

## History of Industrial/Organizational Psychology at Purdue University

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Industrial psychology had its inception at Purdue University in 1937 when President Edward C. Elliott brought F.B. Knight from the University of Iowa to help conceptualize and head a new administrative unit within the University. Prior to Knight's arrival, the university had only a handful of psychology courses, most of which supported teacher education. (Few people know that, at one time, Purdue was the eighth largest producer of secondary school teachers.) These psychology courses were a part of the Department of Education and carried "education" numbers. At that time, H.H. Remmers was a member of the faculty, had the title of Professor of Education and Psychology, was teaching a full load, and was beginning his work in the measurement of attitudes. Remmers had come from the University of Iowa, had known Knight, and had originally recommended him to Elliott.

F.B. Knight, while an educational psychologist by designation, roamed far afield at Iowa, and supervised studies in many areas, including the Ph.D. research of George Gallop of public polling fame. He had earned his own reputation by co-authoring a series of elementary mathematics textbooks. He knew Walter Dill Scott who had been deeply involved in the mental ability testing of World War I army recruits (later to become President of Northwestern University). He brought this "applied" orientation to Purdue and was responsible for designating this expansion of the Department of Education as the Division of Education and Applied

Psychology; the unit was not a part of any school and he, as director, reported directly to the President. The emphasis was to be on the application of psychology to many areas of human endeavor, including education. A pragmatist of the highest order, he came to Purdue – then known primarily as an engineering-technical university – which provided an ideal locus by virtue of its pragmatic posture and its close relationship to industry. Purdue had the most fertile climate that one could envision for the development of Industrial Psychology.

Knight turned to Joseph Tiffin, a personal friend, who had also been on the faculty at Iowa but who, because of a psychology department blow-up, had gone to Brooklyn College a semester earlier. At Brooklyn, Tiffin was engaged in recording and analyzing the voice patterns of famous Broadway actors and other dignitaries, including Hitler. Joe was truly an applied psychologist, but not an Industrial Psychologist. Knight brought him to Purdue in 1938 and, in his flamboyant manner said, “Joe, from now on, you are an Industrial Psychologist. Purdue is the hub of Industrial Psychology, and your job is to prove that I’m not a liar.”

While figuring out what an Industrial Psychologist is supposed to do, Tiffin served as de facto head of the psychology component of the Division, completed a textbook which he started, The Psychology of Normal People, co-authored with Knight and Charles C. Josey, inaugurated Purdue’s first psychological laboratory, and hired its first instrument technician.

The Division of Education and Applied Psychology included four vocational industrial education professors who engaged in fieldwork and who had established a high level of rapport with industry. Tiffin accompanied them on their field trips and took advantage of their industrial contacts. The country was on the brink of World War II and, as industry began to shift to war production, the industrial education people identified problems and Tiffin, with his sound research orientation learned from Carl Seashore at Iowa, solved them. The result was many

studies that stand as classics today, including the famous tin plate inspection studies at the Gary Sheet and Tin Mill and the assembly personnel studies at Knoblet-Sparks in Columbus. The impending war resulted in a vast expansion of the industrial workforce; the industrial climate was something like this: “Anything you can do to help us, go ahead!”

C.H. Lawshe, who had received his Ph.D. under Tiffin the year before, joined the faculty in 1941 after serving as Principal of a day trade preparatory school; he became a close working associate of Tiffin. Meanwhile, Tiffin had assembled the results of his research into an orderly, organized textbook, Industrial Psychology, the first edition of which was published in 1942. Subsequently adopted for use in correspondence courses by the U.S. Armed Forces Institute (USAFI), it was published as a paperback and distributed by the thousands to GI’s all over the world. It was a tremendous graduate student recruiting device after the war had ended.

One of the highlights of the war years was the Army Specialized Training Program (ASTD) in personnel psychology. This program brought to the Purdue campus 125 highly selected enlisted men who were to do army classification work. Several temporary faculty members were needed for the seven-month period, including E.J. Asher who later returned to a permanent position and ultimately became the first Head of the Department of Psychology.

Tiffin’s boundless energy and his growing reputation resulted in the consummation of an agreement with Bausch and Lomb, an optical company, to study vision in industry. This affiliation resulted in numerous achievements: a new concept in visual targets as an alternative to the Snellen chart was developed; uniform vision test results were sent to Purdue for the first time, making possible the accumulation of adult vision norms; Bausch and Lomb underwrote the cost of an IBM machine installation in the Psychology unit (a forerunner of the computer and the first ever at Purdue), and the Industrial Vision Institute was inaugurated; it was a two week short

course for industrial personnel from the dozens of companies that had installed the B and L vision program. This institute, held four or five times a year, provided an arena for interaction between faculty members and industry personnel. It was so successful in this respect that Tiffin and Lawshe, later, offered the Personnel Testing Institute, a one week short course, also for industrial personnel; in all, 44 such sessions were conducted, enrolling almost a thousand industrial men and women.

It is impossible to estimate the impact of the IBM installation on the Purdue Industrial Psychology program. As indicated earlier, it was the first installation on the Purdue campus. It provided hands-on experience for graduate students and made possible research previously not feasible. In 1946, Newell C. Kephart became the third faculty member added to the unit. He supervised use of the IBM equipment and taught the first machine statistics course ever offered at Purdue; it was listed under a psychology course number.

Kephart had known Ernest J. McCormick in the Navy and induced him to come to Purdue. After completing work for his degree, he joined the faculty, adding still another dimension to the industrial component. Thus, starting in 1947 and continuing until 1958, Tiffin, Lawshe, Kephart and McCormick constituted the Occupational Research Center (ORC) as it came to be called.

During the ensuing years, members of the ORC utilized a formal graduate student admission system. Each applicant took the American Council On Education test (later the Graduate Record Examination), filed a transcript which was carefully scrutinized for evidence of quantitative courses, and provided a work history that was used to examine evidence of having done something besides “go to school”. When complete, the applicant file was routed to each of four faculty members for evaluation. Those who received four As were admitted immediately,

those with three or four Cs were rejected, and the remainder were placed on the agenda of the next weekly staff meeting where a decision was made. Approximately 23 students were admitted each September. In the seven-year period from 1950 to 1957, three out of ten were admitted (selection ratio of .30).

During the mid-forties, the graduate students in Industrial Psychology organized PAGESIP, an acronym for Purdue Association of Graduate Students in Industrial Psychology. It was a live wire organization that had a clearly defined program each month followed by a “regression session” at a local bistro. Faculty members associated with students on a collegial basis. PAGESIP also maintained a “headquarters” room at meetings of the Midwestern Psychological Association.

In 1946, Knight employed John Hadley (along with seven other faculty members during the next two years) and started Purdue’s clinical psychology program. This faculty growth, together with expansion into other fields, led to the dismemberment of the Division of Education and Applied Psychology in 1954 and the creation of three department within the School of Science, Education, and Humanities: the Department of Education, the Department of Sociology, and the Department of Psychology. As indicated earlier, E.J. Asher became the first Head of the Department of Psychology. Tiffin remained the de facto head of the ORC.

Throughout the program’s evolution, members of the ORC faculty maintained a close, working relationship with industrial people, including practicing psychologists in industry. This made possible a series of eight colloquia each year, each presented by a well-known practicing Industrial Psychologist who participated without cost to the university. Following each colloquium, provision was made for seven or eight graduate students to meet the visitor in a small social group.

In 1958, Lawshe left the ORC to develop the Purdue extension centers into full, degree-granting branches, to serve as Dean of Continuing Education, to conceptualize the School of Technology and serve as its first dean, and, in 1966, to become one of Purdue's five vice presidents. William A. Owens, Jr. came from Iowa State to fill the vacated budget position.

The 1960s saw an expansion of the Industrial Psychology program at Purdue, both in size and in scope of interest. In 1959, Robert Perloff joined the program and with him came activity in Consumer Psychology. This interest was reinforced with the addition of Jack Jacoby in 1968. Hugh Brogden came in 1964 and expanded the program to include psychometrics and purer quantitative interests. This too was reinforced by the hiring of Art Dudycha in 1967. Karl Weick was hired in 1962 and although he stayed only through 1965, he provided Purdue the first real taste of the more Organizational side of the field.

Thus, the decade of the sixties was a period in which traditional personnel psychology coexisted with consumer psychology, human factors, quantitative psychology, psychometrics and even organizational psychology under the umbrella of the Industrial Psychology program at Purdue. As it was in the fifties, Industrial Psychology was the strongest program in the Purdue Psychology Department. In fact, the department was essentially Industrial Psychology and Clinical Psychology and not much else.

The importance of the program to the department is seen in the number of Ph.D.'s awarded. Purdue's first Ph.D. in Industrial Psychology was granted in 1939, but by 1970, a scant 30 years later, 229 men and women had received Doctorates in Industrial Psychology from Purdue. This represented close to 40% of all the Doctoral degrees awarded in Psychology at Purdue to that point. Ninety-eight Industrial Psychology degrees were awarded during the sixties alone.

While the variety of interests represented by the faculty was large, the applied focus of the program remained unchanged through most of the 1960s. Few of the new Ph.D.'s took academic positions. Purdue training was geared primarily toward eventual jobs in industry.

In 1968 an event occurred which would have a profound influence on the Purdue Psychology department in general and the Industrial Program in particular. In that year, Jim Naylor agreed to leave Ohio State and accept the position of Head of the Psychology Department of Purdue. Jim had received his degree from Purdue in 1960, with Ernie McCormick serving as his Major Professor, and he came back with some very definite ideas about the future direction of the department and the field. To begin with, he believed that Purdue needed to be stronger in the other traditional areas of psychology such as Social, Experimental and Developmental. By building up these areas, he created a more balanced department that reduced the overall importance of the Industrial Program but strengthened its connections to basic psychology.

In addition, he believed that the Industrial program needed more focus and a better mix of traditional Industrial Psychology and Organizational Psychology. His journal, *Organizational Behavior and Human Performance*, helped build and Organizational identification for Purdue, as did the hiring of Bob Pritchard and Dan Ilgen in the early 1970s, Howard Weiss in the mid 70s, and Judi Komaki in the early 1980s, and the retirements of Tiffin and McCormick. In 1980 Naylor, Pritchard, and Ilgen published their book entitled, *A theory of behavior in organizations* which added to the organizational identification of the program. Naylor also reduced the size of the program by encouraging department reorganizations that led to separate Consumer and Quantitative Psychology areas and the housing of Human Factors faculty in the Cognitive Psychology area. The result was a smaller program more focused on the traditional areas of Industrial and Organizational Psychology.

During the 1980s, research and graduate training continued unabated. In 1980 Naylor, Pritchard, and Ilgen published their book entitled, *A Theory of Behavior in Organizations*, which added to the organizational identification of the program. In 1980, Purdue dedicated a new Psychology Building. The I-O program moved out of its home of over 30 years, into new and impressive facilities, which included a laboratory complex devoted to research on work behavior. This complex was one of the finest I-O labs in the country, and allowed for both traditional and emerging methodologies that are still in use today.

By 1990, the number of Ph.D.s in I-O Psychology awarded at Purdue had grown to 300, and the placement of graduates showed a balanced mix of academic and industry employment. In 1990 we were saddened by the passing of Ernie McCormick, a true I-O pioneer. Due to the generosity of the McCormick family, Purdue alumni, and friends of the program, an endowment was created, which was used to launch a biannual lecture series in honor of Dr. McCormick. The inaugural luncheon and lecture took place in 1995 with Dan Ilgen as the first speaker. The lectures are held every other year and we are always delighted when Wynne Lewis, Dr. McCormick's daughter, is able to join us and share memories of Dr. McCormick.

In 1996 Howard Weiss and Russell Cropanzano (I-O Class of 1988) published an influential chapter in *Research on Organizational Behavior* which introduced Affective Events Theory. This work marked a beginning of the program's focus on person-centric perspectives and the study of subjective work experience. A basic premise of Affective Events Theory is that employees have emotional reactions to events that occur at work and these reactions in turn influence affect-driven behaviors as well as judgments of job satisfaction. Much of the research testing the assumptions of Affective Events Theory has involved the experience sampling

method with employees carrying devices pinging them to complete measures of recent events (and reactions to them) several times per day.

In 1999, Howard Weiss teamed up with Steve Green from the Krannert School of Management and Shelley MacDermid Wadsworth from the Department of Human Development and Family Studies to submit a proposal to the Department of Defense for a Cooperative Agreement. In 2000 the Department of Defense funded (\$8.9m) the creation of the Military Family Research Institute (MFRI) at Purdue to conduct policy-relevant research on the well-being of military families with an emphasis on job satisfaction, retention, and performance. The Cooperative Agreement was funded through 2005 and provided a rich training environment for quite a few of the I-O graduate students as well as students from other departments. The MFRI continues today under the direction of Shelley MacDermid Wadsworth and still serves as a training environment for graduate students throughout the college.

Aside from the excitement of the MFRI, the 2000s also brought an extremely generous donation from alumnus Bill Byham for an endowed chair in I-O Psychology. In 2011, Professor Deborah Rupp became the first William C. Byham Chair in Industrial and Organizational Psychology. Also in 2011 she and Howard Weiss published a paper on person-centric work psychology. This approach to theory and research focuses on the subjective experiences of employees at work. Much of the current research conducted in the I-O program at Purdue represents this focus. Along this tradition, a current faculty member of the Purdue I-O program, Louis Tay, recently developed Expimetrics ([www.expimetrics.com](http://www.expimetrics.com)) which is a web and mobile app platform for rich, real-time data collection. Seeking to democratize this research methodology, this app is one of the most economical programs available for researchers interested in collecting longitudinal data in real time.

In 2010, the Department of Psychological Sciences joined the newly formed College of Health and Human Sciences. Under the leadership of Dean Christine Ladisch, the College of Health and Human Sciences has thrived becoming the second largest college at Purdue. In 2015, under the guidance of Deborah Rupp, the Industrial-Organizational Psychology program became the first I-O program to join the United Nations Global Compact. As a program, we have pledged to give emphasis in our courses and other program activities to topics and issues relevant to the Ten Principles of the UN Global Compact, which center around organizations' responsibilities relevant to human rights, labor, environment, and anti-corruption.

The Purdue program has been blessed with scholars and practitioners whose ideas and efforts have helped to shape not only the Purdue I-O program, but also the I-O field more broadly. We are extremely proud of the accomplishments of our graduates and look forward to seeing them at SIOP and other conventions. PAGESIP continues to thrive and provides a link for our new students to our network of Purdue graduates.