

SUBJECT

INTRODUCTION TO INDUSTRIAL ORGANIZATIONAL PSYCHOLOGY

SESSION 3

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Historical overview

The historical development of I–O psychology had parallel developments in the United States and other countries, such as the UK,[7] Australia, Germany, the Netherlands,[8] and eastern European countries such as Romania.[9] However, many foreign countries do not have a published English language account of their development of I–O psychology. The roots of I–O psychology trace back nearly to the beginning of psychology as a science, when Wilhelm Wundt founded one of the first psychological laboratories in 1876 in Leipzig, Germany. In the mid 1880s, Wundt trained two psychologists who had a major influence on the eventual emergence of I–O Psychology: Hugo Münsterberg and James McKeen Cattell.[10] Instead of viewing differences as “errors”, Cattell was one of the first to recognize the importance of these differences among individuals as a way of predicting and better understanding their behavior. Walter Dill Scott, who was a contemporary of Cattell, was elected President of the American Psychological Association (APA) in 1919, was arguably the most prominent I–O psychologist of his time. Scott, along with Walter Van Dyke Bingham worked at the Carnegie Institute of Technology, developing methods for selecting and training sales personnel[11]

The "industrial" side of I–O psychology has its historical origins in research on individual differences, assessment, and the prediction of work performance. This branch crystallized during World War I, in response to the need to rapidly assign new troops to duty stations. Scott and Bingham volunteered to help with the testing and placement of more than a million army recruits. In 1917, together, along with other prominent psychologists, adapted a well-known intelligence test, (the Stanford-Binet test, designed for testing one individual at a time) to make it suitable for mass group testing. This new test form was called the Army Alpha. After the War, the growing industrial base in the US added impetus to I–O psychology. The private industry set out to emulate the successful testing of army personnel, and mental ability testing soon became a commonplace in the work setting. Industrial psychology began to gain prominence when Elton Mayo arrived in the United States in 1924.[12] Mayo was fascinated by not the efficiency of workers, but their emotions and how work may cause workers to act in particular pathological ways. These observations of workers' thoughts and emotions were studied to see how prone employees would be to resist management attempts to increase productivity and how sympathetic to labor

unions they would become. These studies are known as Hawthorne studies. The results of these studies ushered in a radically new movement known as the Human Relations Movement. This movement was interested in the more complicated theories of motivation, the emotional world of the worker, job satisfaction, and interviews with workers.

World War II brought in new problems that led to I-O Psychology's continued development. The war brought renewed interest in ability testing (to accurately place recruits in these new technologically advanced military jobs), the introduction of the assessment center, concern with morale and fatigue of war industry workers, and military intelligence. Post-Second World War years were a boom time for industry with many jobs to be filled and applicants to be tested. Interestingly, however, when the war ended and the soldiers came back to work, there was an increasing trend towards labor unrest with rising numbers of authorized and unauthorized work stoppages staged by unions and workers. This caused management to grow concern about work productivity and worker attitude surveys became of much interest in the field. Following Industrial Organizational Psychology's admission into Division 14 of the American Psychological Association, there continued to be an influx of new tests for selection, productivity, and workforce stability. This influx continued unabated until the passage of the Civil Rights Act of 1964. Section, Title VII dealt with employment discrimination and required employers to justify and show relevance for the use of tests for selection.

The mid-1960s seemed to mark a line of demarcation between "classic" and "modern" thinking. During this period, the name changed from just industrial psychology to industrial and organizational psychology. The earlier periods addressed work behavior from the individual perspective, examining performance and attitudes of individual workers. Although this was a valuable approach, it became clear that there were other, broader influences not only on individual, but also on group behavior in the work place. Thus, in 1973, "organizational" was added to the name to emphasize the fact that when an individual joins an organization (e.g., the organization that hired him or her), he or she will be exposed to a common goal and a common set of operating procedures.

In the 1970s in the United Kingdom, references to occupational psychology became more common than I/O Psychology. Rigor and methods of psychology are applied to issues of critical relevance to business, including talent

management, coaching, assessment, selection, training, organizational development, performance, well-being and work-life balance. During the 1990s references to "business psychology" became increasingly common. Business psychology is defined as the study and practice of improving working life. It combines an understanding of the science of human behavior with experience of the world of work to attain effective and sustainable performance for both individuals and organizations.

Research methods[edit]

See also: Psychometrics and Statistics

As described above, I–O psychologists are trained in the scientist–practitioner model. I–O psychologists rely on a variety of methods to conduct organizational research. Study designs employed by I–O psychologists include surveys, experiments, quasi-experiments, and observational studies. I–O psychologists rely on diverse data sources including human judgments, historical databases, objective measures of work performance (e.g., sales volume), and questionnaires and surveys.

I–O researchers employ both quantitative and qualitative research methods. Quantitative methods used in I–O psychology include both descriptive statistics and inferential statistics (e.g., correlation, multiple regression, and analysis of variance). More advanced statistical methods employed by some I–O psychologists include logistic regression, multivariate analysis of variance, structural equation modeling,[13] and hierarchical linear modeling (HLM; also known as multilevel modeling).[14] HLM is particularly applicable to research on team- and organization-level effects on individuals. I–O psychologists also employ psychometric methods including methods associated with classical test theory (CTT),[15] generalizability theory, and item response theory (IRT).[16] In the 1990s, a growing body of empirical research in I–O psychology was influential in the application of meta-analysis, particularly in the area of the stability of research findings across contexts. The most well-known meta-analytic approaches are those associated with Hunter & Schmidt,[17][18][19] Rosenthal,[20][21] and Hedges & Olkin.[22] With the help of meta-analysis, Hunter & Schmidt[23][24] advanced the idea of validity generalization, which suggests that some performance predictors, specifically cognitive ability tests (see especially Hunter [1986][25] and Hunter & Schmidt [1996][26]) have a relatively stable and positive relation to job performance across all jobs. Although not unchallenged, validity generalization has broad

acceptance with regard to many selection instruments (e.g. cognitive ability tests, job knowledge tests, work samples, and structured interviews) across a broad range of jobs.

Qualitative methods employed in I-O psychology include content analysis, focus groups, interviews, case studies, and several other observational techniques. I-O research on organizational culture research has employed ethnographic techniques and participant observation to collect data. One well-known qualitative technique employed in I-O psychology is John Flanagan's Critical Incident Technique,[27] which requires "qualified observers" (e.g., pilots in studies of aviation, construction workers in studies of construction projects) to describe a work situation that resulted in a good or bad outcome. Objectivity is ensured when multiple observers identify the same incidents. The observers are also asked to provide information about what the actor in the situation could have done differently to influence the outcome. This technique is then used to describe the critical elements of performance in certain jobs and how worker behavior relates to outcomes. Most notably, this technique has been employed to improve performance among aircraft crews and surgical teams, literally saving thousands of lives since its introduction. An application of the technique in research on coping with job stress comes from O'Driscoll & Cooper.[28] The resistance to qualitative research resulted from viewing it too excessively subjective. This concern, however, is misplaced due to all methods of research, either qualitative or quantitative, ultimately requiring some sort of interpretation. When a researcher is developing and researching a phenomenon, all information available should be used, regardless of its form. The key is triangulation, which is an approach looking for converging information from different sources to develop that theory.[29]

I-O psychologists sometimes use quantitative and qualitative methods in concert. The two are not mutually exclusive.[29] For example, when constructing behaviorally-anchored rating scales (BARS), a job analyst may use qualitative methods, such as critical incidents interviews and focus groups to collect data bearing on performance. Then the analyst would have SMEs rate those examples on a Likert scale and compute inter-rater agreement statistics to judge the adequacy of each item. Each potential item would additionally be correlated with an external criterion in order to evaluate its usefulness if it were to be selected to be included in a BARS metric. As a simpler example, consider an extended observation of a worker, which might include videotaped episodes of performance - a qualitative measure. The qualitative video could

easily be used to develop a frequency count of a particular behavior - a quantitative measure.

Topics[edit]

Job analysis[edit]

Main article: Job analysis

Job analysis has a few different methods but it primarily involves the systematic collection of information about a job. The task-oriented job analysis, involves an examination of the duties, tasks, and/or competencies required by a job, whereas a worker-oriented job analysis, involves an examination of the knowledge, skills, abilities, and other characteristics (KSAOs) required to successfully perform the work. Job analysis information is used for many purposes, including the creation of job-relevant selection procedures, performance appraisals and criteria, or training programs. Position analysis questionnaire is a particular analysis that is used to determine an individual's job characteristics and relates them to human characteristics.

Personnel recruitment and selection[edit]

Main article: Personnel selection

I–O psychologists typically work with HR specialists to design (a) recruitment processes and (b) personnel selection systems. Personnel recruitment is the process of identifying qualified candidates in the workforce and getting them to apply for jobs within an organization. Personnel recruitment processes include developing job announcements, placing ads, defining key qualifications for applicants, and screening out unqualified applicants.

Personnel selection is the systematic process of hiring and promoting personnel. Personnel selection systems employ evidence-based practices to determine the most qualified candidates. Personnel selection involves both the newly hired and individuals who can be promoted from within the organization. Common selection tools include ability tests (e.g., cognitive, physical, or psycho-motor), knowledge tests, personality tests, structured interviews, the systematic collection of biographical data, and work samples. I–O psychologists must evaluate evidence regarding the extent to which selection tools predict job performance, evidence that bears on the validity of selection tools.

Personnel selection procedures are usually validated, i.e., shown to be job relevant, using one or more of the following types of validity: content validity, construct validity, and/or criterion-related validity. I–O psychologists adhere to professional standards, such as the Society for Industrial and Organizational Psychology's (SIOP) Principles for Validation and Use of Personnel Selection Procedures[30] and the Standards for Educational and Psychological Testing.[31] The Equal Employment Opportunity Commission's Uniform Guidelines[32] are also influential in guiding personnel selection although they have been criticized as outdated when compared to the current state of knowledge in I–O psychology.

I–O psychologists not only help in the selection and assessment of personnel for jobs, but also assist in the selection of students for admission to colleges, universities, and graduate and professional schools as well as the assessment of student achievement, student aptitude, and the performance of teachers and K–12 schools. Increasingly, I–O psychologists are working for educational assessment and testing organizations and divisions.

A meta-analysis of selection methods in personnel psychology found that general mental ability was the best overall predictor of job performance and training performance.[33]

Key terms and glossary

waigawa system A management system dedicated to the idea that when the corporation faces a difficult problem, all rank-related concerns are temporarily set aside so that anyone from any level of the organization can have input.

360-degree feedback A method of performance appraisal whereby employee's performance is rated by a variety of individuals, including himself or herself, a peer, a supervisor, a subordinate, and perhaps a customer or client.

affective commitment The employee's emotional attachment to his or her place of work.

biographical inventory A type of job-screening test that involves asking the candidate about life experiences that seem verifiable.

Burnout An extremely distressed psychological state in which a person experiences emotional exhaustion and little motivation for work.

continuance commitment A kind of job commitment that derives from the employee's perception that leaving the organization would be too costly, both economically and socially.

distributional error A common error in performance ratings, so called because it refers to ratings that fail to use the entire rating scale.

Downsizing A dramatic cutting of the workforce that is an increasingly popular business strategy to enhance profitability.

ergonomics (human factors) A field that combines engineering and psychology and that focuses on understanding and enhancing the safety and efficiency of the human-machine interaction.

Flow The optimal experience of a match between our skills and the challenge of a task.

halo effect A common error in performance ratings that occurs when the rater gives the person the same rating on overall items, even though there is actual variability.

Hawthorne effect The tendency of individuals to perform better simply because of being singled out and made to feel important.

human relations approach Emphasizes the psychological characteristics of workers and managers, stressing the importance of such factors as morale, attitudes, values, and humane treatment of workers.

integrity test A type of job-screening examination that is designed to assess whether a candidate will likely be dishonest on the job.

job analysis The process of generating a description of what a job involves, including the knowledge and skills that are necessary to carry out the job's functions.

job crafting The physical and cognitive changes individuals can make within the constraints of a task to make the work their own.

job evaluation Scientific determination of the monetary value of a particular occupation, which relies on experts' decisions as to the standing of an occupation in terms of compensable factors.

job satisfaction The extent to which a person is content in his or her job.

job stress The experience of stress on the job and in the workplace setting.

KSAOs (KSAs) Common elements in a person-oriented job analysis; an abbreviation for knowledge, skills, abilities, and other characteristics.

Leisure The pleasant times before or after work when individuals are free to pursue activities and interests of their own choosing, such as hobbies, sports, and reading.

Mentoring A relationship between an experienced employee and a novice in which the more experienced employee serves as an advisor, a sounding board, and a source of support for the newer employee. p

normative commitment The sense of obligation an employee feels toward the organization because of the investment the organization has made in the person's personal and professional development.

organizational citizenship behavior (OCB) Discretionary actions on the part of an employee that promote organizational effectiveness but are not part of the person's formal responsibilities.

organizational culture An organization's shared values, beliefs, norms, and customs.

organizational identity Employees' feelings of oneness with the organization and its goals

Orientation A program by which an organization introduces newly hired employees to the organization's goals, familiarizes them with its rules and regulations, and lets them know how to get things done.

Overlearning A key goal of training by which trainees practice after they have achieved a level of acceptable skill at some task so that the skill has become automatic.

performance appraisal The evaluation of a person's success at his or her job.

role conflict The kind of stress that arises when a person tries to meet the demands of more than one important life role, such as worker and mother.

scientific management The managerial philosophy that emphasizes the worker as a well-oiled machine and the determination of the most efficient methods for performing any work-related task.

sexual harassment Unwelcome behavior or conduct of a sexual nature that offends, humiliates, or intimidates another person.

strengths-based management A management style emphasizing that maximizing an employee's existing strengths is much easier than trying to build such attributes from the ground up.

structured interview A kind of interview in which candidates are asked specific questions that methodically seek to get truly useful information for the interviewer.

Theory X managers Managers who assume that work is innately unpleasant and that people have a strong desire to avoid it; such managers believe that employees need direction, dislike responsibility, and must be "kept in line."

Theory Y managers Managers who assume that engaging in effortful behavior is natural to human beings, and who recognize that people seek out responsibility and that motivation can come from allowing them to suggest creative and meaningful solutions.

thinking outside the box Exploring new ways of approaching tasks and challenges and finding solutions.

Training Teaching a new employee the essential requirements to do the job well.

transactional leader An individual in a leadership capacity who emphasizes the exchange relationship between the worker and the leader and who applies the principle that a good job should be rewarded

transformational leader An individual in a leadership capacity who is concerned not with enforcing the rules but with changing them.

Strategic planning

a set of procedures for making decisions about the organizations long-term goals and strategies

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Operational planning

Day-to-day decisions and actions (tactics) to carry out Functional Plan

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Mission statement

A concise description of the goals or desired outcomes of a team

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Goal

Something you would like to accomplish.

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Budget

amount of money that can be spend

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Standards

values held by stakeholders that provide the basis on which to assess the merit or worth of the initiative

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Policies

written instructions designed to address a commonly occurring problem in an institutionally approved manner

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Authority

a government's legitimate use of power

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Procedure

a set of steps that explains how to do something

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Organization chart

A visual representation of an organization that shows title and responsibility (in a box form)

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Responsibility

to accept the consequences of our marketing decisions and strategies

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Accountability

Ability to track user activity on a system. This requires positive, unique ID and an effective audit trail

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Empowerment

enhancing the capabilities and influence of individuals and groups

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Line authority

authority to make decisions and to direct the performance of subordinates in production, sales, or finance-related activities.

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Centralized organization

a structure in which authority is concentrated at the top, and very little decision-making authority is delegated to lower levels.

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Decentralized organization

An organization in which decision making authority is not confined to a few top executives but rather is spread throughout the organization.

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Departmentalization

The basis by which jobs are grouped together

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Top level managers

managers responsible for setting goals and planning the future for a company

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Middle managers

2nd lowest technical skills, high human skills, 2nd highest conceptual skills, 2nd highest motivation to manage

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Operational managers

managers who are responsible for daily operations of a business such as supervision and office managers

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Planning

Goals, Interventions, and Individualization

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Organizing

the process of arranging personnel and physical resources to carry out plans and accomplish goals and objectives

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Implementing

function of management that involves directing and leading people

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controlling

the management function that monitors and evaluates tasks.

