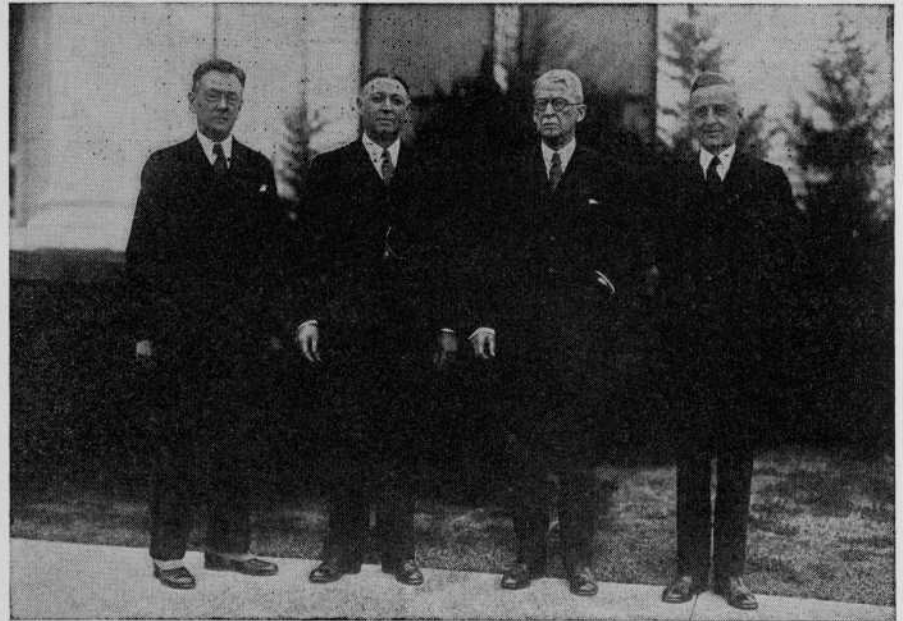


An informal group showing President Bizzell with the distinguished visitors to the George Washington bicentennial celebration at Norman. Left to right, Henry J. Haskell, editor of «The Kansas City Star», President Bizzell, Dr Andrew C. McLaughlin, University of Chicago and Dr Robert G. Caldwell, Rice Institute, Houston, Texas



TRUBY

Washington

THE University of Oklahoma under the leadership of President W. B. Bizzell paid tribute to George Washington by holding an impressive all day celebration of the bicentennial birthday at Norman. The program was the most important observation held since the dedication of the new library in 1931.

Through the efforts of Doctor Bizzell, two nationally known historians were obtained as guest speakers: Dr Andrew C. McLaughlin, professor of history at the University of Chicago, and Dr Robert G. Caldwell, professor of American history, and dean of the graduate school of Rice institute, Houston, Texas.

Henry J. Haskell, editor of the *Kansas City Star*, and Lieut. Col. Leslie J. McNair, assistant commandant of the field artillery school at Fort Sill, spoke to the day's final gathering—a banquet held in the Oklahoma Union building.

Advance preparation for the observance included invitations from Doctor Bizzell extended to famous men of letters, several of whom responded with short articles on George Washington, which were included in a booklet published by the University Press, distributed to guests of the day. These follow:

George Washington, 1732-1932

By

WILLIAM BENNETT BIZZELL

The University of Oklahoma joins the people of the nation in the celebration of the Two Hundredth Anniversary of the Birth of George Washington. It is a significant fact that George Washington is the preëminent hero of our country. A scholarly historian has recently reminded us that Switzerland had its William Tell, France had its Joan of Arc, Italy had its Garibaldi, and America had its George Wash-

ington. These great national figures symbolize the people's patriotism and give reality to national character. In appraising the place of George Washington in history, it is well to recall the words of one of his greatest contemporaries. "His was the singular destiny and merit of leading the armies of his country successfully through an arduous war for the establishment of its independence," wrote Thomas Jefferson, "of conducting its councils through the birth of a government, new in its forms and principles, until it had settled down into a quiet and orderly train; and of scrupulously obeying the laws through the whole of his career, civil and military, of which the history of the world furnishes no other example." These words summarize fairly the verdict of public opinion today.

While there were those to criticize, as there have always been, it is worthy of notice that those who were most intimately associated with him, from the slaves on his plantation in Virginia to the generals on many battlefields or the members of his cabinet while president, honored him as a fine soldier, as a great statesman and patriot, and generally respected him as a man and citizen.

Washington's achievements have been the subject-matter of instruction in our schools and colleges throughout our national history, and his character has inspired the youth of every age to nobler endeavor. Through the emphasis laid by our schools upon Washington's life, he has always been the best known among all the men who have served this country. Washington has been the subject of more than four hundred biographies. Throughout his eventful life he wrote more than twenty thousand letters and state papers. Most of these have been printed and made available to the public. We are told by Albert Bushnell Hart, historian of the Washington Bicentennial commission, that "about seventy mountains, bays and rivers in the United States are named for him, not to mention uncounted streets, public buildings and educational institutions." A recent number of the *National Geographic Magazine* contains a map showing the places visited by Washington from time to time throughout his eventful career. There is now in preparation a George Washington Atlas, which is the first of its kind to be made in connection with the life of any public man.

As a part of the plans for the celebration of this occasion, a letter was written to a selected list of eminent historians and biographers requesting a brief appraisal of the place of George Washington in history. The names to whom letters were written included Dr Paul Van Dyke, eminent literary man and the author of a biography of Washington; Mr Rupert Hughes, widely known novelist and also the author of a much discussed biography of Washington; Mr John Drinkwater, the English playwright and the author of several biographies of prominent literary men and statesmen; Mr André Maurois, the popular and widely read French biographer; and Mr Emil Ludwig, the author of the best biography of Bismarck and many similar books. Only three of the men to whom requests were made have at this writing complied with the request. These are Mr Rupert Hughes, Dr Paul Van Dyke and Dr H. A. L. Fisher. Grateful acknowledgment is made to these distinguished literary men for their contributions to our program today and the papers they submitted are included in this program.

The university wishes to express appreciation to the scholarly men who have participated in the exercises of the day. Dean Robert G. Caldwell and Professor Andrew C. McLaughlin represent the best educational traditions and scholarship in the field of history. Mr Henry J. Haskell, the scholarly editor of the *Kansas City Star*, has contributed much to wholesome public opinion in this country; while Colonel Leslie J. McNair is a type of soldier that has helped to sustain the honor and good name of the United States since the days of George Washington. To these and others who have contributed to the success and to the interest of the exercises of this day grateful acknowledgment is made.

What Washington Saved Us From

By

RUPERT HUGHES

Ours is the only important government in history that has never been overturned since its first definite organization. No American or foreign adventurer has so much as attempted to seize the power and exploit himself as king, emperor, or even dictator.

The horrors we have escaped are infinite. We managed to conduct even a gigantic Civil

war with no suggestion of an individual tyrant on either side. At no time in our national life of a century and a half has there appeared a Caesar, a Cromwell, a Napoleon, or any imitation of any of them.

And this blessing, so great, so beautiful that we breathe it in like the air without ever being grateful for it,—this unique escape from the worst evils of human ambition and greed we owe altogether to George Washington.

Never was there a man with a better opportunity to seize and wield a royal power. Chosen by thirteen jealous colonies to wage a war against a mother-country to which half or more of the inhabitants were still loyal, Washington was the one man in the new world whom all the thirteen nations trusted. The only rivalry he had was of no serious importance and the one suggestion that he should be supplanted was so vague and feeble a conspiracy that it was known by the name of a foreigner, as the Conway Cabal, and it collapsed at the first exposure to the light.

Congress, which nobody trusted, was forced more than once to flee from its assembly place and turn over to Washington the full powers of dictatorship, and on one of these occasions it was driven to flight by its own soldiers. But Washington wielded the dictatorship with all the meekness of a devoted servant and returned the power as soon as the masters resumed their offices.

Patriots who had read deeply in history were afraid of him for a time because they could find in human chronicle no precedent for such meekness and selflessness. A few, disgusted by the chaos of the government, wanted to force a crown on Washington, but he took the mere suggestion not as flattery but as a vicious insult. He alone could keep and did keep his mutinous and unpaid officers and troops from overthrowing the government.

After eight years of war brought peace, he retired to his farm. He left it unwillingly to help in the revision of the government under a new constitution with a president at the head of a federated nation. The fact that he was alive and could be persuaded to be the first president alone made possible the consent to the union. For eight years he administered the government and gave the people the habit of association together as one country. Then again he returned to obscurity and the majesty of private life.

During his presidency, as during his military commands, the people were shaken by all the ferocities of contradictory interests, principles and passions. Brilliant and unscrupulous men of unlimited personal ambition and jealousy were as common as in any other nation. But Washington's exalted example kept them from revolt and established self-sacrifice not only as an ideal but as a reality so firmly that no one then or since ever dared to claim power as his own right.

There has never been a crown for an American to clutch at, for Washington made the thought of one impossible. Any native or any invader who tried to set himself up as a dictator or a monarch would look so strange, so incredible that he would either be put away as a lunatic with delusions of grandeur or would be laughed out of the country as a silly clown.

The supreme gifts are those that support and envelop and nourish us so constantly that they are not realized. The magnificent achievements of Washington's actual deeds are well known and constitute our national epic. But we owe even more to the things he was not and the things he prevented in others forever by his refusal to stoop to them.

George Washington. An Opinion

By

PAUL VAN DYKE

Sent on request of the president to the University of Oklahoma, February 1932

I consider it a very great compliment that after more than thirty years service of one of the oldest American universities and the pub-

lication of seven volumes—one of the newest of American universities should send me an invitation to express my opinion about George Washington, that gracious invitation makes clear that in spite of my long residence in the old conservative state of New Jersey, you do not think me an old fogey, while to read a few pages of any of my books is to become aware that I am not one of a great number of modern writers who deliberately assume that biography is a part of historical romance. On the contrary I think it is a very laborious and serious study, based not on legend, uncertain family tradition or the untrustworthy memories of very old men; but on authentic documents and records and only on them. Such a study of Washington up to the age of forty-three when he took command of the Continental army, has laid the foundation for a little book from which I take seven points in regard to Washington.

1. He was not only the Father of his country but also a son of his country—a typical Virginia planter who finally grew into a most representative American. He never said but he might have said, "I am no longer a Virginian, I am an American."—How important this was appears if we try to imagine Kosciusko or Steuben or even Lafayette leading the Continental army to victory or being the chief founder of the Republic.

2. The influence of Washington and the true value of his memory, lies, not in his ability, but in the qualities of his character. Five are most prominent. (a) Courage. This won his soldier's hearts and made his officers, even while they blamed his great boldness, proud of him.

3. (b) Judgment. Patrick Henry, when asked who was the greatest man at the Continental Congress said; "For solid information and good judgment George Washington is unquestionably the greatest."

(c) Ability to win the hearts of men. When he said goodbye to his officers at the close of the Revolutionary war, the glass of wine he drank to their health while they moved off in silence, took on almost the quality of a sacramental cup.

(d) and (e) Magnanimity and a sense of duty. When he left his beloved Mount Vernon to command the American army he had no ambition except service—there was in his heart no self seeking, he would much rather have stayed at home. Although often pressed for cash during the war he would not take a penny of salary, and, when the war ended he would not accept an acre of the great principality in fertile land which congress urged upon him. Washington was not a man of extraordinarily brilliant abilities, but he was a man some of whose character and qualities were developed to so extraordinary a degree as to make him unique among the heroes of the nation. This is our heritage in him—this is the true significance of George Washington to America.

Flesh of Our Flesh

By

DR H. A. L. FISHER

Warden, New College, Oxford, England

I greatly appreciate your kind invitation that I should contribute a communication concerning Washington's place in history on the occasion of the Bicentennial of Washington's birth. Unfortunately the time at my disposal is so short, that I do not feel as if I could compose anything which would be worthy of the occasion. I would merely say this:

George Washington's name is as highly honored in Great Britain as it is in the U. S. A. We regard him as exemplifying all the highest qualities of the British race, to which he belonged. We are as proud of him as we are of any of the great makers of our national history. There are many great Americans for whom we entertain a great and legitimate ad-

miration, but I think that Washington's place among us is quite distinctive. It is a very curious fact that although he was the Leader of the Movement which resulted in the independence of the U. S. A., we feel with regard to him, as, perhaps, we do not feel to the same extent with regard to any other American, that he was bone of our bone, and flesh of our flesh, a great common possession, shared by the English speaking peoples on either side of the Atlantic.

Please, my dear president, understand that, although I am unable, in the time at my disposal, to compose a tribute which would be in any way worthy of the man and the occasion, I extend to you my very deep and sincere sympathy in the tribute which you are paying to the memory of George Washington.

"Panics in Washington's Time and Today" was the subject chosen by Doctor Caldwell for his address before the morning session. The invocation was read by Rev Marius J. Lindloff, vicar, St. John's Episcopal church, and music was furnished by the university's mens' quartet.

Panics in Washington's Time and Today

A prominent American banker, whose name is found frequently in the public press, has recently remarked that the experiences through which America has been passing since the severe financial panic in October, 1929, is both unprecedented and unusual. Unfortunately, of course, depressions, panics and wars have alike punctuated human history, and our present experience, far from being either unprecedented and unusual has in all its fundamental features been matched by that of every generation of Americans. Today, as we celebrate the two hundredth anniversary of the birth of a great American, it is interesting to remember that twice in an eventful career even he was called upon to meet problems which in spite of the passing of the years are not essentially different from those of our own day.

When Washington was only thirty-two, the end of the French and Indian wars in which he had borne so prominent a part, was marked by a severe depression, the last and the most momentous of the colonial period. The difficulties of that world panic had much to do with the measures of taxation on the part of England and with the bitter opposition in America. Objections which in ordinary times might have remained suppressed led at length to the American Revolution of which Washington himself was to become both the leader and the eternal symbol. And just as Washington lived through the last panic of the colonial period so he was also to meet the difficulties of the first of the great depressions of the national period. In that case he pointed even more clearly to the great solution which we call the Constitution of the United States, a document as clearly economic as political in its significance, under which Washington himself was again enabled to lead the country to still another period of prosperity and of expansion. In each case, I need scarcely remind you, the wisdom, the far sighted sagacity, and the courage of a single man were of almost unique importance. In the light of these events, and of others like them, it is my purpose to look back over the long history of American panics and to consider whether the story has in it some lessons that may not be without importance to the men and women of the twentieth century.

At the very threshold of American history, long before the days of Washington, we find more than a little evidence that the fundamental and persistent cause of that astonishing

(TURN TO PAGE 230, PLEASE)

Geology perhaps did as much as any one department to center attention on the University of Oklahoma, and the school of geological engineering is enhancing that reputation under the able direction of Dr V. E. Monnett, '12 arts-sc., director

Geological engineering

THE school of geological engineering was established at the University of Oklahoma in order to meet the need of those phases of geological work which require more training in engineering practice than was afforded in the college of arts and sciences.

The laboratory investigator in the field of paleontology or in mineralogy has never felt the need of this type of training but nearly all types of field work involve many basic engineering principles.

There are very few universities which offer this type of training and only a small percentage of graduates in geology from this university have undertaken the curriculum offered in geological engineering. Graduates of the school have found that it widens their field of opportunities. Naturally enough most of them have entered some phase of the petroleum industry either in the geological departments or production departments. The field of the geological engineer does not lie wholly in the petroleum industry. A large part of his technical training is designed to acquaint him with the various minerals and rocks that constitute no small part of the wealth of natural resources of any nation. Indeed the geological engineer is as much of a mining engineer as a petroleum geologist. Not only does his province include the search for, and development of, iron, gold, silver, copper, lead, and zinc properties; but also those non-metallic substances that often equal or exceed in value the metals.

Only one professional degree has been conferred on any graduate of geological engineering, but a number of men can now qualify for the degree by virtue

of having completed the necessary amount of field work.

The out-doors is the great laboratory for any geologist or geological engineer and it is only after considerable field experience that any graduate may consider himself fully qualified for professional work.

The present condition of the petroleum industry has probably limited the opportunities of the geological engineer more than that of any other engineering group. Exploration and extension of development necessarily must be curtailed in times of unsettled economic conditions. The work of the geological engineer is largely of this type. The search for new commercial sources of oil and other earth materials has caused American geological engineers to be sent to many foreign countries. Java, Argentina, Cuba, Venezuela, Morocco, Colombia, and Mexico have all served as field laboratories for Sooner geologists and geological engineers. Many are now engaged in the search for favorable gold prospects in the mountainous area of our own country. The geological engineer is primarily a pioneer and through his effort and success in locating valuable mineral deposits often aids in the opening of new sections of country which would otherwise have remained without transportation facilities.

▲ ▲ ▲

Tau Beta Pi dues

Tau Beta Pi, honorary engineering fraternity, voted to discontinue payment of dues for this semester. Revenue will be made up from tickets sold to members attending the fraternity dinner-dance.



WASHINGTON

(CONTINUED FROM PAGE 213)

movement of population that Woodrow Wilson called the swarming of the English was the hard necessity of poverty. Back in England, the enclosure of the fields of the peasants and the decay of the ancient guilds were of course not new, but the full effects were only visible in the closing days of Elizabeth and in the reign of her successor. Even in the sixteenth century, Sir Thomas More had written burning words regarding the difficulties of the unemployed. More than once he had seen husbandmen compelled to sell their little homes and *'depart away, poor innocent wretches, goods, men, women, husbands, wives, fatherless children, widows, woeful mothers and their young babes . . . out of their known and accustomed houses, finding no place to rest in. And when they have wandered abroad . . . what can they else do but steal . . . or go about begging? And then also they be cast in prison as vagabonds, because they go about and work not, whom no man will set to work.'* How often in later days, would the same description prove to apply!

Fifty years later conditions were worse, rather than better. Many thoughtful Englishmen now pointed out the possibility of finding a solution for prevalent unemployment by a consciously directed policy of colonial expansion. Thus Sir Humphrey Gilbert who was to give his life to the enterprise that he advocated wrote in 1574: *'We might inhabit some part of these Countreyes (America) and settle there these needy people of our country which now trouble the Commonwealth and through want here at home are enforced to commit outrageous offences whereby they are daily consumed with the gallows.'* In 1611, four years after the first settlement of Virginia, the watchful Spanish ambassador, Velasco, wrote to his master: *'Their principal reason for colonizing these parts is to give an outlet to so many idle wretched people as they have in England, and thus prevent the dangers that might be feared of them.'* It is noteworthy that the decade of most severe depression came from 1620 to 1630, a time in which the foundations were laid for more than one future American state.

The earliest of purely American panics came (TURN TO PAGE 239, PLEASE)

ruary 20. Alpha Phi-Delta Tau Delta. Home, Oklahoma City.

HUTCHISON-WRIGHT: Miss Genevieve Hutchison, '32, and Carleton Paul Wright, '29 bus., February 14. Alpha Chi Omega-Acacia. Home, Oklahoma City.

DAVIS-WILLIAMS: Miss Mildred Davis, and Robert M. Williams, '22 law, February 11. Home, 1629 West 32nd street, Oklahoma City.

RUSSELL-MORRIS: Miss Mary Elizabeth Russell, ex '31, and John Wesley Morris, '30 ed., February 19 in Norman. Home, Seminole.

THURMAN-RALSTON: Miss Margaret Thurman, '29 arts-sc., and Leonard L. Ralston, '31 law, February 27. Pi Beta Phi-Kappa Alpha. Home, 714 West Thirtieth, Oklahoma City.

HILL-FARRIMOND: Miss Lenore Hill, and James Farrimond, '27 bus., February 3 in Guthrie. Home, Oklahoma City.

PACEY-BLACKWOOD: Miss Dola Pacey, '30 arts-sc., and Frank G. Blackwood, ex '30, February 14 in Holdenville. Alpha Chi Omega-Phi Kappa Sigma. Home 403 West Thirty-third street, Oklahoma City.

STOCKTON-HAWKS: Miss Mildred Stockton, ex '30, and Preston Allen Hawks, ex '31, January 29 in Oklahoma City. Home, Clinton.

SQUIRE-PACE: Miss Lydia Katherine Squire, '31 arts-sc., and Edgar H. Pace, ex '27, January 26. Kappa Kappa Gamma-Sigma Alpha Epsilon. Home Mangum.

BIRTHS

To Mrs Dorothy Stevenson Hale, ex '22, and Mr Robert F. Hale, a daughter, Nancy Margaret on February 6. Home, 30 First street, Malone, New York.

To Mrs Peggy Highley Wienecke, '26 arts-sc., and Mr Louis G. Wienecke, a daughter, Gretchen Patricia, February 16. Home, Borger, Texas.

YEAR BY YEAR

1905

Monroe Osborne, ex '05, has announced as democratic candidate for justice of the state supreme court to succeed R. A. Heffner, justice, subject to the July primaries. Mr Osborn attended the university in its earliest days, from 1901 until 1905. For a time he was secretary to David R. Boyd, first president of the university. After completing his law education at the University of Kansas, he went to Pauls Valley where he has been an attorney twenty-three years. Mr Osborn is a World war veteran and has been active in American Legion affairs. He has been indorsed for the nomination by nineteen members of the Garvin county bar.

1908

Helen Maynard, daughter of M. M. Maynard, '08 arts-sc. won the Illinois State women's intercollegiate oratorical contest on February 12. Mr Maynard was a Varsity debater when he was in school. At present he is professor of Education at Monmouth college, Monmouth, Illinois.

1912

C. C. Williams, '12 arts-sc., of Poteau, has announced his candidacy on the Democratic ticket for congress from the third Oklahoma district. Mr Williams represented the university in two victorious intercollegiate debates and was chosen by the class of '12 to dedicate the sundial which is that class's memorial. Mr Williams advocates reduction in governmental expenditure and passage of laws for the benefit of all people rather than a few.

1914

Robert M. Bounds, ex '14, of McAllen, Texas, has been appointed district judge by Gov-

ernor Sterling. He is the first judge of the Ninety-second district court just recently created by the Texas legislature. There were several applicants for the position, and the Texas governor was unable to pick from several able lawyers in time to fill the position for its first January term, the sheriff of Hidalgo county adjourning court until the March term which opens March 7. Judge Bounds' selection is a distinct recognition as being best fitted of several applicants. He was sworn in and has assumed his duties.

1916

Leon H. Brown, '16 law, who for several years was secretary-treasurer and attorney for South Vernon Oil company, which drilled the discovery well in the South Vernon field, Vernon, Texas, for the last three years has been a citrus fruit grower in the lower Rio Grande valley of Texas, residing at Mission, where he owns an orange and grapefruit grove. Incidentally he is employed as the full time attorney for John H. Shary, pioneer developer of "Sharyland" in that section, and for the various Shary organizations, including a land company, irrigation company, nursery, a bank (of which Mr Brown is vice-president) a newspaper, a fruit juice plant, and eight packing plants of the Texas Citrus Fruit Growers Exchange.

The condition of Robert Pruet, '16 arts-sc., '18 law, of Ponca City, is reported to be no better. Mr Pruet is suffering from pneumonia.

H. S. Oderman, '16 M. E., is president of the Detroit City Service company. His address is 16211 La Salle, Detroit, Michigan.

1918

B. P. Stockwell, '18 M. E., is general manager of the Empire Public Service company at Bristow, Oklahoma.

George L. Dolph, '18 C. E., is now living at 302 Avenue D, Bismarck, North Dakota. He is highway engineer for the bureau of public roads.

Lloyd Stone, ex '18, is now director of the Lloyd Stone Advertising service with offices in 815 Daniel building, Tulsa.

1919

Leon B. English, '19 G. E., is a consulting geologist at Longview, Texas.

Jesse D. Biggers, '19 E. E., is chief electrician of the southern division for O. G. and E. He lives at 325 K street, Ardmore.

1920

Milo M. Orr, '20 G. E., lives at 225 Bush, San Francisco, California. He is senior geologist for the Standard Oil Co. of California.

Jewellean Brodie, '20 arts-sc., '27 M. A., has been invited by the librarian of Central Missouri State Teachers college, Warrensburg, Missouri, Mr Walt Edwards, to allow them to place a copy of her M. A. Thesis in their very unusual and valuable collection of Walt Whitman. The subject of her thesis is The Personal and Literary Relation between Ralph Waldo Emerson and Walt Whitman. Miss Brodie and her sister Willa B., '23 arts-sc., are living at 408 Hawthorn, Markeen apartments, San Diego, California.

1921

Ludwig Schmidt, '21 Chem. E., is petroleum engineer for the United States bureau of mines at Bartlesville, Oklahoma.

1923

Earl Bartholomew, '23 M. E., is now director of engineering laboratories for the Ethyl Gasoline Company at Detroit, Michigan. His address is 8810 Dexter boulevard.

George Albert Heap, '23 C. E., is now a structural engineer at Los Angeles, California.

1925

Charles E. Bathe, '25 E. E., resides at 2315 north Barnes, Oklahoma City. He is superintendent of radio and standards for Oklahoma Gas and Electric company.

Lloyd McGuire, '25 law, of Guthrie was recently elected president of the state Young Republican league.

1926

Herbert L. Oakes, '26 C. E., lives at 1825 Lincoln avenue, Topeka, Kansas. He is general inspector of the construction department of the Kansas state highway commission.

1927

Y. E. Jones, '27 educ., Norman, is in the race for the office of Cleveland county superintendent of public instruction. He divides his time between working on his master's degree and maintaining a business down town.

H. B. Prewitt, '27 M. E., is living at 520 Green street, Flint, Michigan. He is branch manager of the American Blower Corporation.

La Verne A. Comp, '27 C. E., is an instructor in mechanics at the University of Oklahoma.

1928

Elton Wilton Le Hew, B. S. in med. '28, is now an interne in the university hospital, University of Michigan. His wife, Beth Amis Le Hew, '30 home-ec., is staff dietitian in charge of the commercial cafeteria for employes and guests.

Wilbur L. Morse, '28 law, of Henryetta has announced his candidacy on the Democratic ticket for state legislator from Okmulgee county, which is entitled to three representatives. Mr Morse is president of the Okmulgee county League of Young Democrats. An interesting feature of Mr Morse's platform is his endorsement of state compulsory unemployment insurance.

1929

Richard D. Mason, '29 E. E., is now enrolled at George Washington university at Washington, D. C. He is still connected with the General Electric.

Edward A. Bartolina, '29 M. E., is with the Consolidated Gas Service company at Blackwell, Oklahoma.

William Woods, '29 E. E., is with Bell Telephone Laboratories Inc. He resides at 76 Roosevelt avenue, East Orange, New Jersey.

1930

Paul Miller, ex '30, formerly director of the bureau of information and service at Oklahoma A. and M. college, has resigned to take a position with the Associated Press at Columbus, Ohio.

Louis Esch, '30 home-ec., is an interne in the university hospital, University of Michigan, Ann Arbor, Michigan.

Kenneth Burton Barnes, '30 P. E., is an instructor in petroleum engineering at Pennsylvania State college, State College, Pennsylvania.

Robert S. Bonham, '30 P. E., is production superintendent for the Barnsdall Oil company at Mankins, Texas. You can write to him at Box 167.

James Cowan, '30 C. E., is an instructor in engineering drawing at the University of Oklahoma.

Arthur Maddox, '30 P. E., is with the International Petroleum company at Negritos, Talara, Peru, South America.

Paul Miller, ex '30, has resigned his position as director of the bureau of information and service at Oklahoma Agricultural and Mechanical college to become a member of the Associated Press bureau at Columbus, Ohio.

Ray Kimball, '30 jour., who served one year as general manager of student publications, has purchased an interest in the Sevier

County Citizen, DeQueen, Arkansas. Mrs Ray Kimball, formerly a student here, will be society editor of the paper.

1931

Merton E. Munson, '29 arts-sc., '31 law, has opened an office at 409 Koehler building, Lawton for the practice of law.

Mildred Clark, ex '31, is learning all about housekeeping in her new job with the Oklahoma Natural Gas Corporation. She is director of a new department, the model kitchen in the home service division of the company. Included in duties of the department, is that of providing quarters for parties and meetings. Miss Clark's plans for spring activities also include demonstration classes for maids and a bride's course.

Dick Williamson, '31 G. E., is now with the Continental Oil company at Ponca City. His address is 418 south Palm.

Sam Alexander, '31 eng., is doing graduate work at Massachusetts Institute of Technology.

Ralph Wassel, Jesse Neal, and Philip B. Anderson, all '31 eng., are at Randolph field, Texas.

Paul Thurber, '31 C. E., is in the mathematics department at the Murray Agricultural school at Tishomingo, Oklahoma.

Mary Camille Carey, '31 phys-ed., is one of the new swimming instructors at the Y. W. C. A. in Oklahoma City.

1932

John E. Cook, '32, Oklahoma City, has been appointed as a cadet in the flying school at Randolph field, San Antonio, Texas. He will report for duty March 2 to begin a three year course in aviation. He is former captain of the Sooner pistol team.

ROBERT D. EVANS

(CONTINUED FROM PAGE 223)

tests on transmission stability in 1923. The first field tests of this were in California in 1925.

Evans obtained his professional degree E. E. in 1926.

The character of Mr Evans' work is of particular interest to the student or master of electrical engineering. It has consisted of application work in connection with power transmission for central stations and a-c. railway systems. Analytical and experimental investigations of the system problems of central stations and railway systems have been carried on. The analytical work has included development of "General Circuit Constants," and the "Evans and Sels Power Circle Diagram." Mr Evans was a leader in the group which first recognized the power system stability problem and which developed methods for improving stability. This has been Mr Evans' principal achievement to date, in the opinion of many experts. Mr Evans has been closely associated with Doctor Fortescue who discovered symmetrical components. He and C. F. Wagner have done much to extend symmetrical components and bring it into general use. Their article on this subject in the *Electrical Journal*, recently reprinted, is the first and only extensive

treatment of this important subject. Mr Evans, also, has been very active in the inductive co-ordination problem between communication and power or railway circuits.

The tribute that is paid to Mr Evans by his chief, Mr E. B. Roberts, of the educational department of the Westinghouse company, is a compliment to the University of Oklahoma college of engineering which graduated Mr Evans as well as to the young man himself. It is also an inspiration to young engineering students. Mr Roberts says, "Hardly anything you can say of Mr Evans can go too far. He is without doubt one of the most able men in our engineering department. He not only has the ability and philosophical attitude, but he has the commercial side of his nature so developed that it commands the immediate respect of executives in the business and engineering world as he comes in contact with them."

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WASHINGTON

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to the various colonies, especially the tobacco regions of Virginia and Maryland, during the reign of Charles the Second. The number of people living in America was, of course, a mere handful, but the sequence of events was strikingly similar to that of a later age in the complicated industrial and banking community. A period of great prosperity in which the price of tobacco had been high, trade active, and the plantation system constantly fed by new importations of indentured servants was succeeded by very hard times in which tobacco became a mere drug on the market. As usual, these difficulties pressed with great force on the recently established western farmers, some of whom had been indentured servants on the larger plantations of the wealthy men of the tidewater region. The results, as every one knows, were highly dramatic; for the western men in deep distress blamed their chief difficulties on the selfish policy of the aristocratic governor, Sir William Berkeley, and the group of favorites that surrounded him. By a curious coincidence in dates, just one hundred years before the declaration of American independence, which had in some respects a similar social as well as a political significance, the common people found a leader in a young planter named Nathaniel Bacon, a relative of the renowned Lord Chancellor of England. With the assistance of two friends, the Scotchman, William Drummond and "the thoughtful Mr Lawrence" as he was called by his neighbors, and under the pretense of defending the colony against the Indians, Bacon raised the standard of revolt, gained some initial successes, compelled the governor to accept far reaching democratic changes in the government of the colony, and proved his power by capturing the seat of government at Jamestown and burning the houses of that center of conservative control. But Bacon and his friends were ahead of their day, and the death of their leader left the discontented rabble unable to cope with the prestige of the wealthy planters under the banner of legitimate authority. A movement of great significance, which had had reverberations in places as distant as North Carolina and Maryland, suddenly collapsed. Bacon was dead, the dour Drummond was soon captured to meet the fate of traitors, and the

thoughtful Richard Lawrence barely escaped into the wilderness where perhaps under some new name he was able to take up again the career that he had left behind.

The results of this episode were probably more permanent and significant than the hard fate of the leaders would lead one to suppose; but when the early chroniclers looked for the cause of a great depression and of the revolt which came with it, in typical seventeenth century fashion they selected features in the general situation which were unique rather than those that suggested common experience in the history of such revolts. Thus a sober and detailed story of these events, the one to which historians have been chiefly indebted, commences at once and boldly by a type of explanation as much in fashion in those distant times as the theories of the business cycle are today: "About the year 1675," writes the planter whose initials are appended to this document, "Appear'd three Prodigies in that country, from which th' attending Disasters, were looked upon as Ominous Presages. The one was a large Comet every evening for a week or more, at Southwest; thirty-five degrees, high, streaming like a horse tail westwards, until it reaches almost the horizon, and setting towards the northwest. Another was flights of pigeons in breadth nigh a quarter of the mid-hemisphere, and of their length was no visible length; whose weights brake down the limbs of large trees whereon these rested at nights, of which the Fowlers shot abundance and Eat 'em. This sight put the old planters under the more portentous apprehensions, because the like was seen (as they said) in the year 1640 when the Indians committed the last massacre, but not after, untill that present year 1675. The third strange appearance was swarms of Flies about an inch long, and big as the top of a man's little finger, rising out of spigot holes in the earth, which eat the new sprouted leaves from the tops of the trees without other harm, and in a month left us." And after this remarkable introduction, the truthful Thomas Mathews, for such was probably the author's name, continued with evident impartiality to recount the events of the next two years in the old colony of Virginia.

For the purpose of this brief review, passing over other depressions of the colonial period, of which the one through which Washington passed in 1764 was the most notable, America had barely escaped from the political and military dangers of the period of the Revolution when she was face to face with the first of the panics of the national period. As is now well known, the hardships of the war had been largely limited to the tattered soldiers of Washington and Greene and to those communities which had been the scene of bitter civil contests between the patriots and the loyalists. In other places, money had never been so abundant, for both the British and the French had war chests and distributed gold and silver, in the colonial period almost unknown, with what seemed at the time prolific hands. Especially in the neighborhood of the seaports where the foreign soldiers were established the farmers found a ready market for their crops and even the artisans were working hopefully under the influence of high wages. The inflation of the monetary medium, due to the large issues of Continental bills and of local forms of paper money, increased prices as if by magic, and made it comparatively easy for the debtor to meet his obligations. Such prosperity in many places helps in part to account for the patience with which the American people endured the disadvantages of so long and true, the old trade routes to the West Indies true, the old trade route to the West Indies were no longer safe, the fisheries on which so many had depended for a livelihood were closed, and the whaling ships remained for years at their wharves in Nantucket. But war brought new opportunities and enterprising

shipmasters laid the foundations of new fortunes by engaging in the adventures of privateering. The fictitious prosperity of the war years led to speculation in lands and to the investment of profits in shops for the manufacture of commodities that had once been furnished by the mother country.

When the war was over, conditions changed so quickly that many persons who had counted on the continuance of good times found themselves in sudden difficulties. The prohibitions of the European mercantile systems were now made general and permanent. Imports destroyed the prosperity of more than one little factory. Gold and silver left the country in payment for luxuries, and prices generally dropped with alarming rapidity. The conditions which had existed in Virginia one hundred years before on a small scale were now repeated on a continental scale. What seemed the harsh exactions of the creditors produced demands for paper money and other means for the relief of debtors, precisely parallel to the remedies that were later to be lumped together under the name of populism. From the viewpoint of the conservative classes, whose leaders were bound together by a consciousness of kind, the dangers of the times were merely emphasised by Shay's rebellion of 1786, put down in the dead of winter at the private expense of the great merchants of Boston. And there can be little doubt that the meeting of the constitutional convention which established a strong government capable of dealing with the dangerous excesses of democracy was hastened and made possible by the fears which the events of the great depression had made so clear. When Washington became president, new trade routes were opened across the Pacific to Asia, and the dangerous and discontented were drained away to the opening west, where they were to modify their institutions and to inaugurate the middle period in American history.

Before the next depression Washington was dead and the generation that remembered the troubles of 1786 had passed away. An era of speculation followed the close of the Napoleonic wars. In America this took the form of a great land boom. Great areas were bought on credit, and pretentious towns were laid out in regions that were to remain for many years thinly inhabited. Then came the crash. Staple productions fell to less than half their former price; land values declined fifty to seventy percent; manufacturers were in distress; laborers were out of work, merchants were ruined. In Cincinnati, whose condition was typical, by the foreclosure of mortgages, the national bank came to own a large part of the city—hotels, coffee-houses, warehouses, stables, iron-foundries, residences and vacant lots. Throughout the west and south, the bank became known familiarly as the Monster. Out of the panic of 1819 came consequences no less momentous than those of thirty years before. Among these were the rise of political consciousness on the part of men who had previously been quite willing to let their betters do their thinking for them, growing demands for a more liberal suffrage, for the abolition of debtors prisons, and above all for the division of the public lands of the west in smaller units and on more favorable terms. Instead of the minimum of 640 acres that had been proposed by the aristocratic Hamilton, good land could now be bought in farms of only eighty acres and for as little as one dollar and twenty-five cents an acre.

As in the case of the earlier depressions, 1676, 1764, 1786, the most marked consequence was a new movement into the west, in which broken business men and discouraged debtors were in the van. Even the vast reaches of the middle west, where so much of the land had fallen into the hands of speculators, did not prove to be sufficient to satisfy the longing for escape which has been so common a feature of

the great American depressions. Moses Austin, an enterprising Yankee, who had been engaged in the iron business first in Virginia and then in Missouri, found himself hopelessly involved in the meshes of the great panic. Without despairing, he decided to give up his citizenship and gained a grant of land in distant Texas where under the banner of Spain he might carve out for himself a new career. He did not live to carry out his plan, and it was left for his abler and less visionary son to become the founder of a new commonwealth. And not the leaders only. For history again repeated itself, and no one can study the records of the early settlers in Texas without being impressed with the extent to which they came to avoid adversity, just as their forefathers had once served a hard period of indenture in the old days in Virginia.

Our editorial writers who speak of the panic of 1929 as one of unusual severity and significance have surely forgotten 1819 and have certainly overlooked 1837. For in that year the story was much the same except that this time there was no war, and that speculation had taken the unusually unfortunate form of canal building at a time when every month made it clear that the canal was doomed in competition with the steamboat on the rivers and especially the now rising railroads. Consider the fact that not some of the banks in the United States, but that every one closed its doors to its creditors and refused to meet its obligations in specie, that the burden of hopeless debts was so heavy that a reluctant congress was compelled to pass a general bankruptcy law by which thousands of distressed debtors were relieved from their obligations, that six states behind the bulwarks of the eleventh amendment were so involved that they repudiated their public debts either in whole or in part, and that of these debts eleven millions have never been made good until this day, and we have a few hints of the seemingly measureless calamity that had overtaken a nation that only one year before had been riding high on the crest of a wave of rising prosperity.

Against the sufferings of 1837 our recent experiences seem minor and insignificant. Captain Marryat, the English novelist, reached New York in the midst of the panic and has left a vivid description of his experiences: *'Two hundred and fifty houses have already failed, and no one knows where it is to end. Suspicion, fear and misfortune have taken possession of the city. Had I not been aware of the cause, I should have imagined that the plague was raging. . . . Not a smile on one countenance among the crowd who pass and repass; hurried steps, careworn faces, rapid exchanges of salutation, or hasty communication of anticipated ruin before the sun goes down. Here two or three are gathered together over on one side, whispering or watching that they are not overheard; there a solitary, with his arms folded and his hat slouched, brooding over departed affluence. Mechanics thrown out of employment, are pacing up and down with the air of famished wolves. The violent shock has been communicated, like that of electricity, through the country to a distance of hundreds of miles. Canals, railroads and all public works have been discontinued, and the Irish immigrant leans against his shanty, with his spade in his hand, and starves as his thoughts wander back to his own Emerald Isle.'* For the first time in the panic of 1837, we begin to have definite statistical proof of the severity of the suffering of the individual as marked by the figures both for suicide and by the number of convictions for crimes. With abundant resources, in an empty continent, America was passing through an experience like that of seemingly overcrowded England in the days when Sir Thomas More wrote his Utopia, and the social incidents differ only in the details of the time and the place.

Pass on twenty years, this time, through a period of great prosperity, in which America becomes the granary of the world and the haven of the starving and distressed. If the panic of 1819 may be called our great land panic, and that of 1837 the canal panic *par excellence*, that of 1857 was surely the first of our two great railroad panics. Consider an editorial from *Harper's Weekly* for October 10, 1857 which sounds as if it were written yesterday: *'It is a gloomy moment in history. Not for many years—not in the life time of most men who read this paper—has there been so much grave and deep apprehension; never has the future seemed so incalculable as at this time. In our country there is universal commercial prostration and panic, and thousands of our poorest citizens are turned out against the approaching winter without employment and without the prospect of it.'*

'In France the political cauldron seethes and bubbles with uncertainty; Russia hangs, as usual, like a cloud, dark and silent, upon the horizon of Europe; while all the energies, resources and influence of the British empire are sorely tried, and are yet to be tried more sorely, in coping with the vast and deadly Indian insurrection, and with its disturbed relations in China. Of our own troubles no man can see the end. They are fortunately, as yet mainly commercial; and if we are only to lose money, and by painful poverty to be taught wisdom—the wisdom of honor, of faith, of sympathy and charity—no man need seriously to despair. And yet the very haste to be right, which is the occasion of this widespread calamity, has also tended to destroy the moral forces with which we are to resist and subdue the calamity.' Wise words which if they could be remembered by more than a single generation of men might go far to prevent the next catastrophe!

But the very next experience of the kind came in a shorter period than had been usual, and was probably hastened by an increase of the spirit of extravagance and corruption which seems to be the inevitable consequence of every long war.

Of all our panics, this one which lies like a storm cloud across the years after 1873 has most points of likeness to our most recent depression. It came just eight and a half years after the conclusion of our most costly war; it began in Germany, which had a panic at almost the same moment as the United States, and from central Europe spread to France and Belgium and thence to England and all parts of the world. Everywhere currency inflation, with rising prices, wages and speculation, made itself conspicuous, and provoked a sharp reaction. Some panics have come out of a clear sky with unexpected suddenness, but in the America of the seventies, cautious observers had expressed a fear that the currency was too much inflated, that the railways were being overbuilt, that there was overtrading, and habits of luxury and extravagance were apparent in the expenditures of individuals and in the rising budgets of cities and corporations. In the spring of 1873 the money market was so badly shaken that some of the close friends of the eminent financial wizard, Jay Copke, begged him not to carry forward a syndicate to build yet another unneeded railroad across the plains. Throughout the first half of the year, the revelations in the Credit Mobilier scandals proved to the most unwary the manifold waste that was involved in the use of public funds for private enterprises, and scandals in the field of railroad promotion were matched in the business of banking and insurance.

The crash came in September, the most dramatic incident being the failure of Jay Cooke and Company, which had been regarded as a very pillar of financial stability. The public was still incredulous, and a newsboy, shouting, 'Extra, all about the failure of Jay Cooke,' was arrested by a horrified policeman, who still

felt it was the duty of the patriotic to whistle against the rising storm.

The panic, like all others, spread in widening circles and involved many who had no part in the area of corruption and speculation that had preceded. The building of railroads was suspended for lack of funds, giving an adventitious importance to unexpected terminals which soon became the rendezvous of the cattle drivers and gained the temporary eminence of the cow towns. Rolling mills, machine shops, foundaries and other industries connected with rail transportation were closed for lack of orders, and as the winter approached laborers to the number of hundreds of thousands were thrown out of work. In the cold weather of 1874-5, long bread lines and demands for outdoor and indoor relief were common features of the life in great cities. Despite an abundant harvest, cases of actual starvation were not uncommon. Two years later, conditions had failed to improve, and the newspapers were devoting editorials to the 'tramp-evil.' From all over the east came reports of thefts, incendiary fires, rapes and even murders committed by vagrants. In some New England towns people on the outskirts were compelled to abandon their homes and in Massachusetts alone there were said to be a thousand vagabonds roaming the rural communities. Two hundred desperate tramps invaded a village in central Illinois, and were only repulsed after a bloody encounter with the marshal and his constables. No one at the time regarded it as a function of government to bring any remedies to bear on a desperate situation. One statesman, James A. Garfield, said that it was no part of the business of government to find jobs for the unemployed. And this sentiment was widely applauded. In these circumstances, the American people found their own remedy in enforced economy. In the first year after the beginning of the panic the consumption of silks and other luxuries was decreased by more than four hundred millions. But even economy was no panacea, and the skies remained dark until the summer of 1878, almost five years after the commencement of the panic, when crop failures in other parts of the world created a new demand for American products, factories began to open, and life to return again to its normal channels.

The end of the reconstruction experiment in the south, the rise of agrarian power and discontent in the west, the introduction of windmills and barbed wire into the plains of the great west, the temporary supremacy of the cow towns at the end of unfinished railroads, where unforeseen contributions of a great panic to the social history of the nation.

The story of our three last panics is too familiar to need recounting. In one respect they belong to a different cycle. For the cities rather than the west have become the true American frontier, and the movement of population which always follow a panic takes a different direction. But the incident again sounds strangely familiar, and in each case, in 1893, in 1907, and now in 1929 it is apparent that the nation has again stood as it did in the days of Washington, at the cross roads of social and political change. We are somewhat too close to those events to be able to estimate their significance. But a few consequences are almost too obvious to require comment. Thus out of the tribulations and uncertainties of the nineties came the relative stability of the gold standard as established in the act of 1900. Similarly the reform of the banking system in the Federal Reserve Act of 1913 can be traced directly to lessons learned in the panic of 1907. However gravely we may differ in our theory of the causes of panics, their social consequences have been both similar and momentous. From the point of view of morals and of institutions, the periods of prosperity often appear in perspective relatively static and hopeless; and with all the suffering which are in-

cident to periods of depression, it is from these events that we are able to trace the process by which injustice has been lessened, ideals aroused, and progress made possible.

Thus from the first tobacco planter in Virginia to the industrial and financial leaders of our own day, even when we leave out of account the minor rise and fall of the business cycle, no man has been active in the industrial or business life of his own time for as much as thirty years, without having the opportunity of at least one period of great and unusual prosperity and similarly passing through the gloom and the darkness of one depression. Curiously enough, if you consider the spacing of these depressions, they seem to fall sufficiently far apart to make it unlikely that few business men in the period of an active life of average length will ever be lucky enough to pass through more than one of these unusual periods of prosperity or unfortunate enough to have to meet more than once the oft repeated problems of more than a single general depression. Accordingly the individual who gets through with his panic early seems to be in a singularly fortunate position, and can hope with some slight confidence that the next major depression will fall in the life of his successor. On the other hand, the person who meets the crushing force of a depression in the later years of middle life, has more than once found the remaining years all too short to overcome the sudden disadvantages which have been imposed.

In all the abundant literature which has arisen from these depressions no one seems to have suggested the most obvious explanation that something may be due to the capacity of each generation of men to learn something from their own experience and to guard against mistakes which events have made all too clear. From the superficial view of the historian, at least, there is more than one indication that men have often understood at the time, just as clearly as we can point out today, the fundamental causes of their own misfortunes, and that the generation of planters, bankers or stock brokers which has just passed through one of these oft-repeated human experiences is apt for a time to be fortified against similar dangers. So the persons who have lived through one great war are surely likely to handle the dynamite of international animosities with peculiar caution. But time is long and memory brief, and neither the diplomat nor the business man is skillful in using history, the long memory of the human race, as an aid to the recognition of old dangers under strange new forms, and so, in answer to the insistent demands of human greed or human ambition, twenty or at the most thirty years suffice to wipe out all the effective memories, to clothe the hideous details of the last war in the attractive illusions of a glorious adventure and to make of the thoughtless cult of prosperity something of a passionate dogma against which even the boldest may not stand with impunity. In the meantime, often, the institutions in business or in government, which were designed to prevent the recurrence of similar evils in the future, have sometimes reached maturity and have begun to decay without prompt recognition of changed circumstances. Similar forgetfulness and institutional decay, may perhaps, in a larger philosophical view, help to account for the curious rhythm in these phenomena. If so it may not seem strange that each generation has had to face its major war and likewise its major panic, and that the length of time between two of these occurrences is roughly similar.

The earlier theories of panics by European writers, beginning with Sismondi in 1818, and varying from the determinism of Jevons with his sun spots to the half humorous individualism of Walter Bagehot, who suggested seventy years ago that panics might be prevented if only the Lord Chancellor could control the in-

vestments of rectors, grandmothers, and other foolish people, have of course had their echos in America. But the favorite explanations have always laid the chief blame on the relative scarcity or abundance of the monetary medium. Unfortunately such theories do not seem to be especially helpful at the time, for while one group of contemporary writers blame all the evils of the period to a currency that is too abundant, others are quite certain that it is too scarce. In 1786, in 1819, in 1873, and in 1893, the remedies suggested for depression were as far apart as the two opposite financial theories of the cause. And while uncertainties as to the value of money have been a common feature of panics and depressions, they have been by no means universal, suggesting the possibility at least that the supposed cause is after all a symptom and that the real origins of these phenomena, even though they do not lie quite so deep as the meteorological theory would suggest, are somewhat more complex than the mere quality of the monetary medium would lead one to suppose. Certainly at the beginning of the present depression there was little uncertainty as to the stability of the gold standard and the level of prices did not show that marked inflation which would account for the length or the severity of the depression. It is accordingly unlikely that similar experiences can be avoided, though they may be mitigated, by regulating the mere quantity and value of the general monetary medium. The passage of the gold act of 1900 was hailed by a paean of praise in the great New York dailies, and one went so far as to describe the act as one that was destined to end panics in America. Similarly the experiences in the brief depression of 1907 were undoubtedly a motive of great force in producing important and far reaching changes in the institution of banking culminating in the Federal Reserve Act of seven years later; and though the newspapers with even greater unanimity proclaimed the act to end panics, just as later the same journals saw the possibilities of a war to end war, we have now lived to the time when one great nation has avoided a depression by accepting permanently depreciated currency, all the theories of stability to the contrary, and another in the very sink of bitter calamity has been compelled to abandon the gold standard at least for the time as the only possible escape from a hopeless financial dilemma. And the United States with abundant gold and a well regulated system of national banking has escaped only in part the dangers of an almost universal situation. The explanation lies evidently somewhere else.

But in mentioning without seeking to analyze well known general explanations of all panics, I had almost overlooked the astonishing similarities between the current explanations of the two chief groups of politicians at the time of each recurrent depression. One group, the one in power at the time, emphasizes always and in almost the same words, the universal and inescapable character of a depression against which no human wisdom could possibly have guarded, but from which with faith, courage, and especially by continuing to vote the right ticket the country may yet be delivered. Turn to the literature of 1837, 1857, 1893, and all the rest and, if history does not repeat itself, the words of politicians often do; and you will at least discover the unconscious sources of the political addresses of next year. The views of the opposite group of political leaders suggest that while general causes had no minor part in the calamities which are so well known, the chief blame lies in the cowardice, the weakness and the folly of the party in power. The truth as so often may perhaps be discovered half way between; for while there have been no cases of real world panics, and even in the worst some important countries have either by wisdom or good luck managed to escape, and while most

panics, including the last, have in each country been made more terrible by the ineptness of statesmanship, no one in his senses, after the heat of passion has died down, would be apt to place the most obnoxious politician in any leading role. But while these contemporary theories, one impersonal and fatalistic, the other individualistic and personal in a highly concrete way, may have no scientific value, the historian can not overlook the fact that men have believed sincerely in the Jackson panic, the Buchanan panic, the Cleveland panic, the Roosevelt panic, the Wilson panic, and that even in these days of scientific enlightenment, if the phrase, the Hoover panic, is not yet familiar, it will undoubtedly come to life next year. The fatalism and the individualism of the politicians, while actuated by more obvious and immediate motives, carries the two groups no farther apart than the fatalism and the individualism of the economist, and leaves the average layman, of whom the historian is necessarily an ignorant and eloquent example, stranded in a medley of alluring but unconvincing explanations.

The fatalistic view of panics, whether in its political or its economic phase, and it has both, is sometimes given special precision by the comparative nearness of some great war, and politicians and business men alike, whose deeds are in grave danger of being subjected to the pitiless analysis of the theory of individual responsibility, seize at once on so convenient and so hateful a scapegoat. And with much truth; for most men feel that in some half realized way, the waste, the extravagance, the moral decay which accompanies a great war are connected with panics and depressions some of which come many years later. So, even at the time, the panic of 1819 was readily explained, without any sharp effort at causal analysis, as the inevitable aftermath of the Napoleonic wars in which at the end America, of course, had become involved. This view was especially common among the New England Federalists who had so bitterly opposed entrance into the war. Again in 1873, the explanation lay somewhat ready to hand, in the fierce struggle that had ended eight years before. A few contemporary economists have even attempted to make the connection more sharp and to account for the disturbing fact that in the most notable cases where panics and depressions have been causally connected with wars, the hard times in their most extreme form, have ordinarily come so long after the deeds they are supposed to commemorate. From this point of view two panics follow every great war. The first of which the depression of 1921 is an example, is called the primary depression and introduces a long period in which agriculture and the extractive industries generally, unduly stimulated by the needs of a war time demand, find themselves face to face with reduced prices for wheat, cotton and other products. The result is an agricultural depression, which proves to be actually beneficial to the city dwellers, and leads to an overexpansion of industry, far beyond the possibilities of the impoverished but consuming farmer. Then comes the major or the secondary panic, some eight years later in which country and city, agriculture and industry are at length involved in common though unforeseen calamity. A theory of primary and secondary panics, when tested historically, fits with reasonable accuracy the events after the Civil war where a brief depression in 1866 was followed by a calamitous panic in 1873 and is again emphasized by recent history where the depression of 1921 and that of 1929 follow at almost the same interval. But after other wars, the formula, in America at least, is no longer good. Thus after the Revolution, there was the one great depression from which Washington gained solid claims to statesmanship, and again after the war of 1812, there was a single depression in 1819. But since in both cases, America

was still predominantly agricultural, these very exceptions may prove the rule. In other words, primary and secondary panics may be necessarily merged where the country has a simple form of economic life, either industrial or agricultural to the exclusion of the other. All that one can say is that a country balanced between agriculture and industry has at least in America lasted too short a time to make such a precise theory capable of convincing proof, and the chances are that when the next war comes with its next cycle of panics economic conditions may have changed in so many and such unforeseen ways as to make still another theory of the exact relation of wars to depressions. Nothing can illustrate better the fact that history is history and not economics and that there are limits to the inductive and historical approach to economic theory which no diligence is ever likely to overcome.

It might perhaps be possible to classify American panics as war panics and peace panics. For if we apply the simple logic of the method of agreement and difference, it is at once apparent that if we place 1764, 1786, 1819, 1873, and 1921 in the first category, there are others equally notable which lie in long periods of profound peace. To this group undoubtedly belong the severe depressions of 1837 and 1893. Conversely, if there have been panics without wars, there have been wars without panics. Thus the Mexican war, which for the time was sufficiently costly, was followed by no panic. Similarly, there have been historians to suggest that the buoyant optimism of the period of the Spanish American war, in which soldiers went to Cuba to the tune of 'There'll be a hot time in the old town tonight,' was at least in part a reaction against and a way of spiritual escape from the gloom and depression of the years which had preceded; but no one has argued that the brief rich men's panic of 1903 or the so-called Roosevelt panic of 1907 were in any sense primary or secondary depressions having any relation whatsoever to the military history of 1898. Indeed all the evidence seems to point to the conclusion that these depressions are to be explained by factors that were peculiar to the business conditions of their own time. Accordingly, no one would maintain that all wars cause panics and that all panics are caused by wars; so that if any general theory be possible, it must arise out of some common condition, frequently present in long periods of war, but which may with almost equal ease manifest itself in periods of profound peace.

But the most obvious and superficial method of classifying American depressions is by their length. And this method may not be without suggestive possibilities. Thus the depressions may be sharp and brief, limited in area, and followed in a few months by renewed periods of prosperity. To this group would fall many minor depressions, for example, 1825, 1884, 1903, 1914. Again, we seem to have a group of panics which have lasted approximately two years and of which the one in 1857 was undoubtedly the most notable. To a distinct class would fall the five years of depression that followed 1837, 1873, 1893. Some one with great confidence in superficial historical analogies might even be found to argue that after two years of gloom the third year of a panic will be marked by flickering movements in the indices of prosperity, in which alternate despair succeeds to hope; that in the fourth year, the signs of returning prosperity are at once more numerous and more evident; and that the fifth year will come to benefit both the American people generally and those political groups which at the time are in a strategic position to capitalize the return of the full dinner pail. But experience has after all been too brief to tempt the cautious into the field of prophetic generalization. Under altered conditions, there seems to be no good

reason why other categories of different length may not and soon be added to those which roughly describe the length of American depressions.

Conditions change so rapidly, that it is unlikely that any theory of panics will be entirely satisfactory for more than a single decade. And yet, from even this cursory and unsatisfactory review of the chief American panics and depressions, different as they have been in many of their details, a few generalizations seem at least tentatively possible. In the first place, every panic of which we have any record has had as an antecedent condition a process of investment in lands, ships, goods, stocks, notes or other securities from which the investor has expected at least a return and often an unreasonable profit. Some of these investments have been virtually compulsory, as in cases where modern people have capitalized the very wastes and losses of great wars; again they have been obviously short sighted, as in the case of the canals of the thirties and again in our own day in foreign investments in countries that were virtually prohibited by increasing tariffs from returning either principal or interest on their debts; others, still, have been marked by obvious elements of wasteful fraud, as in the case of the railroads of the seventies; and some finally have been ultimately wise and even socially beneficial, but have anticipated somewhat too eagerly the demands of a slowly rising population. But whether the investments have been compulsory, dishonest, absurd, or even wise, the day of reckoning has come when the debtor has proved unable to pay, and the panic itself seems without exception to be the immediate result of the effort on the part of creditors to collect bad debts. For this reason one of the persistent features of panics has been an increased consciousness of kind among creditors and debtors alike, either individuals or nations, sometimes, as in Bacon's rebellion and the uprising of Daniel Shays, leading to armed conflict and again as in the march of Coxey's army ending in complete fiasco. These depressions have usually been hastened and made more severe by elements of uncertainty in monetary systems, in tariffs, or in diplomacy, to such an extent that in contemporary discussions these occasions of a panic have more than once come to occupy the center of the stage.

Now, if the causation of panics has been even roughly sketched, the other side of the equation is at least equally significant and has been too much neglected. For from these panics have come social consequences, using the phrase in its largest sense, which have not been entirely dissimilar. In America at least, one of these has been a large movement of population, like the westward movement of the early panics, and another has been the emergence from the conflict of the times of new and significant institutions, of which the Federal Reserve Act, the Independent Treasury System, and even the constitution of the United States may be regarded as examples. It is by these and other similar social consequences, that the modern historical emphasis on these periods of depression is to be chiefly justified.

For, if bad investments and uncertainty have been the two common factors in the origination of panics, it is well to remember that no one of these has proved to be like the depressions of the ancient world either hopeless or without incidental advantages. In every American panic, the path of escape has been found in the very conditions of the depression itself. By the acceptance of the lower price levels, by the removal of uncertainty, as in the case where Washington led the way, sometimes by the discovery of wider markets, where luck and foresight have both sometimes contributed, by enforced economy, by writing off bad debts, the foundations have been laid for still another period of prosperity.

The most discouraging feature of the whole story is that the last experience, in spite of a well organized system of banking and of immense resources, both natural and acquired, in spite of all its vaunted business sagacity, with almost no accidents to furnish an excuse, America by following at the same time two contradictory policies regarding her tariffs and her investments, has deliberately walked in a path which seems to court inevitable disaster. The history of ancient and mediæval panics is often a monument to human misfortune; that of modern panics, in which the last is surely no exception, are a supreme monument to human greed and to human folly. Let us trust that even this one will serve its function, as in Washington's day, to arouse public opinion to unrecognized conditions, to change accepted formulas, and to introduce both in production and in foreign commerce methods which are suitable to a new age. At such a time I can do no better than to close with the immortal words which have come down to us from Washington's farewell address: *'As a very important source of strength and security, cherish public credit. One method of preserving it is to use it as sparingly as possible—avoiding occasions of expense by cultivating peace, but remembering also that timely disbursements to prepare for danger frequently prevent much greater dangers to repel it.'* In such a spirit who can doubt that courage and patience will, and that soon, point the way as so often in the past to a better day?

Doctor McLaughlin spoke on "George Washington and His Times," before an audience of approximately 1,200 people in the afternoon session. Rev Herbert J. Cockerill, pastor, Methodist Episcopal church, read the invocation. Musicians were the university mens' glee club.

George Washington and His Times

Washington today stands preeminent among the statesmen of time. This eminence was won by undeviating devotion to duty and high-minded loyalty to what he believed right. The essential elements of his character—honor, probity, unselfishness, patience, readiness for service, deliberate wisdom—lie at the basis of his success. It is not always that we can see the full force and influence of the substantial, though homely virtues, without which daily life would be unsupportable; the practice of these virtues by the every day man in his every day job makes every day life endurable. Washington not only had these virtues in marked degree, a degree amounting almost, if not quite, to perfection, he had the opportunity of using them on a vast and impressive scale, that all the world could see the difference between duplicity and rectitude, between sordid selfishness and open-hearted service. All that is of consequence to us and to the world today. We may ponder the fact that the Revolution was won, and constitutional government was established on the basis of Washington's character.

No one can appreciate Washington's achievements unless he knows something of his times and thus sees the difficulties he had to overcome, the heavy burdens he had to bear and the almost incredible patience with which he bore them. It is often said that he was not brilliant, that he frequently relied on others, on Hamilton for example in later years, that he was not alert and keen and analytical. There is some truth in these statements I think; but the impression the unwary might gather to the effect that he was second-rate, appears to me to be ridiculous. People are often impressed by oration, and have great respect for a certain awful regard for brilliant strokes. They pay deference to mental agility. But when all is said, nothing is so much needed in wise statesmanship as good judgment, sober

thought, unerring sense of what is sensible and practicable. Now Washington presumably being human, made mistakes, but it is difficult to find them. He followed his course with so much patient care and with such devotion that a nation and the world pays him homage.

The word "patience" I have used more than once. Washington's self-control under insuperable difficulties is the one most salient fact. No one can appreciate him unless one sees the conditions which must have appeared even to him to make success almost impossible. He rarely complained, indeed complaint would seem to be the last word we should use and the most inappropriate. The land had no adequate government, as the war was a war against authority. There was a good deal of disorder, and war lets loose passions and creates a state of mind which we in this generation can appreciate. In some parts of the country, the struggle bore the aspects of a civil war, with all its demoralizing and disintegrating effects; the militia forces on which he had in some manner to rely were unreliable and wayward; Washington, grieving over the suffering of his brave little army, spoke in private letters of the speculation, speculation and extravagance which seemed to have taken hold of every order of men. We might go on at length painting the dark side of the picture, and that dark side one must recognize if he wishes to estimate properly Washington's achievements.

But there is another side—though that also is amazing. It now seems almost incredible that despite the disintegrating effects of war, the men of that generation accomplished so much. In fact we have the important thing when we focus our attention upon the war and think of it only as a war in which Britain was defeated and the old empire broken asunder. Isn't it possible even in text-books to bring out the dominant fact that the time was a time of construction rather than destruction? The men of that one generation did more in the way of developing political principles and establishing institutions which have lived and influenced the world than any other one generation in the history of the world. The Revolution was a movement which began long before the war, it is true; but if we speak of the Revolutionary period, we mean the movement which became clearly manifest in the mid-eighteenth century and indeed with the adoption of the constitution of the United States. The Americans in some thirty years found the basis for the creation of the state constitutions and they built the United States as a complex institutional system. This achievement is of profound significance; its accomplishment, one of the greatest in human minds, should give us courage and the determination to fulfill our destiny. The statesmen of the Revolution in organizing state government and building the United States needed the materials gathered from history and practical experience. They did not cast aside the lessons of the past. The period therefore was a period of development, of new adjustments of the old. It was creative without unwholesome destruction. As an example of sober statesmanship—a statesmanship which did not scorn ideals and yet was ready and anxious to profit by what the men of the past had said and done—the work of the Fathers seems to me literally preeminent, as Washington was preeminent, for without him, it appears to us, not only the war but national integration and construction would have been impossible. Much as can be said of the acts of turbulence and disorder of tea parties and burning effigies, the time has come when we should estimate the period of the Revolution as a time of creative statesmanship, and learn the lesson to be gathered from the courage and the wisdom of men who amidst war and social confusion could go forward in their tasks of construction with wisdom.

An editor and a military leader paid

tribute to George Washington at the banquet which climaxed the day's entertainment. Mr Haskell traced the government under Washington, describing it as "a great experiment for the promotion of human happiness." He traced the intrusion of government into business from Washington's time through recent presidential administrations.

"The prohibition problem really started under Washington with the whiskey rebellion," the editor pointed out, "which represented one of the first governmental intrusions into business.

"That the government is a government of accommodation rather than of law was apparent even in Washington's time and the first president realized the importance of the personal element in governmental affairs.

"Still more governmental intrusion was represented by the income tax legislation carried through in Roosevelt's administration. With the coming of Wilson, the tide of social legislation rose still higher with bills regulating banks and the federal trade commission, then all such action was submerged in the great war.

"President Hoover has been buffeted by the hand of time, and he shows the great strain which he has been under since his administration began."

Following Haskell's speech and a violin solo by Paul S. Carpenter, head of the department of violin, Lieutenant Colonel McNair delivered his address.

"Washington indeed deserves a place among the great commanders of the world. His greatest accomplishment as a soldier was his strategy and his greatest virtue was his will to win.

"As he had no secretary of war, Washington had to face congress alone in trying to obtain the things he most needed, and congress represented a real difficulty in appointing his generals and in even directing his actions at times. Washington's early military training and environment had a great deal to do with his success."

Following his visit to the university, Mr Haskell, on his return to Kansas City, published the following editorial in *The Kansas City Star*.

The importance of higher education has been recognized from the earliest days in America. Privately endowed colleges began with the founding of Harvard. The new states as they entered the Union have set up state universities in addition to these endowed institutions because they wanted to make sure that their young people should have the advantages of university training if they so desired.

It is illuminating to observe one of these universities in operation in a new state and to consider its leavening influence on the life of the people. Oklahoma has built a finely equipped institution at Norman. Its administration building is in the Tudor Gothic style. The latest addition, the Gothic library, constructed for eventual connection with the ad-

Dr Cecil T. Langford, '18 sc., M.S. '20, professor of chemical engineering, was formerly head of the chemical research department of the Marland Oil Company



TRUBY

ministration building, has an interior finish of lovely carved oak. It is a great thing that the young people of the state can work in such an atmosphere.

The observance of Washington's birthday was characteristic of the leadership of the university under the inspirational direction of President W. B. Bizzell. It was made a notable patriotic day. Outside speakers were brought in, including such distinguished scholars as heads of the American history department of Rice Institute, Houston, and the University of Chicago. The influence for good citizenship of such occasions is evident.

A state is fortunate when its human resources can be enriched year by year by the graduates of the great educational institutions which the people have established.



THE CHEMICAL ENGINEER

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the speed of any reaction is accelerated by raising the temperature of the reacting substances. We find, therefore, that many processes developed in the laboratory, where the cost of heat energy is of no consequence can not possibly be operated commercially because of large and expensive heat requirements. Processes development, which is adapting laboratory experiments to plant practice, calls for a different kind of training than that needed for the laboratory research. It is decidedly the field for the chemical engineer.

The great assets of this country, its fertile soil, abundant timber, coal, iron ore and oil deposits are being seriously depleted. We have used the cream of our resources. If it were not for the scientist and engineer, we would, as a race, be facing the prospect of a more laborious life and lower standards of living. If however, our problems are

attacked, scientifically and energetically, utilizing modern methods of research, our people may not only maintain their present standards of living and leisure, but also enjoy a more healthful and pleasant life as the result of new discoveries in whose development the chemical engineer will have played an important part.

«Doc» Langford

Ask any chemical engineer concerning the faculty of the Chemical Engineering school and the chances are he'll start out at once talking about "Doc" Langford, '18 sc., M. S. '20. If a chemical engineer has a problem of any sort, regardless of whether it concerns water analysis and treatment, oil refining, pipeline flow, rayon manufacture or the shifting of an equilibrium constant with an increase in temperature, it's a safe bet that he'll soon find his way to Dr Cecil T. Langford's office where his problem will be solved. That's why the chemical engineers believe what he says, because he demonstrates his practicability and knowledge in a way that is clear to them.

Doctor Langford received his B. S. in 1918, and his M. S. in 1920 from the University of Oklahoma. After he had received his B. S. degree he was employed for a time with Dupont Chemical Company. He received his Ph. D. from the University of California in 1926. Returning to Oklahoma he was employed as research chemist and head of the chemical research department for the Marland Oil Company at Ponca City; subsequently he became director of the entire research department for Marland and retained this position until the fall of 1929 when he returned to accept the position of professor of chemical engineering at the university.

While attending the university Doctor Langford was elected to Phi Beta Kappa and Sigma Xi and he is a member of Alpha Chi Sigma, professional chemical fraternity.

The chemical engineers swear by what Doctor Langford says, and with his professional and academic training, he is indeed a vital and important part in the training of the chemical engineers of the University of Oklahoma.

FORREST E. LOVE



SOCIETIES

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There are now over sixty one chapters at the leading engineering schools of America which have initiated more than eighteen thousand members. In the spring of 1926 the petition of Tau Pi, a local honorary engineering fraternity, was accepted and Tau Beta became a coveted honor on the campus.

The first and primary qualification for membership is scholarship, while other requirements are capacity for leadership, character, and social qualities. In the line of scholarship, the upper one fourth of the senior class and the upper one eighth of the junior are eligible. However, this is further restricted to those having a two point average or better. It is felt that the above requirements qualify one to become a leading engineer.

The officers of the local chapter are: Scott Hammond, president; Bob Feemster, vice president; James Callahan, recording secretary; Gerald Billyeu, corresponding secretary; J. L. Forbis, student treasurer; H. V. Beck, faculty treasurer; and Robert Ratliff, cataloger.

Sigma Tau

Sigma Tau, a national honorary engineering fraternity founded at the University of Nebraska February 22, 1904 has at the present time twenty three chapters located in various parts of the United States.

Mu chapter at the university was established May 13, 1916. The motives that guided the founders sprang from a general desire to be of service to engineering educators in colleges and universities where chapters are located. The membership is selected from those men who rank in scholarship among the upper one third of the juniors and seniors of a recognized engineering school. Selection of members from those men who qualify scholastically is made on the further basis of practicability and sociability.

Honorary membership may be granted to members of the engineering faculty ranking higher than instructor or to prominent practicing engineers.