

# INDUSTRIAL PSYCHOLOGY AT WORK

Nancy Syverson, Managing Editor

**The science has produced volumes of information about workers, productivity, behavior, motivation and other issues. Here's a look at the effect it has had and continues to have on industrial human relations.**

In 1945 there were a grand total of 130 participants in a newly-formed division of the Washington, D.C.-based American Psychological Association (APA), designated Division 14. It was one of the original 19 divisions of the APA and was created to focus on Industrial and Business Psychology. In September 2000, Division 14, incorporated in 1982 as the Society for Industrial and Organizational Psychologists (SIOP), boasted 6,000 participating, retired and student members. That number was a 28% increase from five years ago.

According to Lee Hekel, administrative director of SIOP, attendance at association-sponsored conferences has increased almost four-fold since SIOP's first conference was held 16 years ago. In 1985, 700 industrial psychologists made their way to the association's first conference. More than 3,200 people are expected to attend SIOP's conference in 2001. "The field is growing," she says. "There are more graduate programs in Industrial Psychology, more articles being published, and more consulting companies being formed. The world-wide web is creating opportunities and consulting companies have increased in size and become multi-national," she says.

SIOP president Nancy Tippins speculates that the steady increase in membership is the result of the higher demand from business and industry for the service industrial psychologists offer. According to Tippins, education may be the cause for the higher demand for industrial psychologists. Through undergraduate and MBA programs, managers have become more educated and more aware of the different options they have to solve the problems.

If Sigmund Freud were alive today, he would probably applaud the transfer of some of his theories from the therapist's couch to the factory floor. Who can forget Freud's concepts of the conscious and unconscious, the id and the ego? The psychodynamic approach to plant organization, like Freud's psychoanalytic approach to his patients, considers both the conscious and the unconscious realms, how they interact, and how they influence personality and behavior. The conscious level of plant operations, that is the professional, overt and observable machinations of a plant organization are often apparent and quantifiable. But, "after exposure to the work environment, some students of industrial psychology complain about not understanding the deeper meaning of behavior in the organization. They are aware of something happening, but they can't put their finger on it," reports Frans Cilliers and Pieter Koortzen, industrial psychologists and authors of an article entitled "The Psychodynamic View of Organizational Behavior," which appeared in SIOP's journal, *The Industrial/Organizational Psychologist*, in October 2000. That "something" they can't touch, but know exists is the unconscious mental and emotional forces that comprise the psychodynamics of that

organization. "When an industrial psychologist goes into an organization, there are things that are spoken and unspoken," says Tippins, "and as psychologists, our job is to observe all of those kinds of cues to use them and help define the problem and formulate a reasonable solution."

In his 1930 book *Civilization and Its Discontents*, Freud introduces the concepts of the pleasure principle and the reality principle. The pleasure principle governs the pleasure-seeking aspect of our unconscious. The reality principle, the practical aspect of our unconscious, seeks to subjugate the pleasure principle for the sake of what has to be done, like work for example. Manfred Kets De Vries, a Harvard-educated MBA and authority on management, analyzes organizations with the logic of the academic and the insight of a practicing psychoanalyst.

"I do not like the word 'Freudian,'" Kets De Vries says, "as if nothing happened in the development of psychoanalytic theory after Freud. After all most of his theories were developed in the 19th century. I use the term 'clinical paradigm' in making sense of organizations."

In 1991, Kets De Vries, currently a professor at the France-based European Institute of Business Administration, postulated that employees view work as both a painful burden that has to be performed and a pleasurable activity that generates rewards, such as financial gains and company recognition. Why? From a psychoanalytic point of view, the employee must give up the pleasures and freedom of childhood to work in a world governed by the reality principle. Sublimating and repressing the pleasure principle causes many problems unless the employee willingly delays gratification. If the worker can't do this, say experts, work will be avoided.

### Face to face with Freud

"When an industrial psychologist goes in to a plant to try to show people how to change and why it is important to change, there is a lot of underlying emotion and aggression," says Michael Serena, educational psychologist and consultant with TBM Consulting, Durham, NC. "They don't want to change, usually because of fear." Serena says worker fear of change is often rooted in the workers' unconscious reaction to the psychodynamics of their organization. These reactions can be divided into three basic categories, he says. They are:

**Dependency.** The worker unconsciously experiences dependency on an organization like a child depends on a parent. When the worker's needs are not met, he or she experiences frustration, helplessness and powerlessness. The worker, responding like a child, will seek attention and structure, and will view the supervisor as a parent from whom the worker seeks security.

"Another hypothesis is that people get upset when they lose their locus of control," says Serena. "They don't have control of their lives when they go to the assembly line. Somebody else is controlling them. When you don't have a locus of control, there is frustration and aggression builds up." The worker may fight this feeling of dependency and the feeling that he is "just being told what to do, just a number."  
**Fight, Flight.** A reaction to an organization that is filled with anxiety. The worker uses fight or flight as a defense mechanism. Fight reactions include aggression against oneself, one's peers and against authority, competition and positioning. Emotions like envy and jealousy are also fight reactions. Flight reactions include avoidance of others, illness and sometimes, resignation.

**Pairing.** To cope with anxiety, alienation and loneliness, the individual or group

attempts to pair with more powerful individuals or groups. The unconscious need is to feel secure. Such groups can be formed rapidly when faced with the prospect of changes in the system. Conflict among groups, and "ganging up" on perceived enemies often results from pairing.

"Industrial psychology takes principles like these and applies them to the issues and problems that employees and managers encounter in carrying out their tasks within an organization," says Nance Lucas, director of the James McGregor Burns Academy of Leadership at the University of Maryland, a non-profit group that offers leadership training to those who have not traditionally been in the leadership role. She says a key challenge the group addresses is the need for modern managers to both recognize that workers can be child-like in their demand for attention, but that they can develop far beyond this stage. "Today we talk more about talent and matching people's talent with the needs of the organization," says Lucas. "A leader's ability to size up individual talent can make or break a leader's effectiveness."

### Psychology 101

If you have taken psychology 101, you may remember a basic formula:

Personality + Environment = Behavior

This is based on the concept that if you know a person's personality and environment, you may be able to predict that person's behavior. Conversely, if you can observe a person's behavior you may be able infer their personality characteristics and the environment from which they come.

One of the more common ways modern employees have contact with industrial psychological principles is through pre-employment personality tests. The use of such tests has grown considerably in the past decade, says SIOP president Tippins, who also works as an industrial psychologist in the employee-selection practice group of Personnel Research Associates, Arlington Heights, IL. The reason for the tests' popularity, she says is that "we have maxed out on cognitive-ability testing," meaning that pre-employment testers have become adept at helping employers determine skills like reading, logical reasoning, mathematical aptitude and others. "We want to predict other variables related to job performance," she says, stressing that it is the combination of cognitive predictors and non-cognitive personality predictors that can help an employer most accurately determine which candidate will be successful in a job and who will not.

The most accurate form of personality test will not be off the shelf, but custom-made, based on an industrial psychologist's understanding of a company's needs. For example, the psychologist will perform a job analysis to determine the requirements of the job in terms of knowledge, skills and abilities. Then, tests are selected to measure the knowledge, skills and abilities the job will require. The final step is to demonstrate that the test actually does predict job performance. A "local" validation study is used to prove test validity by giving the test to people on the job. Performance data is then collected from supervisors and is statistically related to the test. Another method is called validity generalization. The industrial psychologist studies the data from other studies and determines that the situation for which the test has been developed is enough like other situations to generalize its validity.

Psychological testing is also used to probe deeper into employee personalities. For example, "situational judgement" questions ask employees to choose a response to

a given situation that relates to their job. Answers can tell an employer a lot about a person's personality and whether he or she will be dependable in certain situations.

### The Hawthorne Effect

Early efforts to determine worker behavior have played an important role in the productivity studies on which our modern-day concepts of communication, leadership, teamwork, motivation and human behavior are based. For example, from 1927 to 1932 Elton Mayo, a psychologist and professor of industrial research at the Harvard Graduate School of Business Administration, conducted psychological studies at the Western Electric Hawthorne Works in Chicago, IL. Mayo was looking for the effect of fatigue and monotony on job productivity. Mayo sought to control worker fatigue and productivity through variables such as rest breaks, work hours, temperature and humidity. The results of these experiments became known as the Hawthorne Effect and popularized as the "Somebody Upstairs Cares" syndrome.

The tests worked like this: Six women from the assembly line were isolated from the rest of the factory. They were put under the watchful eye of a supervisor whose role was that of a friend rather than a disciplinarian. Mayo changed the above-mentioned variables, and explained and discussed those changes with the women in advance.

Each of the six women sat on a bench and assembled telephone relays. When assembled, the relays were dropped down a chute. The number of completed relays were counted. Production was noted at the start, and, as the above-mentioned changes were introduced, the number of relays were counted to indicate the effect of that change. Throughout the experiments, an observer was present who spoke with the women, and kept them informed on the progress of the experiment. The observer asked advice and listened to the women's complaints.

The experiment revealed that the changes did, indeed, make a difference. For example, output increased when the women were put on piece work for eight weeks, and when they were given two five-minute breaks in the morning and afternoon.

When the two breaks were increased to 10 minutes, output went up sharply. When six five-minute pauses were introduced, however, the women complained that their work rhythm was broken by the frequent breaks and output decreased slightly. Output went back up when the two breaks were re-implemented and the company supplied a free hot meal during the first break. It went up again when the workday was shortened to 4:30 p.m. instead of 5:00 p.m. When the women were dismissed at 4:00 p.m., however, output remained the same.

The most interesting aspect of the experiment is what happened when the women were returned to their original work conditions for 12 weeks. This included a 48-hour work week, work on Saturday, no rest pauses, no piece work and no free meal. Result: Output reached the highest level ever recorded.

So what happened? Despite the variety of changes, says SIOP's Tippins, "It was really the attention that the people were given that caused their productivity to increase." The Hawthorne experiments revealed that:

• attention increases worker productivity

• satisfied workers are productive workers

• behavior can be altered if an individual or group knows it is being observed.

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The Hawthorne researchers showed that the workplace is a social system, that a group life develops among workers, and that relations with supervisors influence how a worker does a job. In addition, the team concept was formed. The six women worked as a team, cooperated with the experiment and were satisfied with their jobs. The group was not bossed around and they had the freedom to change their technique for relay assembly to avoid the monotony of the job. They did not feel that they were being coerced or pressured by a supervisor. Regular medical checks showed no signs of fatigue. Mayo's findings also indicate that the women developed an increased sense of responsibility. Discipline came from within the group rather than from a higher authority.

These results have been used to form some of the basic assumptions of many modern-day industrial psychologists and the spring board for current behavioral concepts of team, leadership, motivation and communication.

Asked to review production and output issues, for example, modern psychological approaches will study the system rather than individuals. "When we go into an organization and work with an existing workforce we don't do personality profiles to find out why there is variation in production." says Tom Oyan, a psychologist with Behavior Science Technologies, Inc. (BST), an Ojai, CA-based employment testing and training company. "We know it's the system they are working in." BST has based much of its technology on Hawthorne's finding that people's behavior can be changed if the individual or group is being observed. This means that unproductive or unsafe behavior can be changed if it is altered by some type of observation-based action, whether it's feedback, consequence or reinforcement.

Equally important was Hawthorne's concept of the team, which has become an integral part in virtually all production improvement programs. "We have adopted the perspective that a team is a group of people who are more than just a collection of individuals on an assembly line," says Lucas of the Burns Academy of Leadership. "It is a group of people who need to be knitted together to work from a common vision and a common agenda."

And even though significant progress has been made since Hawthorne, much of the work of industrial psychologists continues in "areas that are new twists on old problems," says Tippins, such as violence in the workplace. As workplace violence escalates, this could prove the next important challenge for those who study and interpret the mind of the modern worker.

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