Employee Honesty Testing: Management's Big Gamble

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Testing is an important procedure for gathering, transmitting, and assessing information about an applicant's aptitudes, experiences, and motivations. The most common types of written tests measure aptitude, achievement, and interests and preferences (Dolan and Schuler, 1987).

The validity and reliability of written tests are of utmost importance for both the organization and the job applicant. Validity and reliability help to ensure that an applicant will perform at a certain level, and will help to provide the job applicant with a sense of fairness and legality in the selection procedure. While a test that leads to rejection of people on any of the grounds specified by the federal and provincial human rights Acts is prohibited, test validity as it relates to discrimination has not yet received as much attention in Canada as in the U.S. No component of staffing has generated more controversy and criticism since the early 1960s in the U.S. than the use of written tests (Albright, 1983). Controversy and criticism centre around questions of test fairness, cultural bias, validity, and test item characteristics such as vagueness and irrelevancy (Croshaw, 1987).

Many of the tests used in Canada were developed in the U.S., and validated with different groups of workers there.

Thus, a serious potential problem relating to discrimination might exist. It is estimated that 20% to 25% of all employers in Canada use tests to obtain information on job candidates. (Teft, 1981; Dewey, 1981).

A number of newly developed and used tests are a matter of headlines news. With increasing numbers of employers adopting the practice of using isoteric tests in recent years, it is no wonder that the resultant furor generated by employees and civil libertarians alike has become the focus of major media attention.

For example, a recent use of medical examinations is to screen applicants on the basis of their genetic makeup. Genetic screening, as it is called, is based on the premise that some individuals may be more sensitive than others to workplace elements such as chemicals. The screening is done on the basis of an analysis of an applicant's blood or urine sample. With approximately 55,000 chemicals in use in industry presently and 800 being added annually, the benefits of genetic testing to the millions of Canadian workers exposed to those chemicals daily are apparent. Both employees and job applicants should be told about their genetic susceptibility so that they can decide whether they want to work in this type of environment. However, some legal as well as ethical questions must be asked: Should companies be permitted to select employees according to their inherited probability of contracting occupational illness? Who should bear the cost of adapting workplaces for the employees most susceptible?

Presently there are no laws that deal with genetic testing in the workplace. The various Canadian occupational health and safety organizations have to date shown little or no interest in investigating genetic screening. However, genetic screening may prove to be more appropriately used as information for placement rather than selection. If all applicants are shown to have equal sensitivity to a workplace chemical, genetic screening information may be used to facilitate workplace modification (Dolan and Schuler, 1987).

Drugs in and of themselves provide a topic sufficiently compelling to warrant attention. Perhaps it is for this reason that media coverage of employee drug testing overshadows the fact that drug testing is but one of the growing battery of controversial testing methods employers are increasingly adopting to protect themselves against business losses directly caused by their employees – including theft, sabotage, vandalism, or other damage to goods and equipment.

Without question, employers have ample motivation for taking significant precautions with regard to their employees. In 1974 – more than a decade ago – a U.S. Commerce Department report estimated employee-related business losses at about $7 billion annually. Among others, the report specifically included the following startling observations:

- About half of all employees steal to some degree; about 5 to 8 percent steal in some volume.
- From 60 to 70 percent of all inventory loss in retail establishments is caused by employee theft; the remainder is caused by shoplifting and accounting errors.
- The cost of employee pilferage and embezzlement exceeds the cost of burglary and robbery by several billion dollars (Sullenberger, 1985).

Today, depending on whose statistics are quoted, estimates on employee-related loss range anywhere from $15 billion to $40 or even $50 billion (Flaherty, 1982).

While it is probably neither accurate nor fair – even in the face of such statistics – to believe that the majority of employees are dishonest, it seems clear that significant numbers are. Apparently, the traditional methods business has long relied on to secure competent, trustworthy employees are no longer adequate. The personal interview isn't screening out the "bad eggs" nor are the references obtained from previous employers. In fact, with the threat of law suits causing many firms to adopt a closemouthed attitude about former employees, it is not unusual to find that reference checks yield no more than a confirmation of employment dates. And as one personnel director puts it, "How much honesty can you expect from a reference a prospective employee has given you? A reference isn't going to tell you the applicant is another John Dillinger (Shub and Connelly, 1985).

So business has begun policing itself in recent years, arming its employment managers with an arsenal of new technological methods and psychological tests designed to spot potentially dishonest employees before they are hired and to ferret out individual employees who have committed specific thefts or other misdeeds. Including not only the use of mechanical equipment like the polygraph, voice analyzer, or other stress detector, but also the use of any of a number of paper-and-pencil honesty tests or even outside opinion from, for example, an expert in handwriting analysis, these new methods have quickly become subject to intense scrutiny.

Controversial the tests certainly are. Few people would not raise an eyebrow over a pre-employment interview that included questions like "Have you ever participated in any type of march, riot, sit-in, or demonstration? Have you ever had an extramarital affair? How often do you change your underwear?" (Flaherty, 1982).

This particular set of questions from an actual polygraph interview administered at one company is perhaps a worst-case scenario of the kind of voyeurism that occasionally characterizes such testing methods and is probably directly responsible for the controversial label they have earned. But having admitted that, it is more in keeping with an objective analysis of the issues to examine the tests not in terms of their shock value but in terms of their validity and reliability – that is, in terms of their value to management as appropriate tools for assessing employee conduct. Do the tests actually measure what they purport to measure (validity)? Do the same tests yield consistent results across a variety of testing situations (reliability)?

Among the most widely used of business's technology-based testing methods is the polygraph, better known from police drama as the lie detector. While estimates as to the number of polygraph examinations administered for business purposes each year range, again depending on the source, from one to four million and more, the list of business clients consistently includes about 20 percent of all U.S. companies – Chase Manhattan, Citibank, Merit Oil, and Loew's Theaters, for example – and 50 percent of the U.S. retail stores especially retailers of jewellery and pharmaceuticals (Tivnan, 1984).

Although information about the use of polygraph tests in Canada is sketchy, one author estimates that this practice is also widely used in Canadian companies (Jain, 1983).

The general public is, by now, familiar with the basic physiological functions measured by the polygraph. The equipment monitors and records changes in blood pressure, heart rate, respiration, and sweat-gland activity, all of which are subject to fluctuations produced by varying levels of stress, physical or emotional.

During the actual testing phase, the applicant or employee is asked to respond to a number of different types of questions, each designed to elicit varying levels of emotional response that can be tracked by the polygraph equipment. The questions themselves may range from innocuous to specific, including "control" questions such as those in the worst-case scenario cited previously. Any emotional stress experienced by the examinee during the testing interview, including the stress produced by the attempt to deceive by lying is recorded by the polygraph equipment.

How valid is the polygraph? How reliable are its results? Police drama aside, perhaps the most critical thing to remember is that while "lie detector" may be the public name, "polygraph" is the scientific one. The polygraph does not "detect" lies; it measures physiological responses that authorities universally agree are produced by stress. The responses to stress recorded by the polygraph might be produced by telling a lie, but the same responses might well be the result of stress caused by fear, shame, anger, or embarrassment. There is no one set of physiological responses unique to lying.

There is, thus, an overwhelming fallacy in the basic logic governing the polygraph's use as a truth-verification device – that is, that there is an absolute relationship between specific physiological responses and the act of lying. On this point alone, the polygraph's validity as a measurement tool is seriously compromised.

Moreover, on questions of reliability – on the accuracy and consistency of test results – the polygraph has also demonstrated serious shortcomings. In part, such are related to the issue of validity already discussed – there is difficulty in identifying the specific source of responses recorded by the polygraph. In part, questions must be raised because the responses themselves can be rendered inaccurate for a number of reasons, including self-induced stress on the part of the examinee (caused, for example, by digging fingernails into palms), sexual or ethnic differences in response levels, or even individual psychological makeups.

Even more critical to the issue of reliability is the fact that reasons like those already noted make the accuracy of the polygraph predominantly a function of the examiner's ability and experience in interpreting polygraph results and forming conclusions about an examinee's honesty. Unfortunately, the current state of polygrapher training – on average, about four to six weeks of instruction – does little to alleviate scientific skepticism regarding the polygraph's reliability. Even more alarming, given the critical impact of such testing, many states still do not mandate licensing requirements.

For all these reasons, therefore, industry experts tend to agree that the polygraph is a less-than-perfect truth-verification device. And while the best of estimates – quoting polygraphers themselves – grant the polygraph an accuracy rate as high as 90 percent (most critics, in fact, would place it considerably lower), that rate needs to be clearly understood in human terms by managers contemplating its use among prospective or current employees.

Conservative estimates claim one million polygraph exams are conducted in North America for business each year. A 90 percent accuracy rate for those exams would incorrectly classify 100,000 people. If one limits the pool to 10,000 examinees and assumes, for the sake of argument, that 90 percent of them are honest, conceding even a 95 percent accuracy rate for the polygraph would result in incorrectly classifying 450 honest employees as liars or worse and 50 deceptive workers as good scouts.

In fact, David Lykken, professor of psychiatry and psychology at the University of Minnesota Medical School and generally recognized as a leading authority on polygraph research, has gone one step further in condemning the polygraph for its tendency to create false-positives. "Highly socialized persons", he notes, "the kind of conscientious individuals whom most employers covet, tend to fail polygraph tests – even though they are truthful – while the undersocialized or psychopathic types of individuals, tend to pass them – even though they are lying" (Lykken, 1985).

In Canada, a Royal Commission inquiring into Metropolitan Toronto police practices concluded that some of the deficiencies of the polygraph were that it is crude and many of the operators are unskilled in its use as a scientific instrument. Justice Monard who headed the Commission was amazed to hear the naive and dogmatic pronouncements made by the polygraph operators and called for legislative control in this field. As of today there are no legislative efforts in this regard (Dolan and Schuler, 1987).

Because of the costs and complications involved in using polygraph tests, companies are beginning to use paper-and-pencil honesty tests to predict individuals who are likely to lie or steal.

Like the polygraph exam, the paper-and-pencil honesty test is finding increasing use in the pre-employment screening practices of numerous business organizations. As an alternative to the polygraph, the paper-and-pencil honesty tests have the advantage of being less costly to administer on an individual basis. Moreover, as there are still few clear-cut legal restrictions on the use of writen exams, they have been used in a growing number of states (in the U.S.), restricting the use of pre-employment polygraph testing.

The paper-and-pencil test is designed to evaluate the examinee's attitudes toward theft and other illegal activities, generally utilizing a multi-item scale and weighted responses to specific questions. Test questions, for example, might inquire into the examinee's attitudes toward theft and other illegal activities, generally utilizing a multi-item scale and weighted responses to specific questions. Test questions, for example, might inquire into the examinee's opinions regarding the frequency and extent of theft in society ("What percentage of people take more than $1.00 per week from their employer?"), punishment for theft ("Should a person be fired if caught stealing $5.00?"), ease of theft ("How easy would it be for a dishonest person to steal from an employer?"), likelihood of detection ("What percentage of employee thieves are ever caught?"), and personal honesty ("Compared to other people, how honest are you?").

As wtih the polygraph, however, the validity and reliability of paper-and-pencil honesty tests have also been criticized by those who doubt that such tests can effectively measure so subjective a quality as individual integrity. The basic psychological assumptions that provide the framework for specific questions, they contend, are invalid in themselves. Does a "no" answer, for example, to a question like "Should an employer fire a long-service, trusted employee who has been found taking a few dollars from the cash register every week?" mean that the examinee can too easily identify with the employee– the assumption being that there is solidarity among thieves– or does it mean that the examinee is moved by the quality of mercy? On the test from which this question was taken, there are no allowances for a forgiving attitude (Flaherty, 1982).

There have, as yet, been no conclusive scientific studies confirming the validity of paper-and-pencil honesty tests. Pursuing a patently circular argument, for example, many studies have attempted to correlate honesty test results with those obtained from polygraph testing. But given the skepticism with which the scientific community generally views the polygraph, it cannot be regarded as a satisfactory instrument for measuring the validity of another instrument.

Studies have also atempted to correlate honesty test results with specific admissions examinees make about instances of past theft. Such studies, however, are flawed by respondents' tendency to give socially desirable, rather than accurate, responses, thus inhibiting admissions and heightening honesty scores. Furthermore, while past behavior may be a predictor of future behavior, the link between the two is less than perfect, making the use of these correlations questionable as estimates of future behavior.

Yet another type of validity study has been made possible by the fact that many companies utilizing honesty tests seek to balance test results with other criteria in order to ensure a sufficient pool of qualified applicants for position vacancies and may, therefore, actually hire employees who fail to pass an honesty exam. According

to estimates, 25 to 75 percent of those who take the paper-and-pencil tests fail to pass them (Sackett and Harris, 1985).

Thus, validity studies have attempted to correlate specific instances of employee theft with previously obtained test results. But these studies, too, are hampered by problems that make their results less than conclusive. In the first place, few employee thieves are ever actually caught. Second, while some detected thieves might be found to have performed poorly on the test, the majority of employees not recommended on the basis of their scores are neither found guilty nor even suspected of stealing.

Employee honesty testing, therefore, is probably best viewed as a matter of playing the odds. Scientific method notwithstanding, it is the business manager alone who must ultimately weigh the value of honesty testing – polygraph or paper-and-pencil – in terms of the practical goals and day-to-day operations of a specific company.

Selection techniques, after all, are developed to assist management in identifying those employees who are most likely to succeed in a job. Given the expense and perhaps even more important, the questionable validity and reliability of honesty testing, is it not appropriate to question the usefulness of techniques that serve at best only to weed out those employees likely to fail in a job?

There are, perhaps, two final cases of an anecdotal nature that will help to underscore this point.

The first involves the well-publicized story of a Californian engineer who sold the Soviets top-secret plans obtained through a friend employed as secretary to a defense contractor executive. Having passed a polygraph exam to obtain the high-security clearance required for her job – thus seemingly assuring her integrity – she simply walked into the vault at the close of business hours each day and just as simply walked out with the critical documents in hand.

The second story involves Sister Terressa, a teaching nun who applied for a job in a B. Dalton bookstore in Minneapolis. After weeks of nervous waiting for word on her application for employment, Sister Terressa called the store. The reason for B. Dalton's refusal to consider Sister Terressa? "They said I had the lowest score on the honesty test that they had ever seen! (Flaherty, 1982).

REFERENCES

Albright, L.E. "Staffing Issues" in S.J. Carroll and R.S. Schuler (eds), *Human Resource Management in the 1980s*, (Washington D.C.: Bureau of National Affairs, 1983).

Cronshaw, S.F. "Employment Testing in Canada: Strategies for higher Organizational Productivity and Human rights Compliance", in S.L. Dolan, R.S. Schuler (eds), Canadian Readings in Personnel and Human Resource Management, West Publishing Company, 1987.

Dewey, M. "Employers Take Hard Look at the Validity and Value of Psychological Screening" *The Globe and Mail*, Feb. 7, 1981, p. 81.

Dolan, S.L. and Schuler, R.S. *Personnel and Human Resource Management in Canada*, West Publishing Company, 1987.

Flaherty, F.J. "Truth Technology: Who Detects the Lies of the Lie Detectors?", *Progressive*, 46 (June 1982), p. 30-35.

Jain, H.C. "Human Rights: Issues in Employment", *Human Resources Management in Canada*, Prentice Hall – Canada, 1983, pp. 51,000 – 50,140.

Lykken, D.T. "The Case against the Polygraph in Employment Screening", *Personnel Administrator* (September 1985), p. 59-65.

Sackett, P.R. and Harris, M.M. "Honesty Testing for Personnel Selection", *Personnel Psychology* 37.1 (1984), p. 221-245.
Shub, A.N. and Connelly, W.J. "In Search of an Honest Employee" *Security Management* (August 1985), p. 24-30.
Tefft, M. "Why More Firms Rely on Psychological Tests", *Financial Post*, December 12, 1981.
Sullenberger, T.E. "Is the Polygraph Suited to Preemployment Screening", *Security Management* (August 1985), p. 44-48.
Tivnan, E. "Truth and Consequences: What's Wrong with the Lie-Detector Tests", *New York* (March 12, 1984), p. 49-58.

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