HERMAN T. BRISCOE (1893-1960): A SUPERIOR ROLE MODEL IN CHEMICAL EDUCATION AND ACADEMIC ADMINISTRATION

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ABSTRACT: Herman Briscoe was so outstanding in the Shoals, Indiana, public schools that after he finished high school in 1912 and took teacher training courses that summer at Indiana University, he taught in Shoals High School for the next six semesters. At the same time, he took summer courses at Indiana University. He completed an A.B. degree in chemistry with high distinction in 1917. Over the next five years, he served consecutively and briefly as Superintendent of Schools in Shoals, then enrolled in the Officers Training Program in the U.S. Army, was transferred to industrial work on chemical explosives, and, after the war, devoted brief periods of time to teaching chemistry at Stark's Military Academy, Harvard University, and Colby College before returning to Indiana University for graduate work in 1922. He joined the faculty at Indiana University in 1924, immediately after receiving his Ph.D., and became Professor of Chemistry in 1928. From 1925 to 1942, he directed the graduate work of 25 students, seventeen of whom earned a Ph.D. He was also the author or coauthor of 23 scientific papers and one U.S. patent. Between 1931 and 1951, he published several very successful chemistry textbooks. His standing as a chemistry teacher and public lecturer rose correspondingly. With the appointment of Herman B Wells as Acting President of Indiana University in 1937 and President in 1938, Briscoe was promptly selected, along with two other well-regarded faculty members, to serve on Wells' Self-Survey Committee. Many sound and basic changes in the University were recommended by the Committee, and within a few years, all the proposed changes were adopted. Early in this notable transformation, Briscoe became the first Dean of the Faculties. Soon, new responsibilities included his appointment as the first Vice President of the University. Functioning closely together as an administrative team, Briscoe and Wells became recognized as great role models. When Briscoe retired (1959), the most meaningful tribute to his excellence was made by Wells (Gaugh, 1959): Briscoe was the "wisest educational administrator in America." Following Briscoe's untimely death in 1960, a major residence complex was named after him, and the endowed Briscoe Professorship in Chemistry was established. Both serve as tributes to Dr. Briscoe as a role model in chemical education and academic administration.

KEYWORDS: Chemical education, chemistry as a changing science. Herman T. Briscoe, research is second in value only to teaching, structure and properties of matter, student guidance is basic in education, Herman Wells.

Residents of Indiana, especially members of the Indiana Academy of Science, can gain much satisfaction from learning about Herman Thompson Briscoe (1893-1960). His influence in chemical education and various aspects of university administration as well as his character and ability to guide others in diverse matters was far greater than is commonly realized. The dimensions of Dr. Briscoe's professional life are extensively cited in *The Development of Chemistry at Indiana University 1829-1991* (Day, 1992) and formed the basis, along with other personal and professional appraisals of his life and contributions, of an unpublished biographical sketch prepared by the author in the 1980s (Day, 1987).

EARLY YEARS AND EDUCATION

Dr. Briscoe was born and raised on a farm near Shoals, Indiana. From his earliest years, he evidenced exceptionally high intelligence and pleasing personal qualities. In the modest Shoals High School, he consistently earned high grades while completing the following units of credit: English composition and literature 3, Mathematics 3, Latin 4, German 3, History 1, and Geology ¹/₂. After graduation, he took teacher preparation courses in the 1912 summer session at nearby Indiana University and received a Class A certificate for teaching. Beginning immediately, and during the following three academic years, he taught several courses—including Latin—at Shoals High School. Before the end of the 1914-15 school year, he had become the school's Principal. During the summers of 1913 and 1914, he took additional courses at Indiana University.

Briscoe returned to Indiana University on a full-time basis in the summer of 1915, and in October 1917, he received an A.B. degree in chemistry with High Distinction. In addition, he was elected to membership in Phi Beta Kappa. During his two years as a full-time university student, he was active in the strong debating program, which competed with Butler, DePauw, and Earlham. Wendell L. Willkie (1892-1944) was a fellow member of the debate group. In his second full year, Briscoe was President of the University's Indiana Debating League. Among other responsibilities, he was a member of the Indiana Club which emphasized the "ideals of high scholarship, and ambition for proficiency in dramatic attainments" (Day, 1987, p. 2).

At the end of the 1917 summer term, the 24-year-old chemistry graduate became Superintendent of Schools in Shoals! Briscoe served in this role until he enlisted as a private in an Officers Training Program in the U.S. Army in May 1918. The Army transferred him to the Hercules Powder Company in Ohio, where he remained, working on chemical explosives, until February 1919. From then until 1922, the readjusting former soldier held successive teaching assignments at Stark's Military Academy in Alabama, Harvard University, and Colby College in Maine. Finally, he returned to Indiana University to do his graduate work in chemistry (1922-1924). Under the guidance of Professor Frank C. Mathers, he received A.M. and Ph.D. degrees in chemistry.

His 149-page substantive and exceptionally well-written doctoral thesis was entitled "The Properties of Dolomitic Limes as Related to the Properties of the Stones, the Conditions of Burning, and Subsequent Treatments." The principal findings of his research were published in the 1925 issue of the *Proceedings of* *the Indiana Academy of Science.* In 1926, a U.S. patent (1,588,253) was issued to Briscoe and Mathers covering some of his thesis work—a process for producing plastic dolomitic limes (Day, 1987, p. 3). In 1927, more of their research on the plasticity of finishing limes was reported in a journal published by the American Chemical Society, *Industrial and Engineering Chemistry.* This early focus on research in the laboratory was influential in shaping the substance and diversity of Briscoe's scientific interests and understanding.

Mounting teaching responsibilities—starting even before the completion of his doctoral work in 1924—diminished the time available for Briscoe's research activities. However, from 1925 to 1942, Briscoe supervised the graduate-level research of 25 different students, and 17 received Ph.D. degrees in chemistry from Indiana University. Most of the research was on the conductivity, chemical reactions, and physical properties of substances in nonaqueous solvents. Briscoe also authored or coauthored 23 publications: seven were in the *Proceedings of the Indiana Academy of Science*, nine in the *Journal of Physical Chemistry*, and the remainder were in various other journals. Two papers were concerned with teaching new concepts on acids and bases, and two others were on manpower management problems in World War II.

SCIENTIFIC PAPERS

- 1925. The calcination of dolomitic limestone. Proc. Indiana Acad. Sci. 35: 133-39.
- 1927. (With F.C. Mathers). Plasticity of finishing limes. Ind. Eng. Chem. 19: 88-93.
- 1929. (With H. Hunt). The conductivity of solutions of some aliphatic acids in water and ethyl alcohol. J. Phys. Chem. 33: 190-99.
- 1929. (With H. Hunt). The electrical conductivity of organic acids in water, alcohols and acetone and the electronic structure of the acids. J. Phys. Chem. 33: 1495-1513.
- 1929. (With H. Hunt). Factors determining electrolytic dissociation. J. Chem. Ed. 6: 1716-1725.
- 1929. (With F.M. Whitacre). Esterification in presence of anhydrous salts. Proc. Indiana Acad. Sci. 38: 187-194.
- 1932. (With F.J. Welcher). The analysis of anions. Chem. News 145: 161-170.
- 1932. (With P.E. Williams). The separation and identification of alkaline earths. Chem. News 145: 177-184.
- 1933. (With W.L. Bright). The acidity of organic acids in methanol and ethyl alcohol. J. Phys. Chem. 37: 787-796.
- 1933. (With F.E. Dolian). Vapor phase esterification. Proc. Indiana Acad. Sci. 42: 101-107.
- 1935. (With F.E. Dolian). The refractive indices of non-aqueous solutions of metallic chlorides. Proc. Indiana Acad. Sci. 45: 110-115.
- 1936. (With R.C. Gore). The dielectric constants of solutions of some organic acids in ethyl alcohol and benzene. J. Phys. Chem. 40: 619-625.

- 1937. (With F.M. Whitacre). Esterification in the presence of anhydrous salts. Proc. Indiana Acad. Sci. 46: 133-141.
- 1937. (With F.E. Dolian). The viscosities of solutions of chlorides in certain solvents. J. Phys. Chem. 41: 1129-1138.
- 1938. (With T.P. Dirkse). The electrodeposition of metals from non-aqueous solutions. Metal Ind. (New York) 36: 284-285.
- 1938. (With J.S. Peake). Measurement of ionization constant of benzoic acid using silver chloride electrodes. J. Phys. Chem. 42: 637-640.
- 1939. (With W.H. Cathcart and R.H. Treadway). The bromination of acetone in non-aqueous solutions. Proc. Indiana Acad. Sci. 48: 92-97.
- 1940. (With T.P. Dirkse). The conductance of salts in monoethanolamine. J. Phys. Chem. 44: 388-397.
- 1940. Teaching the new concepts of acids and bases in general chemistry. J. Chem. Ed. 17: 128-130.
- 1942. (With J.T. Pinkston). Conductometric titrations in non-aqueous solutions. J. Phys. Chem. 46: 469-473.
- 1942. (With W.T. Rhinehart). Relative viscosity of non-aqueous solutions. J. Phys. Chem. 46: 387-394.
- 1943. Training program for chemists. Chem. Eng. News 21: 1702-1704.
- 1944. The crisis in chemical manpower. Chem. Eng. News 22: 584-587.

PERSONAL LIFE

The author received many helpful letters from people who knew Briscoe very well during his student years and/or other periods of his later life. The author also had conversations with most of those who wrote to him.

Russel L. Hardy (A.B. '22 and A.M. '23) wrote in 1962 (Day, 1987, p. 40) that "... he [Briscoe] was born with intellectual honesty and this hereditary factor governed his life." Also, in this long and most sincere letter, he concluded that, "Herman's . . . passion for an honest, thorough intellectual performance by his teachers . . . is no accident nor surprise that it emerged as the dominating factor in his thinking and able planning for Indiana University during the remaining years of his life." At the time of his retirement in 1962, Hardy was Director of Electrochemical Production for the DuPont Company.

Hardy, Mrs. Briscoe (formerly Orah Cole), and Mrs. W.J. Sparks (Meredith Pleasant) provided considerable information about the swift and unexpected marriage of Herman and Orah. As Hardy (on file in the Chemistry Archives) commented, "He [Briscoe] seemed to be almost totally preoccupied by work" and he "... had no personal interest in any young lady at the time." But in May 1928, Meredith Pleasant, a chemistry graduate student, arranged for Orah, her roommate, to have a blind date with the young Associate Professor. Later, Meredith married a fellow graduate student, William J. Sparks, who eventually became one of the most highly recognized chemists in America. But the romantic fire she ignited through the blind date swept on and three months later Herman and Orah were married. During the brief courtship, Herman was elevated to the rank

of Professor of Chemistry. In a letter to the Sparks written in 1960 shortly after her husband's death, Orah stated: "Meredith, that blind date you arranged for us was back in May 1928. We never forgot who brought us together." The Briscoes had four children: Mrs. Stephen G. Ayers (Catharin Alice), Robert Herman, William Cole, M.D., and James Frederick (deceased in early childhood). Each surviving child married and had children.

TEACHING AND TEXTBOOKS

Briscoe's great interest in and effectiveness at teaching chemistry were reflected in the chemistry texts and laboratory manuals that he authored between 1927 and the early 1950s. His initial effort was a set of mimeographed notes on qualitative chemical analysis which focused on "the theories and principles of electrolytic solutions and the properties of the cations and anions which are involved in the various analytical procedures" (Briscoe, 1931, p. iii).

In his textbooks, enough substantive historical background was lucidly woven into the presentations to provide the student with both perspective and understanding. For example, Briscoe wrote "the path of thought which was followed during the centuries of alchemy and the dark ages did not lead toward truth . . ." (Briscoe, 1931, p. 38). To help the students understand more about nature through modern chemistry, he wrote (Briscoe, 1938, p. 38):

Perhaps they [the alchemists] erred no more than we err at present in following rather blindly a path of thought and reasoning which would lead to a crossroads of uncertainty if we should follow it back to its origin. From this crossroads different routes lead out into darkness of the unknown, and, perhaps, only one of them leads to truth, which is always the ultimate goal.

In this vein, Briscoe elaborated on searching for paths leading to truth through the methods of science. Briscoe (1938, p. 38) referred to:

John Dalton and the scientific world of his day [who] stood at such a crossroads. They were confronted with the question of the structure of matter. Dalton proved that matter consists of "atoms" by certain experiments in analysis which established the Law of Multiple Proportions . . . Soon after the theory was announced, knowledge of atomic weights began to accumulate. . . .

The first 142 pages of Briscoe's 279-page book were devoted to theories and general principles; the remainder of the book provided informative instruction on procedures along with clarifying explanations and stimulating questions. The book emphasized Briscoe's belief (1938, p. 38):

... that laboratory work proves its worth forces him, to investigate for himself and to explain the results of his investigations in terms of his own knowledge and experiences.

Also of note was Briscoe's widely read 420-page book, *The Structure and Properties of Matter*, which was published in 1935. Briscoe started teaching this

subject in 1925. In 1934, while the book was in press, Robert E. Lyons, Professor and Head of the Department of Chemistry, described the forthcoming book as "a splendid interpretation of what is now known concerning the structure of matter in terms of the chemical behavior of matter" (Day, 1987, p. 4). This book was the first publication from the Chemistry Department that compared favorably with other first-class scientific books.

In the same year (1935), Briscoe's *General Chemistry for Colleges* appeared. In 1937, he published a related treatment on general chemistry, *An Introduction to College Chemistry*, the fourth edition of which appeared in 1949. Following Dean Briscoe's death in 1960, William Briscoe discovered that his father had almost completed either another revision of one of his textbooks or an entirely new chemistry textbook.

Briscoe's philosophy of teaching was reflected within the preface to the last edition (4th) of *General Chemistry for Colleges* (Briscoe, 1949, p. viii):

Instead of displacing the subject matter of what we may call classical chemistry, new information and new theories are discussed alongside the old. . . . If this practice serves no other purpose, it will help the student see that chemistry is a changing, developing science and, perhaps, will cause him to realize the possibilities that lie ahead of us [as] we extend and revise our present knowledge of the subject.

Even before the highly fruitful H.B Wells - H.T. Briscoe combination in academic planning and administration became acknowledged, Briscoe had gained recognition for his excellence in teaching chemistry as well as for the high quality of his chemistry textbooks (Wells, 1980). Many tributes emphasizing his interest in teaching were written following Briscoe's untimely death. Especially meaningful was the letter written by Frank J. Welcher (A.B. '29, Ph.D. '32), whose doctoral research was supervised by Briscoe: "He had the teacher's voice, the teacher's care of preparation, and above all, the teacher's passionate interest that students should fulfill themselves" (Day, 1987, p. 7). Perhaps the epitome of summations is in the measured words of F.T. Gucker, then Dean of the College of Arts and Sciences at Indiana University (Day, 1987, p. 7):

When I came to Indiana University 14 years ago [1947] as chairman of the Department of Chemistry I knew Herman T. Briscoe through his books on general chemistry and on the structure and properties of matter. Like many others throughout the country who used these books in their classes, I admired the clear, lucid, and interesting style in which he presented chemical facts and theories.

The highly respected Gucker served as Chairman of the Department of Chemistry for four years before he became a Dean, a position he held until his age necessitated retirement from administrative responsibilities. One section of Briscoe Quadrangle (a dormitory complex) is now named in memory of Dean Gucker, who died in 1973.

SPEAKING ON CAMPUS AND THROUGHOUT INDIANA

Dr. Briscoe accepted scores of invitations to address various local and other largely in-state groups and organizations. The topics were substantive, and they were usually concerned with chemistry or science in general. A number of examples should suffice to show the breadth and scope of these talks. In 1925, he spoke to the Bloomington High School Science Club on "The Structure of the Atom." In 1928, he spoke before the Physics and Chemistry Sections at the Indiana State Teachers' Convention in Indianapolis on "The Electron Theory of Valence." "Atomic Theories" was the topic of his talk to the Indiana University Physics Club in 1933. In 1934, he addressed the campus YWCA on "Conflicts between Science and Religion." According to the campus newspaper (Indiana Daily Student), Briscoe "think[s] there exists no conflict between science and religion." In 1934, he participated in a symposium on "Teaching Methods in General Chemistry" at a regional meeting of the American Chemical Society in Louisville. In 1936, he spoke at the annual meeting of the Indiana State High School Chemistry Teachers' Association at Purdue. His topic was "Causes of Students' Difficulties in Chemistry." In 1937, under the auspices of the Indiana Section of the American Chemical Society, his topic was "Cosmic Rays" before a science club meeting at Hanover College. In 1938, as the new Chairman of the Department of Chemistry, he presented a paper at a Bloomington meeting of the Indiana Section of the American Chemical Society on a new perspective on "The Place of Chemistry in Indiana University." In 1939, he spoke twice at the Indianapolis Center of the Extension Division. The topics were "New Products of the Chemical Industry" and "Chemistry under Nazism."

SELF-SURVEY COMMITTEE

Soon after Herman B Wells became Acting President of Indiana University on 1 July 1937, he instituted a planning process by establishing a Self-Survey Committee. On January 15, 1938, the Trustees approved the appointment of three highly regarded faculty members to the committee—Herman T. Briscoe, Professor of Chemistry and a dedicated member of the College of Arts and Sciences; Wendell W. Wright, Professor of Education; and Fowler V. Harper, Professor of Law. Harper was designated Chairman, and Briscoe was Secretary. Of the three, Briscoe was the only alumnus of Indiana University. Wells stated in his autobiography (1980, p. 97) that "Wright was conservative, Briscoe was moderate, and Harper was liberal." All three worked together efficiently and with great thoroughness, understanding well the high importance of their assignment. No diminution in teaching load and related academic duties was noted for Briscoe and presumably the same applied to the other two Committee members.

Naturally, the Committee solicited the views of faculty members and others, both locally and nationally, on the best objectives for the University. As Clark (1973, p. 372) said:

The organizational chart projected by the survey committee was a study indeed in a step from rigid simplicity and personal control to one of complexity. In fact the committee's charted proposal was more a prescription for revolutionizing the administrative system of the university than anything of the sort had been since the founding of the institution. Not only was this branch of university government to be updated, but it was to be brought into proper relationship with both the institutional and professional aims and objectives set forth in the general program.

In addition to proposing major administrative changes, considerable attention was given to faculty development and to strengthening both teaching and research. The Committee emphasized that Indiana University was far behind other Big Ten Schools in its level of support for faculty research by pointing out that in 1936-37 Indiana University spent only 1.7 percent of its total budget in support of original research as compared to an average of more than 10 percent at 135 publicly-controlled universities listed in the biennial survey of the U.S. Department of Education. The Committee also stated in their report that a marked increase in the effectiveness of the University would require a rigorous and comprehensive program of faculty recruitment to attract and hold the most promising talent in teaching and research.

One of the major recommendations of the Committee was to establish the office of Dean of the Faculties. The recommendation was promptly approved. The first Dean was Dr. Briscoe. On May 31, 1940, President Wells sent a mimeographed letter to every faculty member announcing the appointment effective the next day. The specific responsibilities of the Dean of the Faculties were listed as follows (Day, 1987, p. 21):

- 1. He will share with me general responsibility for the academic administration of the university and will receive and act upon all academic proposals and problems during my absence.
- 2. He will share with me responsibility for public appearances.
- 3. He will be an *ex officio* member of the general university standing and special committees unless at the time of the appointment of the committee, it is specifically stated that he will not serve.
- 4. He will be a member of all Faculties of the University, as is the President.
- 5. He will assume from time to time such additional responsibilities as may seem desirable.
- 6. He will continue to be in charge of the guidance program [This evolved from the Self-Survey Committee in May 1939. As stated by Clark (1977, p. 33): "Herman Briscoe almost single-handedly devised an advisory system which supplanted an older plan and prepared the way for instituting the Junior Division [now University Division]."]
- 7. He will continue as Chairman of the Department of Chemistry until a successor can be selected, seeking such relief there at present as possible for him to effect.

Many laudatory expressions of approval to Briscoe's appointment were immediately forthcoming. For example, Lee Norvell, then Associate Professor of English and Radio Director, wrote: "I honestly believe that his appointment will receive the unanimous approval of the faculty. I know of no one else of whom this could truthfully be said" (Day, 1987, p. 21). In 1941, Briscoe's title was changed to Vice President, Dean of the Faculties. This change met with equally strong approval.

The Self-Survey Committee began deliberations early in 1938. By December 1939, Briscoe, Wright, and Harper had presented their full report to the faculty for thorough study and debate. In his comprehensive analysis of the report and its effects on the University, Clark (1973, p. 382) wisely concluded:

For the university the immediate result of the self-study was the aid it rendered in a realignment of the institution to recognize new educational opportunities and to meet the needs of the near future. The luck of time and history favored Indiana University in 1940. Its administration and a major portion of its faculty no doubt became aware of the currents in post-Depression America of educational reform and were emotionally and intellectually prepared to accept change with little loss of momentum or desecration of tradition.

If Dr. Briscoe had not been afflicted with serious and lingering health problems (he had a cerebral hemorrhage in 1945, when he was only 52), many individuals have speculated that his remaining contributions would have been substantially greater, but his role on the Self-Survey Committee and in the adoption and implementation of its recommendations were scarcely surpassable.

CHAIRMAN OF THE DEPARTMENT OF CHEMISTRY

On March 22, 1938, Acting President Wells became President of the University. During his first nine months of service, major planning and systematic changes toward restructuring and energizing the institution, particularly in matters of academic organization and higher goals, were implemented. In August 1938, Dr. Lyons was almost 69 year of age, and he had been Head of the Chemistry Department since 1895. "On 4 August 1938 Dr. Robert E. Lyons submitted his letter of resignation as Professor of Chemistry and Head of the Department of Chemistry effective August 11, 1938..." (Day, 1992, p. 250). In his brief and courteous letter, Lyons strongly recommended that his successor should be Dr. Briscoe. The resignation and the recommendation were accepted by the Trustees on August 13. The making of an essentially new department began when Briscoe was designated Chairman.

Besides this new responsibility, his regular teaching duties, and his pressing service on the Self-Survey Committee, more "advancements" lay immediately ahead (Day, 1992, pp. 253, 255):

Briscoe was soon assigned to other heavy responsibilities. Specifically these were under the title of Special Assistant to the President. This role was announced by President Wells in May 1939. Then on 1 June 1940 he became the first incumbent of the newly created office of Dean of the Faculties. One year later, shortly before he was succeeded by a new chairman of chemistry. his title was changed to Vice President, Dean of the Faculties. Briscoe was keenly aware of the concurrent developments in the American Chemical Society on the professional training of chemists. Already a program of the ACS was underway for the certification of institutions for such training. Naturally he wanted his department to qualify for certification as soon as possible. In essence he worked understandingly with the university administration to transform the department.

Aware of weaknesses in his Department, he moved promptly and wisely. For example, on August 26, 1938, Briscoe informed Dean Stout (College of Arts and Sciences) that William Degnan, a recent graduate at Yale, had accepted an instructorship at Indiana University effective immediately. Degnan was the first "outsider" appointed full-time to the chemistry faculty in the 20th Century!

An illuminating example of Briscoe's administrative genius is found in his twenty-page double-spaced report to President Wells on the Department of Chemistry (Briscoe, 1938). The one-paragraph transmittal letter read:

I enclose herewith a statement concerning the present status and needs of the Department of Chemistry. In this I have attempted to outline my evaluation of the present department in all respects and to state conservatively my estimate of its immediate needs. It is my opinion that the department should take immediate steps to place itself on a par with some of our neighbors such as Northwestern, Nebraska, and Iowa and plan for a future when we may rival even our superior neighbors such as Illinois and Wisconsin. I should be glad to discuss this report with you at your convenience.

The report had eight sections. The titles and brief commentaries follow: Section I. ADMINISTRATION AND ORGANIZATION OF THE DEPART-MENT. Considering the question of "the organization of chemistry at Indiana University as a school instead of a department of the College of Arts and Sciences," he wrote that: "It is my opinion that the work of the department is too intimately connected with the college and with the professional schools to allow organization upon an entirely independent basis." After further characteristically thoughtful commentary, he stated:

> It is my opinion that the department should be administered through a chairman appointed by the President and Board of Trustees for a definite period of time with the understanding that reappointment is possible and probable in the event of satisfactory service. The limitation placed upon the term of office should make change easy when it becomes desirable. The chairman should consider his entire staff as a committee for the consideration of the fundamental policies of the department with respect to curriculum, general departmental business, and student affairs. A good chairman who has sound ideas concerning such policies should be able to carry his staff along with him. If he cannot, he should be able to subject his own ideas to severe criticism and, perhaps, to alter them until they are more nearly in agreement with those of the committee as a whole. The chairman should assume the responsibility of carrying out the policies and regulations passed on to the department from the administration of the university and more particularly from the administration of the college. Only in matters which are left to the consideration of the department or in dealing with problems which arise in the department, [sic] should the department as a whole assume active participation.

The new (less than 90 days) Chairman had focused on his new responsibilities. This section was followed by his reflections on the Department's activities over the past several decades.

Section II. THE OBJECTIVES AND FUNCTIONS OF THE DEPARTMENT. The first Chairman concluded that "the department has four functions in connection with its position in the College of Arts and Sciences." He pointed out that first: "It must act as a service department for certain professional schoolstraining in chemistry on both the lower and the higher level of the curriculum." Second, he concluded that the Department "should offer to all the students of the university general courses in chemistry which will fit into the liberal education program of the College of Arts and Sciences." He emphasized that "the department should offer a special course to those students." Third, the Department should "provide professional training for the students who will become chemists in the industries." Finally, he noted that: "The department must provide for original work in the field of chemistry. Provision must be made for a modern and adequate program of graduate instruction, for the proper control and guidance of the research work done by students in the graduate school, and for the scholarly studies, investigative work, and writing of its staff. This function should be second to no other function in the department."

Section III. THE CURRICULUM OF THE DEPARTMENT. Almost one page was used to point out the deficiencies in the chemistry curriculum at that time. Briscoe summarized this section by saying: "our curriculum stresses the practical aspects in chemistry and makes little attempt to provide the necessary requirement for original and scholarly work." Then, he listed some very important changes that would have to be made at the undergraduate and master's levels. In beginning his analysis of the needs at the upper graduate level, Briscoe wrote that the upper graduate level "should be one that is designed for the few I would not go so far as to say that we should abandon the A.M. degree. We should, however, place emphasis upon a curriculum designed for the Ph.D." Briscoe wanted these basic but major changes made as quickly as possible.

Section IV. THE STAFF OF THE DEPARTMENT. The new Chairman wrote in effect that in all changes "we must have in mind primarily the graduate work in the department and the productiveness in research by members of the staff." The relatively long discussion devoted to enlarging the chemistry faculty is impressive. In the areas of organic chemistry and physical chemistry, Briscoe listed 14 persons whom he considered to be "representative of the kind of individuals whom I think Indiana University should seek." He expressed the opinion that "some of them, at least, might find an offer from Indiana University attractive." Those named included R.L. Shriner and Henry Gilman in organic chemistry and Henry Eyring and Farrington Daniels in physical chemistry. In the search for a Chairman to succeed Briscoe so that he could devote all of his time to central administration, the University was indeed fortunate that Shriner accepted the offer to join the faculty as Professor of Chemistry and Chairman of the Department. In this section, Briscoe also referred to the need for additional new faculty members at lower academic ranks. Included was a person to teach and do research in biological chemistry. He pointed out that this individual would strengthen both biology and chemistry. (The appointment also added strength to the move of first-year dentistry to Bloomington in 1940-41.)

Once more, Briscoe emphasized that the persons selected should be "the graduates of institutions other than Indiana University." Concerning their credentials and promise, he emphasized that: "They should be selected also upon their records and promise along the line of research."

Section V. SPACE. His analysis and recommendations on space requirements were based on expectations for the future. Briscoe wrote: "With the growth of the department and the expansion of its program more space should be made available in the east wing now occupied by the Department of English." Aware of the dire needs for improvements in space as well as in general modernization in physical chemistry, he stated that: "The space on the third floor of this wing should be converted into a modern laboratory for physical chemistry."

Section VI. EQUIPMENT. Because he had high expectations for the Department, Briscoe wrote: "At present the equipment is entirely inadequate for undergraduate instruction, and there is practically nothing in the department in the way of first class modern equipment for research. . . . The appropriations of the department in the past has done little more than replace the chemicals, glassware, and supplies consumed during the previous year." His report on the dire needs in the Department reflected the thoroughness of his analysis.

Section VII. MISCELLANEOUS RECOMMENDATIONS. In this part of the report, various other matters were discussed. These matters included: "Funds from outside the university in support of research" (with elaborations on the need); Service to the People of Indiana; Research Directed at the Solution of Indiana Problems; and the value of adding "to the department a man trained in the field of nuclear chemistry." Briscoe felt that a nuclear chemist would be a valuable addition to the Department in view of the research program in physics and the possibility of tying these two important fields together.

Section VIII. LABORATORY FEES. His discussion of the problems in this area was concluded with the words: "Increased laboratory fees are recommended only in the event that the university is unable to provide for laboratory needs from other sources of income."

Section IX. CHANGES IN THE DEPARTMENT SINCE SEPTEMBER 20 (1938) AND PLANS FOR THE PRESENT YEAR. The final section of the November 1938 report was a listing of different internal actions that would advance the Department:

- 1. Representatives of leading companies should be invited to interview graduating students for employment.
- 2. Tuesday mornings were set aside by the Chairman to talk with students individually in his office to offer "guidance in the formation of plans for the future."

- 3. Because a "survey of the curriculum has not been made for many years," the Department was considering revisions "along the lines mentioned previously in this report."
- 4. Attention was being given to ways to "attract some conferences and meetings of importance to our campus."
- 5. A departmental committee was considering how the present standards of graduate work might be changed "to elevate these standards to a higher level of accomplishment."

Even before Dr. Briscoe succeeded Dr. Lyons, a central tenet of his thinking was that the leadership of the Department had to come from a highly qualified person with a good national standing in chemistry and with some promise of administrative capability. As Briscoe prepared to relinquish this post, he noted that his successor's principal education in chemistry and related areas should have been obtained elsewhere (Day, 1992, p. 281):

> Characteristically Briscoe moved quietly in searching for his successor. He sought and listened to the views of faculty members in the department and trusted leaders in chemistry elsewhere. This culminated in the selection and attraction of Dr. Ralph L. Shriner, the right person for the times and the needs of the department. He was a productive, resourceful, and widely recognized leader in both the academic and industrial world of chemistry.

> The public announcement of the selection was made by President Wells in the IDS [campus newspaper] of 15 July 1941.... The final decision was made by Briscoe and Wells in May. The board approved the appointment on 2 June and the formal notification [to Shriner] was made by Wells a week later.

In retrospect, one might say this about Briscoe's three-year chairmanship (Day, 1992, p. 279):

He led the university in starting the department toward an ever expanding level of productivity in chemical education and research. Its stature and respect in professional chemistry acquired increasing significance. Within less than four decades it became a truly major department in this country. In this development all areas of the university shared equally in deriving the benefits from his wisdom, devotion, and credibility.

Briscoe's nature and the basis for his overall effectiveness were aptly expressed in the words of the trustworthy administrative secretary of his last sixteen years. Lucile B. Languell (Day, 1992, p. 280):

> He was not only a great administrator and teacher but he was also a true friend to all who sought his valuable advice. He was completely unselfish, always thinking of the interests of others, and it was his kindly ways that brought so many people to him for help with their problems. Among these people were not only faculty members but staff employees as well.

UNIVERSITY ADMINISTRATIVE RESPONSIBILITIES

After Dean Briscoe's principal responsibilities in the Department of Chemistry had been transferred to others (the end of the summer of 1941), he discreetly remained aloof from departmental administrative matters, but he retained his academic office-laboratory in the chemistry building for several years. With pleasing frequency, he came to his office in the chemistry building from his main office in Bryan Hall (Administration), walked about in the building, and conversed with others. Obviously, he enjoyed being with chemists. He also made notable use of the chemistry library, which was directly below his office-laboratory. Briscoe's stroke in 1945, the consequent partial health impairment, and the increasing space needs of the Department ultimately required that he surrender his office-laboratory for other uses.

Between approximately 1941 and 1960, Day (1987, p. 22) noted that:

Many academic and administrative developments occurred which bore the deep imprint of Dean Briscoe's counsel and had his creative participation. Several had been included in some degree in the deliberations of the Self-Survey Committee. Those issues in which he was notably involved included the Junior (University) Division, U.S. War Manpower Commission, School of Health, Physical Education, and Recreation (HPER), School of Optometry, School of Music, Graduate School, orientation of foreign students for study in America, Special Administrative Committee of the Presidency, and Academic Freedom.

In addition to these creative activities, additional responsibilities existed that were ongoing and equally demanding—budget preparation and control as well as meetings with the President of the University and school deans and departmental chairpersons in the College of Arts and Sciences.

Budgets. In the new administrative framework, budget preparation and the control of approved budgets became the responsibility of the Dean of the Faculties and Vice President. Every academic budget was under Dr. Briscoe's general control, but he exercised his authority so gently and constructively that departmental chairpersons and school deans could only conclude that his judgment was always fair and appropriate. For example, in 1983, then Professor Emeritus Harry Sauvain of the School of Business wrote to the author on his experiences as Acting Dean of the School of Business (Day, 1987, p. 23): "When I went to him with a proposal or a problem he would listen patiently while I told him all about it . . . I always went away feeling that I had had a fair hearing and that the decision was a just one."

Junior Division. As early as the mid-1920s, Briscoe believed that thoughtful student guidance was basic to education. Typical of his position was a 14page memorandum which he sent to President Wells (written on October 3, 1941). The memorandum was "a proposal for the organization and administration of a lower division [in the University] consisting of the first year. It is based very largely upon the organization which I saw in operation at Yale and upon the organization at Nebraska."

Characteristically, the memorandum was prefaced with an "Introductory Statement" in which Briscoe emphasized (1941, p. 1) that, for students, "The first and sometimes even the second year are years of adjustment and explo-

ration; the last years are, and should be, years of concentration in one field . . ." Central to the entire presentation (Briscoe, 1941, p. 9) for establishment of a lower division was the following summation:

Higher education must . . . have two primary objectives:

- (1) to broaden the base of a student's general education and
- (2) to provide training in some specialized field.

The lower division must promote both of these objectives. It must extend his [and her] study into fields that he [and she] has not entered in high school or carry on studies previously undertaken to new depths. It must also promote the second objective sometimes getting him [or her] started on the ground floor of a specialized course, but more often in assisting him [or her] to find his [or her] field of specialization...

These objectives were amplified for the President in ten concluding statements labeled "The Essential Provisions of a Lower Division." The final provision specified that (Briscoe, 1941, p. 13): "Complete responsibility for the work of freshmen must be vested in the administration of the lower division, subject to general policies that are established by the general faculty of the university."

Briscoe's 1941 proposal to President Wells was adopted by the faculty after the name was changed to Junior Division. Immediately following the faculty action, the Board of Trustees gave their approval (Day, 1987, p. 24):

The new Junior Division became operational almost at once, with Wendell W. Wright serving as the first dean. The first students enrolled in May 1942.... Over the years its structure and function remained essentially intact, but in 1970 the name was changed to University Division.

OTHER SPECIAL ADMINISTRATIVE SERVICES

Throughout Briscoe's approximately two decades of administrative service to the University, numerous other special contributions were made by the Vice-President and Dean of the Faculties.

War Manpower Commission. In December 1942, a year after this country had entered World War II, Paul V. McNutt, then Administrator of the Federal Manpower Commission, requested President Wells to release his long-time friend Briscoe for a limited time period to serve in Washington to help formulate policies on the use of academic institutions in the war effort. This request was promptly granted. In Washington, Briscoe represented all the institutions of higher learning in this country which were involved with Federal training programs. His work required numerous arduous round trips by train to Washington; in the interim, Prof. A.L. Kohlmeier served as Acting Dean of the Faculties. The demands placed on Briscoe in Washington heightened. By request, his service to the war effort was extended when Dean Briscoe was named Director of the War Manpower Training Bureau, placing him in the forefront of postwar educational planning. Professor Ford P. Hall relieved Dr. Kohlmeier and served as Acting Dean

until Briscoe's duties in Washington ended. The precise length of his service in Washington is unclear, but Briscoe's entry in *Who's Who in America* for 1958-59 states that he was a consultant to the Commission from 1942 to 1944.

School of Optometry. In 1945 in response to requests for the establishment of a School of Optometry, President Wells asked Vice-President Briscoe to prepare a report that would serve as the basis for policy discussions. Within the year, Briscoe had made a coast-to-coast survey. After considering all the facts, he concluded that the University had the responsibility to provide such training and that the programs in the School of Optometry would not conflict with those in Ophthalmology in the School of Medicine. However, owing to some persistent objection by the Indiana Medical Association and some ophthalmologists, Briscoe deferred action so all the alternatives could be considered. Ultimately, the issue was taken to the Indiana General Assembly, and a bill authorizing the School of Optometry was passed almost unanimously. Preprofessional work started in 1951-52. The first faculty member and essentially the creator of the School was Henry W. Hofstetter, who arrived in 1952. Until its designation as the School of Optometry in 1975, the program operated as the Division of Optometry in the College of Arts and Sciences. Until his retirement from administrative responsibilities in 1959, Dean Briscoe was responsible for the budgetary affairs of optometry at Indiana University (Day, 1987, p. 26).

School of Health, Physical Education, and Recreation. Early in 1945, Vice President Briscoe reported that the administration was considering consolidating all physical education programs into a single division under the administration of an academic dean (Clark, 1977). This change had been recommended by the Self-Survey Committee in 1939 and was approved by the general faculty in 1940. Although some uneasiness and opposition to the consolidation existed, the confidence-inspiring nature of Dean Briscoe aided the change. Support for a unified division was strengthened by Wendell Wright of the School of Education, who had also been a member of the Self-Survey Committee. The influence of Wright, Briscoe, and Wells contributed to the faculty consensus that led to the establishment of the new school in September 1945. Willard W. Patty became the first Dean (Day, 1987, p. 26).

School of Music. Dean Briscoe helped in the re-creation of the School of Music. The key element was the appointment of Wilfred C. Bain as Dean of the School in 1947. Close communication always existed between Briscoe and Dean Bain. These two opposites (in some respects) fit together in a productive way that was reminiscent of the match between Briscoe and Wells. The net effect was succinctly and poignantly expressed by Dean Bain at the time of Dean Briscoe's death in 1960 (Day, 1987, p. 27):

Herman Briscoe was for me a distillate of human goodness with a wealth of wisdom. He was a creative thinker not only as a scientist but also as a patternmaker for the education of youth. As an academic elder brother he sought to administer unselfishly to the needs of each member of his academic family. As a trusted friend he exemplified the nobility of intellect as he dealt with problems outside the field of his immediate interest. The Graduate School. The author noted in 1987 that (Day, 1987, p. 28):

The three major architects in moving toward a redirecting and vitalization of graduate work were the new President Wells, the new Dean of the Faculties Briscoe, and the blunt and determined Dean of the Graduate School Fernandus Payne. All three were graduates of Indiana University and native Hoosiers. With the ascendancy of Wells to the presidency in 1938 they became an effective team, each with unique talents, that operated toward common goals.

Although these three men recognized the need for greater centralization of direction in the various graduate programs, several significant barriers to centralization existed which could not be quickly removed (Clark, 1977, p. 353).

In 1947, Dean Briscoe presented President Wells with a plan in which as much of the graduate work at the University as possible would be centrally coordinated and some degrees combined to minimize duplication. He proposed that the professional schools be granted greater freedom in setting their specialized standards. Realizing that this proposal would arouse concern and conflict, Briscoe tried to include the changes in planning going on as a result of the approaching retirement of Dean Payne. Nevertheless, implementation of the plan was delayed due to effective opposition. Some coordination was attained, but full implementation did not occur in Briscoe's lifetime.

By 1989, while Thomas Ehrlich was President of the University, extensive centralization between all the campuses of Indiana University had been achieved through the creation of the University Graduate School. Heading the program was George Walker, Professor of Physics and Vice President for Research and Dean of the University Graduate School. These changes required more than four decades, surely exceeding the original expectations. The changes that occurred, along with many other developments, are monuments to these two sons of Indiana—Herman Wells and Herman Briscoe.

Special Administrative Roles. At times, Dean Briscoe and others were asked to substitute for an absent President Wells (Wells, 1980, p. 302):

Owing to Vice President Briscoe's natural closeness to the presidency of the university the frequent absence of the president from the university added to Briscoe's responsibilities. In October 1947 this became a major responsibility. Near that time an urgent request was made upon President Wells to head for some time (six months) the Education and Cultural Branch of the United States Military Government in Germany. The University Board of Trustees granted the request. To make this practicable the Board designated an administrative committee consisting of the President of the Board John Hastings, and Vice-President Briscoe, Wendell Wright, and Joseph Franklin. During this long interim many decision-demanding issues naturally arose and all were handled well by the committee, but without doubt the extra burden on Vice-President Briscoe was heavy.

During Briscoe's years in administration, the research, publications, and public statements of faculty members were occasionally the basis for criticism which in effect was a challenge to responsible academic freedom. "As frequent adviser to President Wells and a builder of a strong faculty, Dean Briscoe was always concerned in the maintenance of the university position" (Day, 1987, p. 29). One of the notable statements, which reflected Briscoe's feelings, was made by President Wells in a letter on May 16, 1955, regarding the work of Alfred Kinsey. The relevant portion was quoted by Clark in 1977 (p. 291): "Indiana University stands today, as it has for fifteen years, firmly in support of the scientific project which has been undertaken and is being carried on by one of its eminent biological scientists, Dr. Alfred C. Kinsey."

RETIREMENT AND FAREWELL REMARKS

On June 30, 1959, and in accordance with the retirement policy which he helped establish more than twenty years earlier, Dean Briscoe retired from administrative responsibilities. Earlier that month the President wrote to Briscoe: "the Board of Trustees of Indiana University approved your administrative retirement on June 30, 1959 from the position of Vice President and Dean of the Faculties, with the understanding that you will continue as Professor of Chemistry and will, in addition, serve as Consultant to the President, on a part-time basis." The special letter then continued (Day, 1987, p. 30):

It is the unanimous feeling of the Trustees of the University that the aboveindicated approval for administrative retirement is given with the greatest reluctance. At the same time the Board extends its most sincere congratulations and appreciation for the splendid record you have made at Indiana University which has resulted in such great achievements for the benefit of the institution. The Board also is most happy that you will be able to continue in service to the University.

The pending change in Briscoe's status was known well before his actual retirement. In August 1958, as Chairman of the Department of Chemistry, the author wrote: "we would be delighted if you would be willing to come back into the Department of Chemistry following your retirement next year even if it should be on a very limited time basis" (Day, 1987, p. 30). President Wells was also informed of the Department's interest. In his response, Wells stated that "some of us also have had in mind asking Dean Briscoe to direct the University-wide effort in program development or to work in some similar general administrative capacity" (Day, 1987, p. 31). Thus, after July 1, 1959, the retired Dean and Vice President moved to a different office—but just as close to the President's Office—as Consultant to the President. There, he thoughtfully prepared commentaries and made suggestions on many administrative matters. As usual, he conferred and counseled with innumerable faculty and administrative colleagues.

Dr. Briscoe's health remained fairly good during the first year of his retirement. The winter months were spent with Mrs. Briscoe at their home in Florida. Indeed, Mrs. Briscoe wrote that in the summer of 1960: "He seemed glowing with health and good spirits for the first time in several years" (Day, 1987, p. 32). This period of good health continued until September 27, 1960, when he suffered a coronary occlusion in his "retirement office" in Bryan Hall in Bloomington. He was promptly taken to the IU Medical Center in Indianapolis. On October 6, 1960, a second attack occurred, resulting in his death two days later.

On October 11, 1960, funeral services were conducted in Sarasota, Florida, where the Briscoes had owned a home since 1953. Simultaneous memorial services were conducted in Alumni Hall on the Bloomington campus. Participants in this service included the local Berkshire Quartet, Rev. W. Douglas Rae, John W. Ashton, Frank T. Gucker, Albert L. Kohlmeier, and the University Singers of the School of Music. President Wells and the new Dean of the Faculties Ralph L. Collins had gone to Florida to be with the Briscoe family and to attend the funeral. The *Indiana Daily Student* reported on that day that: "Not since the death in 1955 of Dr. William Lowe Bryan, President Emeritus of the University, have similar honors been paid to a member of the university staff" (Day, 1987, p. 32).

The November 1960 issue of *The Indiana Alumni Magazine* eulogized Dean Briscoe in an appropriate double-page tribute. These memorable words were spoken by his long-time close friend and colleague President Wells (Anon., 1960, p. 7):

Dr. Briscoe served the University superbly as student, teacher, and administrator. Transcending this brilliant record was the influence of his rare spirit upon the University. He was a selfless man, never asking for personal recognition or power; yet because of his great wisdom and quiet strength his advice was eagerly sought by his colleagues. He had an unusual quality of personal loyalty and an exceptional capacity for friendship. He will ever live in the life of the great University he helped to build and in the hearts of his friends. We shall not look upon his likes again.

In the column "Late News Happenings," a statement appeared that "Plans have been announced by the University to establish through gifts an endowed chair in chemistry to be known as the Herman T. Briscoe Memorial Professorship." The planning and the "soft sell" program resulted in an endowment to which 315 individuals and corporations made contributions. Dr. Dennis Peters presently is the Herman T. Briscoe Professor of Chemistry.

This review of the "Superior Role Model" should logically conclude with a discussion of the retirement event and the substance of the remarks and actions of that memorable evening. Dean Briscoe's public retirement occurred in the Alumni Hall on June 5, 1959, at a banquet sponsored by the Indiana Alumni Association. Following dinner, two notable events occurred—the poignant, brief address given by the retiring Dean and the presentation of Marie Goth's impressive portrait of Briscoe to the University (Figure 1).

His long experience as well as his deep-thinking, problem-solving nature were evident in every part of his address. Dean Briscoe focused on the basic responsibilities of the University. Following a succinct historic introduction, his first penetrating remarks were entitled "We Face a Problem." Briscoe (1959, p. 8) stated:



Figure 1. Beside the Briscoe portrait (left to right): H.T. Briscoe, Verling Votaw, Briscoe's former student and President of the Indiana University Alumni Association in 1959, and Ralph L. Collins, who succeeded Briscoe as Dean of the Faculties.

As a University, we face the problem of how we can best perform our function, which we have said is to promote the progress of our society. There are many ways in which a university may aid the state and its citizens but, in my opinion, we can best perform our function through teaching and research, or in some areas such as art and music, by creative work.

Dean Briscoe (1959, p. 8), as part of this focus, emphasized the importance of teaching skills and "how to do a job and how to do it well." When elaborating on teaching responsibilities and goals, he stated (Briscoe, 1959, p. 8):

The student should be made to realize his responsibility to his fellow men and to society in general. To properly assume this responsibility, the student must have some knowledge and appreciation of the world of science and of nature and his own place in it. He must have an acquaintance with the deeds, thoughts and dreams of other men as revealed in books, art and music.

The next topic was "Cultivate a Mind to Think." At this point, Briscoe (1959, p. 8) emphasized that "the ultimate goal of higher education should be to cultivate in the student a mind that will and can think for itself...." Briscoe (1959, p. 8) gave special attention to the responsibilities of the teacher: "The test of good teaching is not found in the grades made by superior students, but in what the teacher can do and does do for the average and below average students."

Those who knew Briscoe well realized that he believed that good teachers encourage and help their students to learn as independently as possible but that they also expect the same students to work in cooperation with others. This point was brought out in the section on "Higher Education Needs Re-direction."

Special emphasis was given to research in the section entitled "Research Next to Teaching" (Briscoe, 1959, p. 9):

And now I should like to speak briefly about research as another way in which a university serves society. The importance of research is only second to that of teaching. Research will make the world of tomorrow different from the world of today and it has made the world of today different from the world of the Caesars and the Pharaohs. Research is the search for new knowledge and once acquired this knowledge may or not prove useful Every unknown is a challenge, and the unsolved mysteries of the universe, of the atom and the molecule, and of plant and animal bodies are just as challenging as traveling beyond uncrossed horizons.

Briscoe (1959, p. 9) emphasized that:

It is in the field of basic research that colleges and universities can best serve, and it is only natural that the teachers who impart knowledge should be most concerned with attempts to discover new knowledge. In the social sciences, such as economics, political science, and sociology, research throws light upon many of the problems that beset us in business, trade and industry, in government and in our complex social order. Research in these areas is, therefore, closely related to our welfare.

Briscoe (1959, p. 9) also spoke about "creative effort:"

They do not solve man's problems of shelter and food and physical well being, but they are the food of his soul and spirit; they give him vision and hope; they provide him with beauty and satisfaction and contentment.

In his final statement on research, Dean Briscoe (1959, p. 9) said:

We cannot, therefore, afford to neglect research. It must be supported by those who support higher education, because it is in the universities that much of the necessary basic research is done.

In his closing remarks, which were to be his last before the public, he stated (Briscoe, 1959, p. 9):

To grow old in such an atmosphere is to have the glories of autumn and the joys of springtime all in one. It is not easy to leave and it will never be forgotten.

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