The Sword and the Atopen

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The conversion of light into electricity by spectrum is an interesting possibility. The idea of using foreign proteins on the human system to repel enemies, is also interesting. Do you get it? We didn't either until we read the story. Read the yarn and you'll get it too.

Although Divine intervention in human affairs passed into the realm of the mythical toward the end of the twentieth or at the dawn of the twenty-first century, one is almost inclined to give thanks to the Supernatural for the marvelous efficacy of Dr. Rutledge's discovery and stratagem which so recently freed us from the Oriental menace.

A year ago only the Mississippi and the most severe winter in many generations was staying the complete invasion of the United States. In an unbelievably secret manner our enemies had for five decades been developing a scientific offensive against which our laboratories could not in a short interval protect us. The vast and fundamental discoveries made during the past hundred years by the Orientals (and now the heritage of the whole world) can only be compared to the Industrial Revolution of the nineteenth century. Without warning, through the discovery of the cause of gravitation, the Mongols practically lifted their Nangsi metal transports (which were built of a material combining the lightness of aluminum with the strength and hardness of steel) out of the sea; and in five days skimmed across the surface of the Pacific. The whole West lay at their mercy, though we know with what gallantry their forces were held in check from summer until winter, when the enemy had reached the Mississippi.

Of course, one of the surprises which the Orientals had not counted on was the providential inspiration of Dr. Mernick of the Hopkins, who devised the now famous Mernickian transformer by which light from the sun, received through a series of grates, is stepped from the wavelengths of light into those of electricity. This gave us a sudden limitless source of power on which the enemy had not counted. It virtually lifted our forces off the ground and made them almost the equal of an enemy who had succeeded in neutralizing the gravitational drag.

The final and most disastrous card our subtle enemies played was dealt on the prairies in Nebraska. They themselves were afraid of their weapon and wanted plenty of space to try it in. I was personally present at its debut, being at the time in General Sanford's stationary observing helicopter which, through the agency of the power supplied by a Mernickian transformer, hung motionless as a bee fifteen thousand feet in the air. Only the treble hum of the air turbine could be heard faintly through the transparent walls of the observatory constructed of the

annealed clersite, which has taken the place of the unsatisfactory glass used by our forefathers. The toughness and tensile strength of this element, comparable to the best chrome steels, combined with its crystal clarity, made an ideal warfare observation unit. It was practically invisible and likewise quite bullet proof. The great strength of the material in our machine, and the rapidity with which we could rise and fall, indeed made us difficult prey. In addition to this we were hanging behind the great electric field that the Radio Defensive Corps had spread like a screen before our forces, greatly to the embarrassment of the enemy in the use of his anti-gravitational machines.

As we stood at our posts, we saw the great degravitated bombs hurtled against our lines suddenly come into contact with the fan-like electric field, somersault a few times and fall. At the edge of the electric screen the ground was excavated to an enormous depth by the bursting of these intercepted degravitated bombs, most of which had been projected from stationary batteries three or four hundred miles behind the enemy lines. The local batteries bombarding with the old fashioned Sangsi steel shell were still effective. On the whole, however, from our own observation of the local front and from the television reports we were constantly receiving, we judged that the American and Allied Caucasian forces were more than holding their own.

General Sanford, the Chief of the Signal Corps, who stood by my side, grasped my arm, and pointed to the west. Everyone crowded to our side in excitement. Before we could gasp our amazement, the incandescent spot which our Chief had mutely indicated on the distant horizon, zoomed in a blazing arc across our zenith and plunged into the terrain of the English forces which were occupying the little town of Ogallala about six miles to our south. We held our breath. What next?

Only a faint throbbing seemed to pulse in the air above the spot where the missile sank. I was about to pronounce the diagnosis of "a dud," when someone cried, "My God, General, they've turned hell loose this time!" The whole atmosphere for a quarter of a mile radius about the fatal bomb quivered as over a heated griddle. Even as we remarked this, the area began to glow cherry red. A deafening thunder assaulted our ears when to our horror the earth on which had stood the now burning town of Ogallala, rose a gigantic incandescent ball and shot like a meteor into the heavens. Our car was a feather tossed in the ensuing hurricane, but even while we bobbed back and forth there was an ear-splitting explosion as the land that was once an American village burst into a blinding blue flare of hydrogen flame twenty-five miles above us.

The swaying of the car gradually subsided in the tortured atmosphere, and a gentle rain began to fall. Ogallala had been chemically "stepped down" into the most primitive element, combined with the oxygen above and was condensing back to earth again as a few globules of H^2O. That day was a sort of crisis; the enemy had discovered and turned upon us the power of atomic degeneration! And I, as assistant chief chemist of the American Army, felt my heart become heavy within me as I soared back to the Central Laboratory.

Even as I watched the advent of the electronic detonator two days previously the inspiration had come to me. What had happened to the doomed Nebraskan town had been so obvious. Through some unexplained agency discovered by the Orientals, the electronic restraint of the normally stable elements had been removed. In a brief time Ogallala had degenerated through all the steps of the periodic table until it became hydrogen, at which point, owing to the terrific air current and incandescent heat, it had recombined with the oxygen of the air as simple molecules of water.

I thought I had a clue as to how it had been accomplished. The Central Chemical Laboratory was the focus of feverish excitement. The air was tense with the expectancy of tremendous things. Every scientist there felt that we were on the verge of discovering the principle of the Mongols' new weapon. "Give us time!" "Time" was the plea we sent daily to the Defense Headquarters. "Only six weeks more, only a month," we begged, "and then we'll make a boomerang out of the enemy's invention." Anderson, Mahaffey, Dr. Spritz—all the great physicists and chemists of the present age—labored at my side endeavoring to trick Nature into giving us that saving secret.

The television 'phone called my name. I immediately hurried to the booth and saw General Loomis, the Commander-in-Chief of the American and Caucasian Armies, standing in his helicopter headquarters. He seemed haggard and worn. "How much longer, Johnson?" he asked. "The enemy has pretty well eaten out the country and with the advent of winter and lack of food, are bending all their efforts to crush us. Besides, we cannot tell just how long it will be before they begin turning out their new bomb in other than experimental quantities. Two weeks, I should estimate, is about all the longer I can hold them."

"If that is the case, General Loomis," I replied, "we may as well give up. Two months will see us ready. But two weeks—!"

I felt a hand laid on my shoulder. Dr. Rutledge, my science chief, had stepped into the booth behind me and overheard the conversation.

"General Loomis," Dr. Rutledge spoke, looking for all the world like a patriarch of olden times, "until five minutes ago what Johnson has just said would have sealed our fate. But now, I think, I believe, we have one more card to play. I have only this moment completed a series of reactions which have resulted (as I calculated they should) in the production of a new protein, similar in appearance to flour. It should, although of course I have not yet had time to verify this statement, be a practical substitute for flour; and indeed, it is my belief that it will easily be mistaken for that substance. Its particles are laminated similar to starch, of an identical size, and the nutritive factor should be greater than that of bread. It is, in short, a new, a foreign protein never before found in this world of men!"

"Very interesting, I am sure," replied General Loomis, with a trace of bitterness and sarcasm in his voice. "Your noble efforts will result in feeding the yellow devils an excellent artificial fare. They will be grateful, I know!"

"Exactly my object, general," Dr. Rutledge replied. He continued impressively: "You have until now relied upon me largely in the waging of this war to save the white race from the menace of the yellow. Since all is lost at any rate, grant me one last effort in behalf of my country. At all costs, Loomis, hold your present lines for two days, preparing to suddenly retire to the west bank of the Mississippi. I leave it to your strategy to make a sudden retreat (which should extend over a period of at least ten days) appear as if enforced by the enemy themselves."

"There should be no difficulty in that direction," General Loomis interpolated, smiling wryly on the television screen.

"Once on the west bank," went on Dr. Rutledge seriously, not noticing the interjection, "make a stand for a day or two and then suddenly retreat across the river to the east bank as if again forced to do so. Now, General, two days from this time—before your retreat begins—I shall, I trust, have your armies all along the lines supplied with my new artificial, foreign protein flour. This you will leave in the enemy's hands, which, you have intimated, will be much to their delight. You will do the same at the stand which for a while you held on the west bank. But, mind you, let none of your men use any of this perfectly harmless food. I will personally see to it that you will receive it in such containers that none will come in contact with your persons."

"Doctor," Loomis said after staring at the old scientist some time in astonishment, "except for years of personal acquaintance, I would say that you were suffering a mental shock. Knowing you as I do, however, I pray to God you're making no mistake this time. I'll do as you wish." His figure faded from the screen.

The next fortnight was one of black despair. I myself doubted on occasions whether or not the old doctor was mentally accountable—even I who had trusted him so long. General Loomis and his staff called up daily to inquire if Dr. Rutledge had any change of plans. As for the army and the populace, they were one in calling on the President to make terms with the enemy. The allies truly were on the point of collapse. All that kept up what morale was left in the chemical division was the unrelenting demands made on us by Dr. Rutledge to continue to ferret out the electronic detonator. Until then, he had scarcely bothered with our work; now he would hear of nothing else. "Today's the Day!" was the slogan he had displayed above every bench.

Finally the fatal day arrived. The retreat across the Mississippi was consummated. This time it was not feigned. The Mongols were hungry, and their appetites were whetted for more flour such as had sustained them for the past twelve days. Moreover, new electronic bombs were beginning to be supplied them.

My name leapt at me across the room: I was being called by that almost human instrument, the television 'phone. Both my superior and I hurried to the cabinet. It was, as we had guessed, Loomis. "It's all up," he said wretchedly. "The fresh supply of atomic degenerating bombs, for which the enemy has been holding back, has now arrived. They matched and neutralized our electric field defense screen just an hour ago, leaving us at their mercy. You've had your chance, Doctor, and failed. I advise you both to make your way north and wait until these fiends forget the inconvenience you both have caused them. As for me, I'm leaving this instant to offer unconditional surrender in the name of all the allies."

It was about ten o'clock in the morning, just after he had transported all his forces hurriedly to the east bank, and as the Mongols were occupying the old entrenchments on the west, that General Loomis closed his conversation with the Chemical Laboratory. He turned to an aerial officer who stood at attention beside him. "Major Maniu," he said, "trail a white banner of truce on your plane and tell the enemy I will parley with them. Tell them that we will serve rations presently to our men who have worked all night without food or rest, and that if it is agreeable to

them, both sides shall simultaneously discontinue activity at one o'clock. At that time I shall cross the river to offer them our terms of surrender."

The officer saluted and hastened to his near-by plane. General Loomis ascended into his helicopter to confer with his staff to draw up in documentary form the surrender, and give the necessary orders relative to lowering of fire that afternoon. He also spoke to the President and to the crowd outside the White House, and then began nervously waiting the crucial moment. About twelve-thirty, however, a remarkable fact forced itself on his attention. Whereas the allied batteries continued to thunder away, the fire from the Orientals became irregular and sporadic. "Celebrating their victory beforehand," the French commander remarked bitterly to his chief. Loomis nodded. "And getting careless, too," another of the Staff added as he saw one of the enemy's detonator bombs disintegrate three or four hundred acres of a Mongolian base encampment fifty miles to the northwest and shoot it a monstrous blazing rocket twenty or thirty miles into the midday sky.

By twelve forty-five the enemy's barrage had fallen completely all along the line. Our battery nevertheless continued until the set time but elicited no answer. Exactly at one General Loomis with two aides stepped into his air-car. He was a picture of grief and despair. Three minutes late the party landed forty miles across the river before the headquarters and armored dining hall of the Oriental General Staff.

Loomis and his officers stepped out of their car and looked about. No one was in sight. Not even a sentry guarded the mess room door. The General paced back and forth a few minutes in indecision.

"Evidently they mean to make us feel our defeat," he said. "They apparently do not even think it further necessary to observe rudimentary diplomatic courtesy. Come on, boys, beggars can't be choosers, as the antique saying goes." He led the way to the dining hall through a window of which a light was seen shining.

"Perhaps if we find his xanthic highness after a good meal he will be inclined to be a bit more lenient," Loomis whispered with a forced laugh, trying to cheer his glum companions.

He opened the unguarded door of the hall. An instant later he reeled back horror-stricken. Instead of a feasting gathering of officers attached to the Mongolian Staff he saw before a feast of men contorted in grotesque shapes by some violent death. Many lay beside the table, some on it, their faces blotched with great, unsightly wheals, their chests bloated until they seemed about to burst. Only one poor wretch had any life left

in him—he lay exhausted on the floor with great streams of frothy mucous pouring from his nose and throat.

A possibility dawned in Loomis' mind. He dashed away to search the other mess tents, shouting to his aides to follow suit. It was as he guessed: they had landed in a camp of dead and dying; stricken by some mysterious power. Hope suddenly surged back into his soul. He felt dizzy and faint. Could a similar fate have caused the unaccountable silence of the enemy's cannonade? Even as the thought came to him, he knew it must be so. His marvelous old friend, Dr. Rutledge, had risen to the need of the world and crushed the yellow menace.

Such, truly, had been the case. In a single hour, through the agency of a harmless food, the subtle scientist had crushed a nation. The principle involved had been discovered nearly two centuries before, when it was well-known that if an animal were injected with a small quantity of a protein foreign to his body, a subsequent dose a hundred million times as weak would cause its immediate and violent death. Even the quantity that might be flying in the atmosphere and become dissolved in the fluids of the nose or eyes would act as the most virulent of known poisons. Through the ages, however, the human race had more or less come in contact with all the proteins in their world and hence rarely became highly sensitized to any protein occurring in nature. The terrible toxicity of a protein which had never before occurred in nature and to whose power mankind had never been even partially desensitized had up to the time of Dr. Rutledge only entered the minds of a few scientists. His strategy was the working out of a new maxim: Nature is terrible, but man makes it more so.

Foreign protein sensitization or anaphylaxis was the basis of Dr. Rutledge's coup. The laws governing this reaction had been more or less worked out by a group of scientists in the twentieth century. They had demonstrated that if a guinea-pig or rabbit were injected with the blood serum of another species, a subsequent dose of an infinitely small quantity of this substance would cause convulsions, collapse and rapid death. Inasmuch as there were many proteins in the atmosphere at that time due to the unrestrained pollination of plants of every description, it was not surprising that they found as many as ten per cent of the white race afflicted with a slight pollen sensitivity which showed up seasonally by causing spasms of the smooth muscle of the respiratory system, a disease popularly called "hay-fever."

Since, however, the proteins of the world had always been present, the human race had, by constantly coming into contact with them, become more or less immunized to the majority. Only occasionally a case of violent sensitivity came to light and was recognized as such. Two or three cases there had been which the old scientist discovered while searching the archives of ancient medicine and these gave him the clew he needed.

One was the case of a little girl who had somehow or other become sensitized to the protein of wasp toxin and who suffered almost immediate death from anaphylactic "choc" as the result of being stung by that insect. A second instance concerned a woman who went into violent asthmatic paroxysms if a mouse entered the room where she was, and whose skin broke out into large wheals if touched with mouse hair. Finally, and most outstanding in his mind, was the case of a child who was thought to be sensitive to the fish protein in glue and who died almost immediately when the physician testing her had brought a small quantity of the dry protein into contact with a scratch on her arm.

These had, however, been rare cases, but they pointed out the method. It had already been proved over and over again that animals could be sensitized experimentally by treating them with foreign proteins, provided that after the initial dose they did not come into contact with the same protein until after a lapse of about two weeks. If they happened to do so the first injection or treatment was frequently neutralized and failed to give the desired sensitivity.

With the discovery of a new, highly pure and synthetic protein by Dr. Rutledge the situation with the enemy could be put on a close parallel with the laboratory condition. The enemy could be fed the protein when they were in need of food and had little else, but since it was synthetic, they could not get a second supply until the Doctor was able to put the fatal meal in their way.

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John Michael Sharkey

The Dope on Mars

Somebody had to get the human angle on this trip ... but what was humane about sending me?

Lowell Howard Morrow

Omega, the Man

Excerpt: "The silver airship cut swiftly through the hot thin air. The noonday sun blazed down upon it and the desert world below. All about was the solemn silence of death. No living thing appeared either in the air or on the drab, gray earth. Only the aircraft itself displayed any signs of life. The sky, blue as indigo, held not the shadow of a cloud, and on the horizon the mountains notched into it like the teeth of a giant saw."

Lowell Howard Morrow

Islands in the Air

The slavery of weight, which chains us to this planet and to the ground, is far more serious than we appreciate, simply because we have always been "earthbound". But, sooner or later, it will be possible to bring about such conditions as our author describes so vividly in this excellent short story. When it does, aviation will be helped tremendously, and indeed the conditions of our entire world will be revolutionized literally.

Jack London

Hearts of Three

Originally intended as a film scenario, this plot is an improbably adventure story that can't help but bring to mind the "Lost Ark" films of decades later!

Jack London

Michael, Brother of Jerry

This story of brutality toward animals inspired a movement known as the Jack London Clubs, which were devoted to the cause of animal welfare and humane treatment.

Neil Ronald Jones

The Jameson Satellite

The mammoths of the ancient world have been wonderfully preserved in the ice of Siberia. The cold, only a few miles out in space, will be far more intense than in the polar regions and its power of

preserving the dead body would most probably be correspondingly increased. When the hero-scientist of this story knew he must die, he conceived a brilliant idea for the preservation of his body, the result of which even exceeded his expectations. What, how, and why are cleverly told here.
Howard Browne

Hard Guy
There will be fine, glittering, streamlined automobiles in 2000 A.D. Possibly they will run themselves while the driver sits back with an old-fashioned in his hands. Perhaps they will carry folks down the highways at ninety miles an hour in perfect safety. But picking up a hitch-hiker will still be as dangerous as it is today.
David Henry Keller

The Rat Racket
With Dr. Keller's genius for hitting at vital spots every time, he now gives us a brand new idea and an ingenious solution. We hope no racketeers read this story. They might, as a result, cause the police some trouble. Fortunately, however, the racket has a flaw.
Nick Name

Password Incorrect
25 short, sometimes funny and sometimes mean stories ideal to rediscover the joy of reading a book as shiny and beautiful as a brand new cell phone.
A look from a distance at the absurdity of our present day lives: fights with the less and less comprehensible equipment, pursuit of the latest technological news, pitfalls of our modern lifestyle, useless inventions and issues racing in all directions at a breakneck speed.
A lot of entertainment and a little food for thought. Just perfect for the moment when you're finally bored with exploring the alarm settings on your new iPhone.
Harry Stephen Keeler

John Jones's Dollar
Take a board with 64 squares on it. Put a grain of wheat on the first square--two on the second--four on the third. Keep doubling in this manner and you will find there isn't enough wheat in the world to fill the sixty-fourth square. It can be the same with compound interest.