



By A. N. Schrieber

Blood Etches World

The tapestry of world events has become more vivid and more intense as the past has fled from the future. Each day the color of blood red more deeply etches the pattern of the tapestry and brings out in bold relief the fundamental struggle between man and man. It is the death battle between totalitarianism by which the state controls the people, and democracy by which the people control the state.

The principles of facism, communism, and nazism have been gaining in strength at an ever accelerating rate throughout the world, especially in Europe and South America. Democracy, on the other hand, has been losing ground. Can it be that totalitarianism offers a more satisfactory way of life than democracy? Dictators would lead us to believe so. But the proof of the pudding is the eating, and dictators are trying to stop eating so that more funds will be available for armaments.

Russia Fails

Russia under Stalin is typical of dictatorships. The formation of the U.S.S.R. during the World War was an attempt to correct the social evils of the Czars. Today this idealism for human justice has resulted in a ruling clique for more vicious and uncompromising than any Czar. People in Russia are treated as biological units to be fed, clothed, worked, and killed according to the dictates of one man. Opposition is intolerable. No one can read current commentary on present day Russia, such as *Assignment in Utopia* by Eugene Lyons, without a deep feeling of sympathy for the Russian people who have been misled into the success of technology and mass discipline and also into the failure of losing their souls in mass regimentation.

Germany, Italy, and Japan are no different from Russia. For the price of a completely unified government, the Russians, Germans, and Italians are now slaves in the bondage of power drunkards.

Freedom Requires Defending

We in America are not fully conscious of our good fortune, and accept our freedom as everlasting and indestructible. It is true that no one can make a coup as did Hitler and Mussolini and say, "America you are no longer free" by assuming dictatorial power. But we can be led into such a state by small seemingly inoffensive events which gradually usurp the freedom of the masses. During the past five years events of this nature have repeatedly occurred in Washington. The rising control of the government in business has wrought havoc with our business leaders, and our social agencies have laid the foundation for regimentation.

Do we need fear dictatorship in this country? No! But our freedom can be seriously impaired if we allow the continued growth of socialistic forces for centralized control of government and business. The American people are, in a conflict of their desire to rule and their desire to be ruled. Every citizen must accept the personal responsibility of fighting for his freedom in a struggle that will become increasingly violent in the next few years.

Technological Leaders Needed

Since our advancing technology is far from integrated with our social habits and is perhaps at the crux of world chaos, we who are engineers must assume positions of leadership and meet future technical problems with a broader social point of view than in the past. Only by such concerted effort can we promote the ultimate happiness and peace of mankind.

Crum and Forster Makes Finnegan Jr. Special Agent

Joseph B. Finnegan, Jr., F.P.E. '32, is now special agent for the Crum and Forster companies, with office in the Fletcher Trust Building, Indianapolis, Indiana. His previous service has been with the Illinois Inspection Bureau and the Western Factory Insurance Association.

Prof. Krathwohl Tells Story of Freshmen Tests**Analysis May Solve Some Students' Faults**

Many students have wondered about what happens to those tests which they took in September and which were their first introduction to college life. The story of the September tests is an interesting one, not only because such tests are new to the Institute, but also because of the useful information they impart and because they show how mathematics is used in places where one would least suspect it.

Immediately after the examination the tests are taken to a small room in the Mission which, with one exception, they never leave again. This is done because all test information is regarded as strictly confidential.

Students Grade Papers

The papers are scored by a group of students who are chosen for mental alertness, reliability, neatness and ability to keep information to themselves. Scoring is done by means of a key, which is a slip of paper on which the answers are printed in the same position as they occur on the test paper. The key is placed next to the answers and then the scorer puts a dash opposite such numbers or names as agree with the key, and a cross where it is necessary to mark wrong answers. In this way a scorer can with little effort and without knowing what the questions are, correct as many as 1000 answers an hour. On a busy day the scoring room looks like the assembly line of an automobile plant. The tests start at one corner of the room, travel down one long table, up another and come out completely scored.

Errors in scoring with an experienced crew occur but seldom, and are caught at once by an assistant who acts as a checker. Competition is keen among the scorers, since each one has a turn at checking to point out the other man's mistakes. When all the papers of an examination have been corrected, the assistants get practice in addition by summing up the partial scores, after which the additions are checked on an adding machine.

Papers Are Given Relative Score

The next step is to arrange the papers in order of descending magnitude so as to get the rank order list which is copied by one of the secretaries of the Institute. This is the only time that the papers leave the office.

The rank order list having been compiled, an assistant who has taken a course in statistics, runs the computing machine and translates the scores, called raw scores, into understandable symbols. Meanwhile the rest of the staff start on another set of examination papers.

It is interesting to know what these understandable symbols are. There are two sets called percentile scores and derived scores. The percentile scores gives the position of a student with reference to the rest of his class. Thus is a student has a percentile score of 90 on the psychological examination, he equals or exceeds 90 per cent of his class on that examination, and is equalled or exceeded by 10 per cent of his class. If he has a percentile score of 20, he equals or exceeds 20 percent of his class and is equalled or exceeded by 80 per cent.

Derived Score Computed

Derived scores are a device to measure the achievement of a student on an examination without penalizing him by an examination which is purposely made too difficult for him. In mathematical language derived scores are linear transformations of the raw scores. The ordinary examination which a student takes, is one in which his instructor believes that he can make 100 per cent if he knows all that his instructor thinks he ought to know. However examinations such as the psychological examination are quite different. They are purposely made too difficult for most of the students taking them. Out of the thousands of students who take them each year only occasionally is there a genius

(Continued on page four)

Twelve Men Initiated Into Alpha Chi Sigma

Twelve men were initiated into Alpha Chi Sigma, professional chemical fraternity, in ceremonies held last Saturday afternoon. The six new senior members are: T. R. Green, R. B. Hallihan, E. L. Koehler, W. J. Mirzinskis, J. F. O'Connell, and C. E. Sellen. The juniors initiated are: C. R. Adesko, C. V. Peterson, W. A. Ryan, and E. F. Wagner. From the sophomore class, J. R. Meyer, and C. J. Ryant were initiated.

The initiates have completed a two month pledge period under pledge captain W. E. Kruse and have passed a written examination. After the initiation, the group of about forty active and alumni members had a banquet downtown at De Met's. Following the banquet they saw the play "Tovarich" at the Selwyn theatre.

Setterberg Asks for Senior Forms

More than half of the senior class have still failed to turn in their placement records, according to information from the registrar's office. The school is interested in having these records filled out by every senior whether or not they already have jobs in view.

Several firms have indicated that they will send representatives for interviews, and all seniors are asked to get the information in as soon as possible. Among the companies are Westinghouse Electric and Manufacturing Co., Graver Tank and Manufacturing Co. and Air Comfort Corporation. W. N. Setterberg, placement officer, states that since economic conditions at present are not too favorable, immediate action should be taken.

Conference Course—

(Continued from page one)

ing with Western Electric in determining the attitude of employees. Franklin H. Fowler, president of Foote Brothers Gear and Machine Corporation, will discuss the practical problems of enlisting the cooperation and loyalty of employees, at another meeting of the course.

Greenberg, Bergen to Talk

Labor history has been made by the successful relations of Hart, Shaffner & Marx with a labor union, and this success will be discussed by Morris Greenberg, vice president and general manager of the company. Another of the conferences will feature the former director of industrial relations for Proctor & Gamble, Harold B. Bergen. Proctor & Gamble has been famous for enlightened labor policies, such as its profit-sharing plan, and plans for selection of employees.

Last year's course in Plant Engineering and Maintenance demonstrated that participants in these conferences do carry back ideas for use in their plants. In the informal exchange of experiences at their respective companies, executives could see their own work in a truer perspective and could carry back practical ideas to their companies. One firm saved more than the cost of the course from a single suggestion which reduced their insurance premiums. Another firm representative discovered from a fellow participant a method of solving his difficulties with tank corrosion.

Suggestions Received

Professor H. P. Dutton, director of the course, received many valuable suggestions from some of last year's participants, and these are to be incorporated in this second course. These suggestions by the executives indicate that such a course stimulates new ideas in the conference representatives.

Each of the conferences will be presided over by a man prominent in local business or personnel circles, as chairman and discussion leader. James D. Cunningham, president of the Republic Flow Meters Company; Samuel N. Stevens, dean of University College, Northwestern University; and C. S. Craighead, vice president of the Belden Manufacturing Company, are a few of the prominent industrialists and educators who will be chairmen and discussion leaders.

Initiate Russell Kotal Into Literary Honorary Tonight

Sphinx Honorary Literary Fraternity will initiate Russell Kotal, junior electrical and make-up editor of the *Tech News*, tonight on the campus. The initiation ceremonies will follow a banquet in "D" Mission.

Chicago Chinese Students to Stage Play January 20, 21, at International House

"Flower of the Han Palace," written and directed by the distinguished playwright, Kenneth E. Foster, will be staged at the International House by the Chicago Chinese students on January 20, 21, at 8 p.m. The proceeds will go to the emergency relief fund for the innocent victims of the Japanese aggression.

Among the highlights of the performance are the Imperial Court romance of the Han Dynasty; the famous Mei Lan Fang Ballet, a travelogue of China; and the wedding procession which recently has won the highest praise in the St. Luke's Fashion Show. Social dancing in the International House, one of the medium of promoting international friendship to which the House is dedicated, will conclude the highlights of the evening.

Tickets may be obtained from the International House or from the Armour Chinese students. Reserved seat prices are \$2.50 and \$4.00, all others \$1.00.

G. M. Ives to Present Talk on Television Before A.I.E.E.

"Problems Encountered in Television Transmission and Reception" is the topic to be discussed by G. M. Ives at the next A.I.E.E. meeting to be held at 10:30 Friday in the electrical lecture room. This talk continues the series of student discussions begun at a previous meeting by R. E. Worcester and E. Brown. These student talks are under the direction of G. A. Palka and E. Brown, chairmen of the program and student papers committees, respectively.

M. Pantone, chairman of the inspection trips committee, is to give a report on the available trips for the coming semester. It is expected that a decision will be made by the members in regard to the trips which they desire to make.

Mr. M. K. Miller, director of research for the Public Utilities Research Commission, was the speaker at the last meeting. Mr. Miller's topic was "Research in the Public Utility Field."

Armour Branch of W.S.E. to Hear Talk on Underpinnings

Mr. S. M. Gooder, of Henricksen Gooder, Inc., will speak to the W.S.E. on "Underpinnings," at its meeting Friday, at 10:30 in B Mission. He will concern himself with that phase of soil mechanics, which concerns itself with the calculations for foundations of buildings. Mr. Gooder was associated with our civil engineering department before, at the time when the loading platform in the soil mechanics laboratory was donated, and he is known to the civils as the author of many articles in W.S.E. publications.

The last speakers of the W.S.E. were Mr. Becker and Mr. Benson of the city bridge design department, who spoke on the new Torrence Ave. lift bridge. At the conclusion of the lecture they invited the members of the W.S.E. to make an inspection trip to the site and to ride on the bridge.

Mechanicals to Hear Lecture by Alumnus

Next Friday at the last A.S.M.E. meeting of the semester, Mr. John C. Segeler, assistant chief engineer at the University of Chicago, will discuss the University of Chicago's power plant. Mr. Segeler, who is a mechanical engineering graduate of the class of '28, will not only discuss the plant from a technical viewpoint but also from an economic viewpoint.

The plant itself consists of a steam generator, over a mile from the university campus, and a long tunnel for conducting the steam from the generator to the campus. The generator is one of the most modern in the country, containing very up to date equipment. The cost of the entire plant was approximately one and three-quarter million dollars.

The program was arranged because of a controversy which arose among the senior mechanicals as to whether a centralized plant or an exterior generator plant was the more efficient.

In conjunction with the meeting, the senior members of the A.S.M.E. will make an inspection trip of the plant. This trip is being arranged through the efforts of Mr. Segeler and will bring out all the high spots of his discussion.

Next Thursday at 1:00 p.m. the A.S.M.E. will view movies on steel manufacturing showing all the stages in production from the unrefined ore to the finished product.

Foreign Films Viewed by Faculty Members

During the activity period last Friday, Professor D. E. Richardson of the electrical engineering department showed before a group of interested faculty members a few reels of the moving pictures he took during his trip last summer to the Short Wave Congress in Vienna. The 8 mm. pictures are one-third colored, the rest in black and white.

Professor Richardson had an intensely interesting trip. At the Congress, held last July 12-17, and attended by world-famous men in the fields of physics, medicine and biology, he was enabled to enlarge his views on problems pertaining to the short wave field, to meet famous scientists of foreign countries, and to visit internationally known universities, laboratories, and cities.

With his practically constant companion, a movie camera, he took pictures in Frankfurt-on-the-Meine, Giessen, Berlin, Jena, Erlangen, and Munich—all in Germany; Zurich, Switzerland, Paris and London. Included were side trips to Oxford and Salzburg.

Famous institutions he visited were the Electro-Technical Institute in Vienna, the City and Guilds College in London, the Reichs Anstalt (Bureau of Standards), and the Vibration Institute, both in Berlin.

Inter-Fraternity Dance to Be at Lake Shore Athletic Club Mediterranean Room

Art Janke and his captivators will furnish music for the fraternity men and their dates at the third annual inter-fraternity formal dinner-dance the 28th of this month. The scene of the dance will be the Mediterranean room of the Lake Shore Athletic Club and an attendance of about eighty couples is expected. As in previous years, the dance will be limited to members of the social fraternities and will include a dinner in the price of the bids, which is \$5.50.

The Mediterranean room of the Lake Shore Athletic Club is known about Chicago for the view of the lake from it and the grandeur of its appointments. For the past few weeks, the social committee of the inter-fraternity council has been hard at work making arrangements for the affair. The chairman of this committee is H. C. Anderson of Phi Kappa Sigma Fraternity. By the time this issue goes to press, the bids for the affair will be issued and ready for distribution. These can be obtained from any member of the committee.

OLD JUDGE ROBBINS
IN CALIFORNIA

I MUST ADMIT, CHUBBINS, GOING TO A FOOTBALL GAME THIS TIME OF YEAR IS CERTAINLY UNUSUAL FOR US. HONESTLY, I'M SO EXCITED I CAN HARDLY WAIT FOR THE GAME TO BEGIN.

THIS STADIUM MUST BE A WONDERFUL SIGHT FROM THE AIR, DADDY.

YES, THERE ARE OVER 80,000 PEOPLE HERE TODAY FROM EVERY PART OF THE COUNTRY.

ROB, I'VE NOTICED HOW MANY OF THEM ARE SMOKING PRINCE ALBERT. THAT SHOWS THAT NO MATTER WHERE PEOPLE LIVE, THEY APPRECIATE PA'S SMOOTH, COOL, NO-BITE SMOKING.

WELL, HOW COULD ANY PIPE-SMOKER OVERLOOK THE GRAND WAY PRINCE ALBERT PACKS AND DRAWS THANKS TO THAT CRIMP CUT. IT'S NO WONDER PA IS CALLED THE NATIONAL JOY SMOKE!

THERE ARE MANY TYPES OF PIPES—BUT ONLY ONE PRINCE ALBERT TO GIVE YOU A PRIME SMOKE—EXTRA-MILD, YET TASTY, FULL-BODIED!

SMOKE 20 FRAGRANT PIPEFULS of Prince Albert. If you don't find it the mellowest, tastiest pipe tobacco you ever smoked, return the packet tin with the rest of the tobacco in it to us at any time within a month from this date, and we will refund full purchase price, plus postage. (Signed) R. J. Reynolds Tobacco Co., Winston-Salem, North Carolina.

Copyright, 1938, R. J. Reynolds Tobacco Co.

PRINCE ALBERT THE NATIONAL JOY SMOKE

50 pipefuls of fragrant tobacco in every 2-oz. tin of Prince Albert