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The Unconvincing Case for Drug Testing

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Le gouvernement Mulroney a récemment proposé un programme obligatoire de contrôle de dopage dans les industries du transport au Canada. Après une brève discussion sur l'application des contrôles de dopage au Canada, l'article revoit la littérature pertinente et souligne la nécessité de faire une analyse coûts-bénéfices. La revue de la littérature montrera que le contrôle de dopage semble peu utile pour régler les problèmes de drogue illégale en milieu de travail. La section finale de l'article décrit l'environnement légal entourant le contrôle de dopage, tel qu'il se présente dans le droit écrit et la jurisprudence, ainsi que les travaux reliés à cette question de certains professeurs de droit et d'autres chercheurs. Une attention spéciale est donnée à la question de la confidentialité qui est sous-jacente à plusieurs causes légales menées aux Etats-Unis contre les programmes existants de contrôle de dopage. L'article conclut qu'il en reste beaucoup à apprendre sur les conséquences et l'efficacité des programmes de contrôle de dopage avant d'endosser leur application à la grandeur du Canada.

The Mulroney government has recently proposed a program of mandatory drug testing in Canada's transportation industries. Following a brief discussion of drug testing in Canada, the paper reviews the relevant literature and describes the necessary components of conducting a cost-benefit analysis. It will be seen that this literature does not provide persuasive evidence of the usefulness of drug testing in addressing illicit drug problems in the workplace. The final section of the paper explores the legal environment surrounding drug testing, as it is reflected by constitutional, statute and case law, as well as the work of legal scholars and other writers. Special attention is given to the privacy issue which underlies many of the legal challenges to testing programs in the United States. The paper concludes that much more remains to be learned about the efficacy and consequences of drug testing programs before widespread Canadian applications can be endorsed.

Introduction

The use of drug tests[1] for workforce selection and maintenance has increased steadily throughout the United States. By 1987, nearly 50 per cent of the largest US corporations performed the procedure in one form or another (*Wall Street Journal*, 1989), and it has since been required by law for most federal employees as well as holders of (and applicants for) 'safety-sensitive' positions in the transportation sector.

The purpose of this paper is to argue that in general, the case for mandatory drug testing in Canada is a weak one at best. This purpose will be fulfilled by demonstrating that studies in the relevant areas are scant and/or unpersuasive. Moreover, in examining the various components that would nec-

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essarily be incorporated into a cost-benefit analysis, it will be seen that several factors will tend to reduce the net benefit of the measures which the federal government is currently contemplating. The final section argues that the legal environment surrounding drug testing in Canada may not be supportive, especially in light of the intrusive nature of drug tests.

The current popularity of drug testing in the United States might suggest that its cost-effectiveness has been proven. This is simply not the case. Indeed, A.J. McBay (1990) has argued that 'no evidence can be found that improvement in safety, health or performance has resulted from the millions of dollars that have been expended on drug testing procedures' (*ibid.*). Moreover, much of the American drug testing 'boom' that occurred during the 1980s is attributable to political pressure. The emotional anti-drug appeals of the Reagan Administration bordered on 'demagoguery' and created an environment in which many employers felt compelled to implement drug testing programs because failure to do so might be perceived as condoning drug use (Rothstein, 1989:365). This fear was easily exploited by aggressive marketing and sales forces, who often overstated the value of testing and painted a bleak picture of the consequences of failing to use the drug testing product or service being offered (*ibid.*).[2]

Drug Testing in Canada

In this section, we will discuss the drug testing issue from a Canadian perspective, as reflected by business and professional groups and the federal government. President Reagan's anti-drug appeals, together with the expanding use of drug tests in the United States caused the matter to become a public issue in Canada (Robinson, 1989:1422). Still, on the whole, the Canadian business community and professional groups were reluctant to follow the American lead on the testing issue. While there was widespread public awareness of the 'drug problem' (Glasbeek and McRobert, 1989), there was also much concern about the impact of testing upon labour relations and civil liberties. Test accuracy was another unresolved issue.

One of the first known instances of Canadian interest occurred in 1986, when Air Canada announced plans to introduce mandatory drug and alcohol abuse testing for its 22,000 employees worldwide. However, the company was forced to scale down its plans severely in the face of union opposition (*Unity*, 1989:7).[3] In a workshop held by the Canadian Centre for Occupational Health and Safety (1987), it was agreed that mandatory or random testing in the workplace should not be done, even for safety reasons. Even pre-employment testing was noted as 'needing further discussion' (*ibid.*:2). Similarly, the Canadian Bar Association of Ontario concluded that the disadvantages outweighed the advantages, and recommended a legislative prohibition on testing in the workplace (1987:33). A discussion paper by the Addiction Research Foundation of Ontario (1987) was less severe, suggesting that while there might be room for testing in situations where employees showed deficits in performance and whose behaviour constituted a safety risk to themselves or others, mass or random screening of employees or job applicants should not be implemented.

More recently, the *Report of the National Consultation on Substance Abuse and the Workplace* noted that 'the overwhelming majority of participants expressed the view that most forms of drug testing were not appropriate in terms of their experience of the substance abuse problem in their industry' (Minister of National Health and Welfare, 1988:33). However, some transportation firms reported several years of experience with pre-employment screening programs, and argued that they should be allowed to continue and/or expand them (*ibid.*:32). The Toronto-Dominion Bank recently announced that it would implement voluntary periodic testing of its senior executives (McLellan, 1990) and later indicated that expansion to other employees and job appli-

cants would be forthcoming (*Vancouver Sun*, 1990).

The Mulroney government appeared to be sympathetic towards Reagan's anti-drug views. In 1986, the Prime Minister declared the nation to be afflicted with a drug 'epidemic,' but later indicated that it was mere coincidence that he had raised the alarm just as President and Mrs. Reagan were going on the air to launch their 'war' on drugs. Many criticized the Prime Minister for 'me-tooism,' and physicians, police and drug abuse experts said that while drug abuse had been growing in Canada, the problem was far less serious than in the United States (Denton, 1986).[4]

Despite concern about drug problems, mandatory testing was not advocated by the federal policy-makers until very recently. An all-party committee of the House of Commons released a report recommending against mass or random drug screening of applicants and employees, although it did concede that limited testing might be appropriate where safety concerns were present (House of Commons, 1987). Former Health Minister Jake Epp stated that employers should concentrate on prevention and education and not drug testing if they wanted to curb drug abuse in the workplace (*Unity*, 1989:12). But by the spring of 1990, it became apparent that the government's position had changed. On March 16th, Federal Transport Minister Doug Lewis announced a comprehensive program aimed at combatting the problem of substance abuse in Canada's transportation industry. Unlike the US program, the Canadian proposals included requirements for education and Employee Assistance Programs, many of which had already been implemented by companies and labour unions on their own. What was new, however, was the suggestion that companies would be required to implement 'random' drug testing, where workers are selected at random for urinalysis even if there is no reason to suspect that their performance is impaired by alcohol or other drugs. A host of other testing requirements (such as pre-employment and post-accident tests) was also proposed (Toulin and Lanthier, 1990).[5]

Empirical Evidence

Given the sensitive nature of drug-related issues, it is hardly surprising to find that sound evaluations of the costs and benefits of drug testing programs are scarce indeed. Some anecdotal 'case studies' have reported reductions in accidents, worker compensation claims or the like following the implementation of a drug testing program. The difficulty here is that often, the testing program is only one of several new personnel practices that were introduced. For example, the Georgia Power company implemented testing, education, communication, dog searches and an Employee Assistance Program in order to combat drug problems (Sheridan and Winkler, 1989). In the US railroad industry, *Operation: RedBlock* combined peer intervention, incentives and a testing program (Eichler et al., 1988:1). It does not seem possible in these settings to attribute any performance increment (or decrement) to any one component of the strategy.

The best attempt at a meaningful cost-benefit analysis seems to have occurred in the field of personnel and human resource management. In this field, utility analysis (or 'utility models') may be used to compare the costs of a new personnel practice (such as drug testing) with the improvements in worker performance that are expected to follow.[6] Normand and Salyards (1989) applied this tool to pre-employment drug testing and estimated the net utility of pre-employment drug screening in the US Postal Service to be about $55 million in reduced absenteeism costs alone. Although the authors noted that the estimates were understated because they did not take into account certain incidental costs associated with absenteeism (Normand and Salyards, 1989:45), there are also several factors which could cause this impressive estimate to be overstated, as the next section of this paper will demonstrate.

It has also been fashionable to quote statistics which suggest that drug-using employees have undesirable accident, tardiness, and absenteeism records (Morgan, 1988:683). Frequently, these estimates appear to be based on survey or interview data gathered from known abusers that have subsequently been extrapolated to the entire population (*ibid.*:685). Because of this, the findings will often be overstated (Osterloh and Becker, 1990). Quite simply, the problem is that it is the consequences of drug *abuse*, not *use* that are being measured. Indeed, McBay notes that evaluations of findings in major transportation accidents reveal that 'rarely is there scientific evidence that the employees were impaired by drugs other than alcohol or that random testing would have prevented the accident' (1990:523).

Very few scholarly studies have investigated the relationship between pre-employment urinalysis test results and successful job performance (Faley et al., 1988; Normand and Salyards, 1989; McDaniel, 1988).[7] In one of the better studies, Zwerling and his colleagues (1990) found that those with marijuana-positive urine samples had 55 per cent more industrial accidents, 85 per cent more injuries and a 78 per cent increase in absenteeism. Their study used advanced multivariate statistical models that could more accurately control for confounding differences between drug users and non-users. But the authors of the study were not able to control for the possible confounding effect of alcoholism, which could well account for a substantial portion of the differences that were found. Moreover, as Wish (1990) points out, the method used by the authors provides a measure of the association between substance abuse and job performance only if one defines *any* use of an illicit drug to be drug abuse.

Perhaps because of the dearth of meaningful empirical evidence, advocates frequently cite studies of the cost of drug abuse upon the economy to support their contention that testing is necessary. The most common source of dollar figures is the Research Triangle Institute of North Carolina, which found that the social cost of drug abuse was $60 billion in 1980. Of this, $33.3 billion was believed to be related to impaired or lost productivity (Harwood et al., 1984).[8] However, the methodology used to calculate the RTI productivity loss estimate has been severely criticized. Morgan, for example, has noted that the estimate relied upon self-reports of income and marijuana use, and used only daily marijuana use to explain differences in household income.[9] The calculations ignored the possible roles of race, location and non-children household residents in accounting for such differences (Morgan, 1988:687). Moreover, the estimate was based on the average difference in salary between marijuana users and non-users and in no way directly reflects users' on-the-job impairment (e.g., eroded performance, increased accidents) (Faley et al., 1988:155). A final caveat that should be mentioned here is that even if productivity loss figures such as these were reasonably accurate, they are unhelpful unless similar figures can be calculated for other more commonplace factors that harm productivity, such as alcohol and tobacco use, or other poor health habits.

Components of a Cost-Benefit Analysis

On the whole, the literature reviewed thus far does not present a clear and convincing argument that testing is needed, or that it is cost-effective. This section of the paper will present and discuss six necessary components of a scholarly cost-benefit analysis. For each component, it will be seen that there are one or more factors that will tend to reduce net benefits of implementing drug testing.

Incremental Benefits of Testing

A scholarly cost-benefit analysis would require knowledge of the extent to which drug testing procedures facilitate detection

of abusers (and resultant cost savings) *over and above* existing personnel practices. This could easily prove to be lower than expected. For, as the popularity of drug tests grows, applicants and employees may well become increasingly conscious of the fact that they need only abstain from illegal drug use for a fairly short period of time in order for the result of a pre-employment or periodic drug test to be negative.[10] This will tend to lower the incremental benefits of these tests to the extent that those unable to stay 'clean' for the requisite time period would be screened out by other procedures, such as the pre-employment medical examination or normal day-to-day supervision.[11]

Direct Test Costs

Although obtaining this information is a fairly straightforward exercise, it should be remembered that legal requirements or labour unions will often induce employers to use more costly analysis methods because these tend to be more accurate. The resultant impact upon the net benefit estimate may be considerable. For example, in the Normand and Salyards study discussed earlier, the authors use a cost-per-test figure of $11 in the utility equation. This may be entirely appropriate for that organization, although elsewhere, the cost is typically much higher. When a more realistic figure of $50 per test is substituted into the equation, the utility estimate declines by about $7 million (or 15%).[12]

Cost of Inaccurate Test Results

There are two dimensions to the accuracy problem. First, there is the unresolved matter of whether the test results correctly classify subjects as users or non-users. For some testing methodologies, many over-the-counter drugs and common foods may trigger a false positive result. A Northwestern University study of the popular and inexpensive Enzyme-Multiplied Immunoassay Technique ('EMIT') test,[13] for example, found that 25 per cent of the positive tests were false (Dentzer et al., 1986:50). Another study used blind testing[14] to evaluate the performance of 13 laboratories and found error rates ranging from 0 to 100 per cent (Hansen et al., 1985). Similarly discouraging results were found in a study in which blind procedures were *not* used (Lundberg, 1986).

More recently, however, the American Association for Clinical Chemistry has given a more favourable evaluation of laboratory performance. They conducted a blind study of 31 laboratories across the United States and found an overall accuracy rate of 97 per cent, and no false positive results. But this study suffers from what might be loosely defined as a 'mortality' problem. The original intention of the researchers was to replicate a study that had been done in 1987, in which 47 laboratories had participated. In the 1989 study, 10 laboratories 'did not produce their paperwork' in time and were excluded (Frings et al., 1989), and it is indeed questionable whether the findings from the sample generalize to the non-respondents.

Although false positives are less problematic when more sophisticated (and costlier) tests are used, the problem can never be dismissed altogether. Certainly, one way to reduce it is by conducting additional confirmatory tests, although one survey found that nearly one-half of the companies surveyed did *not* hire the applicant based on *one* test (Godefroi and McCunney, 1988:302). Moreover, as one Canadian laboratory employee has noted, 'while it may be true that a particular analytical technique is highly accurate if handled with the utmost diligence and done in triplicate with a blindfold blank, this seldom happens in the real world. This is a problem in laboratories whose income depends upon getting a certain number of samples out in a certain amount of time' (Canadian Centre for Occupational Health and Safety, 1988: 69–70). Even when laboratory performance is at its best, the likelihood that a test will generate false positive results increases dramatically where the incidence of drug use in the population is low. This notion is

articulated nicely by Barnum and Gleason (1990), who used Bayesian revision to demonstrate that even using accurate testing methods, it is conceivable that over 20 per cent of positive test results could prove to be false.[15]

Absent confirmatory tests, the only way to decrease the problem of the false positive is to raise the 'cut-off point'.[16] Doing so, however, increases the probability that a 'false negative' will occur. In this case, a person who is in fact a user of illegal drugs tests negative and is not weeded out. The concern here is very real: at a recent Air Transport Association Forum, one advisor complained that the threshold levels that the Federal Aviation Administration (FAA) is willing to accept as indicating that an employee or job applicant has recently used drugs are so high that the tests may not catch an individual who uses cocaine as many as four times a week (*Air Safety Week*, 1989:3). Whether the inaccuracy takes the form of a false positive or false negative, there is clearly a cost associated with inaccurate test results, which must be included in evaluating the desirability of the drug testing program.

The second dimension of the accuracy problem has to do with the predictive value of a positive test result. As alluded to earlier, little is known about the extent to which alcohol and other drug use adversely affects job performance (Robinson, 1989:1423). Clearly, some drug users are abusers whose work performance will suffer. Others can probably continue the moderate use of drugs for a lifetime without serious difficulty (Spitzer, 1986:23). Some drug-free applicants may have philosophical reservations about the testing procedure (Crown and Rosse, 1988:29). All three of these groups are excluded from the applicant pool when mandatory screening is used – two of them erroneously. As Becker (1989) points out, conventional utility models in the field of personnel/human resource management have ignored the effects of the external labour markets on the estimated utilities of selection tools. The Postal Service utility estimate is overstated to the extent that widely-expected labour shortages materialize during the 1990s. 'False negative' selection decisions (which occur when good applicants are incorrectly screened out) are of little consequence when loose labour markets ensure that ample numbers will clear the hurdle of a drug test. In periods of labour scarcity, however, the problem of the false negative has the potential to impose significant opportunity losses upon firms using poor selection methods that screen out otherwise qualified applicants.

Employee Relations Costs

As Rothstein has noted, each new test required of workers carries with it some employee relations cost. This is particularly true if the test is intrusive, invasive, embarrassing or otherwise unpopular with employees (Rothstein, 1989:365). Sadly, some analysts have overlooked this reality. For example, the authors of a cost-benefit analysis done by the US Urban Mass Transportation Administration (UMTA) did not include the costs associated with labour negotiations, arbitration, litigation or lost wages which might result from the implementation of drug testing requirements 'because of the uncertain nature of these actions and the varied costs that might be associated with them' (Urban Mass Transportation Administration, 1988).

In principal, costs such as those UMTA chose to ignore could well be incorporated into an analysis by the use of accounting data. Other employee relations costs, however, are markedly less measurable. Karren, for example, has noted that it is hard or almost impossible to quantify costs associated with the lower employee morale that will results when employees 'must prove their innocence against the presumption of guilt' (O'Keefe, 1987:38; cited in Karren, 1989:29; see also Maltby, 1987). Yet such costs may certainly be significant.[17] The potential linkage between morale and productivity is alluded to by Rothstein, who notes that increases in turnover, theft and

sabotage are also possible consequences of tests which cause an air of suspicion, distrust and animosity to pervade the labour-management relationship (Rothstein, 1989:365).

Resource Misallocation

As Schottenfeld notes, one danger of undue optimism about the effectiveness of testing is that it may cause abandonment of more comprehensive approaches that would ultimately be more effective (1989:416).[18] In other words, implementing testing may engender a misallocation of resources that might otherwise have been used to remedy more significant threats to worker performance, such as faulty equipment or unsafe operating procedures. Even in a situation where drug abuse constitutes a serious threat, there are several alternative strategies which could prove to be more effective in the long run. Regan (1989), for example, has suggested that performance appraisal can be used to correct substance abuse problems in the workplace. Others have suggested that video games or other behaviourally-based measures could be more meaningful in detecting workers whose performance might be impaired because of alcohol and other drug abuse (or other difficulties, such as marital problems) (Jacobson, 1990; Minister of National Health and Welfare, 1988:34).

The Employee Assistance Program (EAP) deserves special mention, for many see mandatory drug testing as a threat to its viability. EAPs have been implemented by many Canadian firms in recent years in order to help workers with a variety of personal problems, including drug abuse. The Canadian Centre for Occupational Health and Safety (1987:45) has suggested that EAPs and drug testing are mutually incompatible: 'one is based on trust and cooperative working relationships; the other is punitive and based on suspicion'. That drug testing may frustrate the viability of EAPs is documented nicely by Googins:

> The EAP had taught supervisors to place the drug problem within a job performance framework. Drug testing, by contrast, suggested an approach that used chemical testing, rather than job performance, to determine use. These parallel programs may well provide more confusion than clarity. They may well be an obstacle to any integrated program. (Googins, 1989:298–9)

Thus, one unintended consequence of tests which measure drug *use* is that they may detract from the effectiveness of EAPs, which almost invariably seek to combat both alcohol and other drug *abuse*. This is a critical notion, since there is virtually no disagreement on the fact that alcohol-related productivity losses are far more costly than productivity losses from other drugs (Harwood et al., 1984; Felman and Petrini, 1988; Anastapio, 1987). Although one scholar has noted that definitive conclusions on the effectiveness of EAPs are inappropriate (Colantonio, 1989), it is nonetheless clear that a testing-caused diversion of managerial time and financial resources from more promising opportunities to enhance productivity or safety (whether or not these pertain to drug abuse) would constitute a loss which would need to be incorporated in the calculation of the net benefits.

Incidence of Drug Abuse

Little is known about the true incidence of drug abuse in Canada. While all sectors and types of organizations interviewed in the National Consultation on Substance Abuse in the Workplace reported 'substance abuse problems' to be significant, it is clear that alcohol was the most important component (Minister of National Health and Welfare, 1988; see also Canadian Centre for Occupational Health and Safety, 1988:5).[19] Most participants said they had never collected data on the incidence of other drug problems (Minister of National Health and Welfare, 1988:17).

In the United States, employee surveys that inquire about illegal drug use indicate that the base rate in the workplace may be

low (Faley et al., 1988:161).[20] This base rate may well be decreasing, since overall drug use among younger people has declined significantly since 1979 and is expected to decline further in the future (Cornish, 1988:4). While the comparability of findings between one country and another is a risky business (see, for example, Johnston, 1989), it is reasonable to suggest that the incidence of drug abuse is no greater in Canada than in the US, and could well be less (Denton, 1986; Frost, 1988; Gershkovitch and Sutherland, 1990). A low incidence not only detracts from the potential payoffs of testing, but also increases the risk of false positive test results described earlier.

Beyond Cost-Benefit Analysis

It does not seem possible to incorporate the value of 'privacy invasion' into a cost-benefit analysis of drug testing programs, except as this might be reflected in the form of employee relations costs discussed earlier. Yet the privacy concern is a real one. In Canada, the general tone of the initial reaction to the growing interest in testing was that 'such testing implied snooping into lifestyles, that it was an affront to personal dignity and privacy, and that it had no place in the workplace because it should not be the concern of the employer' (Robinson, 1989: 1422). The paper will now review the legal environment surrounding drug testing, and how the privacy issue has been articulated by constitutional, statute and case law, as well as legal scholars and other writers.

Americans are afforded protection against unreasonable government searches and seizures by the Fourth and Fourteenth Amendments to the US Constitution.[21] However, in 1989, the Supreme Court ruled in favour of two Federal drug testing programs despite the constitutional objections of the plaintiffs. (See *Skinner v. Railway Labor Executives Association* 109 S. Ct. 1402 1989 and *National Treasury Employees Union v. Von Raab* 109 S. Ct. 1384 1989.) The two clear principles that can be gleaned from these cases are that American employers can constitutionally require their workers to submit to drug tests if the jobs are 'sensitive' in terms of public safety, security and integrity; and that employees do have privacy interests that employers cannot violate without showing that legitimate governmental interests are served by drug testing (Angarola and Rodriguez, 1990:577). In applying these principles, both the Supreme Court and lower courts recognize that while testing does deter drug use, it should be used only where there is a close linkage between illicit use and job performance, particularly in the case of current employees (*ibid.*).

Canadian employers who implement drug testing programs in response to US regulatory requirements should follow future developments in US courts, since some legal scholars have asserted that the Fourth Amendment may apply in evaluating the constitutionality of searches conducted outside the United States where these searches are effected by American government officials (Ragosta, 1985:313; *Harvard Law Review*, 1989). Indeed, it would appear that one way for Canadian unions affected by US drug testing requirements to seek redress would be to challenge their constitutionality before American courts.[22]

Historically, Canadian courts have been reluctant to recognize a broad constitutional right to privacy. However, with the enactment of the *Constitution Act* of 1982, the judiciary clearly has a more expansive role to play in the interpretation of civil liberties (Coates, 1989:765,767). But Canadian courts have generally been selective in their reliance upon US Fourth Amendment jurisprudence and are therefore left with the task of developing principles of their own (Stone, 1989:702–3). There is little doubt that drug testing is a search for the purposes of Section 8 of the *Charter*, which protects the individual from 'unreasonable search and seizure' (Lafontaine, 1989:91). In *Hunter v. Southam*, the court found that the section was designed to protect a 'rea-

sonable' expectation of privacy and that the limitation of 'reasonableness' requires that:

> ... an assessment must be made as to whether in a particular situation the public's interest in being left alone by government must give way to the government's interest in intruding on the individual's privacy in order to advance its goals ... ([1984] 2 S.C.R. 145; cited in Lafontaine, 1989:91)

Hence, several scholars have suggested that mandatory and periodic drug testing could be held to violate Section 8 of the Canadian *Charter of Rights*, whereas a selective program based on reasonable cause might not be so held (Robinson, 1989:1427; see also Trossman, 1988:213; Lafontaine, 1989:92).[23]

The *Charter* does not apply to drug testing programs in the private sector (Lafontaine, 1989:93). The *Canadian Human Rights Act* does apply however, and implies that refusal to hire or dismissal of an employee on the grounds that the person is dependent on alcohol or other drugs would be considered to be a discriminatory practice (Robinson, 1989:1427). The only defence to such a charge of discrimination is that not being handicapped is a bona fide occupational quality 'related in an objective sense to the performance of the employment considered' (*Hall and Grey v. Borough of Etobicoke* [132 D.L.R. (3d) at 19-20 (S.C.C.)]).[24,25]

Regardless of whether testing requires any observation, the experience of being forced to produce a urine sample at the behest of an employer offends normal expectations of dignity (Felman and Petrini, 1988:273). There are two reasons why the intrusive nature of drug tests might be an unjustified invasion of privacy. First, as Moore has noted, the ability to determine how much and what kinds of things others know about us is indispensable to our individual autonomy. However, individuals are not entitled to keep *all* information about themselves secret from others; whether drug testing violates employee rights will depend in part on the extent to which testing provides information that the employer is entitled to know (Moore, 1989:492). Given the undemonstrated relationships between drug testing, drug use and job performance, as well as the problem of inaccurate test results documented earlier, it is not at all certain that drug test results contain information which is of legitimate concern to employers. Furthermore, drug tests necessarily scrutinize a broad array of off-duty activities (Felman and Petrini, 1988:272), which will often be beyond the employer's legitimate interests.

Second, even if the vast majority feel that they have 'nothing to hide,' Schroeder (1988:884) has noted that 'one of the most important functions the right to privacy affords is protecting minor failures to comply with social norms'. In a similar vein, another legal scholar has suggested that'we are committed to a philosophy of tolerating a certain level of undetected crime as preferable to an oppressive state' (LaFave, cited in Schroeder, 1988). It is therefore hardly surprising that both the Human Rights Commissioner and the Privacy Commissioner have voiced opposition to the Government's plans (*Globe and Mail*, 1990; Mackie, 1990).

Conclusions

This paper has not sought to trivialize the tragic human consequences and social costs of drug abuse in Canada. Rather, its purpose has been to suggest that the empirical studies and other relevant literature do not demonstrate convincingly that drug testing will reduce these unhappy events, or that it is cost-effective for Canadian businesses.

A method for evaluating the effect of drug testing programs is sorely needed (McBay, 1987:575). For, while this paper has discussed the practice broadly, there is clearly a wide variety of drug tests (e.g., pre-employment screening, random, post-accident and reasonable suspicion), and some of these tests could be less invasive and

more cost-effective than others. McBay, for example, has suggested that cost-effective drug testing should be based on reasonable cause (1987:576); provided it is implemented carefully, such a program could well involve lower employee relations costs than the 'random' testing programs which have generated so much resistance and litigation from labour unions. In any case, it remains clear that testing should be seen as only one among many measures that may be taken in response to workplace drug abuse problems. Other remedies may be far more effective, and the possibility that testing will act to their detriment is one that deserves serious consideration indeed.

Given the difficulties in obtaining adequate data, it appears unlikely that the 'components' discussed in this paper will be incorporated into a sound and scholarly cost-benefit analysis in the near future. Nonetheless, the discussion serves a useful purpose by making the reader aware of the numerous factors that will tend to reduce the desirability of testing. These realities, together with the legal environment and the unresolved question of whether the privacy of employees deserves to be compromised, lead to the conclusion that much remains to be learned about drug testing before its expanded use in Canada will be appropriate.

Notes

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1 The most common technique for conducting drug tests is the collection of a urine sample. Subsequent analytical procedures attempt to detect the presence (or absence) of drugs or their metabolites.

2 For example, sales representatives often claimed that failure to implement pre-employment testing would cause the client to become a haven for drug abusers (Rothstein, 1989:365, fn.12).

3 Only pre-employment tests for safety-related positions and post-accident tests are now conducted by Canadian airlines (McLellan, 1990).

4 Similarly, a discussion paper written by William Frost (1988:10) of the Canadian Urban Transit Association noted that while 'drug abuse is a major problem in the United States ... the evidence is much less clear in Canada. As such, we must be careful not to take action based solely on the U.S. experience'.

5 In November, 1990, the government withdrew the random testing proposal. However, current US legislation will require random testing for many Canadian transportation employees working in the United States by 1992. Testing is also to be required for anyone working on American equipment, even if this takes place outside the United States (Slotnick, 1989). The results of Canadian Government representations to US authorities on this issue were not resolved at time of writing.

6 A brief explanation of the basic formula used in utility analysis is presented in Appendix A.

7 Normand and Salyards (1989) noted in their review that earlier scholarly studies suffer from methodological flaws, including criterion contamination (e.g., Blank and Fenton, 1988) and low statistical power (e.g., Parrish, 1989).

8 Reagan estimated the annual productivity loss to be $100 billion annually in 1988, although the support for this figure was never revealed (Felman and Petrini, 1988:fn.23).

9 McDaniel (1988) has noted three problems with the use of self-report data to measure drug use. First, the respondent may not know what drug he/she has consumed. Second, the respondent may not remember the information which is being solicited. Third, the respondent may not be willing to accurately report his/her drug consumption.

10 This assumes that urinalysis continues to be the primary testing methodology. A person's hair, on the other hand, may contain evidence of drug use over much longer periods of time. Much remains to be done, however, before hair testing will be appropriate in the employment setting (Cone, 1989).

11 Indeed, the current attention being given to drug issues by management practitioner journals and other sources (such as training programs) make it likely that managers will improve their ability to spot and confront drug-abusing employees.

12 The $50.00 cost-per-test figure could well be a low estimate. The current cost to the US military of specimen collection, transportation, analysis and reporting amounts to $90–100 per sample, not including time lost from work of the person being tested (De Cresce et al., 1989:8).

13 A more detailed discussion of the various drug testing methods is contained in Felman and Petrini (1988).

14 'Blind' procedures involve introducing the samples into the laboratory without any indica-

tion that they are survey specimens that could prompt lab personnel to deviate from normal procedures. For example, a blind procedure could involve having a regular client of the lab submit test samples with fictitious names.

15 Bayesian revision provides a way of integrating figures on the incidence of drug use and empirical data on test accuracy rates in order to determine the likelihood that a given positive test result will be correct. An excellent textbook discussion of this statistical tool may be found in Holloway (1979).

16 A 'cut-off point' (or, 'threshold level') must be set in order to use any test procedure properly. When the concentration of the substance exceeds the cut-off point, the test is reported as positive. If the concentration does not exceed the cut-off point, a negative result is reported.

17 A survey done by the American Management Association found that 53% of the companies questioned noted 'negative impact upon morale' as the reason for rejecting testing (American Management Association, 1987:14).

18 Additional support for this notion is found in the results of the California Commercial Laboratory Drug Testing Project. The authors concluded that 'the low rate of positive specimens in the workforce samples raises questions as to the costs and benefits of drug testing compared to alternative methods of identifying and assessing drug abuse problems in the workplace' (Anglin and Westland, 1989:81).

19 To their credit, the Canadian testing proposals include strategies to discourage use of both alcohol and illegal drugs. This is in marked contrast to the current state of American testing regulations, which to date have largely ignored alcohol abuse and do not require employers to offer rehabilitation programs.

20 The general credibility of alcohol and drug use estimates, however, has recently been called into question (Osterloh and Becker, 1990:506).

21 Additional protection may be found in State common law and some State constitutions. A number of states also have drug testing statutes: some of these prohibit the use of certain types of tests, while others prescribe how testing is to be done.

22 Case law suggests that 'the Fourth Amendment protects "people" rather than "areas" or "citizens" and that "the Constitution of the United States is in force wherever and whenever the sovereign power of that government is exerted"' (*Toscanino*, 500 F. 2d at 280, cited in Strang, 1988).

23 Section 7 of the *Charter* may also provide grounds for legal challenges against mandatory drug tests, as evidenced in *Re Dion and the Queen* [30 C.C.C. (3d) 108].

24 This is in marked contrast to the recently-passed *Americans With Disabilities Act* (Public Law 101-336), which specifically excludes drug users from the protection it affords (Carey, 1990). A similar dichotomy also appears to be present in American labour arbitration cases. Comparative statistics indicate that in cases involving illicit drugs, US arbitrators are more likely to reject a corrective approach (e.g., rehabilitation) in favour of a deterrent approach (e.g., dismissal) than in cases involving alcohol. They are also more likely to demand a lower standard of proof and sustain discharges in such cases (Thornicroft, 1989:60).

25 Additional legal bases for contesting drug testing programs could be found in some provincial Human Rights statutes and the federal *Privacy Act*.

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Appendix A

The following formula was used by Normand and Salyards (1989:36–37) in order to arrive at their utility estimate:

$$\Delta U = TN_i d_i SD_y - NC$$

where

ΔU = the change in utility expected to follow from the implementation of drug testing ($52,124,114)

T = the duration in years of the testing program's effect on performance (10)

N_i = the annual number of new hires that would be screened out by the drug testing program in year i (5,543)

N = the total number of applicants who would submit to the drug test annually (65,000)

SD_y = the variability of the absenteeism cost measure in dollar value of the combined group (i.e. negative and positive group pooled) ($3,320)

d_i = the observed absenteeism effect in standard units (0.294)

C = the cost of testing per applicant ($11).