

## **Chapter 1**

# **INTEGRITY TESTING FOR PRE-EMPLOYMENT SCREENING AND SELECTION: BACKGROUND**

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#### SCREENING FOR PRODUCTIVE AND HONEST EMPLOYEES

Hiring new workers is always risky. Applicants who are selected may turn out to be less productive than expected, while those rejected might have proven productive if given the chance. Although the costs to employers of the first type of error are more readily observable, both types can undercut the productive efficiency of a firm. Firms have an incentive to minimize the costs caused by hiring unproductive workers as well as the costs of denying employment to workers who would have become productive.

Since the early 20th century, a number of psychological tests have been developed to assist employers in making personnel decisions. For example, following the development of intelligence tests at the turn of the century, and their application by the military to recruit and assign soldiers during both World Wars, the use of personality and cognitive ability tests in industry became widespread.<sup>1</sup> Pressures on organizations to select and place employees more carefully have increased with specialization of job categories, high rates of employee turnover, concerns about worker productivity, workplace theft, increased liability and insurance costs, and drug and alcohol use on the job;<sup>2</sup> and the impetus to use more effective screening techniques has grown with the

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1. For the history of personality testing in industry, see Robert Hogan, Bruce N. Carpenter, Stephen R. Briggs, and Robert O. Hansson, "Personality Assessment and Personnel Selection," Personality Assessment in Organizations, John Bernardin and David A. Bownas (eds.) (New York, NY: Praeger, 1985); and Robert Perloff, James A. Craft, and Evelyn Perloff, "Testing and Industrial Application," Handbook of Psychological Assessment, Gerald Goldstein and Michel Hersen (eds.) (New York, NY: Pergamon Press, 1984). For a modern critique of assessment based on traditional tests of intelligence, see Robert Sternberg, The Triarchic Mind (New York, NY: Viking Penguin, 1988). A thorough analysis of the use of the General Aptitude Test Battery in employment can be found in John Hartigan and Alexandra Wigdor (eds.), Fairness in Employment Testing (Washington, DC: National Academy Press, 1989).

2. Anne Anastasi, "The Use of Personal Assessment in Industry: Methodological and Interpretive Problems," Personality Assessment in Organizations, H. John Bernardin and David A. Bownas (eds.) (New York, NY: Praeger, 1985), p. 2.

development and marketing of new written, physiological and chemical tests designed for use in personnel screening.<sup>3</sup>

### Measuring Theft and Counterproductivity

With a growing awareness of the prevalence of workplace theft and counterproductivity, many employers are interested in prospective employees' honesty, indebtedness, prior convictions, drug and alcohol use, health, and dependability, in addition to their prior education and specific job skills. These hiring concerns were always a high priority for employers, and have spurred the search for innovative and effective ways to deal with employee dishonesty; and the possibility that reducing theft and counterproductivity could play a role in restoring the Nation's aggregate economic performance has gained credibility.<sup>4</sup>

It is important to distinguish attempts to measure the prevalence and incidence of theft from attempts to explain its origins and/or cures.<sup>5</sup> Neither issue is easily answered. The measurement problem is plagued by the fact that ". . . try as they might, businesses do not have any reliable statistics on the amount of employee theft and other forms of workplace crime [and] we are forced to make educated guesses regarding the scope of the problem."<sup>6</sup> Nevertheless, some research efforts are often cited. The American Management Association (AMA), in a frequently cited study conducted in 1977 at the request of the U.S. Department of Justice, estimated annual losses to U.S. businesses

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3. For a review and discussion of biological tests designed to screen job applicants with relatively high vulnerabilities to various workplace health hazards, see Dorothy Nelkin and Laurence Tancredi, Dangerous Diagnostics: The Social Power of Biological Information (New York, NY: Basic Books, Inc., 1989).

4. The U.S. Chamber of Commerce, for example, estimates that ". . . approximately 30 percent of the business failures that occur each year are precipitated or related in some way to employee dishonesty." Chamber of Commerce of the United States, A Handbook of White Collar Crime (Washington, DC: 1974). OTA did not independently analyze these or other data regarding theft and counterproductivity levels in U.S. firms, and cannot assess the claim that the U.S. productivity growth slowdown might be arrested or reversed through the implementation of strategies designed to reduce theft in the workplace. For a recent analysis of productivity growth and comparison with other countries see, for example, William J. Baumol, Sue Anne Batey Blackman, and Edward N. Wolff, Productivity and American Leadership: The Long View (Cambridge, MA: The MIT Press, 1989).

5. Prevalence refers to the proportion of employees involved in theft or other behaviors, while incidence refers to the number of times theft occurs in a given time period. These are the definitions adopted by Hollinger. See Richard C. Hollinger, Dishonesty in the Workplace: A Manager's Guide to Preventing Employee Theft (Park Ridge, IL: London House Press, 1989), p. 13.

6. Ibid., p. 6.

from 11 nonviolent crimes (including employee theft, vandalism, and bribery) in the range of \$40 billion.<sup>7</sup> Of the nonviolent crimes studied, AMA estimated that employee pilferage accounted for between \$5 and \$10 billion.<sup>8</sup> These estimates were used by the Bureau of National Affairs in a 1988 study showing a dramatic increase in losses from theft over the 1975 data: “. . . annual economic losses to U.S. business from employee theft ranges from \$15 billion to \$25 billion per year.”<sup>9</sup>

A comprehensive analysis of workplace theft was funded by the National Institute of Justice.<sup>10</sup> Based on a survey of over 9,000 employees in the retail, hospital, and manufacturing sectors, including 47 corporations in three metropolitan areas (Minneapolis-St. Paul, Cleveland, and Dallas-Ft. Worth), this study found that 35 percent of employees responding in the retail sector reported some involvement in some type of theft (see table 1), 33 percent in the hospital sector (table 2), and 28 percent in the manufacturing sector (table 3). ” Reported figures for involvement in production

7. See National Institute of Law Enforcement and Criminal Justice, Law Enforcement Assistance Administration, "Summary Overview of the State of the Art Regarding Information Gathering Techniques and Level of Knowledge in Three Areas Concerning Crimes Against Business," draft report, March 1977; and American Management Association, Crimes Against Business: Background, Findings, and Recommendations (New York, NY: 1977).

8. This figure could be an underestimate, however, if dishonest employee behavior contributes to other crimes such as kickbacks/bribery (\$3.5 to \$10 billion), embezzlement (\$4 billion), and securities theft/fraud (\$5 billion); but it could also be too large, if some so-called employee theft is the result of clerical or billing errors, shoplifting, or incorrect inventory control.

9. I. Shepard and R. Duston, Thieves at Work: An Employer's Guide to Combating Workplace Dishonesty (Washington, DC: Bureau of National Affairs, 1988). Cited in Hollinger, op. cit., footnote 5, p. 7.

10. Richard C. Hollinger and John P. Clark, Theft by Employees (Lexington, MA: Lexington Books/D.C. Heath and Co., 1983). Originally published as Richard C. Hollinger and John P. Clark, Theft by Employees in Work Organizations, (Washington, DC: U.S. Department of Justice, National Institute of Justice, September 1983). An update with commentary has been authored by Hollinger (workbook author) and John Jones (series editor) as Dishonesty in the Workplace: A Manager's Guide to Preventing Employee Theft (Park Ridge, IL: London House Press, 1989). For other studies of theft, see, for example Terry L. Baumer and Dennis P. Rosenbaum, Combating Retail Theft: Programs and Strategies (Boston, MA: Bitterworth Publishers, 1984), ch. 2, which concluded that losses in retail stores due to internal sources were over \$8 billion for 1980, while losses attributable to customer shoplifting were about \$3.7 billion. A recent study of small businesses in New York City concluded that crime cost them more than \$1 billion a year, and that the most common types of crimes are break-ins, vandalism, auto and truck theft and break-ins, and shoplifting; the study, "Small Business, Big Problems," was done by Interface, a public policy research organization, as reported in Dennis Hevesi, "Crime is Costing Small Businesses \$1 Billion a Year, a Study Shows," New York Times, May 15, 1989.

11. Other recent studies tend to confirm the significance of workplace theft in specific industries: for example, it was found that internal theft, and not shoplifting, was the leading cause of retail losses, and FBI statistics on bank losses point to the significant impacts of employee dishonesty. See W. Zierden, "Statement of the Chamber of Commerce of the United States on the Polygraph in the Workplace," testimony before the Senate Committee on Labor and Human Resources, June 19, 1987; and American Bankers Association, 1988 ABA Bank Insurance Survey (Washington, DC: 1988).

**Table 1-- Percentage of Employees Involved in Property Deviance  
Retail Sector (N = 3,567)**

Items	Involvement				Total
	Almost daily	Once a week	4-12 times/year	1-3 times/year	
Misuse the discount privilege	0.6	2.4	11.0	14.9	28.9
Take store merchandise	0.2	0.5	1.3	4.6	6.6
Get paid for more hours than were worked	0.2	0.4	1.2	4.0	5.8
Purposely under-ring a purchase	0.1	0.3	1.1	1.7	3.2
Borrow or take money from employer without approval	0.1	0.1	0.5	2.0	2.7
Be reimbursed for more money than spent on business expenses	0.1	0.2	0.5	1.3	2.1
Damage merchandise to buy it on discount	---	0.1	0.2	1.0	1.3
Percentage of employees involved in one or more of the above					35.1

SOURCE: Richard D. Hollinger and John P. Clark, Theft by Employees (Lexington, MA: D.C. Heath and Company, 1983), p.42; also cited in Richard C. Hollinger, Dishonesty in the Workplace: A Manager's Guide to Preventing Employee Theft (Park Ridge, IL: London House Press, 198

**Table 2- Percentage of Employees Involved in Property Deviance  
Hospital Sector (N = 4,111)**

Items	Involvement				Total
	Almost daily	Once a week	4-12 times/year	1-3 times/year	
Take hospital items (e.g., linens)	0.2	0.8	8.4	17.9	27.3
Take or use medication intended for patients	0.1	0.3	1.9	5.5	7.8
Get paid for more hours than were worked	0.2	0.5	1.6	3.8	6.1
Take hospital equipment or tools	0.1	0.1	0.4	4.1	4.7
Be reimbursed for more money than spent on business expenses	0.1		0.2	0.8	1.1
Percentage of employees involved in one or more of the above					33.3

SOURCE: Richard D. Hollinger and John P. Clark, Theft by Employees (Lexington, MA: D.C. Heath and Company, 1983), p.42; also cited in Richard C. Hollinger, Dishonesty in the Workplace: A Manager's Guide to Preventing Employee Theft (Park Ridge, IL: London House Press, 1984).

**Table 3- Percentage of Employees Involved in Property Deviance  
Manufacturing Sector (N = 1,497)**

Items	Involvement				Total
	Almost daily	Once a week	4-12 times/year	1-3 times/year	
Take raw materials used in production	0.1	0.3	3.5	10.4	14.3
Get paid for more hours than were worked	0.2	0.5	2.9	5.6	9.2
Take company tools or equipment	---	0.1	1.1	7.5	8.7
Be reimbursed for more money than spent on business expenses	0.1	0.6	1.4	5.6	7.7
Take finished products	---	---	0.4	2.7	3.1
Take precious metals (e.g., silver, platinum and gold)	0.1	0.1	0.5	1.1	1.8
Percentage of employees involved in one or more of the above					28.4

SOURCE: Richard D. Hollinger and John P. Clark, Theft by Employees (Lexington, MA: D.C. Heath and Company, 1983), p.42; also cited in Richard C. Hollinger, Dishonesty in the Workplace: A Manager's Guide to Preventing Employee Theft (Park Ridge, IL: London House Press, 198

deviance, which included taking long lunch breaks and misusing sick leave, were even higher: 64 percent in the retail sector, 69 percent in the hospital sector, and 82 percent in the manufacturing sector (see tables 4, 5, and 6).

### **Workplace Theft and Counterproductivity: Explanations and Remedies**

As compelling as these statistics appear, they may obscure certain fundamental questions about the nature of theft and other forms of workplace deviance -- their origins and causes -- which could play an important role in devising appropriate management and public policy responses. The strategy inherent in integrity testing is to identify individuals with relatively high propensities to commit theft or other counterproductive acts. This reflects a view that some people are inherently more honest (or dishonest) than others.

However, other experts emphasize the organizational and situational influences on behavior. In addition, the question is made complicated by differences in the definition of dishonest behavior at the workplace. For example, some experts regard theft on a continuum of production and property deviance: the former includes acts such as participating in strikes, coming to work late, and abusing sick leave, and the latter refers to pilferage, embezzlement, sabotage, and stealing of property.<sup>12</sup>

Second, there are many factors that can stimulate these acts. Some researchers argue that ". . . most incidents of [theft] are unrelated to an employee's particular economic situation. . . ."<sup>13</sup> although there is still extensive debate on this subject. Another factor, job dissatisfaction, seems to be more important: ". . . employees who felt that their employers were dishonest, unfair, and uncaring about their workers were significantly more involved in theft and other forms of workplace deviance."<sup>14</sup>

A very important question about workplace deviance, then, is the relative effects of individual propensities, on the one hand, and characteristics of the work environment or situation, on the other. Although this is a specific instance of the debate between "traits and states" that continues to occupy psychological researchers,<sup>15</sup> there appears to be widespread agreement that it is useful to discuss

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12. Hollinger, *op. cit.*, footnote 5, p. 34.

13. *Ibid.*, p. 21.

14. *Ibid.*, p. 23.

15. This issue is discussed in greater detail below.



**Table 4 — Percentage of Employees Involved in Production Deviance  
Retail Sector (N = 3,567)**

Items	Percentage of employees				Total
	At most once a day	Once a week	Two or three times a week	Three or more times a week	
Take a long lunch or break without approval	6.9	13.3	15.5	20.3	56.0
Come to work late or leave early	0.9	3.4	10.8	17.2	32.3
Use sick leave when not sick	0.1	0.1	3.5	13.4	17.1
Do slow or sloppy work	0.3	1.5	4.1	9.8	15.7
Work under the influence of alcohol or drugs	0.5	0.8	1.6	4.6	7.5
<b>Percentage of employees involved in one or more of the above</b>					<b>65.4</b>

SOURCE: Richard D. Hollinger and John P. Clark, Theft by Employees (Lexington, MA: D.C. Heath and Co., 1983) p. 45.

**Table 5 -- Percentage of Employees Involved in Production Deviance  
Hospital Sector (N = 4,111)**

Behaviors	Involvement				
	Almost daily	Once a week	4-12 times a month	1-3 times a year	Other
Take a long lunch or break without approval	8.5	13.5	17.4	17.8	57.2
Come to work late or leave early	1.0	3.5	9.6	14.9	29.0
Use sick leave when not sick	---	0.2	5.7	26.9	32.8
Do slow or sloppy work	0.2	0.8	4.1	5.9	11.0
Work under the influence of alcohol or drugs	0.1	0.3	0.6	2.2	3.2
<b>Percentage of employees involved in one or more of the above</b>					<b>69.2</b>

SOURCE: Richard D. Hollinger and John P. Clark, Theft by Employees (Lexington, MA: D.C. Heath and Co., 1983), p. 45.

**Table 6 – Percentage of Employees Involved in Production Deviance  
Manufacturing Sector (N = 1,497)**

Items	Involvement				Total
	Almost daily	Once a week	4-12 times a year	1-3 times a year	
Take a long lunch or break without approval	8.0	23.5	22.0	8.5	72.0
Come to work late or leave early	1.9	9.0	19.4	3.8	44.1
Use sick leave when not sick	---	0.2	9.6	28.6	38.4
Do slow or sloppy work	0.5	1.3	5.7	5.0	2.5
Work under the influence of alcohol or drugs	1.1	.3	3.1	7.3	2.8
<b>Percentage of employees involved in one or more of the above</b>					<b>82.2</b>

SOURCE: Richard D. Hollinger and John P. Clark, Theft by Employees (Lexington, MA: D.C. Heath and Co. 1983), p. 45.

theft and workplace deviance with reference to situational as well as individual variables. A good example of accounting explicitly for the effects of management decisions is found in a discussion of sick leave abuse: “. . . if management should institute strict controls over sick leave abuse, we may discover that people simply leave early or come in late or have friends ‘clock them out’ without their physically being at work. Or, if management tries to increase productivity without a corresponding increase in wages, we might expect to find employees compensating themselves informally through theft and pilferage.”<sup>16</sup> Thus, while there are strong incentives to screen out job applicants with a ‘. . . predisposition to excusing or rationalizing theft behavior . . . ,’<sup>17</sup> the importance of supervisory personnel creating an atmosphere conducive to honesty and productivity seems at least as important.<sup>18</sup> According to this view of theft and other deviant acts, “. . . the ‘crime in the workplace’ perception of employee theft is usually incorrect. Employee theft is a management problem, not a crime problem.”<sup>19</sup>

There are other sociological factors that can enrich the discussion of workplace deviance. For example, some scholars have pointed to the effects of work group norms on theft levels. One study found that “. . . the men who loaded and unloaded ships ‘taxed’ cargo in transit by stealing a percentage of the ship’s contents . . . ,” and concluded that “. . . this informal system of worker rewards is so pervasive that it constitutes a substantial ‘hidden economy’ found in every society around the world.”<sup>20</sup> A special case has been documented in which management actually encouraged certain forms of employee theft: “A number of researchers have observed instances of

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16. Hollinger, op. cit., footnote 5, p. 35.

17. Ibid., p. 41.

18. According to Hollinger (ibid.), pre-employment integrity testing is “. . . perhaps the single most important step that an organization can take . . . ” (p. 41), but the author also notes that “. . . perhaps the single most effective tool in reducing employee theft is for supervisory personnel to set a good example. . . .” (p. 42). OTA did not assess the comparative advantages of these basic approaches, but notes that if they were found to be equally effective, then a comparison of their social and private costs would be an important criterion in deciding whether to implement them. An equally important question is whether the use of tests enhances or detracts from management’s efforts at creating a productive environment.

19. Ibid., p. 33.

20. Ibid., p. 24.

supervisors allowing productive employees to take from the organization as an unauthorized 'perk' rewarding high productivity.<sup>21</sup>

### Legal Incentives for Pre-employment Screening

Employers' incentives for improved screening go beyond their desire for productive and honest workers, and may be driven also by the need to protect themselves from a variety of legal actions.<sup>22</sup> For example, under "negligent hiring" doctrine, employers may be liable for the wrongful actions of their employees, even if the action occurred outside the scope of employment, if employers do not exercise reasonable care in selecting and retaining competent and safe employees.<sup>23</sup> While standards for reasonable care are still being developed, some employers believe that use of integrity tests might bolster their case in a negligent hiring suit, and some integrity test publishers concur with this strategy. However, whether courts will accept this defense remains unclear. To date there has not been a published negligent hiring case in which an employer's defense rested on the use of paper-and-pencil integrity tests, few integrity tests claim to predict violence, and since most negligent hiring suits involve violent behavior by employees, it is not clear that tests to screen thieves (or people who miss work or get to work late) would ever be germane.

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21. Richard C. Hollinger and John P. Clark, "Deterrence in the Workplace: Perceived Severity, Perceived Certainty, and Employee Theft," Social Forces, vol. 62, 1983, pp. 398-418. This is illustrated by an example from the shoe department of a major department store: "The leading salesman of the group was allowed to freely steal from the store as a reward for making his supervisor's sales statistics look good. . . . Poor salesmen were turned in to store security personnel for relatively minor instances of pilferage." See Hollinger, op. cit., footnote 5, p. 35. For an enlightening discussion of the potentially positive effects on workplace morale and organizational productivity of certain behaviors that appear deviant, see M. Dalton, "The Interlocking of Official and Unofficial Reward," The Sociology of Organizations, O. Grusky and G. Miller (eds.) (New York, NY: The Free Press, 1981), pp. 324-346.

22. Michael Silver, "Negligent Hiring Claims Take Off," ABA Journal, vol. 73, May 1, 1987, pp. 72-78.

23. For a review of these issues see Mark Minuti, "Employer Liability Under the Doctrine of Negligent Hiring: Suggested Methods for Avoiding the Hiring of Dangerous Employees," Delaware Journal of Corporate Law, vol. 13, No. 2, spring 1988, pp. 501-532; and Sue Walker, "Negligent Hiring: Employer's Liability for Acts of an Employee," The American Journal of Trial Advocacy, vol. 7, No. 3, summer 1984, pp. 603-610.

## WHAT ARE INTEGRITY TESTS?

Integrity tests are viewed by employers as one tool in the armamentarium of personnel screening techniques, which can also include other tests of personality and/or cognitive ability, background checks into criminal history and credit records,<sup>24</sup> reference checks, blood or urine tests,<sup>25</sup> handwriting analysis, and personal interviews. These tests, almost always paper-and-pencil instruments, contain, either in whole or in part, questions about an individual's attitudes toward theft and other deviant or illegal acts, and questions about an individual's prior involvement in such behavior. Answers to these queries lead to inferences about the test-taker's propensity to commit workplace theft and/or other counterproductive acts.

Some tests, which are called "overt integrity tests," are clearly designed to query applicants about their attitudes towards specific manifestations of dishonesty -- theft in particular -- and about their past involvement in such behavior.<sup>26</sup>

To better understand the nature of questions that typically appear on integrity tests, consider the following examples:<sup>27</sup>

### Overt Questions

- "How often do you tell the truth?"
- "Do you think that you are too honest to take something that is not yours?"
- "How much do you dislike doing what someone tells you to do?"

24. For a discussion of issues regarding access to criminal history records, see U.S. Congress, Office of Technology Assessment, An Assessment of Alternatives for a National Computerized Criminal History System, OTA-CIT-161 (Washington, DC: U.S. Government Printing Office, October 1982).

25. For discussion, see "Employment Testing," in U.S. Congress, Office of Technology Assessment, Medical Testing and Health Insurance, OTA-H-384 (Washington, DC: U.S. Government Printing Office, August 1988), ch. 3.

26. According to Sackett et al. (P. Sackett, L. Burris, and C. Callahan, "Integrity Testing for Personnel Selection: An Update," Personnel Psychology, vol. 42, 1989), these tests include the Personnel Selection Inventory (London House), the Trustworthiness Attitude Survey (Psychology Surveys Corp.), Pre-employment Opinion Survey (P.O.S. Corp.), the Reid Report (Reid Psychological Systems), the Stanton Survey (Stanton Corp.), TrueTest (Intergram, Inc.), and the Phase II Profile.

27. These questions are based on existing test questions found in a variety of integrity tests examined by OTA. The questions have been changed slightly to avoid proprietary disclosures.

- “Do you feel guilty when you do something you should not do?”
- “Do you think it is stealing to take small items home from work?”
- “Do you believe that taking paper or pens without permission from a place where you work is stealing?”
- “What percentage of the people you know are so honest they wouldn’t steal at all?”
- “How many people have cheated the government on their income tax returns?”
- “How easy is it to get away with stealing?”
- “in any of your other jobs, was it possible for a dishonest person to take merchandise if a dishonest person had your job?”
- “Do you believe most employers take advantage of the people who work for them?”
- “Do you think company bosses get away with more illegal things than their employees?”

#### **Veiled-Purpose Questions**

- True or False: Eating right is important to my health.”
- “True or False: I like to create excitement.”
- "True or False: I like to take chances.”
- “On the average, How often during the week do you go to parties?”
- “True or False: I am usually confident about myself.”
- "True or False: A lot of times I went against my parents’ wishes.”
- “I feel lonely even when I am with other people {all of the time, most of the time, sometimes, almost never, never}.”
- “How often do you blush?”
- “How often do you make your bed (everyday, never, etc.)?”
- “How many people don’t you like?”
- “Are you an optimist?”

Whether or not tests question applicants overtly about behavior and attitudes related to honesty, they now almost all rely on a broad range of behaviors as measures of their effectiveness. The distinction between overt and veiled-purpose integrity tests appears to be disappearing. A review

of the marketing information from publishers of the more overt tests indicates that the constructs these tests are said to measure are becoming less precise; in many cases, “theft” is broadening to include “theft and other forms of counterproductive behavior.” In addition, publishers of the original “honesty” tests appear to be expanding their portfolios to include tests intended to measure a range of attitudes and predict a range of behaviors.

### **Traits, Attitudes, and Behavior: Some Basic Concepts<sup>28</sup>**

The debate over integrity testing revolves around interlocking issues of test design, use, and effects. One focal point of the debate is the question of whether dishonesty is a personality trait. If a test is designed to measure the degree to which an individual possesses this trait, however, there remains the question of how the trait is linked to specific behaviors of interest. It is at least theoretically possible for individuals to be identified as possessing a trait called dishonesty without their necessarily committing theft or other counterproductive acts in the workplace. Indeed, this has led some psychologists to question the very basis of integrity tests: “It is a substantial leap of faith to label [individuals’] responses [to questions on integrity tests] as probative of their future honesty or dishonesty. . . .”<sup>29</sup>

It can be argued, however, that integrity tests are designed strictly to help employers weed out job applicants who are relatively likely to commit certain undesirable behaviors, including but not limited to stealing, and that the existence of definable personality traits is irrelevant. This might be called a more purely predictive model, in which test questions that work well in predicting behavior under experimental conditions are kept and those that do not contribute useful information are discarded. Pure predictive empiricists would claim that they are only mapping answers to behaviors, and not measuring any particular traits. While such tests inevitably contain at least some questions that appear to suggest personality types, they are not necessarily based on any particular

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28. This section is based in part on Mark Kelman, “A General Framework for Evaluating Classification Errors, With Special Reference to Integrity Testing,” OTA contractor report, June 26, 1990.

29. Leonard Saxe, “The Social Significance of Lying,” paper presented to the American Psychological Association, Boston, MA, August 1990, p. 14.



psychological theory of personality.

Under either of these conceptualizations of what is being tested, an important question arises as to the relative efficacy of attitudinal and behavioral questions in predicting future behavior. On the one hand, there is empirical and theoretical support for the notion that intention is a strong predictor of behavior.<sup>30</sup> Assuming that individuals answer questions about their feelings regarding certain types of action with candor, and assuming further that these answers can be interpreted as reflecting intent, it may be possible to draw inferences about the likelihood of certain behaviors being committed in the future.<sup>31</sup>

By and large, however, prior acts are generally assumed to be better than beliefs or intentions as predictors of future acts. Test questions based on prior behavior are therefore based on a different empirical model, one which assumes that people tend more or less to keep acting the same way they have been acting. For example, persons who have stolen before are, probabilistically at least, more likely to steal in the future than those who have never stolen before (which is perhaps why detectives typically start their search for suspects by considering evidence linking a crime to known -- rather than new -- criminals). The validity of integrity tests based on these questions, then, depends in large part on whether admissions of past acts are a reasonable surrogate for actual past acts. It is difficult to assess the accuracy of self-report data in the absence of objective benchmarks.<sup>32</sup> Moreover, if admissions-based data are accurate, then people who confess to prior acts are reporting honestly. They might be probabilistically more likely to commit the undesirable behavior of interest in the future, however, and this makes the interpretation of such tests particularly complicated. (It is important to keep in mind that integrity tests do not usually rely on questions about prior behavior alone.)

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30. See, for example, I. Azjen, "Attitudes, Traits, and Actions: Dispositional Prediction of Behavior in Personality and Social Psychology," Advances in Experimental Social Psychology, vol. 20, 1987, pp. 1-63. This article reflects a stronger position on the role of attitude and intention from that taken in an earlier work. See I. Azjen and M. Fishbein, "Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research," Psychological Bulletin, vol. 84, 1977, pp. 888-918.

31. OTA did not assess the extent to which attitude questions on integrity tests would be considered as questions of "intent," and found no research that addressed this issue specifically.

32. On the reliability of admissions data, see Sackett et al., op. cit., footnote 26, pp. 517-519. In this context it is worth noting that although some predictors of criminality might be more accurate than personality-based ones -- see, for example, Herbert Packer, The Limits of the Criminal Sanction (Stanford, CA: Stanford University Press, 1968) -- they are not necessarily admissible as criteria for selection: in other words, predictive validity is not the sole criterion for determining the uses of screening instruments. See, e.g., Kelman, op. cit., footnote 31; or Nelkin and Tancredi, op. cit.,

Purely predictive tests, as well as those aimed at identifying theoretical psychological traits, can consist of both attitudinal and behavioral questions. Attitudinal questions probe beliefs and feelings about dishonesty, counterproductivity, and/or other even seemingly unrelated attitudes. Behavioral questions seek to correlate prior acts -- overtly related to honesty -- with future ones.

## Situations and Behavior

An important point regarding the predictive ability of integrity tests concerns the relative importance of individual personality variables and environments in explaining behavior. Despite efforts to declare the debate over,<sup>33</sup> psychologists continue to disagree on their relative importance. And this general debate has extended into the more specific area of honesty.<sup>34</sup> In any event, it 's unclear to what extent integrity test publishers take seriously the effects of situations on personal behavior. One spokesman for the integrity test industry claims that ". . . integrity test publishers typically assume that dishonesty is a relatively stable personality trait, but that counterproductive behavior can be influenced by a variety of situational factors."<sup>35</sup> There have been no studies of integrity tests in which organizational level variables have been fully integrated. These variables are difficult to define, and integrity test publishers are not alone in encountering this methodological problem.

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footnote 3.

33. See, for example, R. Carson, "Personality," Annual Review of Psychology, vol. 40, 1989, pp. 227-248. Carson cites W. Mischel, who is one of the psychologists most clearly identified with a situationist perspective, as having adopted over the years a more interactionist perspective. In this view, traits are taken as ". . . conditional probabilities that a particular action will be evoked by a particular environmental state." See Wright and Mischel, 1987, cited in Carson. See also W. Mischel, Personality and Measurement (New York, NY: John Wiley, 1968); and his more recent article, "Toward a Cognitive Social Learning Reconceptualization of Personality," Psychological Review, vol. 80, 1973, pp. 252-283. For different viewpoints that have appeared in the literature, see also D. Bem and D. Funder, "Predicting More of the People More of the Time: Assessing the Personality of Situations," Psychological Review, vol. 85, No. 6, November 1978, pp. 485-501; there the authors write that ". . . the recent debate [over the interaction of trait and situation] appears now to have evolved into a consensus that it is the interaction between the person and the situation that supplies most of the psychologically interesting variance in behavior . . ." (pp. 485-486).

34. The work of H. Hartshorne and M. May, Studies in the Nature of Character (New York, NY: Macmillan, 1928) was seminal. More recently P. Ekman, Why Kids Lie: How Parents Can Encourage Truthfulness (New York, NY: Charles Scribner's Sons, 1989) suggests that personality matters more than previously believed. Saxe however, notes that Ekman's critique of the Hartshorne and May work, on the grounds that they "made it too easy to cheat," serves to reinforce the situational explanation (op. cit., footnote 28, p. 9).

35. John Jones, London House, personal communication, July 1990.

## HOW ARE INTEGRITY TESTS DIFFERENT FROM OTHER PERSONALITY TESTS?

While there are still some integrity tests that purport to predict theft alone, as noted above, the majority appear to be marketed as instruments designed to assess a wider range of personality traits and to predict a wider range of behaviors. Publishers of integrity tests (and many employers) now increasingly argue that honesty and integrity in the workplace should be defined broadly, to include various types of counterproductive behavior as well as outright theft of money, property, or merchandise. Moreover, some items on integrity tests, and the constructs they purport to measure, bear some similarity to items and constructs found in other psychological personality tests.

Thus, with respect to criteria (i.e., outcomes of interest) and predictors (test constructs) it is sometimes difficult to distinguish honesty and integrity tests from the broader family of personality tests: in fact, one integrity test publisher has argued that “there is no fundamental conceptual difference between integrity tests and other personality tests,” such as the Sixteen Personality Factors Test (16PF), the Minnesota Multiphasic Personality Inventory (MMPI), and the California Psychological Inventory (CPI).<sup>36</sup> Nonetheless, there are differences among these latter tests and between any one of them and an integrity test.

It is commonly agreed that integrity tests are tests of personality, as they claim to measure an individual's propensity to behave in certain ways. But the professional and academic literature on integrity tests is ambiguous on the question of whether integrity tests are somehow special within this broader family. The leading academic and professional reviewers<sup>37</sup> note that most tests now include more than just honesty scales, which, at least until very recently, clearly distinguished them from other tests.<sup>38</sup> But these reviewers also imply that integrity tests are different from other Personality tests and

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36. Ibid.

37. R. Michael O'Bannon, Linda A. Goldinger, and Gavin S. Appleby, Honesty and Integrity Testing: A Practical Guide (Atlanta, GA: Applied Information Resources, 1989); and Sackett et al., op. cit., footnote 26.

38. See, for example, H. Heneman, D. Schwab, J. Fossum, and L. Dyer, Personnel/Human Resource Management (Homewood, IL: Irwin, 1989), p. 338, where honesty tests are singled out as a separate category from "work sample tests," "personality and interest tests," etc.

that they ought to be considered in a class by themselves. For example, a comprehensive directory of available integrity tests omits several widely used personality tests, despite certain similarities in question content and scope.<sup>39</sup> One is therefore left with the impression that experts continue to sense important differences between integrity tests and other personality tests, but that the differences are difficult to pinpoint.

This issue of deciding which tests are integrity tests and which are not seems to ignite considerable debate and acrimony. Some tests include items or scales seemingly related to honesty generally (if not in the workplace); but the publishers of these tests assert -- often quite vehemently -- that they are not integrity tests. For example, one test designed and used for screening law enforcement applicants includes the item: "I have to admit it, I once took money from an employer," and a scale called "Trouble with the Law and Society." In validation research on this test, criteria such as turnover, absences, lateness, and disciplinary actions have been used.<sup>40</sup>

Nevertheless, the developer of this test does not consider it an integrity test, primarily because it has never been validated using theft as a criterion and because it is not intended for predicting theft or screening out potential thieves *per se*.<sup>41</sup> Similarly, the Army's ABLE test, which contains measures designed to predict turnover, is not considered an integrity test by its developers, the claims of some integrity test publishers notwithstanding.

This point of contention has more than just academic interest. Policymakers contemplating possible regulatory action must keep in mind the formidable barriers to defining precisely what tests would be included and under which criteria.

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39. O'Bannon et al., *op. cit.*, footnote 38. See also Sackett et al., *op. cit.*, footnote 26, whose review of research on validity omits studies based on several personality tests known to be used in personnel selection.

40. See B. Bolton, review of the Inwald Personality Inventory, in J. Mitchell (ed.), The Ninth Mental Measurements Yearbook (Lincoln, NE: Buros Institute of Mental Measurements, University of Nebraska-Lincoln 1985), pp. 711-714.

41. Robin Inwald, personal communication, 1990. Note also that this test was not included in the review by Sackett et al. (possibly because its use is limited to a single employment setting, namely enforcement and security), nor in the review by O'Bannon et al. (*op. cit.*, footnote 38). It is included as an "interpersonal skills and attitudes" test under the broader category of "Business and Industry" tests in Test Critiques. J. Keyser and R. Sweetland (eds.), Test Critiques (Kansas City, MO: Test Corporation of America, 1987).

Even if honesty tests resemble personality tests because they share some common items or scales, they are somewhat distinguishable by the scope of their questions and by the nature of their intended uses. Thus “. . . personality and interest tests seek to measure motivation . . . ,”<sup>42</sup> and “. . . with few exceptions [these tests] have not been developed for use as employee selection techniques. Personality tests are typically intended . . . to identify broad personality dimensions or mental disorders . . . [while] interest tests are used to provide people with information about their preferences for various activities, and, in turn, such information can be of assistance in making personnel choices.”<sup>43</sup> When personality tests are used, they can provide information on such matters as individual interests, which presumably can be helpful in assigning people to appropriate jobs. While in practice they are also sometimes used for personnel selection (i. e., for hire/no hire decisions), that use is considered controversial. Honesty tests are specifically designed and marketed for selection of applicants and not for their assignment to particular jobs.<sup>44</sup>

#### **Caveats to Comparisons of Integrity Tests and Personality Tests: Additional Considerations**

As stated earlier, some integrity test publishers tend to compare their products with several widely used personality tests, and claim they are identical in most important aspects. OTA believes this claim to be weak. Consider, for example, the Minnesota Multiphasic Personality Inventory (MMPI), a widely used and validated personality test, originally designed for use in identifying clinically significant levels of psychopathology. The test was validated on a clinical sample of psychiatric inpatients, and while it has been applied to “normal” populations, these applications have raised a controversy within the psychological community. The recently added subscales intended specifically for use in employment screening have not been validated independently and have been controversial as well.<sup>45</sup>

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42. Anne Anastasi, *Psychological Testing*, 6th ed. (New York, NY: Macmillan, 1988), pp. 523.

43. Heneman et al., op. cit., footnote 39, p. 336.

44. For honesty tests to be useful in assigning individuals to jobs, one would have to assume that some jobs (or some employers) have less need for honest workers. To illustrate this point, suppose one's interest in classical music suggested a poor match for work in a video arcade; it would not necessarily rule out work in a concert hall. But one's “high risk of committing theft” would likely be undesirable in any job, which suggests why misclassification from honesty tests may be especially troubling. See ch. 3 for discussion.

45. One source of controversy is the face validity of these scales, which closely resembles

Even the user's manual for the MMPI-2 reflects the controversy over using the test for normal populations, and cautions that ". . . preemployment screening [is justified] for positions for which *clinical personality assessment is recommended, namely, positions involving public safety and trust, and those in which personality factors affect the performance of hazardous jobs. . . .*"<sup>46</sup>

Moreover, even in high-risk environments where the MMPI can be deemed acceptable, it is not to be used as the sole instrument of selection. Individuals applying for sensitive jobs who test negative on the MMPI are usually subjected to additional screening.<sup>47</sup> It is not clear to what extent business establishments rely exclusively or principally on integrity test scores.

The proprietary nature of integrity tests is another distinguishing characteristic that raises problems. Unlike the MMPI, for example, for which item banks and scoring keys (the templates used to interpret raw scores) have generally been available to independent researchers, the content and scoring algorithms of integrity tests have been more closely held.<sup>48</sup> critics argue that as long as integrity tests remain proprietary, it is unlikely that the research base will improve substantially, either in quantity or in credibility. It is important to keep in mind, however, that test publishers believe that the effectiveness of their instruments could be jeopardized if the contents were made public; this, they would argue, could cut revenues and constrain their resources available for research and test innovations.<sup>49</sup>

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honesty tests. According to Dr. Robert M. Gordon (Institute for Advanced Psychological Training, Allentown, PA), an expert on MMPI research and practice, when people apply for jobs they are particularly defensive about their faults, and have a strong incentive to fake their answers. While truthfully reporting an occasional immoral act would result in a low (i.e., good) score on the "L" (lie) scale, it would show up on the "ASP" (antisocial practices) scale as an indicator of immorality.

46. S.R. Hathaway, J.C. McKinley, and James Butcher, MMPI-2: Minnesota Multiphasic Personality Inventory-2 -- User's Guide (Minneapolis, MN: National Computer Systems, Inc., 1989), p. 1 (italics added). This caveat is mentioned in a section entitled "Clinical Testing in Personnel Selection, An Invasion of Privacy?" and points to one of the public policy problems of concern in this report (see ch. 3). Note that the invasion of privacy issue seems to persist despite extensive revisions of the original MMPI, and deletion of particularly offensive questions.

47. Although the MMPI demonstrates extremely low rates of false positive error (less than 1 percent of persons who are diagnosed by the test as ill are in fact free of the psychopathology(ies) of interest), it continues to suffer from what might be an unacceptably high rate of false negatives. This represents an inversion of the kind of public policy problem that arises because of false positive errors of integrity tests: false negative errors with MMPI can lead to the mistaken hiring of individuals who are not psychologically suited for dangerous or sensitive jobs. (OTA is grateful to Dr. Robert M. Gordon, for bringing these matters up in a personal communication to OTA.)

48. The IPI and 16-PF are copyrighted, but are not as closely held as integrity tests.

49. The original developers of the MMPI may have made little money, but spawned a generation of high-quality psychological research; indeed, much of the research was devoted to the detection

## Issues of Test Scoring and Use

Another aspect of integrity tests that may help distinguish them from other personality tests is the manner in which they are scored and their results presented to clients. Honesty and integrity tests on the market today can be scored by the test publisher or the employer. Although no statistics have been gathered on scoring procedures for the available tests, the impression is that slightly more than one-third offer both on-site and publisher scoring, and less than one-third offer only one of either . option.<sup>50</sup>

An important issue concerning the scoring of tests and reporting of results arises in light of the fact that “. . . integrity tests are marketed in large part to nonpsychologists . . . ,”<sup>51</sup> who may be inadequately equipped to interpret the results. For example, most publishers who score the tests themselves provide an interpretation of test performance in terms of “recommend/not acceptable. ” Although individual propensities to act dishonestly or counterproductively are often classified in more than two dichotomous risk categories, the intent is that employers -- with professional guidance from test vendors -- use these classifications in making hiring decisions. While psychometrician and some test publishers recognize that continuous score distributions are superior to such classifications, the latter are easier to interpret and are therefore more compelling to employers.<sup>52</sup>

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and weeding out of flaws in the test instrument. Some long-time users and advocates of the MMPI have expressed their dismay over the recent commercialization of the revised version of that test, and its direct marketing as a personnel selection device. Integrity test publishers, on the other hand, believe that innovations and improvements in their tests are furthered, not impeded, by the potential for financial reward; and that ultimately both the producers and consumers of integrity tests are better off in this arrangement, because publishers assume responsibility for the psychological interpretation of their tests (based on an interview with John W. Jones, London House, June 26, 1990). OTA did not analyze these issues in full. The American Psychological Association has recently created a task force to look into various aspects of commercialization in psychological research, and its findings will undoubtedly be useful to policymakers.

50. Linda Goldinger, personal communication, 1990.

51. Sackett et al., op. cit., footnote 26, p. 523.

52. For continuous score distributions to yield meaningful inferences about differences in risk level among applicants with different scores, additional information is required (the standard error of measurement). But this information is rarely given and even more rarely understood by nonpsychologists or psychologists without adequate training in statistics.

It is important to point out that test inaccuracy in itself is not a measure of actual misclassification of job applicants, but rather provides a measure of the potential harm that could result if test results were the dominant or sole criterion for selection. Few experts would argue with the publishers' warning that test scores should not be the sole basis for hiring decisions.<sup>53</sup> Whether these admonitions are followed in practice, however, is questionable, and seem to be confounded by claims in publishers' marketing literature "proving" that tests -- without reference to other elements of hiring decisions -- can reduce workplace theft and other counterproductive activity. The role of tests in reaching hiring decisions remains largely unknown. Although similar arguments could be advanced regarding any test for which discrete classes of performance, rather than continuous scores, are reported, the categories often provided for integrity tests -- "at risk to commit theft," e.g. -- may be particularly influential in hiring decisions (see box 1).

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53. See Association of Personnel Test Publishers, Model Guidelines for Preemployment Integrity Testing Programs, 1st ed. (Washington, DC: 1990).



## Box 1

### The Power of Test Results

One question that warrants careful empirical investigation is how employers use different kinds of test-based information. For example, some observers argue that the seductive nature of quantitative data, generated from “scientifically validated” studies, could induce employers to base their hiring decisions solely or primarily on test scores. To illustrate, consider a hypothetical test, which provides information on a range of 18 personality traits from “interpersonal style” and “caring” to “natural v. logical problem solving style.” The intent of this instrument is to provide clues to rather complex psychological traits, not all of which are clearly defined or necessarily consistent with one another. While the test might supply some useful information to employers, particularly for meeting certain job needs, it is not intended as the basis for a dichotomous “hire/no hire” decision.

But now suppose there were a “19th” factor added to the list, called “dishonesty” or “proclivity to violence.” Given that no employer wants dishonest or violent workers -- regardless of other cognitive or interpersonal attributes -- this variable could very well dominate the list. The scientific imprimatur associated with scoring this factor would be likely to make any employer reluctant to hire someone with this ranking. To a large extent this is why many psychologists who advocate the cautious use of any personality test in selection are concerned over the apparent ease with which integrity tests can be misused.

End of Box