. Fool, he accused himself, blind, idiotic, fanatical fool, and then recalled something else that he had found in a pile of ancient literature that was being burnt. "The blood of the martyrs is the seed" of the Church." He had not understood the words at the time. They had seemed no more than the strange ravings of these peculiar liberationists. "The blood of the martyrs," he repeated mentally, "is the seed of the Church." They clicked into place now; he knew the meaning' of the words - fully. . . . A martyr-a man who died for something he believed in-as liberationist after liberationist had died by cruel torture for the things that he or she had believed in. Old Eric Rhinegow had been one of those. . . . His blood that had spilt onto the security guard room floor where the bayonets had his aged flesh. That blood had been the seed of the new idea, the new dawning, the drawing aside of the curtains.

These liberationists, Ertzmann knew, believed in some kind of life after death; they believed in a soul, an indestructible eternal essence that went on when life was extinct. When the physical body was destroyed they believed that the real person, the real man, the real mind, went on and was not extinguished. If that was so, then the real Eric R4inegow might even be watching him at that moment. And if the eternal spirit of the old man was able to look deep within him and read his innermost thoughts, as even the security guards were unable to do, then he would have in some way atoned for his part in the death. For he knew that the old man would find satisfaction in what he saw.

He realized, as they fitted the electro encephalograph

reversal indoctrinator to his head and to the heads of the party who were accompanying him, even as his subconscious was imbibing the archaic French and the other information that they would need in the epoch to which they were about to be transported-that there was far, far more to life than he had ever envisaged in his wildest and most improbable dreams. There were, he could see, certain moral standards, things which he had always regarded as the ravings of the wildest lunatics. and yet standards which now held inexorably true. As though the dirt of centuries had been swept away from his mind, revealling something clean and worthwhile, he was able to realize in the depths of his own understanding that all the meaningless words and phrases which had tumbled from the lips of captured liberationists had been true; had been part of a huge gestalt, or pattern, which now made overwhelmingly straightforward Common sense.

It opened up to him whole new vistas of thought. Life changed from shades of drab grey to a magnificent panorama, a phantasmagoria of superb tints and hues. He was vaguely aware the reversal device was being removed from his head He looked round at his men. He and they knew that when they required it, deep within their minds, as ~ for them to recall as this morning's breakfast, or the headlines of today's paper, was a complete new vocabulary, even the ability to think in archaic French if they required it. They knew without being told the manners and the customs, for the carefully garnered data from the Imperial Research Museum had been recorded on to a tape. The tape, containing the vocabulary and all necessary information, had then been fed as a series of code electronic patterns into the reversal device. It had been picked up by their own subconscious minds and was now as much a part of their memories as if it had been acquired by a process of long, slow mental effort. It was the perfect method of learning. It saved time, and time was as vital as obediooce in the Eurasian Utopia of Rajak the Magnificent. TlD1e, nature, and eventually the whole cosmos itself, if the party and the dictator had their way, would eventually become one huge, smoothly ronning machine that obeyed without question the dictates of that great dictator.

Again a two-,handed salute from the area sub-officer, who was eight grades superior in the order. Looking at him, Paul Ertzmann wondered what kind of mind the man reaIly had. It gave him no small sense of satisfaction to realize that however superior the officer might be in the order of the dictator, and by the standards of the Eurasian regime, as far as personality, and plain, straightforward humanity were concerned, the man was practically nonexistent. . . . He was a nonentity; he had not found tnat one vital spark which had been kindled into a sudden flarina light in the heart of security Captain Paul Ertzmann.

The glass cylinder lifted, there was room in a pinch four men inside, and believing as they did in efficiency, the scientists had decided that four moo should go. Ertzmann and three of his hand-picked guards made their way on to the crystalline quartz, and the glass cylinder settled around them. Oddly enough, Ertzmann was not afraid. Many men would have been overawed at the

possibility of traveling through time, but there was still sufficient of the Eurasian military disciplin about him to cast out all fear in obedience to orders. It was that kind of discipline which enabled the Eurasian armies to charge through hails of crackling energy bolts to death in battles for the expansion of their borders. It was this obedience to discipline which enabled the Eurasian anti-grav pilots to bring their gigantic warships crashing down with suicidal velocities upon enemy shipping. It was, in fact, the reaction of the completely conditioned mind to any environment. And yet in Ertzmann's case there were other feelings present. Although his military training and conditioning had removed all fear from his mind, the curiosity which was part of the natural mati, now reasserting itself, after years of contrary training, was looking round with great interest at the interior of the time vortex chamber. The grey mist was beginning to infiltrate, as if it were poison gas pumping into the devitalizing chamber. .. . The mist ~w thicker, and Ertzmann decided that it might be a good idea to take a deep breath, in case there was anything actively unpleasant in the grey mist. He was glad that he had done so, for he noticed a few seconds later that as the mist grew in intensity and became tinged with purple and finally black, his colleagues were having difficulty in remaining upright. One by one the security guards slumped to the floor. Ertzmann reached his hand out to touch the side of the cylinder and managed with swimming head to remain upright. The glass itself disappeared; the date became evident in fiery red letters, then melted like wax before the heat of a torch. Then Ertzmann felt that he, too, must succumb. His knees buckled, his broad shoulders bowed, his great deep chest heaved. Then he, too, sagged down on top of the unconscious security guards. He did not fully lose consciousness, but experienced a kind of paralysis which gripped him.

The great grey-black mist continued to press in and enclose them.. The darkness grew more and more pronounced, became darker and thicker and mote tarij!;ible with every passing second. Ertzmann was vaguely aware that the guardsmen beneath him were groaning as though they were under great stress or in pain. Their eyes were closed, but he could see the retinas were moving underneath, as the nerves twitched the muscles of the eyes themselves. His eyes grew heavier and heavier until at last he was forced to close them.

He knew, even though they were closed, that the I darkness was still there. It grew thicker still. He felt almost overcome by it. He felt that his heart, his lungs, his muscles, his bones, his sin~ws, must yield to this crushing black amorphousness, and yet it did not do so. He lived as though he were dead. He felt as though his body had been lowered into wet black concrete, concrete which was setting and contracting with every passing second. . . . He felt that the end of the world had come and gone a thousand times. It was like being in the grip of some dreadful implosion; as though he were shrinking, and then ~xpanding; as though he were a diver without a suit, being dragged to th~ bottom of the ocean by remorseless lead weights upon his ankles, and, as the pressure increased; as though his body

were being ground down into th~ size of a walnut. Yet he knew that there was no real physical change taking place. There was no alteration in his physiological chara~teristics. He was still Paul Ertzmann; he still weighed around a hundred and seventy pounds. His hair was still black and his eyes were still grey. He could not move his arms and legs, the body was still responsiv~ to the mind, but both lay helplessly paralyzed above th~ other bodies slumped on the crystalline quartz of the floor. Just as it seemed that flesh and blood could stand no more, when it seemed that nerve and sinew must surely snap with the tremendous in-pressing strain, when it seemed that the tremendous pressure must overcome the most courageous effort of physical endurance, the miracle happened. The darkness began to lift. . . slowly. . . slowly, so slowly that it didn't seem real; like a man who has placed hi.~ hand accidentally on a hot pipe and finds that he cannot get it off, and then in spite of the blistering agony, finds that the pipe is gradually starting to cool. And so it was with Ertzmann and the other guards. Inch by inch; ounce by ounce; the great w~ight and pressure of the dreadful Stygian blackness seemed gradually to lift. The blackness gave way to grey, the grey to purple, the purple to grey, and the grey to opalescent light. And the dreadful voyage backwards through time was over. There was a short red flash on one of the cylindrical walls, and then even the cylinder disappeared. There was nothing but a puff of grey mist.

They found themselves in the courtyard of an inn. There was no one in sight. Their conditioning sprang unbidden to their memories. Ertzmann gave swift orders which he knew his men would comprehend before he even bothered to utter them. For he knew that they, too, had received similar conditioning. The thoughts of freedom and the new ideas about liberationism, which had previously gone through his head, he pushed gently into the background until he judged that the opportunity would be ripe to bring them into operation. There were four more guardsmen due to arrive when the cylinder discharged its second load; and when the original party had recovered from their journey and gotten their bearings, the second, party had arrived. It had not occurred to Ertzmann until that moment to consider how thoroughly efficient the conditioning must have been. For at some time or other, while he and his followers had been under the influence of electro encephalograph reversal process, their uniforms had been changed to perfect replicas of the douaniers' uniform of the period. They knew- their lines, and like actors in costume, they were ready to play their part. Each had also been supplied with a mental image of the features of Mike Grafton. There would be very little difficulty for them in tracking him down. When the entire party of eight was assembled, they made their way to the inn door.

"We are looking for a stranger."

Ertzmann gave as close a description as he could of the missing man. The inn-keeper noted the number in the party, the grim, determined expressions on the cold, stem faces, and his heart sank within him.

"He-er-he has been here," he admitted.

"Is he here now?" demanded Ertzmann in the archaic

french that sprang so naturally to his lips, now that there was an occasion to use it. Silently the inn-ke-eper nodded again. Another look at those cold grim faces told him that, it would be advisable to tell the whole story. Briefly he poured out the episode of the watch and the man with the strange grey clothes.

"Yes, an English spy, as we suspected. He was last seen wrearing such clothes," snapped out Ertzmann quickly. Inwardly he knew it was Grafton without a shadow of doubt. The inn-keeper showed the watch, and a final seal was put upon the knowledge that the security men had already held almost for certain.

"He's in the room upstairs," whined the inn-keeper. "I trust I have. done nothing to offend the Emperor.

"You have done nothing worthy of punishment," said Ertzmann coldly. "It is well, though, that you have told us the truth and not attempted to shield this spy. Come." with a swift movement of his arm he beckoned the security guards upstairs. As they mounted the stairs, he wondered whether there would be any possibility of saving Grafton. He wanted very much to have a talk with the liberation man. It might be his great chance to make a break. He looked round at his own forces, eight of them. Seven to one if he tried to pull anything. It would be difficult. It would have to be made to seem like an order. Their discipline was so great that if he could only prove to them that it was for the good of the Eurasian Utopia and for the sake of Rajak the Magnificent, they would! wi11i1igly march to their death into an open blast furnace. It would have to be an adequate reason, but it need not be a clever reason, for their skulls were thick. However, it had to be a logical one, for even the lowe-st of the security men understood that lives, loyal lives, must not be wasted at least not the lives of the young. The old they never questioned.

Ertzmann wondered whether or not Grafton would be expecting company. Probably not; he might even be fooled into thinking that this was a genuine douaniers' guard, in which case he might not be particularly afraid. On the other hand. . . the question was large and complex, and for the time being he was content to leave it unan$wered. he led his men up the stairs toward the fugitive's room. At the stairs head he called a halt and sent the party forward to break open the door. It did not take very long. He heard the sound of a bed being dragged across the floor to act as a barricade, and it suddenly occurred to him that Grafton would probably try to make his escape out of the window. Deliberately he kept the idea to himself. None of the men dared make a suggestion, thus proving that he had thought of something before his captain had. Such actions were usu"ally regarded as insubordination and were punished accordingly. Initiative was not very often rewarded in the Eurasian Utopia. Ertzmann was rather glad of that particular feature of Eurasian life at that precise time. The door gave way, and he urged the men forward.

"Search the room," he ordered from th~ background, hoping that Grafton had made good his escape.

"He is not here, Captain. The ~dow is open."

"Well, look out and see if you can see him," ordered Ertzmann, delaying the order to fire as long as possible.

Finally he felt that even their conditioned minds would begin to question his motives, if he delayed any longer. "Fire if you see him," he said reluctantly.

"We see a moving shadow, Ca.ptain."

"Keep firing until you hit him," ordered Ertzmann, again hoping against hope that they would not be successful.

"Do we use our own weapons?"

"No, you must stick to the weapons of the period," he snapped. There was a faint chance that Grafton could avoid a musket ball, but a power charge, when he was sheltered only by a tree, would be a vastly different matter. It would be as dangerous as seeking shelter from a thunderstorm in the middle of a wood. The muskets continued to crack and the heavy lead balls pounded and richocheted around the fugitive's hiding place. Ertzmann kept well to the back of the group. It had just occurred to him that Grafton might be able to fire back at the security men, if he had some kind of weapon with him. If he did, it would probably help to solve the captain's own problem..

He saw moonlight gleaming on something behind a shadow of the tree and wondered what that thing might be. . . . A sudden bolt of energy filled the room, and with a blinding, choking flash the group at the window staggered back in wild, desperae confusion. . . .

Chapter Six
Exposition

"You looked surprised," said the tall, brown-cloaked stranger. Surprised was about the greatest understatement that Benjamin Bathurst was capable of comprehending at that precise moment. His eyes narrowed.

"You're the same man," he commented. "You've got some fiendishly clever form of disguise. How on earth you do it, I couldn't pretend to have the inkling of an idea."

"My name you will never learn, for none know it." He smiled enigmatically, "In fact, I have almost forgotten it myself. It is sufficient for you to know that I am the leader of the liberationist forces and the leader of those who fight against the Eurasian powers." In a few brief words he put the diplomat in the picture about the set-up of the times. "So you see that, in our tinle, is the world in which we live. There are few, very, very few who are fighting against the evils of that world. As for your own strange experiences, I can explain them to you quite simply. One of our men, by the name of Grafton, escaped through a time vortex machine, an electronic device, the culmination of our entire technological science. It was the only possible channel of escape, and much as we regret the machine falling into the hands of our enemies, we still consider the sacrifice worth it to save a human life, for those are our ideals and our principles. It is also necessary for me to tell you something about how you came here. But to do that I must explain the workings of the machine. To put it simply, you came because the machine creates a space-time vacuum vortex, and when the operation took place here, your own particular time-space epoch became overcrowded by one individual at that particular point. You

were nearest to the other end of the channel. So it was you who was plunged upwards here into the future with us. I think, in all fairness to you, to alleviate some of your bewilderment, I will try and give you a simple exposition of time and the workings of the machine. The first thing that you must try to understand is a new scientific principle, a principle new to you, at any rate. It is known as the theory of Relativity. It was discovered or propounded by a great scientist called Einstein, who lived a hundred and fifty years after your own time, in mid-twentieth century. That theory of Relativity brought about a change in the fundamental conception of space and time. Another great scientist of the same time, Minkowski, said that henceforth space in itself and time in itself would sink to mere shadows, and only a kind of union of the two preserve an independent existence."

"This union, which is called space-time," went on the stranger, "is the subject which, I am going to try and explain to you."

"Just one moment," said Bathurst. "The first thing I would like you to explain is how you come to be so changed. This disguise-how is it done?" The intense, burning eyes became rather sad as they went back to a memory of events which the other wouJd have preferred to forget. "Sometime before they had perfected their system of truth drugs," he said quietly and gravely, "the security forces relied on the old-fashioned and sadistic method of physical torture to exhort 'confessions' from liberationists who were captured. So far as I am aware, I am the only man who has ever been captured and survived. But you see we, although small in number in the liberationist group, possess scientists who are every whit the equal of our opponents. The very creation of the time machine itself should be sufficient evidence of that. These men number among their ranks some of the foremost medical exponents of the day. When I returned after my escape, I was as you saw me a few moments ago, before I transformed myself back to my original physical appearance. My bones and sinews were broken and twisted. It took five years, and a long succession of medical processes, vitamin injections and hormone treatment, to restore me to the man that I had once been. And I owe a debt of gratitude which I can never repay to the medical scientists of the liberation movement. As you may well guess, however, they took the process a stage further, for during my restoration they diScovered just how flexible the human body can become. It is simply a matter of bringing the subconscious faculty into full control of the conscious mind. . . . I can make my hair cease growing, or I can make it grow at unbelievable speed. I can change the color of my eyes, the timbre of my voice, my height, my weight, my bt'lild, my coloring-almost everything. You see all these things are under the control of the mind, but normally, in the average individual, they rely entirely upon the control of the subconscious. In my case, I am able to move my tissues and sinews at will. I can move my body into positions that would defeat the most skilfully trained contortionist, because I have the subconscious power of moving muscles that are normally entirely involuntary. I can simulate the symptoms of most diseases. I can control

the cardiac condition; in fact, like the legendary enchanters of the prehistoric fairy tales, I am rather like the magician who could turn himself into any beast at will. With the amount of material in my frame I could become anything up to nine feet tall, and broad in proportion, but I should weigh no more. I should look rather fearsome. I can twist my face into a mask that would appall the creator of the legendary Frankenstein. Or I can simulate my own features, or, at the opposite extreme, I can become as handsome as what I believe in your own time would be known as theatrical actors, and in a later generation became film stars. . . . But they are a jump ahead of your period-you must forgive me. And so it is that the agonies that I endured, far from destroying me, have made me a man with adaptive possibilities far beyond the comprehension of any other. I have the ultimate in disguise. There was, I believe, once upon a time a criminal who was known as 'Rubberface.' He could twist his expression, by a conscious effort of will, into almost any pattern he desired. It was this ability to alter his facial contours, by an effort of will and muscular contraction, that enabled him to escape the police net on several occasions. All that I have done, by harn~sing the full powers of the subconscious, is to make it possible for my body as well as my features to be molded into almost any pattern, and to remain in that pattern, without conscious effort, for as long as I will. It was as that horrible, deformed gnome that the security guard remembered me. A gnome with a diseased mind. An object of their scorn and ridicule. A harInless little Simple Simon, who could trot in and out of the security offices at will. Hardly anyone notices him! I make tea for them sometimes-rather amusing. And at others," his eyes suddenly went very cold and hard, like the eyes of a marble statue, "I plan their deaths with a strange, but perhaps understandable delight in my work.

Bathurst was completely and utterly taken aback.

"Good heavens," was all he could say. The other flashed him another of those enigmatical smiles.

"Right," he said briskly. "Let us go back to our consideration of the time machine. I feel that, as one who has experienced it, you certainly deserve some kind of explanation. All conceptions of space and time are considerably difficult to grasp, because all our thought and concepts are activated by sense experiences and they only have a meaning for us when we think of them in a context of these same sense experiences. However, thoughts and concepts are in reality the product of the spontaneous activity of the human mind. They are not, therefore, in a logical consequence. If we wish to grasp the essence of complicated, amorphous, abstract notions and ideas, then we must, on the one hand, investigate the relationships between the concepts and the assertions that are made about them. On the other hand, we must investigate how they are related to the experiences. Concepts are connected with one another and with the experiences, and that far, there is no difference between the concept systems of science and those of ordinary everyday life, either in your country or in this one. The concept systems of science, both our science and the early science of the 17th and 18th centuries, have grown out of those of or-

dinary everyday affairs and occurrences. But they have been rounded off according to the objects of the particular science that we have in mind. . . . The more universal a concept or an idea is, the more frequently it comes into our thinking. The more indirect its relation to our everyday experiences, the more difficult it is. for us to com-:-prehend its meaning. You will find that this is particularly the case with the prescientific concepts that could be referred to in the simple questioning words Where? When? Why? Being? In fact, volumes of philosophy without number have been written on the elucidation of those same concepts. In fact," he shrugged those broad, straight shoulders, "we are no nearer to solving the problem than is a fish who is trying to clear its mind about 'What is water?' But let us concern ourselves first about the meaning of space; that is, the meaning of 'Where.' There is no quality in our own individual sense of experiences that we may designate as spatial. Rather, what is spatial appears to be the order of material objects of experience. For example, when we think of a material object we must bear in mind if any other ideas concerning space are to any degree possible. Logically-and alas, how illogical human beings are.--Iogically, I say, it must be the very first of all our ideas. It must be the basic stepping-stone. It must be the jumping off point. Just think about it for a moment, and you will see that if we try to analyze our ideas about space.--for example, take the words 'next to' or the word 'touch' and so on-that is, if we endeavor to make ourselves aware of their equivalents in experience then it becomes obvious that the materia.! object concept is a vital beginning. Now the idea of 'object' by itself is simply a means of taking into account, by our reasoning, the persistence in time or the continuity of certain groups of experience complexes. The existence of objects is thus a conceptual affair. The meaning of the concepts of objects depends wholly on their being connected, and connected, if you like, by means of human intuition with groups of elementary sense experiences. This immaturity of association, or connection, if you like, is the basis of the illusion which makes primitive experience appear to infoI:m us directly about the relation of material bodies which exist, when all is said and done, only insofar as they are not thought. . . . In the sense that we have just gone into, we have the indirect experience bf the contact of two bodies. We need do no more than think for a few minutes about this, as for the purpose of my exposition and explanation we can gain nothing by singling out the individual experiences, to which so simple an assertion alludes. Many solid material bodies occupying space can be brought into permanent contact with one another in a great variety of different methods. We speak in this sense of the positional reilatioilships of bodies, or as the Germans would have it, lagenbeziehungen. "

"Now there are general laws existing, laws which deal with the position relationships, and these laws are essentially the concern of basic geometry. If we do not wish to restrict ourselves to regarding and to studying the propositions that occur in this branch of knowledge, the various relationships between words that have been set up, according to certain principles-then this must of necessity

hold good. . . . But perhaps I am getting ahead of you, my dear friend. I forgot that, brilliantly intellectual man though you are, you, like all the rest of humanity, must to a great extent be a child of your age, and I will deal for a few moments with something that I will call pre-scientific thought. I will try and bring the whole business down to a level, which--'"though I do not wish to sound patroniz-ing-may be simpler and easier for you to. comprehend.
Let us begin by asking ourselves again what is the mean-ing of the concept space. I think I can best explain it by saying the concept of space in this type of pre-scientific thought is characterized by a sentence like this. We can think away things but not the space which they occupy.
Now I want you to think very deeply about that for a'mo-ment. We can think away things, but not the space which they occupy. It is as if, without having any experience of any sort, we have an idea, a concept, a presentation of space, and if we ordered our sense experience, with the help of this concept, present a priori. On the other hand, we may 'say that space is a reality, a thing which exists without thought, just as material objects do. Under the influence of this view of space, the fundamental concept of geometry, the point, the straight line, the plane, might be regarded as having a self-evident character. The basic principles that are concerned with these configurations would be regarded as being necessarily valid and true, and holding good in the vast majority of circumstances. At the same time they were held to have an objective content.
For example, no one felt any scruples in those early days in ascribing an objective meaning to such statements as-'' He paused, trying to think of an example; then he snapped his fingers. "This one's quite a classic. Three em-pirically given bodies (practically infinitely small) lie on one straight line. Without demanding a physical definition for such an assertion, ther~ was a pathetically blind faith in evidence and in the immediately real meanings of the concepts and propositions of geometry which became un-certain only after the introduction of the non-Euclidean geometry. Let us begin with the view that all concepts of space are associated with contact expe1,iences of solid bod-ies; then it is easy for us to understand how the concept of space itself began. It began solely and simply as a thing independent of bodies and yet embOOying their position possibilities, or as the Germans would have had it, lagerungsmoglichkeiten. H," went on the stranger, "we had a system of bodies in contact and at rest relative to one another, some could, of course, be replaced by others. This property of allowing substitution is interpreted scien-tifically and philosop:hically as available space. Space denoted the property in which rigid bodies can occupy dif-ferent positions. The view that space is something with a unity of its own is different, and is perhaps due to the cir-cumstances of those pre-scientific days, and the pre-scientific thought that went witl:l them. For, as I said some time ago, we are all very much c~dren of our age. And we are affected by our relative environment. In those days," he went on, "it was thought that all positions of bodies were referred to one body, which was known as a reference body. The most obvious thing was the e<{rth.
Now in genuine modern scientific thought-though when I

say 'modem' I say it with a smile, for it is over three hundred years old-the earth is represented by the co-ordinate system. The assertion which has been often made, that it would be possible to place an unlimited number of bodies next to one another, denotes that space is infinite. In pre-scientific thought, the concept of space and time and body reference is scarcely sorted out at all. But I felt that it was necessary for me to go over these points with you in order that you might have a full and clear understanding of them. You must always remember that a place, or a point in space, if you like to give it a more technical reference, is always taken to mean a material point on a body of reference. Now to put you more fulIy in the picture, let us go on to the basis of Euclidean geometry. We may say that the basis of Euclidean geometry is to be found, insofar as it refers to the laws regulating the positions of rigid bodies, and it turns to account the ingenious thought of tracking back all relations concerning bodies in their relative positions. . . to the very simple concept of distance. Distance denotes a rigid body on which two material points, marks or signs have been specified. Now, the concept of the equality of distances and, incidentaIly, the equality of angles refers to experi. ments involving various coincidences. And the same remarks apply to theorems on congruence. Euclidean geometry is entirely dependent, at least in the form in which it is handed down to your generation, on the idea that a straight line is the shortest connection between two points.. I am now going to outline briefly how the basis of Euclidean geometry may be gained from the concepts of distance. We will start with the equality of distances. Suppose of two unequal distances one is always greater than the other, the same axiom must hold for the inequality of distances as holds for the inequality of numbers. We will do it simply. There are three distances: AB, BC, and CA. Now if CA can be suitably chosen, you will have the marks AAl, BBl, CCl superimposed on one another in such a way that a triangle ABC results. The distance CAl has an upper limit for which this construction is stilI just possible. The points A(BBl) and C then lie in a straight line. This leads to the following concepts, first producing a distance by an amount equal to itself; second, dividing a distance into equal parts; and third, expressing a distance in terms of a number by means of a measuring rod, or in other words, definition of the space interval between two points. When the concept of the interval between two points or the length of a distance has been gained in this way, all we need to do is to follow Pythagoras' theorem, in order to arrive at Euclidean geometry analytically. To every point of space, or body of reference, three numbers of three coorrlinates X Y Z may be assigned, and conversely in such a way for each pair of points A (Xl, YI, Zl) and B (X2, Y2, Z2) the theorem holds.

"Measure number AB-the square root of (X2-Xl)2 {Y2-Yl)2 plus (Z2-ZI)2.

"I think 1 must have now said enough to remind you of the fundamental principles of the Euclidean geometry with which, as an educated man of your time, you should have been familiar. But I must now go on to tell you the serious difficulties encountered in those representations and inter-

pretations of geometry, insofar as the rigid body of experience does not correspcnd exactly with the geometrical body. There are no absolutely definite marks, and moreover, we must always remember that temperature, pressure, and other circumstances of the environment trust modify the laws relating to position. It is also to be recollected that the structural constituents of matter-such as atoms and the electron-assumed by modem physics, are not in principle commensurate with rigid bodies, for they are, in actual fact, electrical discharges Nevertheless the concepts of geometry are applied to them and to their parts. For this reason modem thinkers havc been disinclined to allow real contents and facts, or as, the Germans would put it, Teale tatsachenbestande. These facts they make out do not correspond to geometry alone. In fact, they consider it preferable to allow that the concept of experience corresponds to physics and geometry conjointly.

"Now, if we go on to apply the theorem of Pythagoras to infinitely near points, it reads like this:-DS2_DX2 plus DY2 plus DZ2. Where DS denotes the measurable interval between them, for an empirically given DS the coordinate system is not yet fully determined for every combination of points by this equation, and I rather doubt if it ever will be. In applying Euclidean geometry to prerelativistic mechanics, a further indeterminateness is bound to come in when we use the co-ordinate system. The state of motion of the co-ordinate system is arbitrary to a certmn degree, namely, in the substitutions of the coordinates of the form:-

"XI-X-VT

"YI-Y

"Zl-Z"

Bathurst, brilliant man that he was, was experiencing a great deal of difficulty in keeping up with these expositions of space, time and relativity. The other, the tall dark stranger, was speaking slowly and clearly, as a patient teacher speaks to a backWard child. And yet he was beginning to wonder how much of his explanation was taking root in this fertile mind that had been tom out of its native century. . . .

"Let us consider now," he went on, "the appearance of time itself. Every event that happens in the world is deter mined by the space co-ordinates of XYZ and the time c0ordinate T. Thus the physical description must be four dimensional right from the beginning. But the four dinIensional continuum seems to resolve itself iJlto a three dimensional continuum of space, and a one .dimensional continuum of time. Now this apparent resolution owes its origin to the illusion that the meaning of the concept of simultaneity is self-evident. This illusion arises from the fact that we receive news of a new event almost simultaneously, owing to the agency of light. This faith in the absolute significance of simultaneity was destroyed by the law regulating the propagation of light in empty space. Or, if my memory serves me rightly, in the dim days of scientific history, by the Maxwell~Lorentz electrodynamics, two infinite near points can be connected by means of a light signal, and in that case the relationship may be mathematically expressed like this: DS2

C2D'f2-DX2- -DY2 - DZ2 - O. It must further follow from this, as I am sure you will agree, that the expression DS has a value which for chosen points, infiIiitely near in space time, is indepeDrlent of the particular inertial system that is selected. In agreement with this, we fiIid that passing from one inertial system to another, when the equations of transformation hold, which they do not in general, leaves the time values of the events unchanged. So surely we must now realize," his voice became very firm as he hammered home the points of his argument, "it must thus become quite clear, that a four-dimensional continuum of space cannot be split up into a time continuum on the one hand, and a space continuum on the other, for the invariable quantity DS may be measured by means of measuring rods and by clocks."

Bathurst shook his head as though to clear his mind of the new ideas and concepts which were being presented to bin} by this brilliant 24th century scientist. He realized that he was attempting something well nigh impossible, as he strove to gain a fundamental mastery of the rudiments of this technology, five hundred years ahead of his oWn generation. The stranger smiled sympathetically, "Let me just go on now and give you a word about four dimensional geometry," he said softly. "On that invariable DS that we've been talking about, it is possible to build up a complete four dimensional geometry, which is analagous to Euclidean geometry, in three dimensions. When we think of it like that, physics becomes a sort of statics, in a four-dimensional continuum, because apart from the difference in the number of dimensions, the latter continuum can be distinguished from the old Euclidean geometry be--cause DS2 may be greater' or less than zero. Corresponding to this we can separate and distinguish time-like and space--like line element. The boundary between them is marked out by what we may call the light cone. The light cone is simply DS2_0, and that cone starts out from every point." He paused to let that piece of basic mathematical information sink in before going on again. "When we think of all the elements which belong to the same time value, we can put forward this mathematical formula

DS2-:-DS2_DX2 plus DY2 plus DZ2-

and then we find that the elements DS have real counterparts in distances at rest, and the Euclidean geometry will still hold good for these elements. With regard to the effects of Relativity, special and generalized, we come to a modification of the whole idea of space and time, a modification which the idea has undergone through the restricted theories and concepts of relativity. The whole idea of space has been still further modified by the general theory of Relativity, simply because this theory insists on denying that the three-dimensional space perception of the space-time continuum is Euclidean in character. And it goes on to assert, and to assert most strongly, that the old flat surface Euclidean geometry cannot, does not and will not hold for the relative positions of bodies that are continuously in contact. Let us regard the empirical law of the equality of inertial and gravitational mass. You will find that we are led to interpret the state of the continuum as a gravitational field and to treat non-inertial systems as equivalent to inertial systems. A paradox, my friend, a

parad6x that has no basis in ultimate reality. . . .

"There was a great early scientist of considerable ge.-nius,' who lived well over three hundred years ago, a man who was not very much after your own time. His name was Riemann, and he held up a system of geometry which holds good for a space of N dimensions, and his geometry bears the same relation to Euclidean geometry, as does the general geometry of curved surfaces to the geometry of the pure and I must add imaginary flat plane. There is a local co-ordinate system for the infinitesimal neighborhood of a point on a curved surface, in which the distance DS be-tween two infinitely near points is given by this equa-tion:-DS2_DX2 plus DY2, Eor other co-ordinate systems, however, we may use a different expression. The expression is DS2-Gll~ DX2 plus2G12, DXl, DX2 plus G22, DX22, and that holds good in a finite, bounded and limited region of the curves surface. Just as the old-fashioned Euclidean geometry space concept that we have been thinking about refers to the position possibilities of. rigid bodies, of firm, unmoving bodies, so the generally ac-cepted and understood theory of Relativity, that we may delineate as the space-time concept. refers to the general behavior of matter, energy, space and time and of course is measured by our old friends the clocks in part, at least. Now to the really important parts of what I have been say-ing. I want us to consider time itself. If what I have said now has been complex, I trust you will forgive me; I have endeavored to simplify it insofar as my limited verbal powers will permit. . . . The physical time concept answers to the time concept of the extra scientifically inclined mind. We experience the moment 'now,' or to express it very accurately, what may be called the present sense ex-perience. Or since we are stilI in Perleberg, we will use the motheT tongue of the proVince and say the sinnen Erlebais in combination with the recollection of earlier sense ex-perience. That is why our sense experiences seem to form a series. In other words, the time series which we indicate by the simple words, earlieT and later, before and after. Now and then, or in reverse, then and now. The ex-perience series is regarded as a one-dimensional con-tinuum; although we have already seen that a one-dimensional time continuum cannot be separated from the three-dimensional space continuum. We must realize that iliere is a fallacy in the argument up to this point, and that ilie natural everyday experiences and the primary sense in which they are accepted differ very vastly from the true state of affairs in the space-time continuum of the universe in which we exist.

"The experience series can repeat itself, and can of course be recognized and understood and comprehended. It can also be repeated without necessary exactness, and in that case, some events are replaced by others without the character of the repetition being completely lost. In this way we form in our minds a time concept as a one-dimensional frame which can be fi11ed in by experiences in various ways. The experiences themselves are really sub-jective time intervals. When we move from subjective time, or as the mother tongue of this location would have it, the ich-Zeit, when we turn from that to the time con-cept of pre-scientific thought, we find that it is connected

with the creation fomlation, the manufacture, or the idea that there is a real external world, independent of the subject. In this sense, the objective event, which we have just been think;ng of, corresponds with the subjective experience, and they are attributed to the subjective time of the experience and real time of the corresponding objec~ tive event. When we then come to contrast experiences of outward events and their order of precession and recession in time, then we find that we have at last reached a concept which has a validity for all subjects. We find that we have arrived, if I may use an old cliche, at a moment of truth.

"Then, of course, there is the process of objectivism. . . which doesn't encounter difficulties except for the fact that the time order of the experience corresponding to a series of outward events is not the same for all individuals. Let us look at something straightforward from everyday life. When we see something, when we make a visual perception in our daily lives, then the two things correspond exactly, and it is because they correspond exactly in normal straightforward, uncomplicated everyday life that there is an object time order, which has beoo established to a remarkable degree and to a very wide extent. But when we come to work out the idea of an objective world of external events, and when we try to take this working out into a system demanding the utmost detail, then we find it very necessary to make both the experiences and the events depend on each other; to make them interdependent and interrelated in a much more complicated way. The. original attempts to bring this about were made by means of rules and methods and laws of thought, if you like, which were gained by man instinctively, as part of the evolutionary process and the uprising of the human mind. By these instinctive rules and modes of thought, the conception of space plays a particularly prominent part. H we go on to define the process, to condense and to analyze it down to its ultimate conclusio~ then we find that we have led ultimately to the goal of natural science. We know pedectly well that we measure time with the clock Or the watch or the chronometer, but let us ask ourselves exactly what a clock does. Let us ask ourselves for a dictionary definition of this common everyday object, for in both your centwy and mine a clock was as familiar as a house, or clothing or food. The purpose of the clock is automatically to pass in succession through an equal series of events. The number of those periods, which we will call clock time, which has elasped, serves as a simple and not terribly accurate measure of time.

"Let us think of a simple time observation experiment. You will see immediately what I am driving at. If an event occurs in the neighborhood of one clock in the same space as the occurrence of the event, everybody watching the event observes the same clock time simultaneously with the event. They observe by means of the eye, and they observe independently of their position." He sighed deeply. "How wonderfully simple it would have been if everything had been as direct as that. . . ." There was just the slightest trace of bitterness in his voice. "Until the theory of Relativity was propounded, it was assumed that the conception of simultaneity had an absolute objective

meaning for events that were separated in space, just as it had a meaning for events that took place in the same area of space. That simple happy, homely little idea was shattered by the discovery of the law of the propagation of light. You see the velocity of light in empty space is a quantity that is independent of the choice of the inertial system to which it is referred. So no definite absolute or invariable meaning can be assigned to the conception of the simultaneity of events that occur at points separated by a distance. in space. A whole system has had to be allocated to every inertial system. And If no co-ordinate system or inertial system was used as a body of reference, there was no sense in asserting that events that took place at different places in space occurred at the same time.
"Before I can really come to the climax of the explanation that I am trying to give, I must just put you in the picture as regards the measurement of time, which has taken place between your day and ours. You see, the whole problem of the measurement of time means that we must refer first of all to its psychophysical basis, unless we are going to be completely simple and give it a mere empiric treatment because of its practical necessity. When experiences are repeated closely enough to each other, then we associate these with ideas of things and indeed with ideas of reality. Indeed, the whole psychological history of the construction of our world, of our universe and of our solar system, of the entire galaxy and the cosmos would appear to have its basis here. We look, then, over a measurement of time, toward some process or other which has recognizable repetitions-repetitions which are easy for us to count. This idea replaces the impalpable idea of duration. And it thus takes us into the realm of measured quantities. Let us think of a few simple examples; the beat of the pulse, the alternations of day and night, the appearances associated with definite spectral lives. These things, of course, are all natural processes. They have actually served this purpose, aiid then of course we have all our man-made instruments: the balance watch, the pendulum clock, the modem electrode chronometer, the radio-active clock, and so on, almost to infinity. We have turned the measurement of time into an extremely fine art. Let us think then for a few moments of what the absolutely essential features of an ideal time measurement instrument would be, and we find that our ideal instrument would be a gyroscope, mounted without friction inside a case, which mayor may not rotate itself and is held absolutely friction free at the common axis. Or more abstractly still, let us imagine two particles which we will call A and B revolving at different angular speeds at a common center which we will call O. Each new passage of A past B is a repetition, giving account of a step of time. An apparatus like that might be used for measurements of time, as precisely as a pair of compasses can be used for measuring space. But if we do not know that the revolution of A with respect to B is completely constant and unvaried, that it is, in other words, an invariant, then, using our old analogy of a pair of compasses, we have a pair of compasses that are not known to be stiff at the joint. The measure can still be made for what it is worth, and it may, in fact, be the only one possible. H the interval of time measured falls between

two interval counts, we have a problem in which we must subdivide the standard unit by constructing a smaller unit, which is standardized by comparing it with the standard. No new problems were introduced there, and from even the earliest historic times, as far as science is concerned, various known methods have been applied to this treatment of the parallel and contrast for the measurement of one-dimensional space and of time. Measurement of one-dimensional space is practically perfect through the construction of a yard, a meter, and an international marking unit, depending upon which country and which time you belong to." He smiled understandingly at Bathurst. "And when that yard or meter has been made, copies are ,taken and compansons are drawn. if the copy, which we will call Al, Bi, is compared with the standard AB,the mark A is ; seen to agree with the mark Al at a particular time, and the mark Bl to agree with the mark B at a different time. The difference 18 the time taken by the observer to travel from A to B. Now if we were to put a mirror at Al and Bl so that the congruences may be observed simultaneously, so that we have observed both the points at the very same instant of time, we have not really abolished the time difference. We only think we have, because instead of traveling ourselves, we have made light the traveler. The difference is essentially a differenCe of a kind. Now let us consider the standard for time measurement.

"We have a gyroscope in which there is a mark A rotating within a case on which there is a mark B; compare thiS with a copy A1 Bl. The cases B, Bl may be in rotation, and the marks B, B 1 cannot be brought into permanent coincidence. We then have a step of time between the two passages of Al across BI, but it is a step of time which may be compared with that occupied by two passages of A across B. Only we must make. an allowance for the time taken for the signal to pass across the space between B and BI. If B and BI are the same, as they may be, if both are effectively the sphere of stars, then the allowance for the passage of the signal is abolished, and the comparison of the two standards of time i& more perfect than that of two standards of distance. The reason for this is that at the two finds of a standard of space we cannot have the same time, but for the two ends of a standard of time we can have the same point of space. By the science of your primitive time and my complicated time we can pass to and fro in space but not, as far as has previously been known, can we pass to and fro in time. Now let us go back to our hypothetical spheres and measuring instruments and comparisons. The two points Al and A2 pass across B at an interval which is an ascertained fraction of the period of Al in respect to B. Then, even though we may know no~ing else about them, we. require an hypothesis. We require an hypothesis in order to tell from this observation exactly what fraction of four right angles AI, A2 suntends at 0, which you remember is the axis. If Al and A2 rotate or revolve as if they were completely rigid and completely uniform, the fraction is the same as the fraction of the period; but if on the other hand, they rotate independently, if they rotate under the action of exactly the same acceleration to the center O, then no conclusion whatsoever can be drawn without further data. Generally,

we must always remember that if we are to define motion in relation to the right angle, it would be necessary first of all to define the metric of the space in which it takes place. In addition, of course, we would have to assign it its own law. But when special statement is absent, rigidity and uniform rotation must be pre-supposed by us, and they will in turn make the time interval.in the angle AI, O, A2 which we will find to be the equivalent measures." Bathurst was waiting with an ill-concealed impatience for this brilliant technological scientist to come directly to the point of his exposition. His patience was now rewarded.

"The glass cylinder," went on the other suddenly, looking as if he had read the diplomat's thoughts, "the glass cylinder which is an integral part of our time transcending device, is in reality not glass at all. It is composed from a series of semi-condensed static atoms, which are designed to be for only an instantaneous duration. In other words, just as in the science of an earlier century, the photon was supposed to be the smallest particle of light energy, just as the electrons, neutron and positions of an atom were considered to be the smallest positively and negatively charged elements of matter, so the instanton in: our generation is regarded as the indivisible instant, the smallest possible particle of time. By a process so long and complicated that its telling would make the facts I have just given you seem like nursery rhymes by comparison with it, I must tell you that we have been able to create a cylinder which can only exist in the fleeting instant of now. In other words, its existence is so transient that it can find any type of palpable reality only in the instanton itself. Now, having created this element, we found that it did not vanish and melt away into nothingness, as one would suppose an element of this nature to do. H it can have only the most transitory of all possible existences, why, we asked ourselves in our laboratories, when it was first created did it continue to exist? And here we found the answer to our problem. It existed not because its duration was longer than the instanton, but because by an electro-atomic process, which is innate in its own basic composition, it has the ability to leap from instanton to instanton in either direction. And as it leapt at a speed which, by the way, far and, away exceeds the supposed ~ .of light-I say supposed because it was so supposed in a science a little later than your own-because it can exceed a speed which is believed to be inexceedable, it creates through time itself through the fourth edge in the continuum a vortex, a vacuum, a channel, a rift, a fault---call it what you will-it causes a passage through which it is possible for human beings, for anything placed within the passage, to travel. The unfortunate thing is that we are not yet able to control entirely the direction or the duration of that which does the traveling. As I said, our glass cylinder is able to travel through time and create a vortex in its wake, in the same way that a vehicle traveling through the air creates a vacuum behind it. It is in, as it were, time echo, or a slip stream of time that it is possible for the traveler to journey. Now I want you to pause and think for a moment of the full meaning of that fact. What we have done is to

create something which is entirely indestructible. No matter how fast the velocity of your energy bolt, your. lead bullet or an axe in your hand, you will be unable to destroy that glass cylinder-I go on referring to it as 'glass,' though of course, it is something far, far more complex. It is impossible to destroy it for the simple reason that at no second, at no instanton of time, could any bullet reach it, no energy crash through it. It is possible to touch it with your hand, but that is purely subjective mental experience. It is not an experience which would have its counterpart in any physical demonstration of destructive energy or matter. For by the second that the bullet arrived or the energy bolt was delivere4, the cylinder would have departed, either into a new instanton a fraction ahead of the missile or a fraction into the past."

Bathurst had hardly been listening to the last part of his new-found acquaintance's remarks. An icy hand of something akin to fear and loneliness was clutching at the young diplomat's heart. One phrase in particular that the expositor had spoken had lodged indelibly in his mind.

"You said," he asked quietly, "that it was not quite possible to control the direction or the duration of travel through the vortex?"

"No, I'm afraid it isn't," replied the other.

"You mean then," went on Bathurst softly, "that I'm here forever?" The other nodded, and opened his mouth as though to speak, but at that second came the sound of i footsteps from outside. The tall stranger Swore volubly un-Ider his breath. "I don't know how they've done it, but it seems the fiends have succeeded in tracking us down. We must act with speed!"

To Bathurst's 19th century eyes, there did not appear to be any escape from the room in which they stood, but there was a glint in the stranger's expression that was by no means a look of despair. . . . "You will find," he said under his breath, "that what I said about our technology was by no means an exaggeration. Come." Seizing the unresisting Bathurst by the wrist, he ran toward what appeared to be a completely blank wall. Behind them the pounding of the security men grew louder, and there came the ominous crackle of an energy bolt being released from a hand blaster.

Chapter Seven
Centrifuge

When Mike Grafton discharged his energy bolt at the fun window, Paul Ertzmann seized his chance. His subconscious had been working overtime even while he was directing the actions of his colleagues with his normal consciousness. He realized now to the very depths of his being that his sympathies.. were entirely with the fugitive below and the cause of the liberationists he served. It was a thing which had often been done before which Paul Ertzmann now did. Since the very first war brought its confusions to the ranks of men, unpopular officers and indeed the other

ranks have had strange tendencies to disappear on active service, usually in the process of going over the top, and there is nothing quite so camouflaging as a battleground full of bursting, blistering shrapnel and enemy missiles, for the assassin to strike in any direction which may suit him best. Although Ertzmann's mind was now patterned and set on the liberationist cause, he, like most men of the 24th century, believed intrinsically without qualm of conscience that the end justified the means, and with the same relentless fanaticism with which he had previously supiported the dictatorship of Rajak the Magnificent, he now worked for its overthrow.

Ertzmann's decision was by no means a difficult one. It would have been strange if it had been. His environment and conditioning had made him to a large extent the man he was. He had already expenenced a remarkable transformation of character, yet there were certain deeply ingrained tendencies, which would never. in the span of a normal lifetime be eradicated from a mind as mature as his.

Just for a second, a fleeting flash of something that might have been a deep call to a kind of perverted loyalty tried to make itself felt: But the call was an extremely weak one, like a faint and far away radio signal" heard on an ineffectual set. . . . It was difficult to feel any degree of affection whatever for the cold, fish-faced subservient beings who were his fellow security guards. It was difficult to feel much regret about destroying a rat or a slug. These creatures, he told himself, were quite definitely sub-human, as he knew that he himself had been sub-human while his mind had been fettered by the fanaticism which had bound him to the new order and the foul regime of Rajak the Magnificent. He saw at once that of the group by the window, at least half had been seriously injured, if not killed. The others were still pretty dazed. With calm cold deliberation, he drew his own blaster and fired into the " stunned dying survivors. When the acrid fumes had cleared away, he was the soul living occupant of that room.

It looked for all the world as though lightning had struck with the devastating force of some angry god, wreaking its vengeance. He went purposefully down the stairs to the inn-keeper waiting at the bottom. He had replaced the weapon inside his tunic and had nothing in his hand but an undischarged musket. No trace of expression showed on his well-trained face. In the archaic French engrained in hiS mind, he spoke swiftly to the inn-keeper.

"It seems that the stars themselves are fighting on the side of that man out there," he said in a good simulation of an awe--struck whisper. "There is no sign of a storm, but lightning struck the building. Either he's in league with the devil or called up brimstone from hell." He tried to look sorrowful. "My men, my douaniers, they are all dead."

"All dead," whispered the inn-keeper.

"Aye," he replied soberly, ''all dead. Not by bullets, not by an assassin's dagger, not killed in battle, but killed by. lightning, from either heaven or hell, I know not which.-In my opinion that English spy out there is in league with the

Bete Noire."

The inn-keeper crossed himself superstitiously. "It is a possibility," he whispered, his voice a mixture of dread and awe. "What are you going to do now, Captain?"

"I'm going out there to see if I can find him."

"You are a brave man," said the inn-keeper. "May the heavens protect you."

"Thank you," answered Ertzmann. "I hope they will. I shall probably need their protection. Let us hope there is no more of this strange lightning." There was a deeper significance to his words than the inn-keeper could possibly understand. He walked out into the darkness of the inn yard and crossed it into the shadow of the trees. He hunted for what seemed an eternity. At last, sheltering himself behind the thick trunk of an ancient oak, he called softly into the darkness, "Grafton, fJrafton, can you hear me? Don't shoot; I'm a friend."

A voice came from the distattce. "Is this some sort of trick?"

No, I swear it isn't, but I've no way of proving it, except to say that the only evidence you'll find is in that lnn.

"What do you mean exactly r said Grafton quietly.

"I mean that until a few minutes ago, as we understand time in our century, I was Captain Paul Ertzmann of the security guard. I was sent with a detachment of seven men through the time machine to bring you back. Those douaniers you just fired at were seven security guards. We went through an encephalic conditioning that gave us the necessary archaic French and German of this epoch. We were also conditioned on customs and natural history. We therefore had quite an advantage over you, who came, as we believe, unprepared. Now listen carefully to me. Of the seven guards, you killed two or three; you probably saw that yourself."

"Yes, that's right. But if they really were security guards why didn't tlley use power blasters instead of th0S6 antique muskets?" asked Grafton suspiciously.

"Because I ordered them not to," said the captain quietly. "I ordered them not to, because I hoped very much they would miss you. They wouldn't have missed if they had used their own weapons."

"Why did you betray them?" asked Grafton. He could feel in his liberationist heart no particular love for a man who could so ruthlessly betray his own, no matter how alien the ideas of his own people were to Grafton's ideas.

"I believe that the end justifies the means," said Ertzmann. It was almost as if he had read Grafton's mind. "You see, I'm the man who captured and interrogated the old scientist who put you through the time machine.

"What became of him?" asked Grafton coldly.

"He's dead," replied Ertzmann. "He was killed by those men who just died on the end of your blaster, and in cidentally of mine. That is the only proof I have got of my integrity. You will probably have noticed that you did not kill the entire group. I turned my own blaster on the survivors. You'd think lightning had hit that inn."

"I can believe that," answered Grafton. "I saw a charge above the light of the candle. There probably isn't much left of that room except a few charred walls and the smok-

ing wreckage, of a bed."

"That's a pretty accurate description from a man who hasn't seen it," commented the captain. He was not without a grim, ironic, sense of humor. There was a long pause. "The point is this: surely the fact that I gunned down my other men must mean something to you, must mean that I have undergone a change of heart." Grafton laughed coldly.

"I wasn't born yesterday."

"You certainly weren't," said the captain again with that odd cynical flicker of humor. "If you had been born yesterday you'd be something like five hundred years old." Grafton let the, full meaning of the remark sink in before replying. He wondered whether that strange voice coming to him from the trees was on the level, or whether this was just another diabolical trick, another subterfuge, a product of the cunning mind of the security forces that he had fought for so long.

"If you mean what you are saying, shine your torch on yourself and come across with both hands up. When you get here, throw me your blaster. I'll keep talking so that you can follow the direction of my voice."

"Agreed," said Erttzann. "You will notice that I have considerably more trust in you than you appear to have in me, because of the new ideas I have of the liberationists and their movement. I'll talk as .I come across as well. I only hope I can convince you."

"So do I, for your sake," said Grafton, "though I'll readily admit that I shouldn't be sorry to have an ally-lost in this alien time as I am."

"The feeling's entirely mutual," agreed the captain, as with his torch switched on and his hands high above his head, he began advancing slowly and purposefully toward the sound of Mike Grafton's voice.

"You see," said Ertzmann, "it all began when I found some words in an old book we were detailed to burn. 'The blood of the martyrs is the seed of the Church.' I didn't understand the words at the time, but I understood them a little while ago. I understood them when I watched my troops murder the old scientist, the man who put you through the time machine. Rhinegow was subjected to truth drugs. He told us everything he knew. He told us everything he knew of the working of the machine. In consequence of that, two top level scientists, A36 and A38 were sent down from the Berlin headquarters. Those same two scientists put me and the seven men through the machine. They got us through in two batches of four. You'd be surprised how crowded it was.. . . I came through with three companions first. . . ." He broke off. He was almost within an arm's length of the concealed liberationist.

"Throw down' your gun," said Grafton's voice, practically straight in front of him. Slowly and carefully he reached his hand down, unbuttoned the front of his tunic and tossed out the blaster.

"I'll have that musket as well, just for the time being, said Grafton. "Even a lead ball is fatal, and I should not appreciate the irony of being shot by an antique firearm after I've disarmed you of your blaster. It might appeal to your sense of humor, but it doesn't appeal to mine."

"You're a sensible man," said the captain as he lowered

the musket to the ground beside the liberationist.
"I'd like you to go more deeply into your so-called 'conversion'," said Grafton quietly. "Tell me more. . . ."
They talked long and earnestly, and when the security man had finished, Grafton felt an odd inclination to trust him. In normal circumstances he would rather have sat down beside a rattlesnake than beside a security guard of the Eurasian Utopia of Rajak the Magnificent. Yet circumstances alter cases, as has been said before. In this instance circumstances had altered cases to such purpose that he really felt there was something in what Ertzmann was saying. They were in a unique situation, and adversity often gave a man strange companions. . . .
When Ertzmann had finished his story, Grafton said,

"The main point seems to be how we are going to get back to our time. I thought when I first came here I would be able to escape permanently, but living in the past is like living with the dead. . . . Over the centuries humanity has attempted in various forms to foretell the future. Going back through the past gives us a perfect knowledge of what the future will hold. At least it gives us as good an idea as our history allows us to hold. But what if we have that knowledge? We then find as you will find when you have been in the past, that there is a complete and utter .sense of futility, Nothing seems to have any point or purpose any more. There's no reason for doing anything, no motive for carrying out any course of action. I am an idealist. I have to be an idealist or I wouldn't be in the liberation forces, risking my neck daily: I have to have a future to work for. But the future for me doesn't begin for five hundred years. Any action which I may carry out in this remote e.poch {)f the past, in this strange medieval aeon, is not likely to have any particularly useful repercussions in the age with which my heart is genuinely concerned. I am sure you follow me. . . ."

Ertzmann nodded, "I follow you only too well, and even though I have been here only a matter of minutes-
He shrugged his shoulders. "Strange how we can talk of minutes when we have just traveled a fantastic distance of five hundred years into the past. But I feel as you do looking back is a kind of imprisonment of the soul, far worse than any physical incarceration could ever be. In fact, I would rather risk all the perils and hazards of our own generation, knowing that by living in that day and generation, we can to some small extent mold the future. No matter how insignificant our weight may be, we can still make that weight of some account. If a million gmins of sand can eventually balance one ton, then I would rather be one of those grains of sand than nothing at all. No matter how small and how blunt my chisel, I prefer to live in a day and age in which I may leave a mark upon the rock of history than to live in a day so remote that my chisel is utterly ineffectual."

Grafton was a more practical man than the Captain.

"I agree, Ertzmann," he said, "and that's all very well. But the thing is, what course of action can we take? We have agreed on the ultimate goal; now we must get to it.
The captain admired this practical streak in his newfound companion. The libecationists were men of character, even though they had seemed to him men of unattainable

ideals. . . . Strange how views alter, he thought.

"Right," snapped Grafton. "There's only one line of approach open to us-we must stay within the region of the end of the vortex." Slowly, keeping to the shadows, the two men made their way back to the inn yard. They looked up at the room in which they had jointly cotnmitted incendiary mayhem, Grafton with a feeling of satisfaction; Ertzmann with a kind of cold aloofness. He had been through so much, in the light of changing experiences, that his mind was becoming confused. He was glad that Grafton had taken the lead.

"If we stay here long enough," said Grafton,there's just a faint possibility that another operation from the machine may haul us back to our 24th century. Even if we find that nothing but an execution is awaiting us . . ." The captain nodded. "I'm with you in that," he agreed. They stood quietly like St. Francis and the wolf.

The eternal stars shone down as they "had shone down for a million years and would shine down in the same constellations a million years bence. It gave -tbem the feeling, looking up at tbose stars, that time itself was a small and insignificant thing-and yet the smallest of interruptions could affeot the small, insignificant lives of two small and insignificant men. . . . Yet they also had a feeling tbat they were in a way superior to the stars--etemal, gigantic, and everlasting as those flaming orbs were, the finite mind of man contained them--could matbematically calculate tbeir courses--could analyze their atomic chemical structures--could forecast their movements--could date them--could survey them with his radio telescopes. Stars, thought Grafton, cannot evaluate a man-but man can evaluate the stars. As they stood gazing up into the blue velvet vault of the heavens, with its myriad pinpricks of gleaming colored light, they became aware of a strange trembling vibration in the air all around. Then Grafton laid his hand quickly on the captain's arm.

"Listen," he said softly, "do you hear anything?" Ertzmann nodded. "It's the same kind of vibration that 1 heard in the machine. Do you think . . . ?" He left the sentence unfinished; a grey mist was beginning to swirl around them.

A grey mist that was all too familiar.

"Take a deep breath," said Ertzmann.

"I haven't forgotten," answered Grafton quietly. Next moment the grey mist had enveloped them completely, and they found themselves swirling away once more into the weird, uncanny vortex. . . .

Chapter Eight
Focus

The pounding footsteps behind them and the crashing of rifle butts against the door of the underground headquarters of the Perleberg resistance movement lent wings to the flying feet of Benjamin BathUrst and the tall gaunt stranger with the penetrating eyes. They reached the blank wall, and for a second, Ben wondered if the fear of capture had turned the mind of this incalculable stranger. But his enigmatic companion ran on straight into the blank

surface of the wall, as though he had been a ghost. Bathurst, feeling that at any second his face and body would come into violent contact with what appeared to be hard, solid stone, continued to follow trustfully. He threw up an arm instinctively to guard his face, and to his amazement the wall yielded. It had no more consistency than soft half set jelly. Of all the scientific marvels that he had so far experienced in this unaccountable technological century, this to him at least seemed the greatest. It was like a conjuring trick, yet it was far more graphic than any stage illusion could ever be. This was more than the art of any Houdini. This was more than the wizardry of a court conjuror. This was a technological miracle, a miracle of science, and he knew at that particular instant that it had probably saved their lives. . . .

Once through the walls, they found themselves in an almost identical chamber. Before continuing their flight, the tall stranger paused and pulled down a lever. "Now touch the wall," he said to Bathurst, just a trace of justifiable pride in his voice. The diplomat did so, and found, as he had half expected when he had seen his companion pull the switch, the wall was now as solid as any other bricks and mortar. This was the ultimate in secret passages; this was the escape route par excellence.

"How on earth . . . ?" he began.

"No time to explain now," said the other, "except to say briefly that it's rather like a very advanced version of the simple experiment that any schoolboy can make with sulphur. Certain alloys exist in certain chemical forms or isotopes. For example, if you take sulphur, or brimstone as you called it in your day, and heat it till it melts, and then pour it swiftly while it is still molten into cold. water, you will find that it forms a crust on the outside but that it is quite soft and malleable, like putty. That form is known as super-cooled sulphur. On the other hand, you can get rock sulphur, flowers of sulphur, several other isotopes. Now the same thing can be applied in a much more advanced technology to certain other alloys. While no electrical discharge is running through it, that wall is as soft as cotton wool. You and I could pass through it quite easily; it's no more than walking through a curtain of thin, filmy gauze. But once an electrical discharge is passed through it, the atoms and the molecules set in sharp, rigid patterns, and it has .the density and tensile strength of steel. It also has the advantage of being practically undetectable. The strongest shutters, if they are obviously shutters, will eventually yield to the attentions of a hand blaster or a power drill. If they won't yield to that., they'll yield to a good charge of explosive. The best doorway is what we have here. As long as they don't discover that, we should gain a considerable lead on them. But what you've just seen is nothing to what I am about to show you. The very fact that they had discovered these head. quarters means that they are altogether too close for the safety and continued existence of you and me, my friend. The time machine of which you have already had a demonstration is only one aspect of a far greater device which I will demonstrate to you in a very few tpinutes." He led the way through another series of labyrinthine cor. ridors and passages and underground chambers. At last he

called a halt before an enormous berylium door, studd~_d with heavy chromium set into its massive framework. Bathurst's eyes met the other's inquiringly. But the tall stranger gave him no answer. Instead he pulled a brown plastic plate fro~ his pocket and held it over an identical plate set in the side of the door. "What's that?"

"It's an electronic lock," explain3d the other tersely. "A certain magnetic pattern has been etched invisibly into this plate. The same pattern eiists on this plate set in the door. When the two plates are superinlposed, the electric circuit is pemlitted to run. That circuit starts the motor which un. winds the lock. There is only one of these plates in the whole world; I alone possess it. You are going to see a Se cret which no other member of the resistance movement knows about. For behind this doorway lies the greatest of all our technological weapons against the dictator-the ul- timate escape roote."

"But how, what?" began Bathurst. The other raised his hand for silence as the door slid noiselessly back and, beckoning his companion, the tall stranger led the way through the aperture that was revealed. They stepped in. side into a-vast underground chamber, a chamber worthy of the magnificent portal that guarded it.

"Is this a natural cavern?" asked Bathurst. The other shook his head. . . . "No time for questions now," he answered. "I'll explain as we travel" He led the way across the chamber to where a large metallic trap door was set in the floor. He reversed the plate that he carried in his hand and applied it to a similar locking device to the left of the trap. There was a pause of perhaps ten seconds; then this door also slid back, quite silently on invisible rollers. Below them a great flight of steps led down into an even larger underground cavern. Bathurst couldn't help thinking that these subterranean works were tremendously elaborate. Their purpose eluded him completely. The tall stranger continued to lead the way as they journeyed downwards. It seemed to Bathurst that they were descend- ing into the very bowels of the earth.

Lower and lower. . . until finally, in thick, inky darkness, the tall stranger whispered, "We have reached our destination."

They halted, and Bathurst strained his eyes, trying to penetrate the gloom. No matter in what direction he gazed, he could see nothing. As sure-footed as a cat, the tall stranger took a pace forward. There was a click, and the vast subterranean chamber became flooded with light. The sight that met the English nobleman's gaze was one of unparalleled and majestic mechanical complexity. Vast, towering machinery rose above him, and it seemed that it must penetrate ,into the upper air. He understood then the size of the caverns, and the depth of thiS vast underground undertaking. The tall stranger led the way through a com- plex maze of enormous machines whose purpose the man from the past could only vaguely guess at. This was science, he kept reminding himself, that was five hundred years ahead of his own.

His guide led the way to the circular entrance of a tube- like structure; for a second Ben hesitated.

"There is nothing to be afraid of," he was told, "but it is necessary for us to journey through thiS structure. You

will understand everything in a little while."

So, overcoming his hesitation, Bathurst made his way through the enormous tubular structure. After they had passed the circular opening, he realized that the cross section of tbe device was becoming triangular. The walls met in an apex above his head. They left tbe circular branch of the tunnel and passed through a sliding alloy door, set at a tangent, to another passageway of the same triangular design.

"Come," said the stranger; "we are about to commence our journey." Bathurst took hold of the other's arm, and they made their way together through what seemed an indefinite distance along the strange passageway. When they had been walking for what seemed an unconscionable time, Bathurst suddenly noticed that the passageway ahead of them ended quite suddenly and sharply. A flat black stab sealed off the triangular passage. His guide seemed not in the least disconcerted. Inserting his fingecs into the soft texture of the black material, he slid the doorway back, they stepped through, and as he released his hold, the black portal automatically fastened itself behind them. On the othec side was a carriage, a carriage so strange and odd in design that the man from the past hardly recognized it as a means of locomotiOn. Yet ther:e was no doubt that this was its purpose. Like the corridor in which they traveled, this carriage was triangular in shape, and it was fitted with sledge-like runners on the under side. The two men entered the triangular vehicle and closed the door behind them. An array of complicated switches made up the control panel. With deft skillful fingers, the resistance leader began switching over the relay circuits and pressing levers and buttons. With a smooth gliding motion, the triangular carriage began to glide forward upon its runners. Inside were comfortable padded bunks lining the walls.

"This will probably take some time," said the resistance man, "so if you'd like to make" yourself comfortable. . . I will go into some of the facts. We are now traveling in a machine which exceeds the possibilities: of ilie time machine. Here, we have overcome the problem of dimensional transition. There is a method of manipulating matter from the present environment into Qther worlds, which, though they are no less real, are completely invisible and m your day and generation were unguessed at. If we go back in time to where there was only a huge black void, and we have the very moment of geological time, that moment was the beginning of the present. Time, and the universe which is in time, began to live and move and have its being. After that first primeval moment, every following instant on was not merely a fixed point in space and time, but became the doorway to an infinite number of possibilities. When you look back into your life, you realize that at an infinite number of points, you could have decided to do an infinite number of things, on such and such a day. The very-fact that we took a certain course of action in the past is responsible for our having to take a certain course of action in the present. Present actions will, in turn, affect the future. Suppose you had taken a different course of action from the one that has led you to this present moment? If you had not driven to Perleberg, but

driven on to Wittenberg, or taken ship fOr the coast, you would not have found yourself snatched into the future by the backlash slip stream of the vortex. Just as there are an infinite number of possibilities for your life and my life, so there are an infinite number of worlds on which these possibilities could become realities. . . .

"Such different time sequences are delineated by our metaphysics as probability tracks. The thought that we might go from one world to another, through a different type of locomotive action was at one time considered as completely impossible, as traveling through time itself. But you have seen that time travel is perfectly simple."

"I wouldn't say it was simple," said Bathurst ruefully.

"Well, shaIl we say simple by comparison with some of the other technological achievements? The point is that I have perfected a device, the device we are traveling in at this very moment, which will enable us to walk between the worlds, a device which can take us from the world in which we find ourselves now to another world; a world, which although it exists at the same point in time and space, is because of its different vibration frequency, completely invisible to us while we exist in the other world. I will try and explain to you a little of the Mobius theorem. If you take a piece of paper and twist it just once, then join the two ends together so that it forms a twisted circle, and if you then take a pencil and draw a line from any point on one side, and continue drawing, never crossing over the edge, but continuing always in the same direction, you will eventually arrive back at the point whence you started. The same things holds equally true of the solid figure, and here you see just one more point at which the old Euclidean geometry holds good. For if you take a triangular solid body and give all the angles just one turn, if we call the apex A and the two bottom comers B and C; then, if you turn A to B, and B to C, and C to A, you will find that you have a solid figure that yet is possessed of only one dimension. If you travel at ever increasing speed until you reach a velocity that will alter the vibration frequency of the physical atoms and molec1l1es within the body, then, by virtue of the fact that you are a three-dimensional body traveling inside a one-dimensional figure, you will find that you have passed from the probability track on which you are to another probability track. You will have walked between worlds. You will find yourself in a completely different environment in which you might have been, had you or a vast number of people made different choices at some time or other in the past." He broke off, and Bathurst realized that they were already traveling at a fantastic rate inside the triangular section.

"And that is what we are doing at this moment?" he asked. The tall guide nodded. "This is another power facet of the same mechanism that is responsible for the time machine. We know that numerically we shall never be able to defeat the armies of Rajak the Magnificent, so our battlefield has had to become a battlefield of ideas and ideals. That heartless regime has produced a wonderful crop of brilliantly practical scientists. But they are scientists who lack the one vital spur, inventiveness. They are analytical scientists ratheJ: than researchers. They have ability, but it

is directionless, purposeless, vague and amorphous. We, on the other hand, lack nearly all their resources, but the few scientists we had-for many of them have been ferreted out and destroyed-were men with a flair of inventiveness. They could solve problems which the Eurasian scientists hadn't even thought up."

Bathurst made a gesture which indicated all the complicated machinery in the underground cavern. "All this . . . how did a handful of resistance workers do this?"

The leader smiled. "Where everything was once done by hand, in the 24th century, practically nothing is done by hand except in the slave labor camp. We have machines for raising edifices and constructions that make it almost possible for one man to build a city in the space of a single day and night." He paused to let the effect of this stupendous announcement sink in. "These caverns and this whole mass of machinery are entirely my own work. I dug them, I blasted them, I cleared them, and I built both the time machine and this dimensional transverser alone and unaided in complete secrecy. For the first essential thing that I learned about resistance work is that not even your most trusted companion should be allowed to know too much. For example, there is the unfortunate case of the old scientist Eric Rhinegow, with whom I collaborated on the time machine. It was necessary for me to mke certain precautions with regard to that; I am so glad now that I did take those precautions. When Mike Grafton, who was a liberationist escaping into Perleberg, was thrust backward into time by my late colleague, Rhinegow was unfortunately caught and arrested, shortly after Grafton made his escape."

"Then Grafton would be the man who passed me in the grey mist, " said Bathurst, snapping his fingers.

"Exactly," said the tall stranger. "As I was saying, the liberationist scientist who jettisoned him through the vortex was interrogated by means of truth drugs. I have agents even inside security headquarters, and I have learned that Rhinegow told everything he knew and was-then destroyed. He knew almost as much as I do, but that almost is very important. Therein lies the difference between life and death, between victory and defeat." He weighed the words carefully and thoughtfully as an orator weighs words. "I knew that if he did not appear to know a great deal about the time machine, they would suspect the existence of another power and come looking for me. There is no man so well hidden as the man whose existence is not known," he said sagely. "As long as they do not know of my existence there is no logical reason they should search for me. If they believe Rhinegow was the leading scientific mind of the liberation forces, and poor Rhinegow is dead, they have destroyed" their enemy-or so they think.

"The information which I had given Rhinegow was comprehensive, thorough, and up to a point complete. One of the most effective methods of telling lies is to tell a half-truth, a fallacious extension, if you wish, a slight divergence. It's like twisting the sights of a gun by just a fraction. The further the bullet traveJs the further it will be off course. So it was with Rhinegow. Poor Eric, I feel sorry to think that he himself was deluded, for he was

such a good and faithful companion, such a loyal old ser
vant. But I am sure that, wherever he is, he will under-
stand that it was necessary."
He sighed deeply, reached in the pocket of the brown
cloak for a cigarette and proffered one to Bathurst, who
took it and, inhaling deeply, found that he had never
tasted tobacco refined to such a point. It must be, he
thought, one of the compensations for living in the age of '
the Eurasian dictator.
"Very good," he remarked.
"What? The cigarettes?" said the leader. "These are
only cheap ones; the good ones-now, that's what I call a
smoke, but you can't get them unless you're a member of
the inner party." He shrugged his broad shoulders with a
wry, cynical grin. "There soon won't be any inner party if
we have our way. No Rajak, either. I hadn't quite finished
telling you about Eric Rhinegow, and it's pretty important.
He gave them all the information he had about the ma-
chine and its operation, but-here's the essential
point-every time Rhinegow manipulated the machine, as
he thought, on his own, I was observing him, by means of
a closed circuit stellar vision, from the depths of the sub-
terranean chamber we have just left. The two machines
are different facets of the same power factor, and when
Rhinegow operated the time machine, I pulled in a safety
switch whicll prevented the power output in the time ma-
chine sector of the whole construction from reaching a
critical mass and causing a flashback. through that vortex.
Every time Rhinegow operated the time machine, it was
necessary for me to throw in the safety device. Rhinegow
had no idea this device was necessary or that it was in
operation. Therefore when he told the security guards .
everything he new, he obvioUsly ,couldn't tell them about
the safety device. That is the point about which their truth
drugs break down. They can't extort information from a
man who hasn't got the information. As the victim
willingly co-operates, there is no necessity to verify the
facts. Besides," again that wry grin crossed his face, "I
don't think their scientists are so very capable, in spite of
all that propaganda which they are continually shooting
out. So now we have our beloved enemies operating the
time machine while I deliberately don't operate the safety
device. So far as I am aware from my recording instru-
ments in the-other chamber, they have so far used the ma-
chine twice." He paused thoughtfully, "There is another
way of looking at it, though. The building up of the kinetic
energy potential within the time machine facet of this large
power factor will mean that, ultimately, the whole mech-
anism ~ going to be deitroyed or hopelessly warped an4
no longer usable." .
"Does that mean the enemy will no longer be able to .
make use of it? I thought they had copied all the plans. I
assumed from what you were telling me that what
Rhinegow told them enabled them to build a duplicate
machine."
"No, not at all Rhinegow just gave them the outward
machinations. It looked good on paper, and remember
that we are dealing with analytical scientists, not research-
ers. While they had the machine tllere in front of them,
they had enough knowledge to operate it minus the safety

factor. But if the machine was not in existence, it would be very doubtful if they would be able to proouce another. They think they have a machine with which they can scour the past and the future, and their phrase. 'The secret police are everywhere,' will, they believe, be true. But they are living in a fool's paradise," he said with a roar that was half humor and half vehemence, "for they will never know what caused the blow-up of the time facet of the machine, and the cross reaction will also probably disinr-tegrate the machine that we ourselves are traveling on. Bathurst looked at him with a trace of apprehension on his face. "Does that mean that whatever it is that is going to happen to the time machine will destroy us as well?" The other laughed, "No; we shall be vibrations away when that happens, and that's better thJIn being mile, away. We shall be so far away, and yet in another sense so close, that the whole world could disintegrate, this suit could discharge into a super nova, so I believe; a chain reaction of atomic explosions could destroy the entire solar system, in their world, and we &hould be completely untouched. Such is the power of this machine, and such is the divergence between the probability tracks. It makea me think of the old phrase: so near and yet so far, it's never been truer than this. We are occupying geometrically practicaJIy the SmIle space, and yet we are so utterly separated from them that nothing they do can affect us in any way whatsoever. At least I hope so. Nothing we do can possibly affect them."

The sensation of vibrating had increased considerably as the car continued to hurtle round its circular track in-side the triangular framework. Faster and faster they whirled, higher and higher grew the pitch of the vibrations, and then Bathurst had the feeling that he had said, "We have taken the step. We are now on the other side of the tracks. We have crossed over the great gulf that is fixed. We have walked between the worlds; we have stepped be-tween the dimensions." It was just like slipping across a step. It was like stumbling over an unseen obstacle in the gloom. There was no more to it than that; just a feeling that things had somehow gotten out of gear, that they weren't quite what they had been a little while ago. It was rather, he felt, like crawling through a fence and finding yourself in a different field on the other side. Yet he knew that the change was a far more radical one than that. As he watched the madly spinning panorama through the visiports of the car, he became aware that the motion was gradually slowing down. They were decelerating quite fast. His companion was smiling at him reassuringly. "We have made it," he said. "We have explored the mysteries of space and another time, and yet the only difference is one of vibratory frequency. We are still jn the same space and time geometrically, yet we are less manifest than ghosts, or spirits, or the ether that the scientists of a long-dead, mistaken age used to talk about. We are as invisible as ra-dio waves; we are as sightless as the wind. Our former neighbors are as completely unaware of us as we are of them. As far as their world is concerned, we have vanished and left no trace, and as far as we are concerned, t11at world has gone as though it had never been." There came a sudden reverberating rumble, and the smile froze on the

liberationist's lips. "It's the time power aspect," he said; "it must have reached its critical velocity. H the machine disintegrates before we get clear-" He broke off and made an expressive movement with his forefinger across his throat. It was a universal gesture which Bathurst understood perfectly. The tall stranger leaned down and pulled on an emergency brake. "We've got to get out," he said, "and get out fast. Whatever you do, stay with me, because I forgot to warn you that when we get into this new realm, you will find everything terrifyingly strange. You will find that the old co-ordinates and the old physical senses don't make sense any more. You will find that the old laws of matter and energy no longer hold good. You will find that all the survival data you have learned, even the simple things," he shrugged his broad shoulders, "like down is down and up is up don't make sense herel-at least they don't necessarily make sense. There was a book written not long after your time, entitled 'Alice in Wonderland.' It's a pity you weren't able to read it. I was. It's still a classic," he went on, smiling, "and we're certainly in Wonderland now, the wonderland of the probability tracks. And when we descend from this carriage and get out here into this world, believe me, we can expect anything."

Just one question framed itself in Bathurst's mind, "Have you been here before?" he asked. The tall resistance leader shook his head. "No," he said softly, "but at least I have studied the theory enough to know What we may have to encounter. We are in a cOO1pletely new world." His vOice, usually so confident, almost brash, had sunk to a subdued murmur. "A completely new world. "

Chapter Nine
The Realm of Insanity

The first thing that Ertzmann became aware of was the difference in the grey mist. He was just aware that Grafton was still in sight, but apart from that nothing was quite the same. The grey had not given place to purple on this occasion. Instead there had been an uncanny vibration, a vibration which pervaded his whole being from head to foot, a vibration which gave him the uncanny sensation of not belonging. It was like the shake-up a man got when riding in an atomic oar. It was not the kind of vibration to which prisoners had once been subjected in the days before the perfection of the truth drugs. It was something horribly different. . . . Grafton had obviously noticed it, too, for although both men found themselves unable to speak, their eyes met in a look that spoke volumes. Suddenly a triangular aperture appeared ahead of them, an aperture through which they found themselves being carried, as though by some powerful and completely irresistible force. There were not many things that scared Mike Grafron, and the disciplined mjnd of the ex-security captain was not a particularly fertile soil for seeds of terror, yet both men were aware of a growing apprehension as they found themselves being forced through the uncanny three.. cornered figure. Once they were through, they seemed to

be in some strange mechanical tunnel. How they bad come there neither of them knew, and yet, unless their senses were deceiving them completely, they were traveling in a kind of orbit around the twisted triangular circuit at ever-increasing speeds. And yet, apart from the sense of vibration that accompanied them, there Was no visible means of locomotion present. After they had been traveling for what seemed eons, they found that they were growing giddy. And an awful feeling of apathetic resignation seized Gratton's mind. The monotony of the projection through that twisted triangular channel was broken by the sudden jolt. Their eyes met again, and Ertzmann knew that his companion had also felt it. Something seemed to have slipped, not something physical, but rather something cosmic. It was almost as though they themselves remained stationary while everything around them had moved slightly but swiftly. The universe seemed somehow to have changed gear. The rushing movement slowed down, imperceptibly at first, and gradually the deceleration grew more pronounced. And now, before their eyes, ghostly figures began to appear, very faint at first. But as they continued to slow down the figures grew clear; it was possible to recognize them as human beings. They decelerated still further. With a rolling, swirling motion, they found themselves outside the triangular tunnel. How it had happened neither of them knew; they were just aware of the change.

Two figures were walking toward them. . . .

The tall resistance leader lurched forward into the neW panorama of the extra-dirnensional world. Ahead of him, growing more distinct with every passing moment, he could see the outline of strong human figures. As he and Bathurst approached, they stood up and seemed to be regarding the diplomat and himself.

With a start, he recognized both of them. He was a man on whom surprises normally had little effect, but even he was startled by what he saw. Instinctively he raised his arm in greeting, for one of the men was his erstwhile colleague, Mike Grafton, whose de.wription he knew perfectly from his role as resistance leader, although they had never met physically. The other he had seen many times in the flesh before. It was Captain Paul Ertzmann of the Eurasian security guards. Bathurst noticed that his companion was waving a greeting.

"Do you know these people?" he asked in astonishment.

"I certainly do," was the quiet reply. "One of them's a security captain of Rajak's secret police, and the othes is one of my own men. His name is Grafton. The captain's name is Ertzmann." The four men were walking toward each other as he spoke; the resistance leader's hand hovered over the butt of his hand blaster. He wondered whether Grafton was a prisoner, or whether the roles were reversed. He was puzzled that neither seemed to be acting the role of jailer to his companion. They were walking side by side in much the same way that he and Bathurst were walking. A man does not become leader of so skillful an organization as the resistance movement of Eurasia without being possessed of an extremely shrewd mind.

The third possibility occurred to the leader's quick in-

tellect in a matter of seconds. Had one or the other of the two men now approaching him undergone some change of heart? The thought that the devilish Ertzmann might have been converted to liberationism seemed highly improbable, but unless they had gone to work on Grafton with the truth drug, it was even more improbable that the rakish freedom fighter had changed his cause, unless he was playing some elaborate game with the security man. The greatest problem of all was what they were doing there? As the gap closed and the four men stood facing each other, the answer presented itself to him. It had to be the machine. H they had been standing, he reflected, at the other end of the time vortex back in Bathurst's day when the time machine was actually in process of going into operation, then they would have been drawn up into that vortex. The time machine had never been used previously in conjunction with the dimensional transverser. In addition, the safety factor had not been employed. It could only mean that, having begun their journey through the time vortex, the fact of using the transverser had introduced a deviation into the power factor, a deviation which had dragged them from the past, not back into the future, back to their own generation, but sideways as well as forward and had thrown them from 1809 into the probability track on the vibrational frequency equivalent to 2309. The possibilities of the time vortex and the dimensional transverser became even more fantastic as the resistance leader thought about it. While the four men stood looking at each other speechlessly in those first moments of meeting, the liberationist raced over the complicated electro-mathematical formula in his fertile mind. That had to be the answer, he reflected. He substituted one constant for another and changed the co-ordinates of his formula, and the pattern clicked into place. It was a rare occurrence, but then, so are many other scientific phenomena. And the evidence was plain before him. These were not ghosts that he was looking at. The improbable had happened, and the operation of the dimensional transverser had swept the four men together as though it were some great cosmic broom and had brought them into the parallel world on the other frequency. His hand still hovered above the hilt of the hand blaster; his eyes never left Ertzmann's. The ex-captain returned his gaze stolidly.

"Don't shoot," said Grafton, as though he, too, although he had never met the resistance leader, knew that the brown cloak and the tall man were the symbols by which he was known.

Ertzmann and Grafton told their stories in a few swift words. The leader added a short explanation of the operation of the machine, but his hand still hovered above the hilt of the hand blaster. He had by no means made up his mind about Ertzmann. Perhaps the man could be trusted; perhaps not.

When explanations were over, they started to take an interest in the landscape. Everything was pervaded by a weird green glow full of grey shapes that danced like flames, and over by the skyline was something that might have been trees. It had a strange appearance, vaguely akin to alien vegetation, but it didn't seem quite real, somehow.

It was more like painted vegetation, more like a two-dimension impression of trees than real trees. One felt that it was possible to look at them but not physically to walk through them. Between the dimension travelers and the trees lay a broad expanse of green, flat, smooth terrain, broken by gentle undulations and marked by small jagged outcroppings of rock.

Even as they stood watching, the green began to fade; until it became a dark, almost purplish blue. The blue grew gradually lighter, grew thinner and paler until it had become as blue as the sky of an earthly summer morning. Low down on the hoPzon, a faint golden glow tinged it with blue as though a distant sun were about to rise. The golden glow became brighter and stronger and cast blurry shadows,. like long dark fingers, tenuously behind the out-croppings of the rock. Into this uncanny phantasmagoria new intrusions appeared. At first the travelers thought they were some kind of circular disc, but they were not. As the light steadily improved, it became obvious that they were not flat discs but spheres. They appeared to be joined together by black lines, like bars of thick painted steel. The spheres varied in size from ten or twenty feet in diameter down to the size of a billiard ball. The black lines locked them constantly into position. They were by no means uniform in color. White, blue, purple, green, red, the whole spectrum "was represented, and the whole system of them was drifting purposefully across the landscape as though they were as light and airy as bal1s of gossamer. Before the spheres had by any means disap-" peared, the whole sky became a brilliant flaming crimson. Against this background, which gave the appearance of an enormous planetarium, they could see the tremendous image of a man, a powerful, strong-faced man, secured to the sky by enormous, thick, blue steel chains. That this was only some kind of projection they could have little doubt. Yet it seemed so real that an uncanny sensation of fear affected them all. The image of the man faded, shim-mered for an instant, and disappeared. . . .

An aura of expectancy settled over the extra-dimensional world in which they found themselves. There was a huge arch of a railway, but for all its appearance of solidity, the watchers felt that it had no more basis in reality than had the chained ~an-figure. Behind the arch the sky lost some of its brilliant color and subsided to a dull orange. Beneath the arch, the unmistakable form of antique railway carriages appeared. They were so old dlat even Bathurst had no difficulty in recogniZing them for what they were. So obvious a form of locomotion had a universal application; the line in which the carriages ran became clearly visible to the observers. They could see lights in the windows, faces looking out, as the enormous ghost train pulled slowly away, under the arch behind them. One of the doors opened suddenly, and a man alighted. He wore a costume later than Bathurst's own, but many years earlier than the 24th century man's. Ho looked to right and left, and then sprinted away as though all the hounds of hell were after him. . .
He disappeared from their view for 'an instant behind some kind of embankment, and when tlIey saw him again, against the skyline, he was being pursued by creatures that

made Rajak's Eurasian Utopia look like a Sunday School ohildren's party by comparison. The creatures were vaguely humanoid. They had flat-topped heads which sloped down to their chest. There was no neck whatsoever. The bone structure of the skull was one with the bone structure of the chest. The flesh had a ghastly white pallor, as though they were used to living underground. . . . Their bodies were round and grotesque, like the bodies caricatured by cartoonists, but there was nothing humorous about the creatures. . . . From the shoulders hung human arms, but from the body, between shoulder and waist, branched an additional pair. This gave them fue appearance of a cross between a spider and a man; they were so uncanny, they seemed to have no niche in the scheme of things. They were garbed in dark green tunics, covered by leather harnesses, crossed at the backs, and fastened to belts from which hung two holsters. The legs which supported these ghastly, white-faced monstrosities were sturdy-they had to be, to support the weight of the grotesque round torsos above. The green uniform trousers ended in thick blue metal boots, and the watchers fancied they could almost hear the clang as fiends hurled themselves forward in pursuit of the fugitive. . . .

Always impulsive, Mike Grafton felt he must do some.-thing to prevent that obviously human figure from being dragged down by the pursuers. Even though he felt this might only be a projected shadow show, yet he drew with tremendous precision-for his life had many times depended on the speed with which he could draw his blaster-and as he fired some of the green fiends vanished as though they had never been. Then the whole panorama folded up on itself and vanished also. . . . A great jagged hole seemed to have shot itself into the sky. Through that hole the watchers got a glimpse of landscape, the like of which they had never seen before. There was a wide plain of pink something-it might have been sand; it might have been rock; it might have been a particularly viscous and turgid fluid. The only outstanding thing about it was its bright pink quality. Beyond, they could see brilliant clusters of stars and the infinitude of deep black space. . . . The stars were not the fantillar, friendly constellations that the watchers knew, but seemed cold in their strangooess. A tremendous vibration seemed to be shaking the pink plain, and as the watchers looked, the pink surface cracked in all directions, and great jagged points of rock thrust themselves upward, as though they were the daggers of some assassin, tearing the planet to pieces. . . . Yet this was not a planet which helped to make up their own solar system; there was something indescribably alien about the pink world and the constellations behind it. The jagged needles of rock lurched skyWards till, like an army of skyscrapers, they crossed what had been a smooth, untroubled surface. There was a terrific explosion, and a series of circular craters appeared on the cracked pink surface, as though some bombardment were seeking to rip the world to shreds and tatters. Again and again those crashing explosions rang and reverberated, until it seemed that the pock-marked surface could sustain no more craters. As suddenly as it had begun, the bombardment ended. They felt they had watched an age in a few sec-

onds. Even the star constellations had changed their patterns, as though they too had felt the change which time alone can impart to a universe. There was a flash, and whoo it had gone, it left a gleaming, metallic roadway behind it, along which a streant of beautiful and graceful cars sped on some mission. As they ,watched, the outline of that distant world grew hazy, until planet, road, rocks and craters had all merged as though they were being dissolved in a celestial melting pot.

The hole in the sky closed up as though intelligent hands were actively at work repairing it.

As the four men stood wondering what was to happen next, the previously solid footing on which they had been standing gave way beneath them. They felt as if they were sinking into a thick, gooey mass. The feeling was indescribably horrible. They felt that they were being sucked down into quicksands of unguessable depths, quicksands which were almost certain to destroy them. The air became thick and unbreathable, and away on the distant horizon strange changes were taking place. Something was coming toward them--something huge and fantastically horrible. It resembled a monstrous crab-three hundred feet long by a hundred feet high. Gleaming red eyes radiated an aura of terrifying evil, and had the travelers not been rooted to the spot by the suction of the quicksands, they would have been unable to move, by virtue of fear alone. The ovaloid monstrosity continued its deadly approach. Its method of locomotion was a series of perhaps twenty jointed legs. Surely no evolutionary process could have produced so foul and evil a monster. It was gathering speed as it ran, and the explorers wondered just how long it would be before the foul, clawlike extremities seized them and crushed the life from their entrapped bodies. . . .

It was only Bathurst's presence of mind which had enabled him to recline backwards against the entrapping substance and make any effectual progress against it The man from the past was very athletic and a powerful swimmer. and it was his cool head and skill in this athletic field which had enabled him to keep himself a little higher out of the cloying substance than his companions. Consequently, it was he alone who was able to reach his hand blasters as the monster bore down upon them. His companions were helplessly pinioned in the path of the beast, and Bathurst leveled the unfan1iliar weapons with a cool efficiency, and fired point blank at the looming gargantuan creature, which had paused and was regarding them with its foul red eyes. . . .

The effect of the hand blasters was completely and utterly devastating. The crab monster disintegrated in a shower of sparks and associated electrical discharges. There was nothing left but a horrible greenish-blue vapor and a rancid smell, that was almost the smell of evil itself; a stench of fetid decay that had within it something so amorphously horrible that it was almost enough to distort the human mind by its sheer intensity.

A wind arose from nowhere, it seemed; and the blue-green vapor with its foul acridity dispersed and dissipated before their eyes. Ertzmann and Mike Grafton were up to their necks in the putty-like substance that held them.

Their struggles were worse than useless. As he realized the plight of his companions, it occurred to Bathurst that despite the fact that they were taller and broader than he was, they were not quite so strong, and this was probably due to a regression in the human race. Five centuries of mechanized living had improved the stature of men, but it had weakened the actual tone and quality of their muscles. They were fine.-looking men, and yet there was some vital spark, some essential quality missing-a quality which he possessed.

Slowly at first, Bathurst began to struggle clear. It was not until he was almost out that another peculiar thought struck him. Why was it, he wondered, that the enonnous crab-like monster had not sunk in the quicksands? Before he could give any further thought to the problem, there was a hideous growling sound to his left. Lying back upon the mud, in the way that an experienced swimmer floats to rest his muscles, he saw that a creature of even greater horror than the crab was now approaching. It was every bit as big as the previous entity, though its shape was different. If anything, it resembled a huge and horrible caricature of humanity. It stood towering above them, well over two hundred feet in height, a mamive leathery-skinned thing, with a single eye and a great horn surmounting its head. Dark shaggy hair covered the lower half of its bi-pedal body, and it looked for all the world like a legendary Cyclops of antiquity. Even now it was stooping forward, the cavernous mouth open, revealing jagged fangs, each one as large as a pit.

Bathurst fired again, fired with the same deadly precision with which he had destroyed the crab monster. The humanoid caricature disintegrated in the same kind of cloud of evanescent vapor as had the crab monster before it. . . .

The heavens seemed to fi11 with distant thunder. Reverberations echoed and re-echoed across the darkening sky. A strange tingling sensation permeated every fibre of the young diplomat's body. Something was happening, something weird and uncanny. The outlines of the panorama around him became blurred and uncertain; it took on the impression of a phantasmagoria world with blurred, indistinct edges. The whole cosmos seemed to melt and flow together in a confused jumble of indistinguishable shapes and color. It looked like a three-dimensional Picasso, come to life. It was surrealism which had somehow found existence. Yet, in the very act of appearing to come to life, it was leaving life. The sense of unreality grew increasingly pronounced, arid Bathurst was acutely aware of a sensation of IWt belonging.

He stooped as low as possible over the cloying mud, and endeavored to support his drowning, asphyxiating comrades. The darkening sky lowered evilly above them and the whole cosmos dissolved in a series of violent tremors. Horrific ululations rent the air.

It was over as suddenly as it had begun. The whole realm of insanity faded into nothingness and was gone, as though it had never been. A new world began crystallizing around them. . . .

Chapter Ten
Rajak the Magnificent

"Incredible," exclaimed the resistance leader as he fought to recover his breath. The others looked at him expectantly, awaiting some sort of explanation. His dark, penetrating eyes regarded each of them solemnly.

"By a fantastic, yet thoroughly logical process," he began, "we have returned to our time. We are in the 24th century once more. And more wonderful still. we are in the one place where the resistance fighters have never been able to penetrate previously." They gazed at their surroundings with interest.

"We are in the courtyard of Rajak's own personal stronghold," said the resistance leader dramatically.

"But how. . ." began Bathurst, in bewilderment.

"We must not waste time in talk," replied the tall stranger, "but I will tell you all that it is necessary to know. Come. We must advance as we talk, for this is an opportunity that must not be l06t." They began moving purposefully forward, keeping to the shadows of the walls that towered forbiddingly above them.

"When we found ourselves in the strange dimension, it was obvious that the quicksands which engulfed us, and the monsters which attacked us, had no real basis in physical or material existence. There must have been something in that world, something completely alien and inexplicable, which gave our thoughts image-existence."

"You mean those monsters and that quicksand were only in our minds?" asked Grafton.

The resistance leader nodded.

"But none of us were thinking about crab monsters or Cyclops," objected Paul Ertzmann.

"Not consciously," agreed the resistanCe leader "But in the primitive depths of the mind, no man can say what foul monsters live and move and have their being."

"I think I begin to follow you," put in Grafton pen. sively.

"There are evil desires in the id more ghastly than anything that walked the earth in the age of reptiles," went on the resistance leader quietly. "The quicksands themselves, and the ghastly monstrosities, were the personified images of the evil in our own subconscious minds, evil that was personified because of something in the constitution of the non-scientific forces ruling that weird dimension across the probability tracks." He paused, and the others looked at him expectantly. "When you fired at the creatures, you expected them to be destroyed; therefore they were destroyed. If you had not had faith in the power blaster, it could not have worked."

"But why did it all disappear?" asked Ertzmann. "Why are we back here?"

"Because of the safety factor in the time machine and the dimensional transverser," answered the liberationist. "The safety factor was not taken into consideration, and the machines were destroyed by the fission of the power source. It had not occurred to me before, and yet it should have been relatively simple, if I had only followed the process in anticipation to its logical conclusion. We were only

able to reach the other dimension because of the vibrations of the machine. Therefore, once the machine broke down, our vibrations would return to normal, and we would find ourselves back in our own probabiJitytrack, the world that is to us the world of reality."

"Why did we find ourselves inside Rajak's stronghold?" asked Grafton, as though the fact were still too good to be true.

"That's tile one thing I'm not quite certain about myself," replied the resistance leader slowly. "However, I think that the explanation is to be found in that weird element in the other world, the world across the tracks; the element that turned thoughts into realistic images. It was something that aided thought to become reality. All of us, with the possible exception of our friend from the past, were determined to destroy Rajak and his foul dictatorship; therefore those thoughts, coupled with the strange power of that alien realm, have landed us here where the alien world dissolved."

"You can include me in your opinions of dictatorships," broke in the 19th century diplomat. "No English gentleman of any era would approve of .Rajak or his method of government."

"Talk of angels," said Ertzmann, and pointed with a hand that trembled excitedly. The tall shaven-headed figure of Rajak the Magnificent was approaching their hiding place, The tall, gaunt, brutal-featured <lictator was accompanied by a well-armed escort. There was not a second to lose. The ~tance men reached for their blasters and waited in breathless anticipation.

Rajak and his entourage rounded the comer.

"Now," shouted the liberationist leader, and the air was filled with the acrid stench of releasing energy bolts, screams of anger and pain, cries of fury and agony, blended with the roar of the small arms.

"Death," screamed the fanatical resistance leader. "Death to the dictator."

The comer of the castle became a holocaust of smoke and destruction. Friend and foe were locked together in a death struggle of terrible ferocity, until only one living man staggered out toward the exit. . . . The reign of Rajak the magnificent was over, and Mike Graftoo was the new leader of the freedom fighters. His great heart was sad at the loss of three gallant comrades, including the man from the past, the courageous English gentleman, lost to his own time, and yet a noble hero in the future. He had been unable to avert the dictatorship of Napoleon, but he had been instrumental in terminating a far more evil reign.

The new era that followed Rajak's death was nc*. without its struggles, its bloodshed and its bitterness, but it was a vast improvement on the tyranny that had gone before. . . .