## FUTILITY By Captain S.P.Meek, U.S.A.

## Author of: "The Murgatroyd Experiment"



ENNETH, there is a legal-looking letter here for you," said Rose as I entered the bungalow.

"I knew that we had a States mail today," I replied as I took the letter from her and sank into an easy chair. "This is probably a business letter delivered here by mistake."

"It's marked 'personal.' " she objected.

I tore open the envelope and glanced at the letter.

"Great Scott" I exclaimed as I sat bolt upright.

Rose hastened to my side and read the letter over my shoulder. It contained the news that Thomas Wallace of New York had died on December 11th as a result of injuries sustained in an automobile accident. It also stated that his will had been examined and that I had been named sole heir to his estate.

"Sole heir !" exclaimed Rose. "Was he worth much?" "About twenty millions," I replied.

Rose gasped at the immensity of the sum.

"Heavens!" she exclaimed. "We're rich! Who was he, Kenneth?"

"He was a living example of the futility of human wisdom," I said slowly. "He was a man who was cursed with too much knowledge and one who fought unavailingly against fate and waged a battle that he knew from the start was a losing one."

Nine months before when the *Berengaria* docked at New York, I was one of the first men down the gangplank. I had not set foot on the soil of my native

land for nearly fourteen years, and I was anxious to see how the atmosphere of the busiest city in the world would affect nerves attuned for nearly a decade and a half to Peruvian mining camps. On the dock I looked eagerly around for the friend who had promised to meet me. I saw nothing that resembled the trim athletic figure I was expecting and I started for from a man, but Tom Wallace had aged forty years in that length of time. It was not the droop of his shoulders or the lines in his face that impressed me; it was the expression that he wore. His was the face of a man who had acquired all knowledge and had tasted all pleasure and had found that wisdom was vanity and that the taste of pleasure was the taste of wormwood and ashes. His face was lined with sorrow and grief, but I have seen faces so marked that still radiated life and hope and faith in the future. I could not place his expression for a moment and then it dawned on me where I had seen a similar one. It was the same expression that I had seen shortly before his execution on the face of a criminal condemned to die. It was a face devoid of hope.

With an effort I dissembled my surprise and greeted him heartily. He shook my hand in the same tired listless way, in which he had spoken and asked about my luggage. Evidently he was a man of some prominence, for a word from him was enough to secure a Customs Inspector promptly and to pass me through in short order. He led the way to a luxurious town car which waited for us and we rolled off toward his home.

"You haven't changed a great deal, Ken," he repeated.

I hesitated for a moment over my reply.

"You haven't changed as much as you might have yourself," I said, rather tactfully as I thought.

"You used to be more

truthful than that," he re-

plied. "You might as well

get used to saying what you

think to me. It won't hurt

my feelings at all. I'm be-

yond that sort of thing.

How has the world treated

you since I saw you last?"

a good position and have

done some good work. I

am up here now to act as

adviser on a projected con-

"I can't complain. I have

WE read perpetually of plotting curves. For instance, by obtaining the necessary data and information, the time of future tides can be predicted with exactitude. Certain machines are now in use that can solve all kinds of seemingly unsolvable mathematical problems in a very short space of time. It seems to us quite possible that some day some scientist and mathematician might attain the apparently "impossible" and learn to plot curves for human beings which will result in true prophecies. How desirable such an invention might be is another matter. Much philosophizing might be done on that score. Certainly the author furnishes food for thought.

the far end of the customs shed, when a hand fell on my shoulder and a tired listless voice sounded in my ear.

"You haven't changed a great deal, Ken," it said.

I whirled around, my hand outstretched to greet the owner of the welcoming voice, but I paused in the act of greeting him. The alert vigorous figure that I had expected was not there and it took an effort for me to recognize my friend in the carelessly dressed individual who stood before me. It was to be expected that fourteen years would take some of the bloom of youth solidation of our properties with those owned by our leading competitor. If the deal goes through, we will almost control the copper situation in Peru. How have you made out?"

"Ill,-or well, depending on your viewpoint. I consider it ill."

"I heard in a roundabout way that you had made money."

"Oh-money." He waved his hand contemptuously as if the thought of mere money made him disgusted. "Yes, I have made money-more money than I know



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what to do with. I have been very successful that way." "Is your health good?"

"I haven't been sick a day in the last four years."

"Has your work gone satisfactorily?"

"If you refer to the successful completion of the problem I have spent my life on, it has gone very satisfactorily. I have completed it."

"If you have made good in your work and have good health and have incidentally made more money than you know what to do with, what in Sam Hill is the matter with you?" I demanded warmly.

"I have no future, no hope, nothing to look forward to," he answered tonelessly.

"No future, my aunt!" I exclaimed. "Why Tom, you are still young and have many years to look forward to. Think what you can do!"

"I have just eight months and four days," he said drily.

"I thought you told me that your health was good?" I asked in surprise.

"It is, as good as any one could ask for."

"Yet you tell me that you have less than a year to live," I remonstrated. "That is hot air, if I may speak frankly. Even the best doctors, and of course you have the best, are sometimes mistaken."

"I have no doctor. I will die in an automobile accident."

I looked at him sharply. There were no signs of insanity visible to my unpractised eye, but his words made me doubtful. I had read of cases of monomania of this type. Indeed I had encountered a case in a native in Peru, and I had doubts of Wallace's sanity.

"I'm not insane," he said answering my unspoken question. "I simply know. Do you remember Bob Jerningham?"

I nodded.

"He is the man who is responsible for my knowledge," he said. "However, we won't talk of it now. When we get him I'll tell you about it. I am really very glad to see you. In fact, I think that I would have sent for you if your letter hadn't come telling me that you were on your way. Sit quietly now and recall all that you can about Bob. It will save me some time and trouble in explaining if you can recollect him fairly well."

I respected his wishes and sat in silence for the rest of the drive, trying to recall what I could about Bob Jerningham.

**T**OM WALLACE and I had been friends after a fashion in college. We were fraternity brothers and had lived in the same house for several years and that accounted for our semi-intimacy, which is all that it really amounted to. He had a flair for mathematics, especially of the abstruse and philosophical type, while my energies had been devoted to the more concrete and practical studies of the course in mining engineering that I was pursuing. My only really close association with Tom had come in my senior year. He had worshipped at the shrine of a local goddess who heeded only the offerings of athletes and he had come to me asking for aid in developing athletic ability.

His frame was too light to offer much hope for success in football, and besides, I was captain of the track team that year, so I persuaded him to come out for distance running. He had a little latent ability and a dogged perseverance and a willingness to heed coaching, all of which enabled me to make a fair two-miler out of him. He won his letter just before my graduation and he swore eternal gratitude. His being, in a way, a protégé of mine probably accounted for the desultory correspondence we had carried on ever since. Our letters were never long but at least each knew where the other was, and when I came to return to the United States, he was the only one of my old friends whom I could locate. Fourteen years in South America will get a man pretty well out of touch with his friends in the States.

I could recall Bob Jerningham faintly, but little more than the name and a few facts remained in my memory. Bob had been a graduate student during three of my four years in college and he had not lived at the fraternity house. He had some kind of a research fellowship in mathematics and had spent his time mooning around the mathematical library and the astronomical observatory, and had only shown up at the house for supper about once a month. When he did so, his head was so far in the clouds that he showed little or no interest in our mundane affairs. I remembered that he and Tom had been rather close friends, their intimacy being no doubt due to their kindred interest in mathematics, although Jerningham, as I remembered him, went in for the practical end a little more than Wallace did.

The ride ended before an apartment building on Park Avenue and I followed Tom through the foyer and up to his rooms. I gasped a little at the magnificence of the furnishings as I entered. It was evident that he had indeed made "more money than he knew what to do with."

"Now I am ready to talk," he said as the valet took our hats and coats and disappeared with them. "What do you remember about Jerningham?"

I told him the little that I had managed to recall and he sat in silence for a few moments.

"That little won't help much," he said. "I'll have to tell you the whole thing. However, there's no hurry and I presume you would like to tell me about your mine. Fire away, I have over eight months and you don't look as if you were to die soon."

"You are getting on my nerves, Tom Wallace," I said rather sharply. "You talk as if you knew just when you were to die and how. You *don't* know any such thing and it's rather ridiculous to let your mind brood on any such obsession."

He smiled faintly.

"I will die at exactly seven minutes, four and twofifths seconds after eleven o'clock on the morning of December 11th, 1928, in a private room in the Bellevue Hospital," he said. "I will be injured in an automobile crash at twenty-two minutes, fourteen and onefifth seconds after nine o'clock the evening before. Both legs will be broken and my spine will be injured so badly that my recovery will be patently impossible. I will not lose consciousness, but will suffer the agonies of the damned from the time of the accident until death literally comes to my relief."

I snorted in simulated disgust, but inwardly I was shaken. Such positiveness as to the time and place of the accident and such a wealth of detail as to the injuries was uncanny. Furthermore, there was a ring of absolute conviction in his voice.

"Have you become an oracle of Delphi, able to foretell the future?" I asked with attempted sarcasm.

"I can foretell the future," he said simply.

"How do you do it?" I asked. This time my sarcasm was real. "Do you use crystal gazing, palmistry or playing cards? Or do you use the simpler method of tea-leaves in a cup?"

He smiled again.

"I am neither crazy nor the victim of superstition," he replied. "I hold no more faith in magic than you do, but at the same time, I tell you calmly and dispassionately, that I can foretell the future."

I laughed. It was an impolite thing to do, but I couldn't help it. The whole thing was too absurd. My host, however, took no offense.

"Your laughter is simply an exhibition of ignorance," he said tonelessly. "The whole thing is purely a matter of applied mathematics. Jerningham and I worked it out, or rather, he worked it out with a little aid from me on some of the principles of pure mathematics. How did you think that I made my money?"

I professed my ignorance of his modus operandi and he went on.

"I made it in the stock market. Since I was able to predict with mathematical accuracy the movements of any stock, all I needed was a shoestring to start on. I ran my original capital of less than a thousand dollars up to twenty millions with only one single loss. That was caused by my carelessness in making a computation."

**I** WAS properly impressed by his statement. No matter how he did it, any man who was able to perform the feat that he had named was entitled to respect.

"Can you predict other things?" I asked.

"I can predict anything for which I have, or can gather, the necessary data," he replied.

"Can you tell me when I am to die?" I asked.

He started as though I had struck him.

"I can," he answered, "but I am not cruel enough to do so, unless I am sure that you realize just what you are asking."

"Why cruel?" I asked. "I really would like to know. It wouldn't worry me at all to have that information. We all have to die some time and I think that it would be an advantage to know just when."

"That is the folly of ignorance," he said bitterly. "I don't blame you though. I thought the same thing myself once. Stop to consider what you are asking for a moment. I will admit that we know that we all have to die some time, but we don't realize it. Each person looks forward with equanimity to the time when his friends or even his loved ones will die, but he can't realize the fact of his own rapidly approaching death. Death, to each of us, seems a thing apart from ourselves. We don't say so, even in our own minds, but each in his innermost consciousness fancies himself immortal and doesn't realize that the death, which he knows is inevitable for others, is also inevitable for himself. It is this thought, or rather this internal conviction of immortality that keeps us going. Think now, if you knew that you were to die in nine days, what interest would you have in life? What could you do in nine days?"

"I don't expect to die in nine days," I replied.

"You prove my point," he went on. "Thousands of people are going to die in the next nine days; why shouldn't you be one of them? There is no reason why you shouldn't, yet you refuse to even consider the possibility. Your answer is the same that would be given by every one of the thousands who are going to die, even those who are on the bed of a fatal sickness."

"If I had your ability to foretell the future, I'd live forever," I retorted. "For instance, you are going to die in Bellevue Hospital the morning of December 11th. If I were in your shoes, instead of waiting here like a sheep for the slaughter, I'd be in China on December 10th."

"I don't say that I shall die in Bellevue Hospital if I were there," he said, "I said that I shall die there. I have checked my figures and calculations a hundred times and there is no error in them. It is the truth and there is no way to evade fate, as Jerningham found out."

"The whole proposition is a palpable absurdity," I exclaimed. "A prediction of the future can be, at best, only a shrewd guess. An accurate prediction such as you pretend to have made is an impossibility."

"It is impossible for you to take a white rabbit out of a silk hat," he answered, "but any third-rate magician can do it. It is impossible to hear music played a thousand miles away when there is no material connection, yet every schoolboy with his home-made radio set accomplishes the feat daily. The discovery that Bob and I made is merely a slight advance, a very slight advance, over commonplace everyday mathematical and mechanical knowledge, and is a discovery that may be duplicated by any man with Jerningham's brain. If no such man arises, the problem will be solved by a series of minute steps, slowly and painstakingly made, by men of less mentality. The development may take several hundred years, but it will come sooner or later. Two of the important steps in the process have already been made and are in daily use. However, I expect that I had better go back to the beginning and trace the whole development for you."

He leaned back and lighted a cigar and studied the smoke thoughtfully.

"During your last year in college, Bob Jerningham and I were pretty close friends," he began, "but it was not until the next year that we became really intimate. I was doing some rather advanced work on transcendental functions, and that brought us into contact, for some of his work tied in with mine rather closely. The longer and more intimately I knew him, the more I appreciated the quality of his mind. He was easily the most brilliant man of this generation. Einstein is a schoolboy compared to what Jerningham was. In addition to his immense mathematical ability, he had a practical ability in a mechanical line, that was little short of genius.

"We became more intimate as the year wore on and when I graduated, he insisted that I stay at the University for at least two more years and do research work in mathematics in some problems in pure mathematics that he wanted worked out. I had about exhausted my funds, but Jerningham seemed to have plenty of money and he offered to stake me to all expenses and pay me a pretty good salary if I would work on his problems. He was good enough to say that he thought that my ability would make me worth what it cost him. In short, I stayed.

"I didn't learn a great deal about the particular problem that he was working on, but some of the things he gave me to work out were cautions. He would bring in a mass of data that he wanted collated and catalogued and curves plotted and calculated from, usually in polar coordinates, and would leave it to me to wrestle with. Sometimes it would take me three months to get the curve that he wanted. When I had it completed, he would check it over in a few minutes and would sometimes put his finger on an error that would require a month of careful checking and recalculating to rectify.

"I put in two years at this sort of mathematical hack work before he saw fit to confide to me the object of his investigations. It was nothing less than an instrument that would enable him to calculate and predict future events."

"Such an idea would have been enough to show me that he was as crazy as a coot," I interrupted.

"Yes?" said Wallace drily. "Well, it didn't show me any such a thing. It showed me merely the greatness and genius of the man. Why are you so sure that future events cannot be calculated?"

"Principally because it has never been done."

"It has been done a great many times. Have you never heard of the predicting of eclipses?"

"Eclipses are simple to predict," I retorted. "All that is necessary is to calculate the movements of certain bodies that follow definite and well-known laws. Besides they aren't done by a machine."

"E VERYTHING follows definite laws although many of them are not well-known," he replied, "and the only reason why eclipses are not predicted by machine is because there are so few of them that it would be uneconomical to make a robot to do the work. As far as mechanical calculating is concerned, you are, of course, perfectly familiar with adding machines and other forms of mechanical calculators. Why, even as long ago as when you were in college, a vastly more complicated machine than an eclipse predictor would be, was known and in common use. I refer to the harmonic analyzer."

"That is entirely different," I protested. "The harmonic analyzer doesn't predict anything, it merely takes a complex curve and breaks it up into a lot of simple harmonic curves, which, combined together, will make the original curve which was fed into it."

"Yet it is a robot that works on the reverse of the principles of Jerningham's predictograph," he answered. "You realize, of course, that when it is possible to make a machine that will analyze or break into its component parts a complex curve, it should be, and in fact is, easy to construct a machine that will reverse the process and take a number of simple curves and combine them into one complex curve. Such a machine, Jerningham made. It is on this principle that the tide predictor in the hydrographic office at Washington is built."

"What machine is that?" I asked.

"It is a robot that will accurately and positively predict the tides on any given date in any port in the world twenty years in advance," he replied. "That happens to be a relatively simple matter. There are only a few variables entering into tidal movements and their laws of variation are well known. It was very easy for Jerningham to make a machine which would take the curves representing the rate of change of these variables and combine them into a curve that would give the time and height of the tide in any port for which the data was supplied to it. There is no mystery about that machine; it is being used daily."

"That is news to me," I said.

"A machine of that type was the first and simplest machine which he constructed," Wallace went on. "His next one was on a little different mechanical principle and somewhat resembling the one announced recently by the Massachusetts Institute of Technology. You probably read about that, the papers were full of it."

"I read something about it, but I don't profess to understand it," I replied.

"It is a splendid mechanical job," he said, "but the principle is not hard to grasp. It consists of a number of variable speed electric motors, whose speed is controlled by arms attached to them ending in pointers. By moving a pointer attached to the control arm of the motor along a curve plotted out to scale, the speed of the motor is made to vary according to the value of the ordinates of the curve. If you have an operator to each curve you are using, each operator can vary the speed of one of the motors according to the ordinates of the curve before him. Thus you will have a number of motors, each running with a speed proportionate to the value of the ordinates of a different curve. It is necessary to synchronize the movements of the operators so that the abscissa value of each curve will be the same at any given moment. Do you understand?"

"That much seems simple enough," I admitted.

"Each of these motors has its separate influence on a central pointer which is extended or retracted according to the combined speed of all of the individual motors, and which, as it moves along a sheet of paper at the same abscissa speed as is being used on the primary curves, plots a curve which is the resultant of the primary curves. What I have described is the machine in its simplest operation of adding a series of simultaneous curves. By making slight modifications, one or more of the curves can be subtracted while the others are being added, or, by further complications, one of the curves may be made to multiply or divide the others which may in turn be adding, subtracting, multiplying or dividing one another, according to the way the robot is set. Am I making myself clear?"

"I begin to have some idea of it," I replied. "It sounds practicable."

"Practicable? It's in daily operation," he said. "That was only the second step in Jerningham's program. He had got that far by the end of my second graduate year and it was then that he suggested that we leave the University where we were rather restricted in our work and come here to New York where we could be more independent. I was interested by this time, and as he offered me the same terms that he had offered me at college—that is, my expenses and a fair salary —I came with him. We established ourselves with our apparatus in a building which he rented and went ahead with our experiments.

"By the end of another year we had constructed a machine that would handle a hundred separate variables at one time, performing any operations with any curve that we wished. One great improvement that we made was that we eliminated the need for an operator for each curve. One man could do the whole job. In addition to adding, subtracting, multiplying and dividing, the robot would extract any desired root or raise to any desired power or would apply any natural or transcendental function to them. That was the part that I worked out.

"We got the machine ready and tried it out. It worked perfectly and then Jerningham announced that we would have to quit. He had run out of money.

"THAT news was rather a body blow to me, for I had become as enthusiastic about the machine as he was. I had a little money saved from the salary which he had paid me and I put this at his service but it was too little to make a great amount of difference. While we were arguing about what we would do, I received word that an uncle of mine had died and had left me about twelve thousand dollars and I wanted to hand that over to Bob. He refused to take it at first for he knew that it was all that I had and he could see no immediate commercial value to his machine. Then it was that I got my great idea which cursed both our lives.

"I suggested that we put our robot to a practical use. Since we were both convinced by this time that everything happened according to natural laws as the product of certain variables, I suggested that we cease work on the machine itself and devote our time to determining some of the rates of change of variables that we could turn to monetary profit. The stock market suggested itself as a logical starting place.

"It took us two years to collect the data and plot the curves representing the eighty-three variables that we found affected the market on two active stocks which we selected for our first venture. When we had the data in usable shape, we ran it through the predictograph and obtained a curve which was supposed to show the variations in the price of these stocks for the next year. One of them was not so very active, so we let it go and concentrated our attention on the other one. We weren't quite broke, so we devoted the next three months to minor refinements in our calculations, meanwhile watching the ticker and checking up on our curve. It proved to be absolutely accurate and we were ready to start our financial operations."

"There is one thing that I don't understand," I broke in. "I can easily understand how you could calculate the price which your stock ought to sell at from your data, but I don't see how you managed to take account of the actions of the buyers and sellers. In other words, it seems to me that you have left human nature out of your calculations."

"We didn't leave it out. It was one of the eightythree variables that we considered. While at that time we were unable to predict with any probability of accuracy the actions of any given individual, we had found that it was easy to predict with absolute certainty, the actions of ninety-nine per cent of humanity and that was enough to work on. The remaining one per cent didn't affect the market enough to vitiate our curve. I'll describe later some of the troubles we encountered when we attacked the problem of the lone individual. But to get on with my story.

"By the time that we were ready to start speculating, although with our knowledge it wasn't really a speculation, we had less than a thousand dollars left. We talked the matter over and decided to make a lot right away or go broke, so we dug up a broker who would let us stretch our margin out pretty thin and we piled our whole lot on our chosen stock and sat back and waited for things to happen. They happened all right, exactly as our curve predicted and we made money fast. As the stock rose, we pyramided. When it was due for a small setback, we would sell enough to get our margin on a firm basis and ride the depression out. When a big retrogession was due, we would sell out and then sell short and whipsaw the market going and coming. We kept this up for several months and then took our profits which amounted to about two hundred thousand dollars and went back to our work.

"We didn't want ever to be financially embarrassed again, so our first task was to determine and calculate the variable on a bunch of selected stocks which would give us wider latitude for our operations. We discarded the less active ones, but we accumulated data on thirty and went back to the market. It was a sure thing. We cleaned up over twenty millions and then quit for good. One thing happened that alarmed us for a short time. Twenty-nine of our stocks behaved according to specifications, but one didn't. However, when we checked back, we ascertained the cause. It was due to my carelessness in misplacing a decimal in calculating one of the primary curves and not to any fault of the machine."

"Didn't the war interfere with your work?"

"No. We tried to enlist in the army early in the game, but they wouldn't have either of us. Bob had poor eyesight and I turned out to have flat feet, so we were both exempted. We tried for a while to fit into other work than fighting, but there were a dozen applicants for every white collar job and we couldn't see where it would help materially to win the war, if we put on overalls and kept a good mechanic out of a job, so we stuck at our work.

"The war turned every one's thoughts toward the uncertainty of human life, and Bob conceived the idea of determining the variables that went to make up a human's life span. That was where we ran into the variable of human nature in the individual but Bob finally solved the problem. I won't bother to go into details, but by testing the reaction to certain definite stimuli, the temperament of an individual can be determined with great exactness. It was not an easy problem and it took eight years of research and calculation and we made a good many errors at first, but in the end we were able to classify people on the basis of a series of 'temperamental index readings,' as we called them."

"How many variables did you find?" I asked.

"Nine hundred and thirty-four," he replied.

"It must have taken *some* machine to handle them all at once," I exclaimed.

"The machine would have covered an acre of ground if we had been forced to combine them all in one calculation," he said, "but as it happened, we didn't have to. We found that they were divided up into groups which interacted upon and affected one another. The number in a group ran from twelve to ninety-one and there were twenty-two groups. Our method was to obtain a resultant curve for each group and then a grand resultant from the twenty-two. When the final curve ran to zero, we believed that it represented the end of the life span of the individual.

"WHEN we had perfected our method, as we thought, we had to find some way of testing the accuracy of it. There was a murder trial going on in the state at the time and we obtained permission from the Governor to make some tests on the accused. They thought we were trying to establish his sanity and we let the authorities think so, but we were really trying to tell when he would die. When we got the curve finished, it showed his early death. We watched the trial pretty closely and when he was acquitted, we felt pretty sick. However, less than two weeks later he was shot to death, presumably by some gangster, and as near as we could determine, we had hit the time of his death to the fraction of a second.

"That encouraged us, but we wanted more cases. We obtained them through the courtesy of a hospital who allowed us to take readings on certain of their patients, with the patient's consent, of course. We made twenty calculations and in every case where our prediction showed an early death, it happened on scheduled time. Two of our test cases are living yet and according to our curves have a good many years of life ahead of them.

"Now I must digress a little in order that you may understand the rest of the story.

"When we first came to New York we had acquired,

along with the rest of our office furnishings, a stenographer. I don't remember her name, but it doesn't matter for she left soon and another took her place. We changed a number of times, usually getting a worse one than the one we lost, but the worst that we ever got, was the one we took on just before we had completed our string of calculations. Her name was Mabel Thompson and she was as good looking as home made sin, but that is all I can say for her. I took her out to supper a couple of times, but as soon as I found that she had blond hair inside her skull instead of brains, the blond hair on the outside of it lost its attractiveness and I dropped her. I had to, anyway, the competition was too hot.

"I suppose that it was the attraction of opposites that was the cause, for she was just as brainless as Bob was brainy. Whatever the reason, he fell hard, and while I don't think she cared for him particularly, she had a bad case on his bank roll and she hooked him nicely. Bob began to think about her instead of his work and I urged him to go ahead and marry her. I figured that a month of Mabel would cure him, and she could get the divorce and alimony that I was sure figured in her plans, and Bob could get to work with a clear head again.

"They became engaged all right and she promptly planned a year-long trip around the world for a honeymoon. That rather worried Bob, for he had conceived a greater idea than any he had had before, and he didn't relish losing a year, even for Mabel. She was anxious to marry him and start spending his roll, but she was foxy enough to pretend great and absorbing interest in his work and she hung around the office all the time—in order to keep an eye on her successor, I fancied."

"I thought you said that she was working for you," I remarked.

"She was, but when she and Bob became engaged, I suggested that it would be a good idea to discharge her with two years' salary in order to let her get ready for the wedding. Bob agreed and we got a girl who didn't spell principle with an 'al'.

"She was more or less in the way in the laboratory and to quiet her and keep her away from Bob, I took a lot of temperamental index readings on her and gathered other data that would enable me to predict her life span, although at that time, I had no idea of doing it.

"The great idea that Bob was working on was a method of calculating not only the time, but also the place and manner of an individual's death. That introduced a lot of extra complications and variables and for a while threatened to stump us, but Bob had made up his mind to postpone his wedding until he solved the problem and he worked like a demon and drove me as if I were a slave. His genius became even more scintillating under the stimulus of his affair with Mabel and he solved the problem. One day he made the final calculation and we looked on a system of curves that would enable us, given the data, to predict not only the time, but also the place and manner of the death of any individual on whom we could secure sufficient facts. Of course, it wasn't confined to the death of a person, although that was the most important event. By supplying data, we could predict any event that would happen.

"For some time we checked our method by experimenting on one another in minor affairs. For instance, Bob would determine what color tie I would wear the next day, or I would predict what he would have for dinner the next night, and little things like that. When the event had happened we would compare notes and we never found ourselves in an error.

"WHEN we had checked our method to our satisfaction, on one momentous day, we assembled all of the needed data and ran a determination of my future life and the time and circumstances of my death. It was on that day that I found when and where I would 'go west.' It was something of a shock to see my death predicted so soon, but I thought of the same thing that you suggested, namely, that on the day I was due to die in New York, I would be in China or somewhere else. It really didn't worry me much at first.

"After we had finished calculating my demise, we ran a curve on Bob and then we got a real shock. Bob was due to die in just thirty-nine days. He was to die in a railroad accident near Lima, Ohio. He looked at me with a funny expression when he read the curve and the same idea that had struck me struck him.

"'When that time comes, I'll be a good many miles from Ohio,' he said with a laugh.

"I agreed with him as to the wisdom of that and we began to make plans. We decided that the best bet for him would be to take a train for San Francisco the next evening and sail from there to Hawaii. As he pointed out, he could get to San Francisco in four days and he would be safe in Honolulu long before the day came when he was due to die in Ohio. We both laughed at the way in which we were going to cheat fate.

"When we had perfected the plans, it struck Bob that it would be a fine idea to marry Mabel the next morning and start his honeymoon. It sounded all right, but I suggested that we run through the data that I had gathered on her and see how her curve looked. He agreed and we assembled the data, plotted our curves and ran a resultant. It showed that Mabel had only seventeen days to live and that she would die of poisoning *in Honolulu*.

"We both of us looked rather funny when we saw that.

"'Apparently, that idea won't work,' said Bob with a sickly grin. 'If I stay around here, something is liable to take me to Ohio and if I go to Hawaii and take Mabel with me, I am sealing her death warrant.'

"'The best thing for you to do,' I told him, 'is to write Mabel a letter and tell her what you have learned and warn her not to leave New York for a while. In the meantime, you go to Hawaii where you are safe. Mabel can join you as soon as her seventeen days are up; in fact she can start from here in ten days if she wants to, and you can be married there. After your honeymoon you can come back and we can go on with our work. Meanwhile, I'll keep things moving to the best of my ability."

"Bob agreed with my plan and so far as I knew, he carried it out. He gave me a letter to mail to Mabel and he took the flyer the next night for Chicago on his way west. I mailed the letter after seeing him off and went back to work, expecting that the next word that I received from Bob would be that he had sailed. You can imagine my astonishment when I received, late the next night, a wire from Chicago telling that Bob was in the Presbyterian Hospital there. The wire said that he was unconscious, but he had been recognized by papers in his pockets and the papers indicated that I was the logical one to be notified.

"I went to the telephone and called Mabel, for I thought that she ought to know about it and I was sure that she would want to go to Chicago with me. Mabel had gone. I asked where, and when I was told, I nearly fainted. She had left on the flyer that evening for Chicago, *en route to Honolulu*. I couldn't get any satisfaction out of her landlady except that her 'boy friend had sent her a ticket and told her to come.' I began to wonder if we were really as smart as we thought we were about beating fate. I called up the airport and was lucky enough to get a place on the mailplane to Chicago the next day.

"When I got there, I found that Bob was still unconscious. He had had a four-hour lay-over in Chicago and he had apparently taken a taxi in order to kill time. The taxi had been smashed up at the corner of Madison and State streets and Bob had been rushed to the hospital unconscious and had remained so.

"There was nothing that I could do for him and I did just that. All that I could do was to look up Honolulu boats and figure out which one Mabel would take. I thought she would take the first one, so I wired her in care of it and told her what had happened to Bob and told her to read his last letter and be guided by the advice he had given her in it about staying in New York for a while. Later on I would have given a good deal to have recalled that wire.

"In due time I received an answer from her. Mabel proved herself to be just as dumb as I thought she was. She wired back something to the effect that she knew that I would like to break up her match with Bob, but that she knew that Bob was in Honolulu and that she was going there and that she wasn't fooled at all by my wire. I saw then that there was no use in trying to stop her, especially as she had waited and sent the wire just before the boat was due to sail.

"B<sup>OB</sup> didn't recover consciousness for a week and when he did he was too weak to stand a shock, so I didn't tell about Mabel. He asked for her, but I told him that I had thought it better not to alarm her, and I allowed him to think that she was safe in New York.

"He gained strength very slowly. As the day for Mabel's death approached, he got pretty nervous, but when the day passed off without anything happening, he looked relieved and the next day he was quite cheerful again. "'I guess we cheated fate all right, Tom,' he said, 'There is really no reason why Mabel shouldn't come to Chicago and I'd like to see her. Wire her to come, won't you?'

"I stalled him off and he appeared satisfied. It never occurred to me to censor or even look at the daily paper before he saw it and as it happened, there wasn't a thing in the one I saw. The nurse brought him a different one and there, on the front page, was a headlined account of Mabel's death. She had talked a good deal on the voyage and the reporters had got hold of the romantic angle of the affair and her death by ptomaine poisoning was news therefore. The hour and minute of her death corresponded exactly with the time we had predicted when allowance was made for the difference in time between Honolulu and New York.

"The shock threw Bob into a relapse and he was unconscious for another two days. When he recovered his senses, the police were after him."

"The police?" I asked in astonishment.

"They were indeed," said Tom. "The Honolulu police investigated her death and looked through her effects and among other things they found Bob's letter telling her that she would die of poisoning on that date unless she obeyed his instructions. He hadn't told her where she was to die, but he told her that he was leaving for Honolulu and told her to follow him in ten days after he left. He had enclosed a check for her expenses. Whether the girl misunderstood him or whether she paid no attention to the part of the letter telling her when to come, no one will ever know, but the facts were that she had hustled off to Honolulu on the fastest trains and boats that she could connect with.

"The police found Bob's letter and also the wire that I had sent her at San Francisco and they had wired Washington of their suspicions and asked that Federal warrants be issued for both of us. The Department of Justice soon located us and the warrants were forwarded to Chicago and we were both arrested.

"Fortunately my wire had been so worded that there was really nothing to hold me on, except possibly as a material witness and I was admitted to bail and was able to go back to the hospital and keep an eye on Bob.

"He recovered slowly and I wished that he would recover even more slowly for he was pronounced fit for travel too soon to suit me. I figured that he was safe there in the hospital and I would have kept him there longer. The day that the surgeon said he could be discharged was two days before we had figured out that he would die in Ohio. Hawaii being a territory, he had been arrested on a Federal warrant and no extradition proceedings were necessary. The Department of Justice men told us that we would both be taken to Washington for a preliminary hearing before being sent to Hawaii for trial. We didn't learn of this plan to take him east until the day that he was pronounced fit to travel.

"I was still free on bail and you can bet your life that I allowed no grass to grow under my feet. I got the best legal talent in Chicago to handle the local end and I wired to New York and got the best legal talent there on the job. I told the New York men to go to Washington and get busy. The orders that I gave to all the lawyers were that no matter what else happened or what it cost, they were to keep Bob from being taken east for seventy-two hours. After that time had passed, nothing would matter.

"The lawyers did their best. The first order that came from Washington was to the effect that Bob was to be taken at once, but just before train time another wire came, ordering a delay of seventy-two hours. When we saw the second wire, we shook hands and told each other that we had won the battle.

"So we had for a time, but the next morning another message came from the Attorney-General's office stating that the delay had been rescinded and that he was to be brought at once. I asked what train we were to take and sure enough, it was one that would put him into Lima just on time to meet the wreck that we had predicted.

"Our Chicago lawyers tried to do something, but they didn't accomplish anything except to run up huge bills. The train that was chosen was a poor one and as a last resource, I offered to pay the extra fare for Bob and both his guards if they would take another train that left Chicago three hours earlier and which passed through Lima over four hours before the accident was due to happen. The choice of the train was more or less a matter of choice for the Department of Justice operators who were to guard him, and when I bribed them to the extent of offering to provide a drawing room and free meals for all concerned, they agreed that it would be no dereliction of duty on their part to take an earlier train.

"We took the earlier train and everything went well until we left Fort Wayne, Indiana. We were rolling along on schedule time and again we were congratulating ourselves on having won out. About five miles out of Fort Wayne, our train came to a grinding stop. We stood for some time and when the conductor came through I asked him the trouble.

"'Burned out bearing in our engine,' he said. 'We have sent for another one and we'll be on our way soon.'

"'How long will we be delayed?' I asked.

"'Not over three hours,' he told me.

"Bob looked at me with a funny smile. There was nothing that I could say.

"THE three hours passed and then some. It was

nearly four hours before a relief engine was hooked on and we started. We were still a little ahead of the accident time, but it was soon evident that the relief engine was not as powerful as the big one usually used on the limited and that we were losing time. Bob looked at his watch as we neared Lima.

"'I guess I have about twelve minutes left,' he said with a sort of a sick grin.

"I tried to laugh him out of that mood, but I had no luck. In point of fact, I had begun to think that he was right. Suddenly an idea struck him.

"'I've got time enough to make my will,' he said. 'Give me a pen and some paper.' "I handed him my pen and he proceeded to write out a will in which he left everything he had in the world to me. The Department of Justice men were willing to humor him and they signed as witnesses. When the witnessing was completed, Bob handed the will to me.

"'Good-bye, old man,' he said. 'You will survive the wreck all right you know, and this will fixes it up so that you get what plunder we have gathered. Don't worry about me. Since Mabel has gone, I can't say that death has any very great terrors for me.'

"He turned and looked out of the window. I had a pretty big lump in my throat and I felt like hitting the detectives who took the whole matter as a huge joke. We swung around a curve.

"'This must be about the time and place,' said Bob as he looked at his watch. 'I hope that none of the rest of you—'

"We were suddenly thrown forward and our brakes squealed. I tried to recover my balance and then came a terrific crash as our train ran head-on into a freight that should have been sidetracked. I recovered consciousness two hours later in a hospital in Lima. My first question was about Bob. He had been taken from the wreck dead."

Tom's voice died away and I sat for a moment in silence.

"A curious tale," I said at length. "It was a funny coincidence."

"Mabel's death might have been a coincidence," he replied, "and I was tempted at first to think so, but Bob's wasn't. I am firmly convinced that neither of them can be explained by that method. It was merely that our predictograph told the truth. That is why I told you that I have little interest in life because I have no future."

"You said that you would have sent for me, if you hadn't received my letter saying that I was on my way to New York," I reminded him. "Why?" "For this reason," he said. "As I told you, I have less than a year of life left and no one knows anything about the predictograph. I am a lone wolf and have no one dependent on me. I will leave my entire fortune, which is over twenty millions, to you on one condition."

"And that is?" I asked.

"On the condition that you will let me teach you how to operate the machine and that you will let me figure your life span for you."

"What if I refuse to take it on those terms?"

"In that case, I am going to destroy it."

I thought rapidly for a moment. The prospect was certainly alluring. Riches beyond even my dreams, would be mine and with them, almost endless power. I could tell in a moment whether the merger we were working on would go through, and that piece of information alone would enable me to make another fortune in the stock market. I could find out just how happy and successful I was going to be and that knowledge of future success might help to tide me over some periods of hard going. On the other hand, suppose it predicted failure and misery instead! Since its predictions could not be evaded, would not that foreknowledge sour my whole life?

Next I thought of Rose. I was going to ask her a very important question when I returned to Peru if the merger went through. I could know her answer in advance and would also know just how long we would each live— Here the thought of Bob's experience intruded itself. I gave a searching look at Tom Wallace's face and made up my mind.

"No, Tom," I said rising, "I don't believe that I want it. You had better destroy it."

"I'm sorry," he said in his toneless voice as he rose. "Why?" I asked, slightly surprised.

"It would have given me a fresh hope of life if you had accepted," he replied. "The predictograph told me that you would refuse."

THE END

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2	2
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