**Volume 7, Numbers 1 and 2** **ISSN 1544-0036**

# JOURNAL OF LEGAL, ETHICAL AND REGULATORY ISSUES

An official Journal of the
Allied Academies, Inc.

**JoAnn C. Carland, Co-Editor**
**Western Carolina University**

**Aileen Smith, Co-Editor**
**Stephen F. Austin State University**

Academy Information
is published on the Allied Academies web page
www.alliedacademies.org

The *Journal of Legal, Ethical and Regulatory Issues* is published by the Allied Academies, Inc., a non-profit association of scholars, whose purpose is to support and encourage research and the sharing and exchange of ideas and insights throughout the world.

Whitney Press, Inc.

Printed by Whitney Press, Inc.
PO Box 1064, Cullowhee, NC 28723
www.whitneypress.com

Authors provide the Academy with a publication permission agreement. Allied Academies is not responsible for the content of the individual manuscripts. Any omissions or errors are the sole responsibility of the individual authors. The Editorial Board is responsible for the selection of manuscripts for publication from among those submitted for consideration. The Editors accept final manuscripts in digital form and the Publishers make adjustments solely for the purposes of pagination and organization.

The *Journal of Legal, Ethical and Regulatory Issues* is published by the Allied Academies, Inc., PO Box 2689, 145 Travis Road, Cullowhee, NC 28723, USA (828) 293-9151, FAX (828) 293-9407. Those interested in subscribing to the *Journal*, advertising in the *Journal*, submitting manuscripts to the *Journal*, or otherwise communicating with the *Journal*, should contact the Executive Director at www.alliedacademies.org.

# JOURNAL OF LEGAL, ETHICAL AND REGULATORY ISSUES

**JoAnn C. Carland, Co-Editor**
**Western Carolina University**

**Aileen Smith, Co-Editor**
**Stephen F. Austin State University**

## EDITORIAL REVIEW BOARD

# JOURNAL OF LEGAL, ETHICAL AND REGULATORY ISSUES

## CONTENTS OF VOLUME 7, NUMBER 1

# JOURNAL OF LEGAL, ETHICAL AND REGULATORY ISSUES

## CONTENTS OF VOLUME 7, NUMBER 2

# LETTER FROM THE EDITORS

Welcome to the *Journal of Legal, Ethical and Regulatory Issues.* This journal was formerly named the *Academy for Studies in Business Law Journal*. It is published by the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The *JLERI* is a principal vehicle for achieving the objectives of the organization. The editorial mission of this journal is to publish empirical and theoretical manuscripts which advance understanding of business law, ethics and the regulatory environment of business.

We changed the name of the journal to better reflect our broader mission. Readers should note more clearly now that our mission goes beyond studies involving business law or the effect of legislation on businesses and organizations. We are also interested in articles involving ethics. We would like to publish more manuscripts dealing with the ethical environment, business ethics and the impact of ethics on organizations and businesses. In addition, we invite articles exploring the regulatory environment in which we all exist. These include manuscripts exploring accounting regulations, governmental regulations, international trade regulations, etc., and their effect on businesses and organizations. Of course, we continue to be interested in articles exploring issues in business law.

The articles contained in this volume have been double blind refereed. The acceptance rate, 25%, conforms to the Allied Academies' editorial policy.

Please visit the Allied Academies' web page to learn how to submit manuscripts for review as well as to view details of forthcoming conferences. We invite your comments and suggestions at any time. Please send these to info@alliedacademies.org.

JoAnn C. Carland
Western Carolina University

Aileen Smith
Stephen F. Austin State University

www.alliedacademies.org

# LEGAL ISSUES
# for Volume 7, Number 1

# LEGAL ISSUES
# for Volume 7, Number 1

# INTEGRATED DISABILITY MANAGEMENT PROGRAMS: GOOD BUSINESS FOR GOOD ORGANIZATIONS

**Susan Gardner, California State University, Chico**
**Pamela R. Johnson, California State University, Chico**

## ABSTRACT

*Every organization has a vested interest in the health and safety of its workforce. Furthermore, good organizations always look for ways to improve their competitive edge. By linking health and productivity, good organizations emphasize integrated disability management (IDM) programs as a way to reign in healthcare costs while focusing on worker health and safety. Integrated disability management programs appear to have a positive impact on overall business success. These programs carry the potential for real savings by integrating an employer's voluntary and statutory plans into one program to meet employee needs efficiently. By being attuned to employee on and off-the-job injuries as well as overall health, organizations can promote productivity and competitiveness while integrating disability programs. In so doing, organizations are able to develop successful return-to-work programs, thereby retaining an effective workforce. This paper will offer an historical perspective on IDM programs, delineate the costs of disabilities to organizations, analyze corporate successes, discuss disability lawsuits, and describe the attributes of successful IDM programs.*

## INTRODUCTION

In 1992, Baystate Health System auditors planned to take over $6 million from the hospital's reserves to cover additional workers' compensation claims. In so doing, Baystate would be in the red, jeopardizing both its bond rating and fiscal health. However, Baystate became determined to manage proactively and aggressively its workers' compensation program. The result is that today, Baystate's integrated disability management (IDM) program has returned millions of dollars to the bottom line on a recurring basis (Kellman & Flaccus, 1999). For example, workers' compensation costs have declined from 2.6 percent in 1993 to less than 0.82 percent in 1999.

Integrated disability management is described as the process of implementing strategies that affect prevention and remediation so as to reduce the costs of disabilities and illnesses at work. Employee illnesses and injuries pose a challenge to employers because they decrease organizational

productivity. These IDM strategies aim to prevent the occurrence of or to encourage early intervention into workplace disabilities (Fitzpatrick & King, 2001). Another aim of IDM is to "manage and minimize the impact of disabling injuries and illnesses" through the development of return-to-work (RTW) programs (Flynn, 2002, p. 2). With IDM programs, organizations streamline administrative costs, enhance benefit values, and improve employee relations by coordinating their approach to employee benefits (Beigbeder, 1999). IDM programs generally merge an employer's voluntary and statutory benefit plans into one program, thereby meeting employee needs more efficiently.

This paper will offer an historical perspective on IDM programs, delineate the costs of disabilities to organizations, analyze corporate successes, discuss disability lawsuits, and describe the attributes of successful IDM programs.

## THE HISTORY

Historically, disability management programs simply focused on filing the correct paperwork for disability claims. Due, in part, to the passage of the Americans with Disabilities Act (ADA) in 1990, IDM programs today manage disability cases, coordinate benefits, and develop return-to-work programs. And, during times of economic retraction, such as is the state of the economy in 2002, disability rates traditionally increase (Watson Wyatt Worldwide, 2000-2001). IDM programs enable proactive solutions that help to alleviate some of the impact of these rising health and disability costs. These programs address unscheduled worker absence, whether from incidental sick leave or disability, because those absences reduce worker productivity, organizational competitiveness, and employee satisfaction (Watson Wyatt Worldwide, 2001b). After all, the primary goals of IDM are to reduce benefit costs and to increase return-to-work outcomes.

## THE HURDLES

The primary hurdle hampering the development of IDM programs is the lack of collaboration between two organizational departments that have different program orientations. The risk management department that handles workers' compensation claims and the human resource department that takes care of long (LTD) and short-term disability (STD) cases frequently engage in some form of turf warfare.

Another hurdle occurs when employers fail to address early on their employees' medical claims and injuries. This lack of early intervention leads to an increase in claim severity and a consequent increase in costs for employers (Ceniceros, 2001). And, in the traditional, non-integrated environment, a third hurdle frequently occurs. Employees are expected to file separate claims under two systems for a single illness or injury e.g., medical or workers' compensation system and then the disability system (Wolfe & Stanton, 2000). These hurdles lead

to substantial administrative inefficiencies as well as inconsistencies in processing and resolving claims. Consequently, employers experience burgeoning administrative costs, employees face rising dissatisfaction, and organizations undergo increasing litigation.

## THE COSTS

When employees become injured or ill, organizations not only lose knowledge and experience of those absent employees but also face decreases in efficiency, increases in strained customer relations, and decreases in worker productivity (Flynn, 2002). The measurement of lost days is critical to corporate productivity. Employers know that time loss injuries are the most expensive, and those expenses grow exponentially for every day that an employee is off work (Flynn, 2002). For example, large companies have determined that the total cost of an absence is $300 per hour (Shutan, 2002). In the telecommunications industry, incidental absences cost approximately $11.54 billion in revenue (IBI, 2001). Another example of the costs associated with short-term disability absences involves a large, mid-western manufacturing company studied by the Integrated Benefits Institute (IBI) (IBI, 2001). To cover absences, the manufacturer needed an increase in its workforce of 20 percent. The lost productivity potential approached $1 billion in additional wages and retirement benefits for replacement workers.

## CORPORATE SUCCESSES

Since 1996, IDM programs have grown an average of 5.7 percent, as more employers are able to quantify a return on their investment (Roberts, 2001). A recent study determined that 78 percent of survey respondents reported not only an increase in employee satisfaction but also a decrease between 30 and 50 percent in disability costs, primarily because of the streamlined administration of benefits (Tinkham, 2002). Employers with IDM programs earned savings of up to one percent of payroll (Robinson, 2002). In fact, three-fourths of companies that have integrated the management of their disability programs report lower disability costs, averaging 25 percent (Watson Wyatt Worldwide, 1998).

Large organizations with IDM programs, such as General Motors, have realized a 14.1 percent savings on direct disability costs and a 2.9 percent reduction in net payroll (Beigbeder, 1999). Similarly, UNUMProvident's IDM program resulted in a 25 percent reduction in lost work days for its clients (Shutan, 2002). Thus, these programs have become increasingly important to absence management. Small organizations with IDM programs have also fared well. Nearly one in three of the smallest employers (fewer than 100 employees) are also pursuing integrated benefits strategies (IBI, 2000). Most companies experienced a reduction in insurance premiums for workers' compensation and disability insurance.

Corporate success stories demonstrate the value of integrating disability management programs. For example, Nationwide Mutual Insurance Company experienced a 15 percent drop in the average length of employee absence. By implementing an electronic absence reporting system, Nationwide enabled its employees to report absences on a toll-free telephone line or on its intranet service. When an employee is absent five days, a nurse from Nationwide phones the absentee, thereby addressing early on any medical problem (Roberts, 2001). Another example is the IDM program of Pitney Bowes. Before integrating their DM programs, Pitney Bowes had no uniform standard for managing an individual who was unable to work because of a health or medical condition. No structure existed to promote cooperation in the delivery of benefits and employees viewed such delivery as paternalistic and inflexible (IBI, 1999). Two years following implementation of its IDM program, the company found that short-term disability lost-time days decreased by 42 percent (Roberts, 2001). Pitney Bowes accomplished several additional cost reductions without any decrease in benefits (IBI, 1999).

SPX, a Michigan-based company, also experienced marked improvement since implementing its IDM program. For example, hours worked increased by 2.6 percent; the frequency of occupational injuries decreased by 1.4 percent; the number of lost workdays is down 65.1 percent; and, the severity of the injury is similarly down 65.9 percent (Scott, 2001a). According to Carol Brocci, corporate risk manager, the key to the SPX success is their "well-run, well-documented, written return-to-work program...." (Scott, 2001a, p.26).

## RETURN TO WORK PROGRAMS

Disability management focuses on getting employees to continue to work and to return to work quickly. For example, with stand-alone workers' compensation programs, employees do not return to work until they are 100 percent healthy. On the other hand, IDM programs focus on what the employee can do, even with limitations. In so doing, these programs increase compliance with the ADA. Employees are returned to work more quickly, either through reasonable accommodation with reduced responsibilities, temporary assignments to different tasks (Gilpin, 2001) or reduced duties within their current position. Consequently, employers that develop RTW programs for those employees who would otherwise stay at home demonstrate to workers that they are, in fact, valuable assets to the organization.

Return-to-work programs generally enable workers to return to work 50 percent sooner than those workers who participate in an outsourced rehabilitation program. For example, many well-managed RTW programs include transitional duties (e.g., light work), enabling 90 percent of employees to return to work within four days of their injury. In many respects, RTW programs treat work as a form of therapy, helping employees recover much faster than staying at home. And, such transitional duty programs reduce hiring a number of expensive, temporary replacements. Because they engage in cross-training activities, employees participating in RTW programs experience

improved productivity. Sometimes, simple modifications to the job enable employees to return to gainful employment and their employers to experience savings in rehabilitation costs. For example, a study by Northwestern National Life Insurance indicates that employers save $96 for every dollar spent rehabilitating an injured employee who returns to the same job (LWCC, 2002).

## DISABILITY LAWSUITS

Coping with disabilities is stressful for employees because they worry about financial solvency and job security (PMA, 2001a). These stressed employees frequently turn to litigation to assuage their fears. According to the PMA Insurance Group, three primary reasons cause disabled employees to file lawsuits. The disabled employees 1) do not understand the frequently complicated process for administrating benefits, thereby becoming confused; 2) are unable to find answers to their questions quickly, thereby escalating their frustration; 3) find discrepancies in their benefit checks, thereby heightening their perception of being cheated (PMA, 2001a).

The litigation that ensues is costly and time-consuming, affecting the morale of the entire organization. One study confirms that companies with IDM programs enjoy up to a 50 percent decrease in litigation concerning benefit claims. A reduction in litigation is important because according to a 1998 Lou Harris survey, resolution of the average disability claim takes approximately 12 weeks to resolve; if an attorney is involved, the time increases to 41 weeks (Tinkham, 2002). IDM programs reduce employee confusion and thus enable claims to proceed uninterrupted.

With respect to lawsuits involving the ADA, employers realize that most ADA lawsuits begin as workers' compensation claims or state disability discrimination claims (Gilpin, 2001). This reality led many employers to focus on what employees can do on-the-job, even with some medical limitations, rather than requiring 100 percent recovery before employees could return to work. As a result, employers began to accommodate workers by reducing their responsibilities or providing them with temporary assignments. This process led to better regulatory compliance with the ADA and better application of advanced technologies (Shutan, 2002). These advanced technologies tend to streamline disability claims management and improve the management of IDM programs.

## ATTRIBUTES OF SUCCESSFUL IDM PROGRAMS

Because IDM programs provide increases in costs savings, productivity, and employee satisfaction, coupled with decreases in litigation, more companies are implementing these programs. As with any change in benefits administration, companies need to focus on those valued practices that generally lead to a successful IDM program. The following identify those valued practices:

*1. Communicate continually.* An ongoing, interactive process with employees is a key attribute of successful IDM programs, particularly when complying with the ADA. According to

the Ninth Circuit Court of Appeal in U. S. Airways v. Barnett, "the interactive process is a mandatory rather than a permissive obligation on the part of employers..." that is "triggered by an employee… giving notice of [his/her] disability and the desire to be accommodated." IDM programs need to adopt a less adversarial approach to injured employees. After all, employees who are engaged in the process (Gilpin, 2001) and are treated with compassion (PMA, 2001b) are less likely to sue. Continual involvement of supervisors with disabled employees helps to convince workers that they are still valued (Ceniceros, 2001). However, a lack of continued supervisory involvement increases RTW costs (Watson Wyatt Worldwide, 2001a).

Furthermore, constant communication establishes clear expectations with disabled employees. This open communication focuses on developing positive employee attitudes (PMA, 2001b). Communication has a direct impact on employee satisfaction, thereby increasing knowledge of disability policies and reducing levels of employee anxiety.

*2. Intervene early.* Companies need to address employee medical claims and injuries early on (Ceniceros, 2001). By addressing employee claims within 24 hours of notification (systematically and accurately), companies focus on quickly paying employees rather than debating whether the injury is work-related (PMA, 2001a).

Preventive programs, such as employee assistance (EAP) and wellness, decrease the number of disability claims because they manage the disability before it occurs (Beaty, 2002). With prevention, early intervention, and return-to-work programs, disabled employees continue to see themselves as valuable members of the workforce (Fitzpatrick & King, 2001). In addition, an expansion of on-site medical clinics also enables early reporting and management of claims (IBI, 1999).

*3. Provide single-point reporting.* Successful programs require little if any paperwork. Rather, employees simply call a single, telephonic number for claims' intake (Integrated program, 2001). This single point of contact covers both occupational and non-occupational disabilities.

*4. Reorganize internally.* Companies need to encourage collaboration among those departments most associated with disabilities and benefits. For example, risk management, human resources, and employee benefits departments must work together for successful implementation. To do so requires the establishment of a mutual philosophy of decreasing lost time that is associated with disabilities (Roberts, 2001). Successful companies place disability management, return-to-work programs and ADA case management under one person's supervision (Gilpin, 2001). The point person is knowledgeable about the company, accessible to both supervisors and employees, and empowered to make decisions (Integrated program, 2001). By designating an "internal absence manager," companies develop a pro-active approach to absence management (Watson Wyatt Worldwide, 2000/2001).

*5. Streamline IDM programs.* Successful DM programs integrate, minimally, STD and LTD programs, workers' compensation, ADA, and Family Medical and Leaves Act (FMLA) (Ceniceros, 2000). Characteristics of these programs include empowering employees to call in and identify their

disabilities as opposed to providing a doctor's note upon return. And, developing less-confusing insurance information is a significant element of program success (PMA, 2002). These programs also enable their administrators to have direct contact with the employee's primary care physician. In order to evaluate the functional capacity of the IDM program, HR develops a comprehensive set of job descriptions geared to those "essential functions" that are based on ADA job analysis methods (Gilpin, 2001). In so doing, program administrators not only detail specifically employee job functions (CEC, 2001), but also explain more clearly to primary care physicians the parameters of alternate duty positions that are available for disabled workers (Scott, 2001a). Finally, a vigorous and active stance against fraud must be included in any reorganization of the system (Beigbeder, 1999).

*6. Document results*. The importance of developing baseline data cannot be over-emphasized. With this data, organizations identify trends, particularly related to return-to-work programs (Scott, 2001b). The development of accurate measuring systems that track disability experiences and their impact provides successful IDM programs with a way to measure success.

*7. Enlist management support.* Successful programs have the full support of senior management. With upper management support, they can demonstrate clearly to their employees the benefits of disability management, in both human and financial terms (Ceniceros, 2000). In addition, successful programs have joint management and labor involvement, together with at all levels of the company. Patience by all involved is a cornerstone of program success because, although the savings are between 10 and 30 percent, they do not materialize overnight (Kelley, 1999).

*8. Implement internet and web-based tools.* An emerging trend for IDM programs is web-based reporting. This type of reporting illustrates the dramatic push for self-services in the employee benefit arena (Watson Wyatt Worldwide, 2000/2001). The importance of integrated information system capabilities cannot be underestimated. With these tools, administrators, with this instant access, oversee the status of individual employee disability claims. By accessing online capabilities, with its increased convenience, they also communicate with disabled employees more quickly (Fletcher, 2002). Online administration improves claim management and service with more timely information, greater flexibility, and informed decisions (Scott, 2001a).

*9. Implement a strong return-to-work (RTW) program.* Critical to all IDM programs is a strong return-to-work program that provides transitional work for employees with health limitations. Without a strong RTW program, employees are not motivated to return to work but rather are financially rewarded for extending their rehabilitation period until they have recovered completely (Watson Wyatt Worldwide, 2001a). These transitional work programs also provide appropriate accommodation that is so necessary when demonstrating compliance with the ADA (Fitzpatrick & King, 2001). Implementation of an aggressive RTW program is essential because these programs shift the focus from disabilities to capabilities. And, an ongoing, interactive dialogue about

available work options, with a certification of work limitations, transitions employees back to work as quickly as practicable (Flynn, 2002).

*10. Educate key employees.* The needs of employees for information are most critical at the onset of injury or illness. Successful program administrators tailor benefit materials to meet those information needs. They also train first-line managers and supervisors about RTW initiatives, soliciting feedback from those involved in the education process (CIGNA, 2001). Companies need to produce a series of instructional modules that enable them to take a proactive approach to workplace safety and accident prevention (Kellman & Flaccus, 1999).

*11. Gather accurate data.* The ability to measure and evaluate the success and short-coming of programs is dependent upon accurate, statistical reporting (Fragomeni, 2001).

*12. Employ qualified specialists for case management.* Managing disability cases facilitates both the implementation of IDM strategies and the development of RTW plans. Case management needs a single point of contact. And, case management should be available to every employee, regardless of the cause of injury (IBI, 2001).

When qualified and experienced specialists administer IDM programs, employees become more confident with the process. For example, nurse case managers help companies develop written, modified duty and return-to-work policies. And, these managers identify appropriate work for returning disabled employees by understanding both their clinical status and RTW accommodations (CIGNA, 2001). Case managers also develop protocols for managing medical cases in order to prevent unnecessary treatment and ensure that proven treatments are pursued (Hellwig, 1999).

*13. Investigate ergonomics.* Designing jobs that accommodate human capabilities and redesigning work operations provide transitional assistance to those returning to work (Fitzpatrick & King, 2001).

## CONCLUSION

Successful companies focus on reducing costs, improving productivity, increasing employee satisfaction and decreasing litigation. One area of work that can block such achievements is the management of occupational and non-occupational illnesses and injuries.

Over the years, many companies integrated their disability programs by including long and short-term disabilities, workers' compensation, ADA compliance, and FMLA claims. These IDM programs, over time, enable companies to achieve cost savings, to improve productivity, to increase employee satisfaction and to decrease disability lawsuits.

## REFERENCES

Beigbeder, S. (1999). Disability management-Improving employee health and the company bottom line. *Journal of Property Management, 65*(4), May/June, 98-102.

Beaty, C. (2002). Managing 'subjective' claims. *Credit Union Magazine, 68*(2), February, 32-33.

CEC Associates (2001). Controlling business costs through disability management: Why every employer needs a disability management program. Retrieved August 1, 2002, from http://www.cecassoc.com.

Ceniceros, R. (2001). Integrated programs require ongoing involvement. *Business Insurance, 34*(45), November, 51-54.

Ceniceros, R. (2000). Integration furthers several aims. *Business Insurance, 34*(50), December, 14-18.

CIGNA Group Insurance (2001). The disability experience: What helps and hinders return to work. Retrieved August 5, 2002, from http://www.cigna.com.

Fitzpatrick, M. & King, P. (2001). Disability management pays off. *Professional Safety, 46*(1), January, 39-41.

Fletcher, M. (2002). Programs ease handling of disability management. *Business Insurance, 36*(25), June, T4-T7.

Flynn, B. (2002). The role of disability management programs in ADA compliance. Employment access for people with disabilities. Retrieved August 5, 2002, from http://www.ilr.cornell.edu/ped/hr_tips/

Fragomeni, T. (2001). Disability management-back to basics. *Canadian HR Reporter, 14*(7), April, G4-G6.

Gilpin, S. (2001). The legal advantage of disability management. *Business and Health, 19*(7), July/August, 38-40.

Hellwig, V. (1999). Integrating disability management to help improve the bottom line. *Compensation & Benefits Management, 15*(1), Winter, 43-50.

Integrated Benefits Institute (2001). What are the total costs of absence? Retrieved September 6, 2002, from http://www.ibiweb.org.

Integrated Benefits Institute (2000). Overcoming the challenges: Employers moving to health & productivity through integrating employee benefits. Retrieved August 15, 2002, from http://www.ibiweb.org

Integrated Benefits Institute (1999). Pitney Bowes-An integrated benefits case study: Partnering with employees for health and productivity. Retrieved August 15, 2002, from http://www/ibiweb.org.

Integrated program produces results for Michigan employer. (2001). *Employee Benefit Plan Review, 55*(8), February, 20-22.

Kelley, B. (1999). Health and savings: Integrated disability management. *Risk Management, 46*(11), November, 23-25.

Kellman, E. & Flaccus, L. (1999). Holding costs at bay. *HR Magazine, 44*(12), November, 81-88.

Louisiana Workers Compensation Corporation, Return-to-work programs mean big returns for employers. Retrieved November 3, 2002, from http://www.lwcc.com/articles.

PMA Insurance Group. (2002). Integrated disability management: Streamlined process increases satisfaction. *Directions,* February. Retrieved October 15, 2002, from http://www.pmagroup.com.

PMA Insurance Group. (2001a). Integrated disability management: The key to decreasing litigation battles. *Directions,* November. Retrieved October 15, 2002, from http://www.pmagroup.com.

PMA Insurance Group. (2001b). Team involvement illuminates path to success. *Directions,* November. Retrieved October 15, 2002, from http://www.pmagroup.com.

Roberts, S. (2001). Integrated programs growing, but still face blocks. *Business Insurance, 35*(43), October 22, 14-16.

Robinson, B. (2002). Overcoming IDM obstacles. *Risk & Insurance, 13*(6), May, 31-32.

Scott, M. (2001a). SPX partners with Synchrony, gets favorable results from integrated disability program. *Employee Benefit Plan Review, 56*(6), December, 26-28.

Scott, M. (2001b). Enabling technology, sophisticated customers drive insurers, administrators to online disability management. *Employee Benefit Plan Review, 55*(8), February, 30-34.

Shutan, B. (2002). Hearts grow fonder of absence management. EBN Supplement, July. Retrieved August 5, 2002, from http://www/benefitnews.com.

Tinkham. L., Jr. (2002). Making the case for integrated disability management. *National Underwriter, 106*(19), May 13, 11-15.

U. S. Airways v. Barnett, 228 F. 3d 1105 (9th Cir., 2000); cert. granted (No. 00-1250; April 16, 2001).

Watson Wyatt Worldwide (2001a). Employer efforts can pay dividends in reduced disability costs, survey. News: Press Release. Retrieved October 15, 2002, from http://www.watsonwyatt.com.

Watson Wyatt Worldwide (2001b). Job dissatisfaction No. 2 cause of lost work days, survey finds; No. 1 is plan design. Retrieved October 15, 2002, from http://www.watsonwyatt.com.

Watson Wyatt Worldwide (2000/2001). Staying@work: Improving workforce productivity through integrated disability management: Fifth annual survey report. Retrieved October 15, 2002, from http://www.watsonwyatt.com.

Watson Wyatt Worldwide (1998). Employers that measure results from integrated disability programs report big savings. News: Press Release. October 15. Retrieved October 15, 2002, from http://www.watsonwyatt.com.

Wolfe, D. & Stanton, T. (2000). Legal liability under IDM program. *Employee Benefits Journal, 25*(4), December, 9-16.

# ETHICAL ISSUES
# for Volume 7, Number 1

# ETHICAL ISSUES
# for Volume 7, Number 1

# THE UNIVERSAL RELEVANCE OF LOCUS OF CONTROL IN ETHICAL DECISION MAKING: A MULTI-COUNTRY EXAMINATION

**Aileen Smith, Stephen F. Austin State University**
**Evelyn C. Hume, University of Texas - Pan American**
**Alan B. Davis, Truman State University**
**Ray Zimmermann, University of Texas - El Paso**

## ABSTRACT

*Research has shown that Locus of Control (LOC) is a personality variable possessing potential explanatory power in the study of ethical decision making. Diverse results have been reported in the literature. Whenever differences on the LOC variable are indicated by the research, individuals with an Internal LOC report the more ethical responses. This study extends the examination of the universal relevance of the LOC variable to ethical decision making of university students.*

*Using an instrument designed to elicit responses to questionable academic behaviors, this research analyzes ethical responses of university students (n=1,657) from seven countries to examine the universal nature of LOC differences. The behaviors examined are of an individualist nature. The students were asked to indicate their beliefs about ethicality concerning the academic behaviors. Results indicate considerable support for the universal nature of LOC differences in the ethical responses of the students.*

## INTRODUCTION

Increasing attention is being focused on understanding differences in decision making associated with questionable behaviors. With the recent scandals in the corporate arena, there is a renewed focus on including ethics courses in the curriculum. Lacking hard evidence of a clear link between ethics classes and ethical behavior, researchers must consider other relationships. Since ethical decisions involve a "cost/benefit analysis," one must ask whether effective decisions are being made, as they relate to the costs of questionable decisions? In addition, are those decisions believed to affect the outcome? Are similar decisions being made on ethical dilemmas that are faced by our future business leaders–both in the US and other countries? In light of the increasing global nature of the business environment, it becomes even more important to understand whether

systematic differences are present across global geographical areas and cultures. In order to further examine the ethical decision processes of our future business leaders, this study examines links between responses to ethical dilemmas and the LOC orientation of university student respondents.

## LITERATURE REVIEW

Research examining the ethical orientation of university students in the US has been reported in the literature for several decades. During the last few years, additional studies have examined ethical decision making of students in the international academic domain. Using a country variable in the analysis, research comparing North American students to those from Western European countries or Australia generally has not indicated significant differences in the ethical beliefs and perceptions of students among these countries (Eynon et al., 1996; Stevenson and Bodkin, 1998; Whipple and Swords, 1992; Lysonski and Gaidis, 1991). Given the predominance of the common Anglo-Saxon heritage, these results are not unexpected. An increasing number of cross-national studies have compared Anglo-heritage countries with various Asian subgroups. In general, the differences in ethical orientations of these geographically and culturally diverse groups are significantly different (Armstrong, 1996; Brody et al., 1998; Goodwin and Goodwin, 1999; Nyaw and Ng, 1994; White and Rhodeback, 1992). However, some research examining cultural differences of Anglo and Asian university students indicates considerable correspondence associated with the responses between the diverse geographical regions. The differences appear to be in the use of the survey responses provided by the Likert scale (Hume et al., 2003; Yamamura et al., 1996; Ueno and Wu, 1993). Asian students tend to prefer the more collectivistic mid-points of the scale and ignore the more individualistic end-points of scales provided with surveys.

A number of studies have addressed the potential link between the personality variable Locus of Control (LOC) and ethical responses. Rotter's (1966) LOC instrument is designed to assess how much control an individual believes he/she has over the outcomes in life. LOC is based on whether an individual believes there is a causal relationship between his/her decisions and behaviors and the potential outcomes of those decisions and behaviors. A person with an internal LOC (hereafter referred to as "Internal") believes in a causal link between his/her decisions or actions and the expected consequences. Internals believe that the consequences of their lives are directly related to the decisions they make and the actions they take. In general, Internals accept responsibility for what happens to them. Those with an external LOC (hereafter referred to as "Externals") believe that the expected outcomes or consequences in their lives are not linked to their efforts or decisions. Instead, they believe the outcomes are under the control of luck, fate, or powerful others. Externals do not generally believe in the acceptance of responsibility of what happens to them because their belief structure does not include a cause-and-effect relationship between the behavior and the consequence.

There has been support indicated for the Internal/External LOC distinction in the reported ethical research using university students. As expected, some research results indicate support for the belief that Internals will supply the more ethical responses to the surveys and scenarios considered (Hagerty and Sims, 1978; Brownell, 1981; Jones and Kavanaugh, 1996; McCuddy and Peery, 1996; Terpstra et al., 1991; Ameen et al., 1996; Trevino & Youngblood, 1990; Smith et al., 1998/99). Other studies have found only limited support for the LOC variable effect in ethical research using university students (Hagerty and Sims, 1979; Rogers and Smith, 2001). Research has also been reported that indicates no ethical response differences on the LOC variable (Brownell, 1982; Geurin and Kohut, 1989; Bass et al., 1999; Jones & Kavanaugh, 1996).

Additional research has examined the importance of LOC in a personal and environmental control context. A number of studies have found general support for the Internals' preference for a participative decision style and expression of greater work satisfaction (Brownell, 1982, 1981; Geurin and Kohut, 1989; Licata et al., 1986; Spector and Michaels, 1986; Storms and Spector, 1987). These results additionally support the position that Internals expect a cause-and-effect relationship between their actions and the resulting outcomes of those actions and would prefer to actively participate in the decision process.

## RESEARCH HYPOTHESIS

This research extends the examination of LOC differences in ethical responses of university students. Specifically, it examines whether there is evidence of LOC differences in a multi-country context. Because Internals believe there is a link between attitudes and actions and the subsequent outcomes of those actions, it is expected that the Internal/External LOC distinction will have an explanatory effect in the students' responses.

| | |
|---|---|
| H1: | Internal LOC respondents will report more ethically sensitive responses than External LOC respondents. |

## METHODOLOGY

Data (n=1,657) for the analysis were collected from university students in the US and six other countries. Demographic information on the student respondents is shown in Table 1.

Because the data were collected from intact classroom situations, there was 100% participation. The students completed the surveys during class time and were assured anonymity (i.e., no names or other identification on the completed surveys). Table 2 shows the countries/jurisdictions represented by the data.

Some of the earlier reported research on ethics using students has used scenarios or questions that are designed to reflect real-world business situations. While these are certainly topics of interest

for the study of ethics, often university students do not have the requisite knowledge or experience to be able to respond appropriately to these survey questions.

**Table 1 - Respondent Demographics**

| Classification: | n* | Age: | n* |
|---|---|---|---|
| Freshman | 176 | 18-20 years | 654 |
| Sophomore | 441 | 21-25 years | 733 |
| Junior | 516 | 26-35 years | 146 |
| Senior/Graduate | 355 | > 35 years | 65 |
| Total | 1,455 | Total | 1,598 |
| Gender: | n* | Locus of Control: | n* |
| Male | 737 | Internal (≤ 9) | 702 |
| Female | 918 | External (≥ 11) | 792 |
| Total | 1,655 | Total | 1,494 |

*Not all totals equal 1,657 due to survey response omissions.

**Table 2 - Countries/Jurisdictions Represented in the Data**

| | n | | n |
|---|---|---|---|
| China | 176 | Puerto Rico | 64 |
| Columbia | 20 | USA | 922 |
| Germany | 52 | Viet Nam | 104 |
| Hong Kong | 319 | Total | 1,657 |

To ameliorate this problem, this study employs academic related questions on its survey instrument. The ethically questionable items surveyed by the current research were selected because they sampled behaviors that were considered to be familiar to the students' academic environment. The survey requested that the subjects respond to their beliefs concerning questionable behaviors in an academic environment. The actions considered were also generally considered to be individualist and active behaviors.

The questionnaire contained three sections. The first part requested from the students information concerning the students' own personal beliefs toward 11 behaviors of varying degrees of ethicality. These survey items were adapted from a questionnaire used by Pratt and McLaughlin (1989). The second part of the questionnaire used Rotter's (1966) Locus of Control questionnaire to determine the students' LOC score for the Internal/External designation used in the analysis. The last part of the questionnaire requested demographic information, which is contained in Table 1.

The first section of the survey instrument presented students with a list of 11 behaviors related to the academic environment. All items relate to academic honesty/dishonesty. Students were asked to indicate how unethical they believed each of the 11 behaviors to be. A Likert scale was used for the responses where 1 = "very unethical" and 5 = "not at all unethical." The focus was the ethical orientation of the respondents toward the academic-environment behaviors and actions.

Based on the assumptions of LOC theory, an Internal LOC individual is more likely to accept responsibility for his or her actions. The acceptance of responsibility for actions and the expected consequences or outcomes of those actions suggests that those with an internal LOC will respond more ethically because of their belief in the behavior-outcome link. By contrast, an External LOC individual is less likely to accept responsibility for the consequences of unethical behaviors, since Externals are less likely to see an inherent connection between their actions and the resulting consequences. Without the assumed link between actions and outcome expectancies, Externals are less likely to respond as ethically. Rotter's (1966) LOC instrument is used in the current research to designate student respondents as either Internal or External. The instrument is a 29-item survey developed to sample beliefs across various situations. As such, it is considered to be a "generalized expectancy" measure. The LOC instrument is designed to award a point every time that an "external" answer is recorded by the subject. Six of the LOC items are "fillers" and are not counted in the scoring; therefore, the students' scores can range from zero to 23. Those students scoring less than or equal to nine on the LOC instrument are designated as Internals. Those scoring greater than or equal to 11 are designated as Externals. Those with a LOC score of 10 were omitted from the LOC variable analysis, resulting in the omission of 163 responses. Because the LOC variable is a continuous variable, this procedure was followed in order to have better discrimination on the LOC variable for the analysis.

The SAS t-test procedure was used to analyze the differences in the students' responses to the items on the questionnaire. The five-point Likert scale mean responses for each survey item were the dependent variable, and the LOC Internal/External designation was the independent variable in the analyses. The Appendix gives the short form of the 11 behaviors surveyed by the questionnaire. Ten of the 11 behaviors indicated significant differences on the LOC distinction. The results of the response analysis shown on Table 3 was consistent and highly significant. On the ten items indicating differences, the Internals responded with the greater ethical sensitivity.

**Table 3 - Locus of Control t-test Response Results (2 Levels)**

| Item No. | t-value | Statistics | | Response Means | No. of Responses | |
|---|---|---|---|---|---|---|
| | | p-value | Internal | External | Internal | External |
| 1 | 6.12 | <.0001 | 1.49 | 1.76 | 698 | 790 |
| 2 | 4.20 | <.0001 | 2.46 | 2.70 | 694 | 782 |
| 3 | 6.63 | <.0001 | 1.87 | 2.22 | 699 | 789 |
| 4 | 4.67 | <.0001 | 1.48 | 1.71 | 697 | 789 |
| 5 | 3.96 | <.0001 | 2.23 | 2.48 | 695 | 789 |
| 6 | 7.11 | <.0001 | 1.88 | 2.27 | 699 | 790 |
| 7 | 2.12 | .0345 | 3.98 | 4.11 | 695 | 782 |
| 8 | 2.77 | .0056 | 2.37 | 2.56 | 695 | 785 |
| 9 | n.s.** | | | | | |
| 10 | 2.82 | .0049 | 1.41 | 1.52 | 697 | 787 |
| 11 | 4.79 | <.0001 | 1.71 | 1.95 | 698 | 789 |

* The lower the response mean, the greater the belief that the behavior is unethical; Internals have lower response means than Externals on all items.

** n.s. = nonsignificant

This offers considerable support for the universal nature of LOC as a moderator of ethical beliefs and decisions, as predicted by the research hypothesis. Generally speaking, individuals who believe they have some responsibility for the outcomes of their own behaviors responded with greater ethical sensitivity. If one blindly accepts attempts at influence by others, such acceptance is equivalent to assigning control to others. These results support the belief that Internals are generally less susceptible to negative influence by others.

To further test the moderating influence of the LOC variable, a general linear model (GLM) was run with four levels of the LOC independent variable (level 1, $\leq 7$; level 2, 8-10; level 3, 11-13; level 4, $\geq 14$). The results of the analysis indicated that the same ten of the 11 items were significant at the .05 level. On all of the ten significant items, level 1 (the greatest internal designation) indicated the lowest response mean (i.e., belief that the action is more unethical). By contrast, the level 4 designation (the most external group) of the LOC variable scored the highest response mean, indicating the belief that the action was considered to be ethical. As shown in Table 4, the ascending order of the response means was 1, 2, 3, and 4 for the first nine of the ten significant items.

| Table 4 - Locus of Control GLM Response Results (4 levels*) | | | |
|---|---|---|---|
| Item No. | F-value | p-value | Ascending Mean Score Classifications |
| 1 | 17.13 | <.0001 | 1,2,3,4 |
| 2 | 9.65 | <.0001 | 1,2,3,4 |
| 3 | 23.16 | <.0001 | 1,2,3,4 |
| 4 | 9.56 | <.0001 | 1,2,3,4 |
| 5 | 9.27 | <.0001 | 1,2,3,4 |
| 6 | 24.53 | <.0001 | 1,2,3,4 |
| 7 | 2.73 | .0426 | 1,2,3,4 |
| 8 | 2.63 | .0489 | 1,2,3,4 |
| 9 | n.s. | | |
| 10 | 4.33 | .0047 | 1,2,3,4 |
| 11 | 15.37 | <.0001 | 1,3,2,4 |
| * Using 4 levels for the LOC variable: 1 $\leq$ 7; 2 = 8-9; 3 = 11-13; 4 $\geq$ 14. | | | |

An additional analysis focused on the relationship between the responses by the Internals and Externals. The Pearson product moment correlation was .993 ($\alpha < .001$). The Spearman correlation on the ranks of the response means was 1.00. These correlational results support the parallelism of the responses by the LOC designation. The lower response mean of the Internals indicates their belief that the behaviors are more unethical. Both of these analyses lend greater support for the research hypothesis expectations–that those individuals using an internal LOC "decision filter" provide a more ethical response to the survey items.

## DISCUSSION

This study examines differences in academic ethical responses of university students based on the Locus of Control (LOC) personality variable. While earlier analysis using US university students indicated some differences, this research assumed an international focus by using students from seven countries. Because university students were the target group, this survey used academic environment survey items familiar to the student subjects.

The results indicate considerable support for the expected link associated with LOC differences and ethical perceptions. When the students' individual ethical orientations were

examined, 10 of the 11 survey items indicated significance ($\alpha \leq .05$) on the LOC variable. In all 10 significant items, the Internal LOC students supplied the more ethically sensitive responses. This points to the importance of understanding the link between ethically sensitive decisions and the potential consequences directly related to those decisions.

All in all, the results offer support for the universal nature of response differences associated with a Locus of Control variable. Additional research investigating these variables across other international combinations is needed to add to a more complete understanding of their effects. With the increased emphasis on ethics in the workplace, understanding the relationship between LOC and decision making can lead to ways of increasing the importance of ethical decisions in business and other professions.

**APPENDIX - Short Form of Behaviors Surveyed**

| No. | Behaviors |
|---|---|
| 1 | Citing someone else's work as your own |
| 2 | Failure to report unfavorable grading errors |
| 3 | Copying homework and turning it in as your own |
| 4 | Using cheat sheets during an exam |
| 5 | Not contributing your fair share of a group project |
| 6 | Falsifying or fabricating a bibliography/references list |
| 7 | Studying from someone else's notes |
| 8 | Visiting a professor after an exam, attempting to bias grading |
| 9 | Obtaining an old exam from a previous semester or quarter |
| 10 | Changing a test paper from the original handed in |
| 11 | Making improper use of another's computer file/program |

## REFERENCES

Ameen, E.C., Guffey, D.M. & McMillan, J.J. (1996). Gender differences in determining the ethical sensitivity of future accounting professionals. *Journal of Business Ethics*, *15,* 591-597.

Armstrong, R.W. (1996). The relationship between culture and perception of ethical problems in international marketing. *Journal of Business Ethics, 15*, 1199-1208.

Bass, K., Barnett, T. & Brown, G. (1999). Individual differences variables, ethical judgments, and ethical behavior. *Journal of Business Ethics*, *9*(2), 183-205.

Brody, R.J., Coulter, J.M. & Milhalck, P.H. (1998). Whistle-blowing: A cross-cultural comparison of ethical perceptions in U.S. and Japanese accounting students. *American Business Review*, *16*(2), 14-21.

Brownell, P. (1982). A field study examination of budgetary participation and Locus of Control. *The Accounting Review*, *56*, 766-777.

Brownell, P. (1981). Participating in budgeting, Locus of Control, and organizational effectiveness. *The Accounting Review*, *56*, 844-860.

Eynon, G., Hill, N.T., Stevens, K.T. & Clarke, P. (1996). An international comparison of ethical reasoning abilities: Accounting students from Ireland and the United States. *Journal of Accounting Education*, *14*(4), 477-492.

Geurin, V.T. & Kohut, G.F. (1989). The relationship of Locus of Control and participative decision making among managers and business students. *Mid-Atlantic Journal of Business*, *25*, 57-66.

Goodwin, J. & Goodwin, D. (1999). "Ethical judgments across culture: A comparison between business students from Malaysia and New Zealand. *Journal of Business Ethics*, *18*(3), 267-281.

Hegarty, W.H. & Sims, H.P. (1979). "Organizational philosophy, policies, and objectives related to unethical decision behavior: A laboratory experiment. *Journal of Applied Psychology*, *64,* 331-338.

Hegarty, W.H. & Sims, H.P. (1978). "Some determinants of unethical decision behavior: An experiment. *Journal of Applied Psychology*, *63,* 451-457.

Hume, E.C., Smith, A. & Davis, A.B. (2003). University ethical dilemmas: Examining the individualism/collectivism question. *Journal of Legal, Ethical, and Regulatory Issues*, *6*(1), 91-108.

Jones, G.E. & Kavanaugh, M.J. (1996). "An experimental examination of the effect of individual and situational factors on ethical behavioral intentions in the workplace. *Journal of Business Ethics*, *15*, 511-523.

Licata, M.P., Strawser, R.H. & Welker, R.B. (1966). A note on participation in budgeting and Locus of Control, *The Accounting Review*, *61,* 112-117.

Lysonski, S. & Gaidis, W. (1991). A cross-cultural comparison of the ethics of business students. *Journal of Business Ethics*, *10,* 141-150.

McCuddy, M.K. & Peery, B.L. (1996). "Selected individual differences and collegians' ethical beliefs. *Journal of Business Ethics*, *15*, 261-272.

Newstrom, J.W. & Ruch, W.A. (1976). The ethics of business students: Preparation for a career. *AACSB Bulletin*, *12* (April), 21-29.

Nyaw, M. & Ng, I. (1994). A comparative analysis of ethical beliefs: A four country study. *Journal of Business Ethics*, *13*(7), 543-555.

Pratt, C.B. & McLaughlin, G.W. (1989). An analysis of predictors of college students' ethical inclinations. *Research in Higher Education*, *30*, 195-219.

Rogers, V. & Smith, A. (2001). Ethics, moral development, and accountants-in-training. *Teaching Business Ethics*, *5,* 1-20.

Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, *80* (Whole No. 609).

Smith, A., Coates, J.D. & Deis, D.R. (1998/99). Are ethical responses linked to Locus of Control? *Teaching Business Ethics*, *2*(3), 249-260.

Spector, P.E. & Michaels, C.E. (1986). Personality and employee withdrawal: Effects of Locus of Control on turnover. *Psychological Reports*, *59*, 63-66.

Stevenson, T.H. & Bodkin, C.D. (1998). A cross-national comparison of university students' perceptions regarding the ethics and acceptability of sales practices. *Journal of Business Ethics, 17*(1), 45-55.

Storms, P.L. & Spector, P.E. (1987). Relationships of organizational frustration with reported behavioural reactions: The moderation effect of Locus of Control. *Journal of Occupational Psychology*, *60*, 227-234.

Terpstra, E.E., Ryes, G.C. & Boker, D.W. (1991). Predictors of ethical decisions regarding insider trading. *Journal of Business Ethics*, *10*, 699-710.

Trevino, L.K. & Youngblood, S.A. (1990). Bad apples in bad barrels: A causal analysis of ethical decision-making behavior. *Journal of Applied Psychology*, *75*, 378-385.

Ueno, S. & Wu, F.H. (1993). The comparative influence of culture on budget control practices in the United States and Japan. *The International Journal of Accounting*, *28*, 17-39.

Whipple, T.W. & Swords, D.F. (1992). Business ethics judgments: A cross cultural comparison. *Journal of Business Ethics*, *11*, 671-678.

White, L.P. & Rhodeback, M.J. (1992). Ethical dilemmas in organizational development: A cross-culture analysis. *Journal of Business Ethics, 11*, 663-670.

Yamamura, J.H., Frakes, A.H., Sanders, D.L. & Ahn, S.K. (1996). A comparison of Japanese and U.S. auditor decision-making behavior. *The International Journal of Accounting*, *31*, 347-363.

# REGULATORY ISSUES
# for Volume 7, Number 1

# REGULATORY ISSUES
# for Volume 7, Number 1

# 401(k) RETIREMENT ACCOUNTS AND AGE RESTRICTIONS

**Kyle Mattson, Weber State University**
**Denise Woodbury, Weber State University**
**Marcus Nield, Weber State University**

## ABSTRACT

*The business world is increasingly concerned with discrimination issues between different groups of employees. Interestingly, age discrimination is legal under the provisions of the 401(k) retirement benefits statute. Current law requires that all employees be covered under a company's 401(k) program at the age of 21; however, benefit coverage for employees younger than 21 remains at the employer's discretion.*

## INTRODUCTION

At the heart of most individual investment is a desire to secure economic or financial security. Traditionally family members and relatives have felt some degree of responsibility to one another. To the extent that the family had resources to draw upon, this was often a source of economic security, especially for the aged or infirm. Long before financial assets, land itself was the key asset and at the center of economic security for those who owned it or who lived on farms (Social Security Administration, 2000). Thus the traditional sources of economic security are assets, labor, family, and finally if necessary charity.

The problem of economic insecurity was at the center of the Social Security legislation. Social Security speaks to a universal human need of economic security. All individuals face the uncertainties brought on by death, disability and old age. Prior to the turn of the 20th century, the majority of people lived and worked on farms and economic security was provided by their labor and extended family. The Industrial Revolution changed the way America faced economic uncertainty, primarily because the family farm and extended family as sources of economic security became less common. The Great Depression was a financial flash point in the nation's economic life. It was against this backdrop that the Social Security Act emerged.

More recently, President George W. Bush, in his Inaugural Address announced his intentions to reform Social Security and Medicare (Social Security Administration, 2000). In his first speech

to a joint-session of Congress in February 2001, the President announced his intention to appoint a Presidential Commission to recommend ways to address Social Security reform. The President stated that the Commission would operate under three broad principles:

- It must preserve the benefits of all current retirees and those nearing retirement.
- It must return Social Security to sound financial footing.
- It must offer personal savings accounts to younger workers who want them.

As society changes individuals must consider new ways to address their own economic security. This security, for the individual and for the family, concerns itself primarily with three factors:

- People want decent homes to live in.
- People want to locate their homes where they can engage in productive work.
- People want some safeguard against misfortunes, which cannot be wholly eliminated.

The key concern of this paper is the role of the 401(k) law in limiting individuals in their ability to provide for their own economic futures.

## EMPLOYMENT SCENARIO

Mattson, et al, (2000) considers three scenarios with "equally qualified applicants":

- a male applicant and female applicant both are hired for the identical position; only the male applicant receives benefits
- a white applicant and an Hispanic applicant both are hired for the identical position; only the white applicant receives benefits
- a Southern Baptist applicant and a Catholic applicant both are hired for the identical position; only the Southern Baptist receives benefits

All three scenarios are potentially legal, though perhaps not "fair." This distribution of benefits are legal if the female, Hispanic, and Catholic applicants are all eighteen years old and the male, white, and Southern Baptist applicants are twenty-one.

Consider a full-time (40 hour per week) employee who has to wait three years to be eligible for the retirement benefits offered by her employer in the form of a 401(k) plan. This period isn't

a standard probationary term imposed on all new employees but an example of legal age discrimination. The individual in question is 18 years old; current tax law does not require the employer to extend the same benefits to an 18 year-old as to a 21 year-old, otherwise identical, employee.

Employers are concerned about the rising costs, both direct and indirect, of labor. Benefits currently account for as much as 40 percent of total compensation costs for each employee. What was considered a "fringe" a decade ago is an "expectation" in today's market. Benefits as a form of compensation, have grown for several reasons, but one key aspect is that the Internal Revenue Service Code treatment of benefits makes them preferable to wages. Even after the Omnibus Budget reconciliation Act of 1993, many benefits remain nontaxable to the employee and are tax-deductible expenses for the employer. With other benefits, personal income taxes are deferred, resulting in an increase in employees' disposable income, since they receive benefits and services that they would otherwise have to purchase with after-tax earnings (Cascio, 1995).

Young employees just entering the workforce are likely to be more concerned with direct-pay components of compensation (e.g. tuition, car, or home purchase components) than with a generous retirement program. Older workers may desire the reverse. Employers that hire large numbers of temporary or part-time workers may offer entirely different benefits than employers who hire predominantly full-time employees. Only about 16.5 percent of firms give part-time employees the same health, retirement, and vacation benefits that full-time employees receive (Cascio, 1995).

## HISTORICAL LEGISLATION

The government plays a central role in the design and regulation of any benefit package. While controlling the cost of benefits in a competitive labor market is a major concern of employers, the social and economic welfare of citizens is a major concern of government as evidenced by the *Social Security Act (1935)*, *Federal Unemployment Tax Act (1935)*, *State Workers' Compensation* laws and the *Employee Retirement Income Security Act* (1974) (Cascio, 1995). Historical retirement security and income legislation include the following (The 2002 National Summit on Retirement Savings, 2002):

It is important to note that Congress enacted the *Savings Are Vital to Everyone's Retirement (SAVER) Act of 1997* to advance the public's knowledge and understanding of the importance of retirement savings. The act requires the U.S. Department of Labor (DOL) to maintain a public outreach program and hold three bipartisan national retirement savings summits. Information from these summits is referenced throughout this paper. The objectives of the national summits (The 2002 National Summit on Retirement Savings, 2002) are to:

| | |
|---|---|
| ♦ | *The Revenue Act of 1921* initiated preferential tax treatment of pensions. |
| ♦ | *The Social Security Act of 1935* devised a nationwide system of social insurance to protect wage earners and their families. |
| ♦ | *The Labor-Management Relations (Taft-Hartley) Act of 1947* provided guidelines for the establishment and operation of retirement plans administered jointly by employers and unions. |
| ♦ | *The Self-Employed Individual Retirement (Keogh) Act of 1962* allowed self-employed persons, unincorporated small businesses, farmers and professionals to implement qualified retirement plans. |
| ♦ | *The Employee Retirement Income Security Act of 1974 (ERISA)* established individual retirement accounts (IRAs), the Pension Benefit Guaranty Corporation (PBGC) and standards for employment-based benefit plans. |
| ♦ | *The Revenue Act of 1978* authorized Section 401(k) and Section 457 plans, and simplified employee pensions (SEPs). |
| ♦ | *The Retirement Equity Act of 1984* amended minimum vesting, minimum participation, and joint and survivor annuity provisions, and created QDROs. |
| ♦ | *The Tax Reform Act of 1986* simplified employment-based retirement plan administration. |
| ♦ | *The Taxpayer Relief Act of 1997* created new types of IRAs, including the Roth IRA. |
| ♦ | *The Economic Growth and Tax Relief Reconciliation Act of 2001* (EGTRRA) increased contribution and benefit limits for tax-qualified plans, added salary reduction "catch-up" contributions for workers aged 50 and over, shortened vesting requirements for employer matching contributions and increased portability of retirement plan assets. |

| | |
|---|---|
| ♦ | Advance the public's knowledge and understanding of retirement savings and its critical importance to the future well-being of American workers and their families |
| ♦ | Facilitate the development of a broad-based, public education program to encourage and enhance individual commitment to a personal retirement savings strategy |
| ♦ | Develop recommendations for additional research, reforms and actions in the field of private pensions and individual retirement savings. |

## LITERATURE

### The Law

Named after an obscure section of the IRS code [Internal Revenue Code of 1986, Section 401], 401(k) plans, for corporations, and 403(b) plans, for government and tax-exempt organizations, are often considered the blue ribbon of retirement plans. These plans allow the investor (employee) to defer taxes on part of his or her salary by contributing to a special account set up by the employer. Employees do not pay taxes on the earnings until the money is withdrawn, usually at retirement. However, the IRS sets age and service conditions under which an organization with such a plan must offer the plan to its employees. Section 410(a) of the Internal Revenue Code states,

> (a) PARTICIPATION.-
> (1) MINIMUM AGE AND SERVICE CONDITIONS.-
> (A) GENERAL RULE. - A trust shall not constitute a qualified trust under section 401(a) if the plan of which it is a part requires, as a condition of participation in the plan, that an employee complete a period of service with the employer or employers maintaining the plan extending beyond the later of the following dates-
> (i) the date on which the employee attains the age of 21; or
> (ii) the date on which he completes 1 year of service.
> (2) MAXIMUM AGE CONDITIONS.- A trust shall not constitute a qualified trust under section 401(a) if the plan of which it is a part excludes from participation (on the basis of age) employees who have attained a specified age.
> (3) DEFINITION OF YEAR OF SERVICE.-
> (A) GENERAL RULE. - For purposes of this subsection, the term "year of service" means a 12-month period during which the employee has not less than 1,000 hours of service. For purposes of this paragraph, computation of any 12-month period shall be made with reference to the date on which the employee's employment commenced, except that, under regulations prescribed by the Secretary of Labor, such computation may be made by reference to the first day of a plan year in the case of an employee who does not complete 1,000 hours of service during the 12-month period beginning on the date his employment commenced.

This law allows employers to exclude 18-year-old employees (or any employee under the age of 21) from participation in a company's retirement program. Furthermore, the employee is excluded from any matching funds provided by the employer.

**Brief Review of the Agency Model**

Agency models generally address the problem of moral hazard. This problem occurs when a decision made by one individual, striving to satisfy personal desires, affects the welfare of others. Furthermore, those so affected cannot observe or directly control the choice made by the individual.

Consider the classical example of an agency model as described by Stiglitz (1974) of a risk-neutral landowner and a risk-averse tenant farmer. In a scheme that elicits the first-best expenditure of effort by the farmer, the risk-neutral landowner is paid a fixed fee and assumes no risk, whereas the tenant farmer receives the outcome of the season less the fixed fee that he/she must pay to the landowner, thereby assuming all of the risk of the operation. This compensation scheme does elicit effort from the tenant farmer, whose disutility of risk-bearing is relatively high, accepts all of the risk of the enterprise. Thus, compensating the tenant farmer as a residual claimant , in order to induce effort, hardly allocates risk reasonably.

In contrast, compensating the agent with a fixed fee claim imposes risk on the risk-neutral landowner, who is able to bear the risk at a lower cost than is the risk-averse tenant farmer. Thus, improved risk bearing is achieved. However, the fixed fee compensation does not provide the agent with an incentive to expend effort.

Both effort and risk bearing are important in the design of compensation contracts. Paying the agent a residual claim induces effort, but allocates risk to the party for whom the assumption of risk may be most costly. Compensating the agent with a fixed fee will provide improved risk sharing if the agent has lower risk tolerance than the principal. It does not, however, provide the agent with incentive to expend effort.

The optimal scheme would be expected to balance these two forces by compensating the agent through the use of both a fixed fee payment and a partial claim on the outcome of the enterprise. The exact form of an optimal contract would, therefore, depend on the relative degrees of risk aversion of the parties to the contract, on the relation between the outcome of the business venture and the effort of the agent, and on the degree to which the actual effort of the agent may be observed.

**Compensation Decision**

According to Lewin and Mitchell (1995), when employers address decisions on compensation whether direct or indirect, they face four basic problems:

- for jobs for which there are comparable workers outside the firm, they must decide how much to pay relative to the external market.
- for jobs for which it is difficult to find comparable workers externally, employers must determine pay levels relative to other occupations in the firm,
- for all jobs a decision must be made concerning the mix of pay versus benefits, and
- compliance with federal, state and local statutes and regulatory restrictions.

Note that where minimum wage or benefit standards are mandated (e.g., minimum wage) employers may choose to offer compensation or benefits in excess of the minimum requirement.

According to Schuler (1998), while not covered in the original 1938 law, the fourth provision of the *Fair Labor Standards Act* was added as an amendment in 1963. Called the *Equal Pay Act,* this extension prohibits an employer from discriminating:

> ... between employees on the basis of sex by paying wages to employees . . . at a rate less than the rate at which he pays wages to employees of the opposite sex . . . for equal work on jobs the performance of which requires equal skill, effort, and responsibility, and which are performed under similar working conditions.

The act mandates that employees on the same jobs be paid equally, except for differences in seniority, merit, or other conditions unrelated to gender. Direct as well as indirect compensation are subject to these conditions. Thus, men and women performing the same job, other factors being equal, by law must receive the same level of direct and indirect compensation, including retirement benefits.

**The U.S. Social and Political Perspective: Personal & Retirement Savings**

Federal Reserve Board Chairman, Alan Greenspan, at The 2002 National Summit on Retirement Savings on February 28, 2002, said,

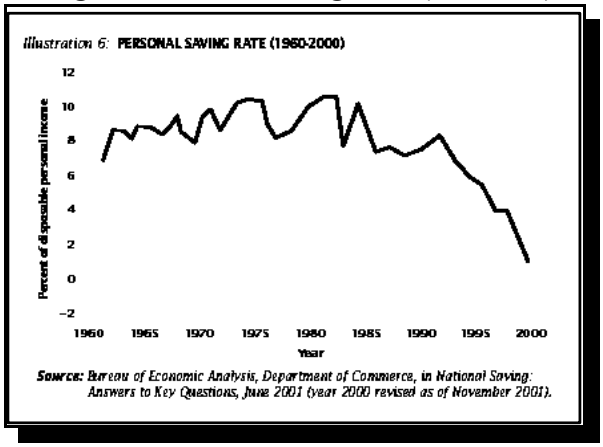
> One of the most complex economic calculations that most workers will ever undertake is, without doubt, deciding how much to save for retirement. At every stage of life, individuals ought to make judgments about their likely earnings before retirement and their desired lifestyle in retirement. Also implicit in such decisions are assumptions about prospective rates of return, life expectancy, and the possible accumulation of a nest egg for one's children. The difficulty that individuals face in making these projections and choices is compounded by the need to forecast personal and economic events many years into the future.

Mr. Greenspan added that discretionary saving is the saving that each individual does consciously by periodically setting aside portions of their income. This is facilitated most recently in the increased interest in IRAs and in defined contribution plans such as 401(k) programs.

President George W. Bush also addressed The Summit and warned "Americans are saving too little -- often, dangerously too little. The average 50-year-old in America has less than $40,000 in personal financial wealth. The average American retires with only enough savings to provide 60 percent of his former annual income. The problem is especially acute for women and minorities" (The 2002 National Summit on Retirement Savings, 2002). This is further compounded in single parent households, through divorce, or by the death of a spouse.

The Delegate Resources for The Summit notes that, "The low rate of personal saving in the United States . . .and the lack of any retirement savings accounts among nearly two-thirds of American workers indicate that there is a need for greater awareness among the public about the importance of setting aside funds to prepare for life after they have stopped working" (The 2002 National Summit on Retirement Savings, 2002).

**Figure 1: Personal Savings Rate (1960-2000)**




Governmental observers and academics have generally drawn the conclusion that people are not saving enough for retirement. As reported at The Summit, too few individuals significantly contribute to IRAs and Keogh accounts as well as employment-based 401(k), 403(b) and 457 thrift plans. This is documented by the Congressional Research Service, which reports that 39% of all workers between ages 25 and 64 owned such a contributory retirement savings account in 1998. (Defined benefit plans and noncontributory defined contribution plans are excluded from this measure.) Of the investors contributing to retirement savings accounts, the average retirement account balance was $34,700 and the median was $14,000- which the report notes is hardly enough

to adequately fund retirement even when supplemented with other sources of income and wealth. Arguments can be made that Americans are not saving enough to preserve their pre-retirement lifestyles. Retirement income replacement ratio benchmarks run from 74% to 83%, depending on income and family situation, according to a 2001 study by Aon Consulting and Georgia State University. Workers in all age groups saved 5% or less of pre-retirement income in 2001, with rates improving for the youngest workers but deteriorating for those in the higher age group at the lower income levels. In each age group, those at higher income levels saved a greater percentage of pre-retirement income than those at lower income levels. (Figure 1, Figure 2, and Table 1) (The 2002 National Summit on Retirement Savings, 2002.)

**Table 1: Savings Rates, 2001 and 1997**

*Illustration 8:* **SAVINGS RATES, 2001 AND 1997**

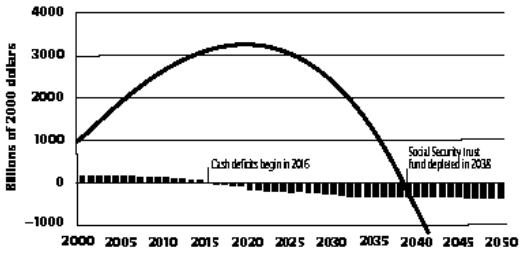
| PRERETIREMENT INCOME ($) | AGES 50 THROUGH 64 | | AGES 40 THROUGH 49 | | AGES 30 THROUGH 39 | |
|---|---|---|---|---|---|---|
| | 2001 (%) | 1997 (%) | 2001 (%) | 1997 (%) | 2001 (%) | 1997 (%) |
| 20,000 | 1.4 | 4.4 | 0.8 | 1.0 | 1.7 | 1.4 |
| 30,000 | 2.3 | 4.8 | 1.7 | 2.1 | 2.5 | 1.9 |
| 40,000 | 3.0 | 5.0 | 2.5 | 2.6 | 3.1 | 2.4 |
| 50,000 | 3.7 | 5.1 | 3.1 | 2.9 | 3.7 | 3.0 |
| 60,000 | 4.2 | 5.1 | 3.6 | 3.0 | 4.1 | 3.5 |
| 70,000 | 4.5 | 5.0 | 3.8 | 3.1 | 4.3 | 3.9 |
| 80,000 | 4.7 | 5.0 | 3.9 | 3.2 | 4.4 | 4.4 |
| 90,000 | 5.0 | 5.0 | 4.0 | 3.3 | 4.5 | 4.8 |

***Source:*** *Replacement Ratio Study™: A Measurement Tool for Retirement Planning, Aon Consulting/Georgia State University, 2001. Reprinted with permission.*

## Social Security

Social Security has become the main source of many people's retirement income with 38 percent of retirees' income coming from Social Security. Of concern to Congress is the disproportionate dependency on Social Security among income groups. Unsurprisingly, the dependency is greatest among those in the lowest quintile of total income, where Social Security benefits supply 82% of income. For the highest quintile, Social Security contributes only 18 percent of the income of retirees (The 2002 National Summit on Retirement Savings, 2002).

Figure 3: SOCIAL SECURITY TRUST FUND FORECAST




*Source: GAO analysis of data from the Office of the Actuary, Social Security Administration, in National Saving: Answers to Key Questions, June 2001.*

The future of the current system of contributions and payments in the Social Security program is the subject of much public policy debate. Of major concern are the increased longevity and the size of the aging Baby Boom generation, combined with lower fertility rates for the generations that follow. These factors will seriously impact the Social Security system. The Social Security Board of Trustees estimates that the number of people aged 65 and older will double by 2075, to 23% of the population. More importantly, on the contribution side, the ratio of workers to beneficiaries will decrease from 3.4 today to 2.1

*Source: The 2002 National Summit on Retirement Savings Delegate Resources*

The future of the current system of contributions and payments in the Social Security program is the subject of much public policy debate. Of major concern are the increased longevity and the size of the aging Baby Boom generation, combined with lower fertility rates for the generations that follow. These factors will seriously impact the Social Security system. The Social Security Board of Trustees estimates that the number of people aged 65 and older will double by 2075, to 23% of the population. More importantly, on the contribution side, the ratio of workers to beneficiaries will decrease from 3.4 today to 2.1 in 2030. It is forecasted that Social Security faces cash deficits in 2016, when payments are projected to be larger than revenue. The same analyst forecasts that the Social Security Trust Fund will be exhausted in 2038, absent reform; projected tax revenue would cover 73% of projected benefits beyond 2038. (Figure 3) Mr. Greenspan warns, "If the Social Security Trust is depleted, the law requires that benefits be paid only to the extent that they can be financed out of current payroll tax receipts" (The 2002 National Summit on Retirement Savings, 2002).

Congress is currently considering proposals to ensure Social Security's financial viability. One proposal is to allow the investment of the fund's assets in equities rather than Treasury bonds. Of key concern in this paper are proposals to allow individuals to manage a portion of their contributions. This is exactly what happens with 401(k) retirement programs where individuals manage their own money including corporate matches.

The eligibility age for unreduced Social Security benefits has increased from 65 to 67, a fact few people realize. Workers who will be dependent on Social Security payments for retirement income may choose to work longer to increase Social Security Benefits. Also, forecasts of unprecedented labor shortages, which Secretary of Labor Elaine L. Chao describes as an "incredible shrinking workforce," could also encourage people to retire later (The 2002 National Summit on Retirement Savings, 2002).

**Life Expectancy**

While many current retirees have a choice between whether to work or not, future retirees may have no choice but to continue working. With people living longer and desiring earlier retirement, earnings on personal assets including 401(k)s become an even more significant source of retirement income. Thus, the importance of early retirement investment (i.e. retirement investment starting at age 18 or earlier) represents a major portion of total retirement investment. One way early retirement investment is facilitated is through employer sponsored 401(k) programs with no age restrictions.

## SURVEY FOCUS AND ADMINISTRATION

The questions posed in this survey were designed to determine when an employee is eligible for enrollment in a company's 401(k) program. The sample of companies surveyed was drawn from the S&P 500 companies included as of January 2002. The S&P 500 classifies each of the 500 companies into one of 11 defined categories. A stratified sample of 100 respondents was surveyed. A telephone survey was conducted during the month of February 2002. For each organization, the benefits director or benefits officer was interviewed. The following tables summarize the results of the 100 responding companies.

## SURVEY RESULTS

Relevant survey results are summarized below.

**Table 1: 401(k) Retirement Plans**

| CHARACTERISTIC | NUMBER | PERCENT OF TOTAL RESPONDENTS |
|---|---|---|
| Companies offering 401(k) retirement plans | 100 | 100% |
| Companies not offering 401(k) retirement plans | 0 | 0% |
| Total respondents | 100 | 100% |

Thus, all of the 100 companies surveyed offer 401(k) plans.

| Table 2: Employee 401(k) Contribution Matching Programs | | |
|---|---|---|
| CHARACTERISTIC | NUMBER | PERCENT OF TOTAL RESPONDENTS |
| Companies offering 401(k) employee contribution matching programs | 93 | 93% |
| Companies not offering 401(k) employee contribution matching programs | 7 | 7% |
| Total respondents | 100 | 100% |

The vast majority, 93 percent of respondents, match eligible employee contributions. However, this does not mean that all employees are eligible.

| Table 3: Employment Status Contingency of 401(k) Retirement Plans | | |
|---|---|---|
| CHARACTERISTIC | NUMBER | PERCENT OF RESPONDENTS |
| Companies offering 401(k) retirement plans to both full-and part-time employees | 88 | 88% |
| Companies offering 401(k) retirement plans strictly to full-time employees | 12 | 12% |
| Total respondents which offer 401(k) retirement plans | 100 | 100% |

Eighty-eight percent of respondents offer 401(k) enrollment eligible full- and part-time employees, while 12 percent limited enrollment to full-time employees.

| Table 4: Age Contingency of Retirement Plans | | |
|---|---|---|
| CHARACTERISTIC | NUMBER | PERCENT OF RESPONDENTS |
| Companies offering 401(k) retirement plans to employees younger than 21 | 52 | 52% |
| Companies not offering 401(k) retirement plans to employees younger than 21 | 48 | 48% |
| Total respondents which offer 401(k) retirement plans | 100 | 100% |

Fifty-two percent of respondents did not have an age requirement listed in their 401(k) employee benefit plan, meaning that these companies do not view age as a determinant of an employee's eligibility for 401(k) enrollment. Many of these companies applied a standard employment probationary period for participation in the program. Forty-eight percent limited enrollment to those employees 21 years of age and older. Probationary periods may have been applied during the years prior to attaining the age of 21.

## DISCUSSION AND OBSERVATIONS

The data shows that 52 percent of responding employers provide retirement benefits to all employees, regardless of age, though Federal Law does not require them to offer such plans. In contrast to these optional retirement benefits, these same employees pay, and their employers match, Social Security taxes. Social Security taxes, which companies match, are required for all employees beginning with the first dollar earned regardless of age. Employees earn Social Security credits (by paying Social Security taxes) whenever they work in a job covered by Social Security. In 1997, employees received one Social Security credit for each $670 of earnings, up to the maximum of four credits per year. In subsequent years, the amount of earnings needed for a credit is indexed to average earnings levels.

A comfortable retirement requires an estimated income of approximately 70% of what an employee earned while working. However, low wage earners receive approximately 60%, average wage earners about 42%, and high wage earners about 26% of pre-retirement income through projected Social Security benefits. Social Security plays a role in retirement planning, but the employee who wishes a comfortable retirement needs to plan to supplement Social Security retirement payments. Social Security was not originally intended to provide full financial support for retirement; it was intended to supplement the employee's pension, savings, and investments, particularly for the individual who far exceeded the life expectancy estimates.

The data also indicate that for 48 percent of the surveyed organizations which offered 401(k) plans, access to the employer sponsored retirement programs is only available to those employees which current IRS code mandated. However, 52 percent of employers voluntarily extend non-mandated retirement benefits to employees under the code-specified age of 21. Employers taking the equivalent of the "ethical or moral high ground" with respect to their employees could optimistically explain this behavior. Alternatively, it might be argued that companies expect a change in regulations and that private initiative has merely preceded governmental intervention and/or regulation. Another rationale might be that a competitive work environment has provided employers with an incentive to make such benefits available in order to compete for the best talent and to reduce turnover in the labor market. Finally, it might be argued that the expense incurred to differentiate between employees and to modify benefits as under-age employees mature may exceed

the savings to organizations of withholding this benefit from the small proportion of their labor force, who typically have the lowest pay levels and whose benefits would thus cost the least.

## SUGGESTION FOR REFORM

Age requirements for participation in 401(k) programs should be eliminated. This would then be consistent with current Social Security taxation. At the least, probationary periods, where they exist, relating to employer 401(k) matching, should be consistent for all eligible employees. Any limitations on program participation should be consistent and without respect to age.

## CONCLUSION

Where powerful demographic, federal and state fiscal policy, economic and social forces are placing increasingly severe financial and solvency strains on the social security system, employee access to company sponsored retirement plans, regardless of age, is essential. The financial realities of money compounding over long periods of time make it essential that all employees have access to retirement plans and be encouraged to participate and plan for retirement, beginning with their first job. As the United States faces an aging population, fewer workers to support retirees, governmental budget deficits and increasing political pressure for social security reform and/or privatization, there should be a corresponding shift to more individual responsibility and involvement in retirement planning and saving.

## REFERENCES

A Brief History of Social Security. Social Security Administration SSA Publication No. 21-059 August 2000 ICN 440000. http://www.ssa.gov (6 March 2002).

Carrell, M.R., N.F. Elbert & R.D. Hatfield (1995). *Human Resource Management - Global Strategies for Managing a Diverse Work Force.* (5th Edition), Englewood Cliffs, NJ: Prentice Hall.

Cascio, W.F. (1995). *Managing Human Resources.* New York: McGraw-Hill Inc.

Internal Revenue Code of 1986, Section 410(a).

Lewin, D. & D.J.B. Mitchell (1995). *Human Resource Management - An Economic Approach.* Cincinnati, OH: South-Western College Publishing.

Mattson, K., D. Woodbury & J. Shapiro (2000). Accessing 401(k) and 403(b) Retirement Accounts: Legal Age Discrimination, *Academy of Accounting and Financial Studies Journal, 4*, 72-81.

Schuler, R.S. (1998). *Managing Human Resources.* (6th Edition), Cincinnati, OH: South-Western College Publishing.

Stiglitz, J. (1974) Risk sharing and incentives in sharecropping, *Review of Financial Studies, 61,* 219-256.

The 2002 National Summit on Retirement Savings. Delegate Resources. http://www.saversummit.dol.gov (6 March 2002).

**APPENDIX 1**

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. Do you offer a 401(k) plan? YES / NO | | | | | | |
| 2. Does your plan offer an employer match? YES / NO | | | | | | |
| a. If YES, what are the terms of the match? | | | | | | |
| 3. What are the eligibility requirements? | | | | | | |
| a. Are both full-time and part-time employees eligible? YES / NO | | | | | | |
| If NO, how many hours a week to be eligible? | | | | | | |
| | 0-9 | 10-19 | 20-29 | 30-39 | 40 | Other _____ |
| b. How long must you be employed to be eligible to participate in the 401(k)? | | | | | | |
| | Hire date | 3 months | 6 months | 1 year | Other _____ | |
| c. Is there an age requirement? YES / NO | | | | | | |
| | 16 | 18 | 21 | Other _____ | | |

# INTERNET DENIAL OF SERVICE ATTACKS: LEGAL, TECHNICAL AND REGULATORY ISSUES

**Jerry Wegman, University of Idaho**
**Alexander D. Korzyk, University of Idaho**

## ABSTRACT

*Internet virus and worm attacks plagued the Internet during the summer of 2003. Millions of computers were affected, and Internet traffic was slowed worldwide. Businesses suffered lost revenue while computer users experienced crashes, cluttered email inboxes, or impaired performance. This was only the latest episode in a continuing problem.*

*Many of these attacks, including the destructive attacks of August 2003, involve denial of service (DOS). A DOS attack occurs when an attacker sends malicious communications over the Internet, crashing computers or interfering with websites. The computer user or website is thus denied service and access to the Internet. This paper will explain how DOS attacks are perpetrated. It will explain why technical "black box" solutions like firewalls and anti-virus software have failed to provide effective protection. The paper will examine current remedies in civil and criminal law. It will explain why law has failed as an effective deterrent in this area.*

*Government regulation, which has so far been rejected as a solution to the DOS problem, will nevertheless be considered and regulatory objectives will be identified. Finally, the paper will describe best practices that firms and individuals can employ now to limit their exposure to DOS attacks or to mitigate their impact.*

## INTRODUCTION

In February 2000 a series of high-profile DOS attacks occurred that knocked leading e-commerce sites like Ebay, CNN and Yahoo off the Internet. Financial loss has been estimated at $1.1 to 1.7 billion (Katyal 2001). The culprit turned out to be a Canadian teenager who used the name "mafiaboy". In the ensuing three and a half years DOS attacks have gained in sophistication and continue to menace the Internet community. For example, in July 2002 the Recording Industry Association of America (RIAA) website was downed for four days by a DOS attack after it endorsed tighter copyright legislation (McCullagh, 2002). The more recent SQL Slammer worm is estimated to have disrupted half of all Internet traffic in January 2003, while the Sobig virus that emerged in late August 2003 affected one in 17 emails worldwide (Economist, 2003). eWeek magazine

estimates that as of the end of August, 2003, 63,000 viruses have plagued the Internet, causing a total of $65 billion in damage (Mendoza, 2003).

The events of 9/11 have caused an increased concern for the security of our nation's information infrastructure. DOS attacks have the potential of doing more than taking websites like eBay temporarily off the Internet. They can shut down power grids, hospitals, airports and other vital services (Guth and Machalaba, D., 2003). The objective of this paper is to provide a deeper understanding of how these attacks are perpetrated and what social mechanisms might be employed to deter them. Law and regulation are two of our most effective social mechanisms for modifying behavior. However, they have so far failed to effectively deter these attacks. This paper will explain why. It will examine the legal sanctions facing those who perpetrate or facilitate DOS attacks. Government regulation, which has so far not been applied in this area, will be considered and regulatory objectives will be proposed. Finally, the paper will describe best practices that can now be followed to reduce the chances of being an attack victim or to minimize the harm following an attack.

## UNDERSTANDING DENIAL OF SERVICE ATTACKS

A DOS attack can be said to occur whenever a person maliciously causes an interruption in another's service over the Internet. There are many sub-types, but they fall into two broad categories: distributed denial of service and hacked denial of service. A distributed DOS attack floods a target with a great number of packets - small segments of information sent over the Internet. The target's server attempt to respond and establish the connections, but the volume of requests is too great and the server crashes. A hacked DOS occurs when a perpetrator gains unauthorized entry to another individual's computer and introduces malicious code. The hacker takes advantage of a security flaw, often in the computer's operating system.

Distributed denial of service attacks are the greater danger, because they are more difficult to defend against, and because they are easier to perpetrate. One common distributed denial of service attack is called a SYN flood attack because the SYN packet is part of the initial effort of the sending computer to establish a synchronous connection with the destination computer (Narayanaswamy, 2002). Typically these packets are sent via "zombies", which are innocent computers that the perpetrator has previously taken over. Thus a hacked DOS can be combined with a distributed DOS. An example is the recent Sobig virus, which in addition to clogging email systems took over 20 home computers in the United States, Canada and South Korea. The New York Times on August 27, 2003 reported that these zombies were programmed to send malicious instructions to millions of computers on August 29, 2003. Fortunately a computer security firm in Finland alerted the FBI, which frustrated that attack (Flynn, 2003).

It is difficult for law enforcement to track down a DOS perpetrator because the architecture of the Internet does not require accurate return addresses. The sender can easily misrepresent

himself/herself by changing that information in the packets he or she sends. Internet routers and servers look only at the "sent to" address, not the "sent from" address. Changing one's sending address is called "spoofing" and is unfortunately quite common (Nemerofsky, 2000). Spoofing is also used by "spammers" - malfactors who send volumes of unsolicited commercial email that clogs our email inboxes.

Another difficulty in deterring distributed denial of service attacks is that they do not currently require great computer expertise. As noted above, the high-profile attacks of February 2000 were perpetrated by a teenager, only 14 years old. The New York Times on August 30, 2003 reported the arrest of an 18 year old High School student in connection with the recent Blaster worm (Fields and Guth, 2003). These malicious and destructive children are sometimes called "script kiddies" (Henderson, 2002). Unsophisticated hackers can download off-the-shelf attack software from the Internet; the Constitution's protection of free speech prevents the government from censoring such material.

Finally, and most importantly, a distributed denial of service attack is difficult or impossible to defend against. As Ian Hoenish, founder and CTO of ElephantX stated: "denial of service is the scariest thing I'm afraid of at this point, because it's the most difficult to shield against" (Saita, 2001). This is because once an attack is launched the target's only defense is to filter the malicious packets. Identifying these packets takes time. But even after they are identified, the sheer number of these packets takes up almost all of the target's bandwidth, effectively shutting the target down. The only hope a target can have is to stop the flow of these packets at a point upstream from the target, but that requires cooperation from those transmitting these packets. Internet service providers (ISPs) are ideally positioned to cut off this flow. However, ISPs are reluctant to terminate service to their customers (Narayanaswamy 2002). This issue is discussed more fully below.

The second type of denial of service attack, a hacked DOS, does not flood the target with malicious computer code. Rather, it occurs when a perpetrator gains unauthorized entry to another individual's computer and introduces malicious code. These hackers are often more sophisticated. They may use advanced hacking programs to probe target computers for vulnerabilities. Sometimes these vulnerabilities are inherent in the users' software. But often they are the result of sloppy computer hygiene, such as failing to employ security patches and updates, leaving passwords blank or selecting obvious ones. Hacked DOS attacks are typically much smaller than DDOS attacks, but they are still destructive and costly. A more technical explanation of both distributed and hacked denial of service attacks is contained in Appendix A.

As we have seen, denial of service attacks are easy to perpetrate, hard to trace, and almost impossible to defend against. The IT industry has not come up with a "black box" solution to this problem. What is needed is a change in behavior within the Internet community. ISPs and large networks need to devote more time and resources to security, and computer users need to maintain better computer hygiene. But how are we to achieve this change?

There are two agencies within our society that seek to modify behavior: law and regulation. Civil law modifies conduct by making undesirable behavior the subject of financial liability, while criminal law deters undesirable behavior with the threat of incarceration. Regulation can be voluntary, that is self-regulation, or it can be government imposed, with legal sanctions to obtain compliance. We will now examine how effective law and regulation have been in deterring DOS attacks.

## LAW AS A DETERRENT TO DOS ATTACKS

### Civil Law

The area of civil law that could potentially deter DOS attacks is known as torts. Torts are defined as "wrongful conduct by one person that causes injury to anther" (Clarkson, 2003). Examples are trespass and battery. There are two torts that hold potential for deterring DOS attacks: interference with contractual relations, and negligence.

The tort of interfering with contractual relations requires proof of two elements: first, that a legally enforceable contract existed between two parties, and second, that a third party unjustifiably interfered with the execution of that contract (Cheeseman 2003). Perhaps the most famous case involving this tort is Pennzoil Co. v. Texaco, Inc., 481 U.S. 1 (1987). In that case, Texaco was held liable for inducing Getty Oil Co. to breach its contract agreeing to merge with Pennzoil. A jury awarded Pennzoil the largest damage award to that date - $11 Billion. The perpetrators of a DOS attack are interfering with contracts between websites and their customers and between customers and their Internet Service Providers.

However, there is a problem with using the tort of interference with contractual relations as a deterrent to DOS attacks. This tort is committed by the perpetrators of attacks. While it is true that these individuals are the primary malefactors, it is also true that they seldom have the financial resources to even begin to compensate their victims for millions of dollars of losses.
As noted earlier, many of them are children, "script kiddies". They typically have few assets. Their parents may have greater assets, but parents generally do not have liability for the torts of their children (Mann, R.A 2003). Parents do have liability for negligent supervision of their children. But the plaintiff in such a case will have a substantial burden of proof to establish, and the problem of collecting an adequate judgment remains.

A more promising approach might be to try to use the tort of common law negligence to deter DOS attacks. Negligence could be a more effective legal theory because large corporations with "deep pocket" financial resources could face potential liability. They could be expected to modify their behavior in order to minimize or avoid this liability. Let us examine the tort of common law negligence more closely.

Negligence essentially consists of failing to exercise a reasonable level of care, thereby causing injury to another. It is typically described as requiring four elements of proof: (a) first it must be shown that the defendant had a duty to exercise a certain "reasonable" level of care in its actions, (b) second that there was a violation of that duty, (c) third that the plaintiff was damaged, and (d) fourth that the defendant's violation directly and "proximately" caused the plaintiff's damage. (Henderson, 2002). Negligence is a powerful legal theory of liability because all members of society are liable if they negligently harm another. That includes ISPs like MSN and web-hosting companies (Scalet, 2001).

ISPs and web hosting companies might be held liable when they transmit malicious code that infects users' computers. As we have seen, these corporations have a duty to exercise reasonable care in their conduct. Reasonable care might include taking reasonable security measures to detect and stop a DOS attack. ISPs in particular are well placed to detect attacks; in a sense they are the portals of such attacks. Once an ISP detects an attack it can terminate service from its customers sending out the malicious code.

However, a serious problem confronts the plaintiff intending to use the legal theory of common law negligence: As Henderson and Yarbrough point out (Henderson & Yarbrough, 2002) there is no generally accepted "reasonable" standard of care regarding Internet security. As noted above, the first element of proof in any negligence case is establishing the existence and scope of a duty of care (Cheeseman, 2003). In any negligence case against an ISP for failure to act more vigorously against a DOS attack we are likely to see a battle of the experts, as each party's expert witnesses contradict each other over the scope of the duty of care owed. Defendant corporations will argue for a lower standard, one that they have met, while plaintiffs will argue for a higher standard that was not met. Eventually our courts will establish what reasonable care consists of in this area.

While the legal system strives to develop a standard of care in computer and Internet negligence cases, some extra-legal efforts are underway to establish a standard. One such effort is by the International Standards Organization (ISO). The ISO in the year 2000 issues ISO 17799, its "Code of Practice for Information Security Management". ISO 17799 addresses the topic in terms of policies and general good practices. If ISO 17799 is to become a useful tool in negligence litigation, it must first be incorporated into precedents which will show how it will be applied (Sagalow, 2003). A second effort to establish a standard is underway in the insurance industry. Conventional policies do not cover e-commerce risks. New policies that do cover these risks may in the future demand of policyholders that they comply with minimum security standards, prescribed by the insurer, before the policy is issued (Jerry II., 2001/2002). These minimum security standards could establish a legal standard of care owed by ISPs and others.

While ISPs and large networks face potential legal liability for failing to adopt more effective security measures, such litigation has yet to emerge. As a result these large corporations, ever conscious of the bottom line, have been reluctant to spend the money for monitoring and filtering software that produces no visible return on investment and degrades system performance. They are

also concerned, and reasonably so, that customer satisfaction will suffer if customers are summarily cut off from service because of sending malicious code. This can happen to an "innocent" customer whose computer has been taken over and turned into a "zombie" by an attacker. And if that customer is, for example, a hospital, then termination of its Internet service may harm innocent patients. However, this may be changing. The Washington Post reported that ISPs are beginning to take this problem more seriously, stating "comprehensive scanning could cost ISPs millions of dollars, but after repeated e-mail attacks capped by the latest version of the "Sobig" virus, customers are beginning to expect it" (Duhigg, 2003).

Nevertheless we must conclude that at the present time tort law has been ineffective in curbing denial of service attacks. Let us therefore turn our attention to the more robust legal sanction of criminal liability.

**Criminal Law**

U.S. Criminal law has had a hard time dealing with DOS attacks. This is because no physical "damage" has occured. There is no "taking" of property, which is the basis for larceny and no physical destruction, which is the basis for malicious mischief (Sinrod, 2000). The leading federal criminal statute applicable to DOS is Section 1030 of the U.S. Criminal Code, 18 USC 1030, also called the Computer Fraud and Abuse Act (CFAA). Under this statute "damage" is defined as any "impairment to the integrity or availability of data, a program, a system, or information that causes loss aggregating at least $5,000 in value during any one year period". The maximum sentence is 5 years. However, prosecutions have been few and the sentences imposed have been light. This is in part because the perpetrator often has no previous criminal record and is not a violent offender (Jacobson & Green, 2002). Script kiddies are treated as youthful offenders and are seldom removed from their parents. Consequently, the current criminal laws are not an effective deterrent to DOS. In the UK a peer proposed making DOS attacks a specific criminal offense (Goodwin, 2002). Even if such a statute were to be enacted in the United States, problems of first offender and youthful offender would inhibit stern punishment, unless mandatory minimum sentences and adult treatment for minors were incorporated into those laws.

The foregoing analysis has shown why the current state of U.S. civil and criminal law has not been effective in curbing denial of service attacks. As eWeek magazine pointed out on August 30, 2003 "Although nearly 63,000 viruses have rolled through the Internet, causing an estimated $65 billion in damages, criminal prosecutions have been few, penalties light and just a handful of people have gone to prison for spreading the destructive bugs" (Mendoza, 2003). When the private sector and conventional legal approaches fail to deal effectively with an important problem, public policy in the form of regulation can be considered. For example, when the tort system failed to provide meaningful relief to injured workers, states developed workers' compensation programs.

**Regulation**

As Fritschler and Ross point out (Fritschler and Ross, 1980) businesses do not like to be regulated. Regulation restricts their freedom and adds cost. Nevertheless business recognizes that some regulation is essential, for example regulation protecting intellectual property. However, other forms of regulation that interfere with the internal workings of the firm, such as worker safety or employment discrimination are generally not welcomed by business. Regulation that would make the Internet more resistant to attacks would fall between these two general categories. It would improve the general climate for Internet business but it would interfere with the internal workings of firms in that it would require some to purchase and use more security resources.

Any government regulation requires at least two things: first, a legal basis, and second, a rationale (Warren, 1982). Since the Internet is a national, indeed international medium, U.S. regulation would have to take place at the federal level. U. S. federal regulation of business is based in law on the Commerce Clause of the Constitution, Article I, Section 8. The Commerce Clause gives the federal government power to "regulate commerce with foreign nations, and among the several States…" The great amount of interstate e-commerce now taking place would provide ample legal justification for federal regulation.

The rationale for regulation is more ambiguous. Regulation often adds cost, increases bureaucracy and may inhibit innovation. When is such regulation justified? The answer must lie in those situations where the free market and legal system have failed to achieve an important goal. This can occur in at least two situations: (a) when responsible behavior is penalized, and (b) when only an industry wide, community approach can be effective. Does regulation of the Internet, requiring greater security measures, satisfy either of these two requirements?

First, let us consider the issue of penalizing of responsible behavior. The responsible behavior desired here is greater effort in Internet security. But implementing effective Internet security is costly and incurs other negatives such as slowing system performance. If two ISPs are in competition, and only one adopts responsible but costly behavior, it will be at a competitive disadvantage. It might even be driven out of business. This phenomenon as been observed in many other areas, for example environmental regulation. Manufacturing plants that discharged their pollutants directly into the air or water could produce at lower cost than their environmentally responsible competitors. The higher cost, responsible manufacturer was penalized. In order to level this competitive playing field, industry wide environmental regulations were adopted.

If two ISPs are in competition, but only one adopts behavior that would deter some Internet attacks, such as investing in filtering software and providing frequently updated anti-virus protection, its costs will be greater than its competitor's. In addition, because increasing security slows system performance, customer satisfaction might suffer compared with the competitor. The responsible ISP is thus penalized for its responsible behavior. The only way to level this playing

field is to require both firms to adopt at least a minimum level of security. Federal regulation would provide this leveling.

The second situation in which regulation might be appropriate is where only an industry wide, community approach can be effective. One familiar example involves the problem of the spread of noxious weeds. A responsible landowner can take reasonable measures to control weeds on his or her property. But if neighbors fail to adopt reasonable measures of weed control, weeds will proliferate in the community. I will be extremely difficult, if not impossible, for the responsible landowner to prevent weeds from invading his or her property. Consequently almost all property is subject to weed control regulation.

Internet Security has been described as a community problem. As the influential Computer Emergency Response Team (CERT, 2000) Advisory CA-2000-01 states "security on the Internet is a community effort. Your security depends on the overall security of the Internet in general". A target is unable to effectively defend itself by employing a firewall or other technical defense. There is no "black box" solution. This is more fully explained in Appendix A. A firewall defense can at best filter out the malicious packets, letting the good packets through. But this leaves the target with much reduced bandwidth, as the blocked packet stream takes up most of the target's bandwidth. The target is thus effectively shut down. The only way to stop a distributed DOS attack is to halt the upstream flow of malicious packets, coming, as it were, from the Internet community. This requires cooperation from the community, especially ISPs, large web-hosting companies and the large networks of big firms and institutions.

While a colorable argument can be made for federal regulation to increase Internet security, firms that would be regulated have resisted it. ISPs and large networks have lobbied against such regulation. They argue that government regulation will stifle innovation, slow communications, and add unnecessary expense. Thus, when the first draft of the National Strategy to Secure Cyberspace was first released in September, 2002 by the President's Critical Infrastructure Protection Board (CIPB, 2002) it recommended federal legislation to make the Internet more secure. But as the New York Times reported on February 15, 2003, "previous drafts of the report suggested that Congress could enact legislation to advance its cybersecurity strategy. This final version, which was released today, suggests … giving only a limited role to the federal government".

To date, the federal government has relied largely on self-regulation by industry to protect cyberspace from attacks such as denial of service. But self regulation failed dramatically to prevent the recent spate of worms and viruses in August, 2003. As the New York Times reported on September 7, 2003 "at the epidemic's peak in mid-August, according to the antivirus company Central Command, Sobig.F-related messages accounted for 73 percent of e-mail traffic worldwide, making it history's most aggressive online contagion" (Koerner, 2003).

What would federal regulation in this area look like? Congress would enact enabling legislation and would designate an appropriate agency to implement it (Dunfee & Gibson 1984). The legislation would employ general goal setting language such as "enhancing the security of

Internet communications and assuring greater resistance to Internet attacks". The agency would then employ experts, draft specific regulations, and issue them in compliance with the federal Administrative Procedures Act. These regulations might attempt to achieve such goals as:

- Having all ISPs and large networks employ anti-virus protection that is frequently updated.
- Assuring that all software used on the Internet passes a test of minimum security standards.
- Requiring that all computers sold in the USA come pre-loaded with firewall protection.
- Requiring ISPs to keep records for a minimum amount of time so that attacks can be back-traced.
- Requiring ISPs and large networks to promptly terminate service to users who send malicious code, and giving firms legal immunity from liability for such action.
- Requiring ISPs to verify email senders' "sent from" addresses.
- Making parents of "script kiddies" financially responsible for their children's DOS damage.

As we have seen, neither law nor self regulation has so far been able to effectively deter Internet DOS attacks. A colorable argument can be made for federal regulation, but industry resistance has forestalled it. This leaves firms and private PC users to fend for themselves. By adopting best practices, they can not fully immunize themselves, but they can reduce the risk of attack damage substantially. Let us therefore turn to what can currently be done by users to ameliorate this problem.

## BEST PRACTICES: WHAT YOU CAN DO NOW

As we have seen, current law and self-regulation have not been effective deterrents to denial of service attacks. This leaves the individual or firm to "fend for itself" by adopting best practices that will reduce the risk of attack and limit the harm caused if an attack is made. Let us first examine best practices for reducing the risk of attack.

## REDUCING THE RISK OF AN ATTACK

### Install a Firewall

Firewalls work by blocking attempts by individual hackers to intrude into your computer. They can therefore be effective against hacked denial of service attacks but they do not help against a distributed denial of service attack. A hacker can enter your computer by exploiting a vulnerability in the computer's operating system or its applications. There are two basic kinds of firewalls: software and hardware. Software firewalls are cheaper and more common. Some are even free and can be downloaded from the Internet. Examples are ZoneAlarm for free,

http://www.zonelabs.com, and Norton Personal Firewall for under forty dollars, http://www.symantec.com. Websites are available which compare firewalls, for example http://firewall.com and http://www.firewall-net.com. PC users should also check their operating systems for built-in firewalls. Microsoft, for example, includes a built-in firewall in its XP operating system. However this requires activation and setting by the user.

Less common is the hardware firewall. This is an external device that is connected to the Internet and which in turn connects to the computer. It is more expensive but offers additional protection. If the hardware firewall is disabled, the protected computer can perform its non-Internet functions normally. Also, the external firewall can utilize a different and less common operating system compared with the computer. This makes it less vulnerable to attack, as hackers typically attempt to exploit vulnerabilities in common operating systems. Finally, a software firewall can be used in addition to or in combination with the hardware firewall for back-up protection.

Hackers are continuously discovering new vulnerabilities, so firewalls need to be frequently updated. The firewall will slow the computer's operation slightly. Firewalls typically are not effective against the worms and viruses that are used in a distributed denial of service attack. This is because viruses and worms are generally attached to email, and the user normally lets email through the firewall.

**Use Anti-virus Software**

A computer virus requires action by the user in order to spread. This action typically involves opening an email or an email attachment. Worms, on the other hand, can enter with emails but then spread automatically by themselves, without any action by the user. Worms are best deterred by diligently using software patches, as described below. Viruses can best be deterred by using up-to-date anti-virus software. Widely used products include Sophos, http://www.sophos.com, Symantec, http://www.symantec.com/avcenter and McAfee Security, http://www.mcafee.com/antivirus. Anti-virus software is programmed to recognize the 'signature' of known viruses. Because attackers are constantly developing new viruses with new signatures, it is essential to update the anti-virus software frequently. However, there is a danger in updating anti-virus software: hackers have been known to set up websites that imitate update sites, in order to obtain confidential information from users. The computer user must be certain that he or she is at the provider's site when attempting to update anti-virus software.

**Apply Patches Promptly**

As noted above, the most effective deterrent to worm attacks is the prompt application of a software patch. Worms spread by themselves by exploiting vulnerabilities in system software. As soon as a software firm discovers a new vulnerability, it develops a corrective program for it, called

a patch. Prompt application of the patch will protect against that worm. However, even when patches have been available for some time, worm attacks have been relatively successful because users did not diligently apply the patch. The recent Blaster worm is an example. Even some computers at Microsoft, which had issued the patch, were affected, as some users there had failed to apply the patch (Guth, 2003). Worms and viruses that are spread by email can be deterred somewhat by using an uncommon email program, such as Pagasus, rather than the more common Microsoft Outlook.

**Shut Down the Computer When Not In Use**

Whenever the user's computer is not being used for an extensive period it should be shutdown as opposed to letting it run in Power-Saver mode. Although the computer appears to be shut down in Power-Saver mode, a hacker could gain access to it.

**Do Not Open Unfamiliar Email**

As noted above, most viruses are spread by email, and require the user to open the message or its attachment. Email with unfamiliar sender addresses or names should be deleted. The most vulnerable part of the email is the attachment. The user should never open an attachment to an unrecognized email address.

**Consider Raising Security Settings**

Most Internet browsers, firewalls, and intrusion detection systems have security settings. If the user finds that his or her computer is under frequent attack, a higher security setting may provide better protection. The downside of increasing security settings is that they may keep out wanted communications.

**Store Sensitive Data Off-Line**

Sensitive data like credit card information and customer lists should not be stored on the computer's hard drive, where a hacker could access it. Instead, it should be stored off-line, on optical disks or perhaps an external hard drive that is not ordinarily connected to the Internet. In addition, firms should consider using encryption to further protect sensitive data (Kaplan, 2003).

## LIMITING THE DAMAGE AFTER AN ATTACK

If prevention efforts have failed and an attack has been made on your computer or system, there are still best practices that can be undertaken to limit the resulting damage.

### Data back-up

Important data should be regularly backed up. Optical discs or an external hard drive are convenient mechanisms for this. Once the data is backed up, thought must be given to the physical location where the back up data will be stored. It is desirable to store the back up data a reasonable distance from the original data. Several firms located in New York's Twin Towers had their back up data stored in the other tower. When the attack of 9/11 occurred, that back up data was lost.

### Promptly Remove an Infected Computer From a Network

Most firms, organizations, and even some large families use a network of computers. One computer may become infected before the others. A prompt removal of that computer from the network may save the others from infection. It is useful to have an extra computer available and ready to take the place of an infected machine.

### Use a Data Recovery Consultant

A relatively new service niche called a Data Recovery Consultant or Data Salvage Consultant has arisen. These consultants can often recover lost or damaged data files. If the firm's data back up has proven ineffective, these consultants may be able to salvage valuable data.

### Contact Law Enforcement Promptly

Promptly contacting law enforcement may be required for insurance purposes. It is also important so that law enforcement can secure evidence that may be used in a criminal prosecution of the hacker who perpetrated the attack.

## CONCLUSION

Denial of service attacks will continue to be a serious and costly problem. The architecture of the Internet does not require verifiable "sent from" addresses, making apprehension and prosecution of attackers difficult. Our institutions of civil and criminal law have proven ineffective; civil law is hampered because large judgments are uncollectible from minors and most adults, while

corporations that could pay large judgments have benefited from the absence of accepted standards of care in Internet security. Criminal prosecutions have been few and punishments light, as offenders are often minors or first offenders. Internet service providers, who are well positioned to cut off a flow of malicious communications through their systems, currently do not have much incentive for doing so. Filtering software would cut off many attacks but it would also be expensive, slow systems and antagonize ISP customers.

So far industry has prevailed on government to abstain from regulating in this area. However, the community nature of the Internet, and the need to "level the playing field" between responsible and irresponsible Internet actors may eventually bring about government regulation. Such regulation would require industry to meet minimum standards of security, such as requiring ISPs to use filtering software and to provide their customers with anti-virus protection.

## REFERENCES


CERT (2000) Coordination Center & Federal Computer Incident Response Capability (FedCIRC), Denial-of-Service Developments. Advisory CA-2000-01. Retrieved August 17, 2002 from http://www.cert.org/advisories/CA-2000-01.html.

Cheeseman, H.R. (2003). *Contemporary Business & E-Commerce Law*, (Fourth Edition). Upper Saddle River, NJ: Prentice Hall.

Chieuh, T. & Hsu, F. (2003, August 9) RAD: A Compile-time Solution to Buffer Overflow Attacks from http://citeseer.nj.nec.com/cache/papers/cs/18040.

Clarkson, K. Miller, R. Jentz, G. & Cross F. (2004). *West's Business Law*. Mason, Ohio: Southwest Publishing.

CIPB (2002). *President's Critical Infrastructure Protection Board Report.* Washington, D.C.: U.S. Government Printing Office.

Cohen, D., Narayanaswamy, K. & Cohen, F. (2003, June, 23). Changing IP to Eliminate Source Forgery. from http://www.cs3-inc.com/sf.html.

Dunfee, T. & Gibson, F. (1984). *Legal Aspects of Government Regulation of Business.* New York: John Wiley & Sons.

Duhigg, C. (2003, August 22). Record Computer Infections Slow U.S., Private Work. *Washington Post*.

*Economist* (2003, August 21). Target: Microsoft. Economist.

Fields, G. & Guth, R. (2003, September 2). Teen Had No Direct 'Blaster' Role. *Wall Street Journal*.

Flynn, L. (2003, August 27). Sleuths Try to Stay Step Ahead of Online Worms. *New York Times.*

Fritschler, A. and Ross, B. (1980). *Business Regulation and Government Decision-Making.* Cambridge, MA: Winthrop Publishers, Inc.

Goodwin, B. (2002, May 16). Peer Backs to Outlaw Denial of Service Attacks, *Computer Weekly,* 3.

Guth, R. (2003, August 26). Welter of Viruses Is a Wake-Up Call for Software Industry. *Wall Street Journal*.

Guth, R. & Fields, G. (2003, August 25). FBI Averts Fresh Computer Attack. *Wall Street Journal.*

Guth, R. & Machalaba, D. (2003, August 21). Computer Viruses Disrupt Railroad and Air Traffic. *Wall Street Journal.*

Harris, S. (2002). *CISSP All-in-One Guide.* New York: McGraw-Hill.

Henderson, S.E. & M.E. Yarborough (2002). Frontiers of Law: The Internet and Cyberspace: Suing the Insecure? A Duty of Care in Cyberspace. *New Mexico Law Review*, 32.

Jacobson, H. & Green, R. (2002). Computer Crimes. *American Criminal Law Review, 39,* 273-310.

Jerry II, R.H. & M. Mekel (2001/2002). Cybercoverage for Cyber-Risks: An Overview of Insurers' Responses to the Perils of E-Commerce. *Connecticut Insurance Law Journal*, 8.

Kaplan, S. (2003, May). When Bad /things Happen to Good Companies. *CSO Magazine.*

Katyal, N.K. (2001). Criminal Law In Cyberspace. *University of Pennsylvani Law Review,* 149.

Koerner, B. (2003, September 7). In Computer Security, a Bigger Reason to Squirm. *The New York Times*.

Mann, R.A. & B.S. Roberts (2003). *Smith and Roberson's Business Law,* (Twelfth Edition). Mason, Ohio: Thompson Learning.

McCullagh, D. (2002, July 30). RIAA Web Site Disabled by Attack. ZDNet News, Retrieved August 17, 2002, from http://zdnet.com.com/2100-1105-947101.html.

Mendoza, M. (2003, August 30). Net Virus Writers, Senders Rarely Jailed. *eWeek.*

Narayanaswamy, K. (2002, May/June). ISPs and Denial of Service Attacks, *Information Systems Security*, 38-46.

Nemrofsky, J. (2000). The Crime of "Interruption of Computer Services to Authorized Users" Have You Ever Heard of It? *Richmond Journal of Law & Technology*, 6.

Sagalow, T. (2003, January 27). Ask the Expert. *CIO Magazine.*

Saita, A. (2001, September). How ElephantX Faced an 800 Pound Gorilla, *Information Security,* 55-56.

Scalet, S.D. (2001, November 1). See You in Court, *CIO Magazine*, 62-70.

Sinrod, E.J. & W.P. Reilly (2000). Cyber-Crimes: A Practical Approach to the Application of Federal Computer Crime Laws. *Santa Clara Computer and High Technology Law Journal,* 16.

Warren, K. (1982). *Administrative Law In The American Political System.* St. Paul: West Publishing.

## APPENDIX A: DENIAL OF SERVICE ATTACK METHODOLOGY

The goal of a DOS attack is to prevent host computers or computer networks from communicating (Harris, 2002). These attacks can either be distributed, involving numerous attacking computers (zombies) controlled by a hacker, or they can be individual attacks in which the hacker penetrates a single target computer. The distributed attack is more serious, as millions of computers may be affected, and defenses against such an attack are poor. We will first examine distributed attacks, then individual hacked attacks. We will also describe the tools, viruses and worms that are often used in a distributed denial of service attack.

### Distributed DOS Attacks

A distributed DOS attack occurs when a hacker executes a command to multiple (zombie) computers to attack a target computer connected to the Internet. This type of attack consumes all available bandwidth for the target's computer connection, as it is bombarded incessantly by the zombies. It is sometimes called a SYN flood attack because the zombie's computer sends an initial connection message, called a SYN, in such a way that the connection is never completed. The victim's computer continues to send synchronization requests for the connection to the attacking computer (CERT, 2000). While the victim's computer waits for a response from the attacking computer, the victim's computer cannot connect with any other computers, effectively denying legitimate connections. So long as the SYN communications arrive, the target is powerless to protect itself. The only hope the target can have is to cut off the flow of SYN communications coming to it, but this requires cooperation from upstream senders such as Internet service providers. As explained elsewhere, these upstream Internet participants have little incentive to take vigorous action to prevent or stop these attacks.

### Computer Viruses

Computer viruses are often used by hackers to perpetrate a distributed DOS attack. A virus is a malicious computer software program that is attached to a non-malicious program. Email is probably the most common example. The salient feature of a virus is that it requires human activity, such as opening the email, in order to spread. The victim's computer then executes the malicious computer program. The severity of the disruption depends on the malicious program code's

instructions. Some computer viruses erase all stored computer programs on the computer's hard drive. Other computer viruses simply shut the computer off immediately and then shut it off every time the user tries to turn on the computer. For example, when an email user opens the Sobig.F virus, the virus copies the recipient's Outlook address book, and sends email with the attached virus to every email address from the recipient's address book. The amount of email traffic on a company's network may become so great that its network server is overwhelmed. CSX Corp. and Air Canada both had to temporarily halt train and airline service for several hours on August 20, 2003 due to the Sobig.F virus and excessive email (Guth and Machalaba, 2003).

As can be seen, containing a virus attack is difficult. A rare success story occurred in August, 2003, when the FBI discovered 20 zombie computers that had been programmed to attack, and took them off-line before the attack could be commenced (Guth and Fields, 2003).

**Computer Worms**

A second type of malicious software used by hackers is called a worm. A computer worm can be far more destructive than a computer virus because the computer worm does not require human action in order to spread to other computers. The worm looks for flaws in the computer system software such as its operating system. Each of these flaws is a potential vulnerability that a hacker could exploit. Once providers become aware of a vulnerability, they issue a corrective program, called a patch. Users who have downloaded the patch are then immune from that particular worm. Unfortunately for millions of computer users who had not loaded a patch from Microsoft by the end of July, 2003, the BLASTER worm propagated so quickly that if the victim's computer was turned on and connected to the Internet, it became infected (Guth and Machalaba, 2003).

**Individual, Hacked DOS Attacks**

A hacked DOS attack involves an individual hacker acting alone, without zombies. The hacker exploits an operating system or an application software flaw to gain control of the victim's computer. Once inside, the hacker can access confidential information or destroy programs. One technique used by hackers to gain entry is called buffer overflow. The hacker sends more data to a holding area in the software than the software can accept. This data packet contains the malicious code. The data packet overflows to other areas of the computer's memory carrying the malicious code with it (Chieuh, 2003). This attack requires surprisingly little skill to effect. Off the shelf hacker programs are available free of charge on the Internet. The First Amendment to the U.S. Constitution prevents censorship of such information.

**Spoofing**

A major difficulty in apprehending Internet attackers is that they can easily cover their tracks by hiding their identities on-line. The architecture of the Internet requires only accurate "send to" addresses. "Sent from" addresses need not be accurate. When hackers substitute another's return address for their own, it is called spoofing. It is also a common practice among spammers. The Internet has no central authority that requires ISPs to verify the source addresses of outgoing data packets. The effort to check the source address would require time and additional computing power, which would be costly and slow down the performance of an ISP (Cohen et al, 2003).

# THE FEDERAL GOVERNMENT AS A CHANGE AGENT

**Carl A. Kogut, University of Louisiana at Monroe**
**Larry E. Short, University of Louisiana at Monroe**

## ABSTRACT

*This paper assesses the federal government's ability to bring about social change by examining the results of its program to ensure equality of employment opportunity in federal employment for minority group members. For more than a century the federal government has attempted to develop a fair and impartial personnel system. During the past 40 years the federal government has intensified its efforts to ensure equality of opportunity for all persons regardless of race, color, or national origin. These efforts have met with success by increasing significantly the overall employment of minority group members but have been unable to obtain equality of opportunity for all minority group members. Thus, it appears that the federal government is effective in bringing about macro changes in the environment of federal employment, but is unable to fine tune the micro changes needed to ensure that the environment is an equal opportunity employer.*

## INTRODUCTION

The federal government has a long history of attempting to bring about social changes in the United States through its laws, regulations, and expenditures. For example, the Sherman Antitrust Act of 1890 attempted to reduce the power of big business by regulating the size and scope of organizational activity. The National Labor Relations Act of 1935 sought to balance the power between employees and employers by guaranteeing employees the right to bargain collectively through unions. When Congress felt that the balance of power had shifted too far to employees, the Labor-Management Act of 1947 was passed to correct this imbalance. The Civil Rights Act of 1964 attempted to ensure equality of employment opportunity for all persons regardless of race, color, sex, religion or national origin by outlawing racial discrimination practices. The Occupational Safety and Health Act of 1970 tried to establish safe working environments for employees by setting standards for the safety and health of workers.

How effective is the federal government in bringing about social change? Has the power of big business been reduced? Is there a balance in the relative bargaining positions of employees and employers? Has equality of employment opportunity been achieved? Do we have safe working

environments? Although almost everyone would agree that the federal government has been an influential agent in bringing about social change, most people would also point out that the federal government never quite succeeds. Big business is still powerful. The balance between business and labor is not always equal. Employees continue to be injured in the work place.

This paper will examine one of the federal government's recent major social change programs to ascertain the effectiveness of the government in resolving complex racial issues in employment. The issue of equality of employment opportunity for minority employees will be examined from the standpoint of the federal government's efforts to achieve equality within its own workforce.

## BACKGROUND

The concept of equality of opportunity in the federal government has been around for over a century. During the initial establishment of a federal system (1789-1882), employment in the government was generally awarded on the basis of political affiliation. Public reaction over the excesses of the spoils system and the assassination of President Garfield in 1881 by a dissatisfied officer seeker, created an atmosphere that resulted in the passage of the Civil Service Act of 1883. (U.S. Civil Service Commission, 1941, pg. 49) The Civil Service Act of 1883 established a civil service merit system that provided for the selection of employees on the basis of qualifications and fitness. The procedures established to implement the Civil Service Act, however, did not specifically prohibit racial discrimination in employment. Discrimination and even exclusion of racial minorities was to become a common practice among federal agencies after the passage of the Civil Service Act. (U.S. Commission on Civil Rights, 1970, pg. 59)

In 1940, racial discrimination in the federal government was specifically prohibited by presidential executive action (Executive Order 8587) and congressional mandate (the Ramspect Act). The procedures established to enforce these policies were primarily reactive in nature. That is, the federal government only reacted to complaints of discrimination and employees (or prospective employees) had the responsibility to prove charges of discrimination. Thus, enforcement of these non-discrimination policies were largely limited to moral suasion and technical assistance. (U.S. Commission on Civil Rights, 1961, pp. 14-15)

In a study of the success of these two different approaches (i.e., merit polices and nondiscrimination policies) in achieving equality of opportunity, Hellriegel and Short (1972) concluded that both approaches resulted in discrimination toward minority group members. When compared against a norm of the proportion of minority group members in the general population, the proportion of minority employees in the federal government was far less than would be expected under conditions of full equality of opportunity. Although the non-discrimination polices enacted in and after 1940 generally resulted in a larger proportion of minority group members being employed by the federal government, they did not result in the promotion of minority group

members to intermediate and higher level positions. Hellriegel and Short (1972, pg. 857) concluded that although policies of non-discrimination were associated with significant accomplishments in employment, they did not result in the advancement of minority group members.

## THE GOVERNMENT AS A CHANGE AGENT

Since the early 1960's considerable efforts have been made by Congress and the Executive Branch to ensure that all people have equal access to employment in the federal government regardless of race. In 1961, President Kennedy, recognizing that policies of non-discrimination and enforcement provisions that responded primarily to overt acts of discrimination were insufficient to obtain full equality of opportunity, took forceful action to change the employment patterns of minority group members in the federal government. President Kennedy's Executive Order 10925 (1961) not only reaffirmed the policies expressed by previous executive orders but also established a change program requiring affirmative action to achieve equality of opportunity for minority group employees in the federal government. President Johnson issued Executive Order 11246 in 1965 strengthening President Kennedy's efforts by requiring the identification of which racial minorities were under represented in the federal government and the formulation of specific programs to eliminate this under-representation via affirmation action. President Nixon's Executive Order 11478 (1969) further strengthened the affirmative action policy established by President Johnson. The key provision of Executive Order 11478 may be its statement that equal employment opportunity will be "...an integral part of every aspect of personnel policy and practice in the employment, development, advancement, and treatment of civilian employees of the federal government."

The goal of equal employment in the federal government regardless of race has also been codified into the laws of the United States. Although Title VII of the Civil Rights Act of 1964 prohibited discrimination in employment on the basis or race, color, sex, religion or national origin, it did not originally apply to federal employment. The Equal Employment Opportunity Act of 1972 amended the Civil Rights Act of 1964 to include federal employment. The Equal Employment Opportunity Act of 1972 combined Title VII and Executive Order 11478 into one law establishing the requirement for all federal personnel actions to be free from discrimination.

Two Supreme Court decisions in the early 1970s also strengthened the concept of equality of opportunity. In Griggs v. Duke Power Company, the US Supreme Court (1971) established the principle that the effect of an employment practice and not the intent, is the key to a violation of the Civil Right Act of 1964. Even though a selection procedure may be neutral in its intent, if the employment practice has a disproportionate adverse impact on protected classes, then the practice must be justified by business necessity. In McDonnell Douglas Corporation v. Green, the US Supreme Court defined the elements needed to establish a prima facie case of discrimination in order to shift the burden of proof from the employee to the employer.

Fine tuning of the enforcement of equal employment opportunity requirements in the federal government has continued through the 1990s. The Civil Service Reform Act of 1978 required special recruitment programs to eliminate under representation of minority group members in the federal work force. The Act established diversity in the federal government as a requirement to ensure that the government's work force reflects the diversity of the nation as a whole. The Act, which was implemented by Executive Order 12067 (1978), also changed responsibility for equal employment opportunity in the federal government from the U.S. Civil Service Commission to the Equal Employment Opportunity Commission. The Civil Rights Act of 1991 provided for monetary damages in cases of intentional employment discrimination and entitled a complainant to a jury trial once their case reaches a court. In 1999, the Equal Employment Opportunity Commission issued a Federal Sector Equal Employment Opportunity Final Rule (64 Federal Register, 1999) addressing the continuing perception of unfairness and inefficiency in the complaint process.

## PURPOSE OF THE STUDY

Equal opportunity of employment in the federal government has been given considerable attention over the past 40 years and major programs have been implemented to achieve equality of opportunity for minority group members. Have these change programs (i.e., the affirmative action programs to obtain equality of opportunity for minority employees in the federal government) been effective in achieving equality of employment opportunity for minority employees? This study will examine the results of 40 years of affirmative action programs to determine if these change programs have been successful in increasing the overall employment of minority group members in the federal government and in obtaining equality of employment for all employees of the federal government.

## RESEARCH ASSUMPTIONS

In analyzing employment data to determine if equality of opportunity has been achieved in the federal government, certain assumptions must be made concerning the meaning of the terms equality of opportunity and minority group members. For the purpose of this study, equality of opportunity is defined as follows. The percent of minority group members working in the federal government, in the various job categories, and in managerial and supervisory positions, should be about the same as their percentage representation in the available labor force.

Our assumption is that, under conditions of equality of opportunity, the employment of minority group members in the federal government would be very similar to their distribution in the available work force. It is assumed that in order for the actual employment distribution of minorities across the various job categories, and in managerial and supervisory positions, to be different than its distribution in the available labor force, intervention would be necessary. That is, the distribution

of minority group members in federal employment should be similar to their distribution in the available labor force unless overt action was taken to increase or decrease this distribution.

Our criteria of equality of opportunity has been supported by federal action. In equal employment opportunity cases, complainants present evidence and arguments to support claims of discrimination. If those arguments cannot be rebutted with additional evidence by the federal government, the claim is generally supported by the courts. In the equal employment opportunity area, statistics of under utilization have been sufficient to make a prima facie case for discrimination.

Minority group members have been classified into five categories for the purpose of this study: African American, Hispanic, Asian or Pacific Islander (Asian), American Indian or Alaskan Native (Native), and Other Minority. With the exception of the "Other Minority" category, this follows Equal Employment Opportunity Commission guidelines that specifies that the term minority is used to mean four particular groups who share a race, color or national origin. (EEOC, 2003).

| |
|---|
| *African American (except Hispanic).* A person having origins in any of the black racial groups of Africa. |
| *American Indian or Alaskan Native (Native).* A person having origins in any of the original peoples of North American and who maintain their culture through a tribe or community. |
| *Asian or Pacific Islander (Asian).* A person having origins in any of the original people of the Far East: Southeast Asia, India or Pacific Islands. These areas include for example: China, India, Korea, the Philippine Islands and Samoa. |
| *Hispanic.* A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin regardless of race. |
| *Other Minority.* A person who entered two or more major race groups or wrote in an entry such as "multiracial" or "mixed" in the census report. |

## HYPOTHESIS DEVELOPMENT

The general hypothesis of this study is that the considerable affirmative efforts made by the federal government over the past 40 years have been successful in increasing the employment of minority group members in the federal government and in achieving equality of opportunity for minority group members in all job categories. The equality of opportunity programs in the federal government have been so comprehensive that equality will be prevalent not only in the overall employment of federal employees, but also among non-management occupations, management occupations, and supervisory positions. Two general hypotheses will be examined.

| | |
|---|---|
| Hypothesis 1: | Affirmative action change programs have resulted in increased employment of minority group members in the federal government. |
| Hypothesis 2: | Affirmative action change programs have resulted in equality of employment opportunity for all minority group members in the non-management occupations managerial occupations and supervisory positions in the federal government. Three sub-hypotheses can be derived from Hypothesis 2. |
| Hypothesis 2.1: | Affirmative action change programs have resulted in equality of employment opportunity for all minority group members in the non-management occupations in the federal government. |
| Hypothesis 2.2: | Affirmative action change programs have resulted in equality of employment opportunity for all minority group members in the managerial occupations. |
| Hypothesis 2.3: | Affirmative action change programs have resulted in equality of employment opportunity for all minority group members in the supervisory positions in the federal government. |

## DATA

Data is available on employment in the federal government from two different U.S. Government agencies: Census Bureau and Equal Employment Opportunity Commission (EEOC). Data in the 2000 U.S. Census is quite inclusive, since it gathers data from every person residing in the USA. One of the problems with Census data, however, is that it is self reported. For example, respondents self-report that they are employed by the federal government. Data from the EEOC is not as inclusive as U.S. Census data. The data base used by the EEOC to prepare the Annual Report on the Federal Work Force Fiscal Year 2002 (2003) is the Civilian Personnel Data File (CPDF) submitted directly to the Office of Personnel Management by appointing offices. The CPDF data base does not include information from the Tennessee Valley Authority (TVA), U.S. Postal Service (USPS), Army and Air Force Exchange Service (AAFES), Central Intelligence Agency, Defense Intelligence Agency, National Imagery and Mapping Agency, and the National Security Agency. To complicate matters even more, the EEOC report on the Ten Year Trend in Government Wide Employment of Workers includes data from the CPDF plus data from AAFES, TVA, and USPS while all other analysis only includes data from the CPDF. The authors believe that the Census data is a better indication of overall employment in the federal government than the data published by the EEOC and have selected the U.S. Census as the base for the study..

The data for 1960 was obtained from U.S. Census of Population: 1960. Vol. I, Characteristics of the Population Part I, United States Summary. The data for 2000 was obtained from the 2000 U.S. Census 5% Public Use Microdata Sample. The detailed analysis of federal employment in 2000 is restricted to individuals who were not members of the armed forces, were between 18 and 65 years of age inclusive, and lived in one of the 50 states or the District of Columbia. A total of 212,365 individuals comprise the federal government employment sample in

2000. The distribution of minority group members in the available labor force was computed from the sample of all census respondents who were not members of the armed forces, were between 18 and 65 years of age inclusive, and lived in one of the 50 states or the District of Columbia. A total of 8,677,322 individuals comprise the overall available labor force data in this group.

The U.S. Census 2000 data was sorted into seven major categories: management, professional, and related occupations; service occupations; sales and office occupations; farming, fishing, and forestry occupations; construction, extraction, and maintenance occupations; production, transportation, and material moving occupations; and military specific occupations. (Persons employed in military specific occupations are not full-time military personnel.) For the purposes of this study, we sorted the data into four categories. The first data set consists of all civilian employees of the federal government and was used to test hypothesis 1. The second data set consists of all occupations except the management, professional, and related occupations. The third data set consists of the management, professional, and related occupations. The forth data set consists of all supervisory occupations listed in the second data set. Data sets 2, 3 and 4 were used to test hypothesis 2.

Minority group members were identified as African American, American Indian or Alaskan Native (Native), Asian or Pacific Islander (Asian), Hispanic, or Other Minority. To be classified as African American, Asian, or White, the census respondent would have had to mark only that race alone on the census form. The Hispanic classification includes individuals who classify themselves as being of Hispanic or Latino origin. As noted above, the Other Minority classification contains those individuals who marked two or more major race groups or who wrote in some other race such as multiracial or mixed.

## EMPLOYMENT OF MINORITY GROUP MEMBERS

Table 1 shows the percentage of minority group members working in the federal government in 1960 and 2000. It is apparent from Table 1 that considerable changes in the employment of minority group members have occurred in the federal government in the past 40 years. Overall employment of minority employees in the federal government has increased from 26.1 percent to 33.9 percent, an increase of almost eight percentage points. It is apparent that the intensive efforts of the federal government resulted in an increase in the overall employment of minority group members in the federal workforce. Thus, we can accept Hypothesis 1 and conclude that the affirmation action change programs implemented over the past 40 years have been successful in increasing the employment of minority group members in the federal government.

**Table 1: Federal Employment of Minority Group Members as a Percent of Total Federal Employment 1960 and 2000**

| | Total Federal Employment 1960 | Total Federal Employment 2000 |
|---|---|---|
| Total Minority | 26.1 | 33.9* |
| Total Non-Minority | 73.9 | 66.1 |

* Includes 1.8% of federal employees who classified themselves as Other Minority

Source: 2000 data from U.S. Census, 2000 U.S. Census 5% Public Use Microdata Sample.1960 data from U.S. Bureau of Census, *U.S. Census of Population: 1960. Vol. I Characteristics of the Population Part I United States Summary*, Washington, D.C.: U.S. Government Printing Office, 1964, pp. 1-56911-570.

## EMPLOYMENT IN NON-MANAGEMENT OCCUPATIONS

Table 2 shows the proportions of minority group members in non-management occupations in the federal government and their expected proportions for 2000. Overall, minority group members are employed in higher proportions in non-management occupations (37.0% v. 28.5%) than would be expected by their distribution in the labor force. The federal government has employed a higher proportion of African Americans (19.4% v. 10.7%), Asians (4.3% v. 3.8%), Natives(2.6% v, 0.9%), and Other Minorities (1.8% v. 1.6%) and a lower proportion of Hispanics (8.9% v. 11.6%) in non-management occupations than would be expected based on their distribution in the population. Thus, since the federal government has not been able to employ minority group members in proportion to their representation in the labor force, we must reject Hypothesis 2.1. The alternative hypothesis that affirmative action change programs have not resulted in equality of opportunity in non-management occupations for all minority group members must be accepted.

## EMPLOYMENT IN MANAGEMENT OCCUPATIONS

Table 2 presents the distribution of minority group members in management, professional, and related occupations This category of federal employment is often considered to be the more responsible and more prestigious positions. As can be seen in Table 3 the federal government employs a higher proportion of African Americans (13.8% v. 10.7%), Asians (4.5% v. 3.8%), Natives (2.3% v. 0.9%), and Other Minorities 1.8% v. 1.6%) and a lower proportion of Hispanics (6.3% v. 11.6%) than would be expected by their distribution in the available labor force. The overall employment of minority employees in management occupations, however, is about what

would be expected by their distribution in the labor force. The significant underemployment of Hispanics in this prestigious occupational grouping balances out the over employment in the other minority groups. Since there is such a disparity in the employment of minority groups in the management occupation, we must reject Hypothesis 2.2 and accept the alternative hypothesis. That is, affirmative action change programs in the federal government have not resulted in equality of employment opportunity for all minority group members working in management occupations.

**Table 2: Percent* of Minority Group Members Working in the Federal Government by Selected Occupations and Their Percentage in the Population (2000)**

| Minority Group | Total Federal Government | Non-Management Occupations | Management Occupations | Supervisory Positions | Expected Distributions |
|---|---|---|---|---|---|
| African American | 17.3% | 19.4 | 13.8 | 18.9 | 10.7% |
| Hispanic | 7.9 | 8.9 | 6.3 | 7.9 | 11.6 |
| Asian | 4.4 | 4.3 | 4.5 | 3.0 | 3.8 |
| Natives | 2.5 | 2.6 | 2.3 | 2.2 | 0.9 |
| Other Minority | 1.8 | 1.8 | 1.8 | 1.9 | 1.6 |
| Total Minority | 33.9 | 37.0 | 28.7 | 33.8 | 28.5 |
| Total Non-Minority | 66.1 | 63.0 | 71.3 | 66.2 | 71.5 |

* Percent of persons in age groups 18-65.

Source: 2000 US Census 5% Public Use Microdata Sample.

## EMPLOYMENT IN SUPERVISORY POSITIONS

The employment of minority group members in supervisory positions in the non-management occupations are also shown in Table 2. Overall, a higher proportion of minority group members are employed in supervisory positions than would be expected by their distribution in the labor force (33.8% v.28.5%). Within the specific minority groups, African Americans, Natives, and Other Minorities are employed in higher proportions than would be expected (18.9% v. 10.7%, 2.2% v. 0.9%, and 10.9% v. 1.6% respectively) and Hispanics and Asians are employed in lower proportions (7.9% v. 11.6% and 3.0% v. 3.8% respectively). Hypothesis 2.3 must be rejected because affirmative action change programs have not resulted in equality of opportunity in supervisory positions for minority group members in the federal government.

## DISCUSSION

The purpose of this study was to examine two facets of the efforts to achieve equality of opportunity in the federal government. First, have affirmative action programs been effective in increasing the employment of minority group members in the federal government? The findings of this study suggest that affirmative action programs are very effective in increasing the overall employment of minorities in the federal government. A comparison of federal employment of minority group members in the early 1960's with employment in 2000 reveals an increase in the representation of minority group members in federal employment from about 26% to almost 34%. Although not all minority groups benefitted equally, it is apparent that the change program of affirmative action did result in increases in minority employment.

The second facet addressed by this study is whether the federal government, after over 40 years of affirmative action programs, is an equal opportunity employment employer. Has the federal government used its authority appropriately to provide equality of opportunity in the federal government for all minority group members? Equality of opportunity is considered to exist when the percent of minority group members working in the federal government, in the various job categories, and in managerial and supervisory positions, is about equal to their percentage representation in the population.

It is apparent from a perusal of Table 2 that the federal government has not used its power appropriately in attempting to obtain equality of opportunity for all minority group members. Certain minority groups have benefitted much more than others. African Americans appear to be the big winners. More African Americans are employed by the federal government than would be expected by their distribution in the population. The 6.6 percentage points difference between the expected and actual employment of African Americans in the federal government means that there are over 60 percent more African Americans employed in the federal government than would be expected from their availability in the labor force. African Americans are also disproportionately employed in every major job category: 8.7 percentage points more employed in non-management occupations; 3.1 percentage points more employed in management occupations; and 8.2 percentage points more employed in supervisory positions. The employment of Natives also appears to have exceeded the employment expectations suggested by their distribution in the available labor force and, thus they are over employed in every job category. The federal government employs over twice as many Natives as would be expected from their population proportions. Asians and Other Minorities appear to be employed in closer proportion to their expected distributions. In all job categories, their employment is less than one percentage point away from their expected employment pattern. If African Americans are the big winners in the federal programs of affirmative action, Hispanics are the big losers. The 3.7 percentage points difference between the expected and actual employment of Hispanics in the federal government means that there are over 30 percent fewer Hispanics employed in the federal government than would be expected under

conditions of equality of opportunity. And this underemployment of Hispanics occurs in every job category.

## CONCLUSIONS

The federal government has given considerable attention to developing a personnel system that ensures equality of opportunity. During the past 120 years, three different approaches have been used to develop a fair and impartial system of federal employment. The first approach (i.e., merit system) resulted in rampant discrimination against minorities. The second approach (i.e., non-discrimination policies) resulted in significant increases in the employment of African Americans, but little progress in moving minority groups members into higher level positions. A study of the third approach (i.e., affirmative action policies) suggest suggests that the current change program developed to ensure equality of opportunity for all employees has met with mixed success. The federal government has been quite successful in increasing the utilization of minority groups members in the workforce, but less successful in ensuring equality of opportunity for all employees. It appears that some minority group members are given preferential treatment in employment at the expense of others. African Americans and Natives are employed in all job categories at levels far in excess of what would be expected by their representation in the available labor force. Hispanics are employed in much smaller proportions, in all job categories, than would be expected by their availability in the labor force. Thus, we can conclude that, although the federal programs designed to ensure equality of opportunity for minority group members have accomplished significant successes in the overall employment of minority group members, these programs have failed at the fine tuning that is necessary to ensure that all persons are treated equally.

## REFERENCES

Civil Rights Act of 1964.

Civil Rights Act of 1991.

Civil Service Act of 1883.

Civil Service Reform Act of 1978.

Equal Employment Opportunity Act of 1972.

Griggs v. Duke Power Company. (1971). 491 U.S. 424.

Hellriegel, D. & L. Short. (1972). Equal employment opportunity in the federal government: A comparative analysis. *Public Administration Review, XXXII*(6), 851-858.

Labor-Management Act of 1947.

McDonnell Douglas Corporation v. Green. (1973). 411 U.S. 792.

National Labor Relations Act of 1935.

Occupational Safety and Health Act of 1970.

Sherman Antitrust Act of 1890.

U.S. Civil Service Commission. (1941). History of the Federal Civil Service, 1789 to Present. Washington, D.C.: U.S. Government Printing Office..

U.S. Census Bureau, http//www.census.gov/Press-Release/www/2003PUMS5.html.

U.S. Commission on Civil Rights (1961). Employment. Washington, D.C.: U.S. Government Printing Office.

U.S. Commission on Civil Rights (1970). Federal Civil Rights Enforcement Effort. Washington, D.C.: U.S. Government Printing Office.

U.S. Equal Employment Opportunity Commission. (2003). Annual Report on the Federal Work Force Fiscal Year 2002. Retrieved February 2, 2004, from http://www.eeoc.gov/federal/fsp2002/index.html.

U.S. Equal Employment Opportunity Commission. Federal Sector Equal Employment Opportunity Final Rules. (1999). 64 Federal Register. 37643.

U.S. President, Executive Order 8587. (1940). 5 Federal Register. 4445.

U.S. President, Executive Order 10925. (1961). 26 Federal Register. 1977.

U.S. President, Executive Order 11246. (1965). 30 Federal Register. 12319.

U.S. President, Executive Order 11478. (1969). 34 Federal Register. 12985.

U.S. President, Executive Order 12067. (1978). 43 Federal Register. 28967.

# FORCE OR FREE WILL? A COMPARATIVE ANALYSIS OF MANDATORY VERSUS VOLUNTARY DEBTOR EDUCATION

**Pamela P. Stokes, Texas A&M University-Corpus Christi**
**Adolfo Benavides, Texas A&M University-Corpus Christi**

## ABSTRACT

*A recent study measured the effectiveness of financial education classes attended by individuals who had filed for Chapter 13 Bankruptcy. The results indicate that debtor education is successful in improving financial management skills and behaviors. In addition to testing the overall efficacy of such classes, this project compared responses for mandatory versus voluntary class attendance. Further analyses compared debtors' ages, household income, educational levels, reasons for filing bankruptcy, propensity to save money, use of new credit during bankruptcy, and perceptions of individual responsibility for their financial situation. The results should be of interest to bankruptcy trustees, judges, and attorneys as well as legislators, educators, and debt counselors.*

## BACKGROUND

This study is the latest in a series of efforts (Stokes 1995; Stokes & Polansky, 1999) to measure the effectiveness of education in modifying detrimental financial habits and behaviors of a proven high risk group - debtors in bankruptcy. Through education programs sponsored by a number of Federal Bankruptcy Trustees, debtors who file under Chapter 13 of the Bankruptcy Code are offered classes in money management. While the classes vary in some respects, they all promote understanding of basic economic principles, financial management techniques, and include material related to psychology of money management. The classes are brief, usually from two to four hours in length, and debtors normally attend one class during the course of the bankruptcy process.

A central premise of the classes is that few individuals learn how to manage money in an organized and effective manner. The result is that many people in this country are financially illiterate. If financial illiteracy is a major cause of bankruptcies, then financial education could diminish the number of filings, pave the way out for those already in bankruptcies, and enable debtors to avoid money problems in the future.

The Offices of the Chapter 13 Trustees in Dallas and Ft. Worth, Texas, sponsored a study of individuals attending the classes in that area. The questionnaire was based on instruments used in two previous studies, and also included additional items requested by these trustees.

## A BRIEF OVERVIEW OF CHAPTER 13 BANKRUPTCY

For those unfamiliar with the U.S. Bankruptcy system, Chapter 13 provides for reorganization of debts for individuals and sole proprietorships with a regular source of income and limited amounts of debt. Individuals in Chapter 13 submit a plan providing for payment of all or a portion of their creditors on a deferred basis, usually over a period of three to five years. A court-appointed trustee administers the process to assure proper handling of the debtors' estates (U. S. Bankruptcy Code).

The bankruptcy laws provide inducement to both debtors and creditors to resolve debt problems in an organized and fair manner. During the course of the proceedings, the debtors are allowed to maintain possession of their property and are protected from continued collection efforts by creditors. After completing their repayment plans, debtors receive a "fresh start" virtually free of debt. Creditors also benefit from the process. They receive a fair share of the debtors' disposable income relative to other creditors, and the process is more efficient than individual litigations. The trustee processes payments from the debtors to the creditors and generally oversees any concern the creditor may have in the debtors' case. In successful Chapter 13 cases, creditors receive a greater amount of debt repayment than under "straight" Chapter 7 liquidations.

Critics of the bankruptcy system allege that it encourages irresponsibility, providing a haven for individuals who want to avoid their financial obligations. These critics have been more vocal of late, in light of the continued increase in the rate of bankruptcy filings and the parallel rise in consumer debt (American Bankruptcy Institute, 2001; Koretz, 2001). Proponents of legislative change focus on the perception that "the process has been abused by individuals who run up high debts with other people's money, then hide their resources behind lenient bankruptcy laws" (Barr, 2001). However, a thorough study, the Consumer Bankruptcy Project (CBP), reached just the opposite conclusion (Sullivan et al. 1989). The CBP found that filing for bankruptcy is the last resort for people who want to pay their debts, but who are simply overwhelmed by the amount of debt relative to their income. Several recent studies support the finding of the CBP. The fact seems to be that the negative personal, economic, and social ramifications of declaring bankruptcy are enormous, and these deterrents are a major constraint on abuse of the system (Clements et al. 1999). Along the lines of these studies, the basic tenet of the debtor education classes is that Chapter 13 filers want to pay their debts, would like to have financial stability, and will use the information to improve their money management skills.

## TWO PRIOR STUDIES FORM BASIS FOR DFW STUDY

Two prior studies on debtor education contributed to the design of this project. The first study evaluated the long-term effectiveness of financial management classes, and the resulting article in Business Credit (Stokes, 1995) is summarized here as it pertains to the current research effort. The second study investigated the concept of economic locus of control in relation to bankruptcy debtors (Stokes & Polansky, 1999), and applicable portions of that study will be recapped as well. The results of both studies support the hypothesis that education is effective in improving the financial status and habits of bankruptcy debtors.

The first study was based on a debtor education course taught under the auspices of the Chapter 13 Trustee for a 26-county region in South Texas. The class was a mandatory three-hour session, which covered the following topics: goal setting, needs versus wants, choice and decision-making, benefits of a financial plan, societal and personal influences on money choices (such as instant gratification, consumerism, and materialism), psychological "comfort zones," personal values clarification, budgeting techniques, importance of savings, wise use of credit, and cost-saving ideas.

Initial post-class evaluations were very positive, so a survey was designed to test long-term retention and use of the material presented. The survey was mailed to people 12 to 18 months after they had taken the class. Results indicated that over eighty percent of attendees used the information and benefited from it. On usage of the material, forty five percent used the ideas presented "many times," thirty eight percent "a few times," eight percent "a lot at first, but not much recently," five percent "not at all", and three percent "once or twice." As to whether or not their money management skills improved, thirty six percent said "very much," forty seven and one half percent "somewhat," seven and one half percent "a small amount," two and one half percent "not at all, even though I used them," and five percent did not use the ideas and therefore saw no improvement. Asked which ideas were most valuable, fifty seven and one half percent said "budgeting," thirty six and one half percent "goal setting," sixteen percent "personal choice," fourteen percent "use of credit," and twelve percent "psychological comfort zones."

Of those responding, sixty one percent chose to answer at least one of the open-ended questions, which solicited specific examples of how class information was used, ways to improve the class and any other data relating to the course. All of these comments were positive in nature, and fell into five broad topic areas. The most frequently mentioned was budgeting techniques, followed by goal setting, distinguishing "needs" from "wants," personal responsibility, and lastly general motivation.

The second study involved the concept of economic locus of control. The locus of control theory proposes that one determinant of human behavior is the degree to which an individual perceives that a reward follows from her own behavior (internal locus) versus the degree to which she feels the reward is controlled by forces outside of herself (external locus). A primary

assumption behind the lead author's original money management course design is that people who are in extreme financial difficulty are more likely to have an external locus of control. This would lead them to defer to others in financial matters, and make them more vulnerable to the many negative influences that exist in our society. Another consequence of having an external locus is that people are reluctant to accept responsibility for their situation, as they customarily attribute their problems to the actions of others. A self-defeating and negative cycle then emerges, as they also do not believe they have the ability to change their troubled circumstances.

One of the goals of debtor education is to make participants aware of their economic choices and encourage them to use these opportunities in combination with sound fiscal techniques to improve their monetary situation. Individuals would then be relying on themselves more than others in economic decision-making, and moving more toward an internal locus of control in financial matters. To test this theory, an economic locus of control questionnaire developed by Furnham (1986) was administered in pre-class and post-class settings. The study's results indicated a change occurred in the participants' economic locus of control toward a more internal orientation, which may explain one reason for the success of the classes.

The Dallas and Ft. Worth Trustees then contacted one of the co-authors to conduct a further study of debtor school participants based on these two projects.

## RECENT ABI STUDY: CONTRARY RESULTS?

A recently published study funded by the American Bankruptcy Institute (ABI) examined the impact of debtor education and other factors on Chapter 13 completion rates (the study's measure of "success") in 5 regions, including the Ft. Worth office used in this study (Braucher, 2001). The other factors included use of wage orders, low percentage payment plan approvals, amount and payment of attorneys' fees, and temporary plan moratoriums to aid debtors with emergency situations. While debtors who took financial management classes completed their plans at a higher rate than those who did not receive education, the results suggest that education itself is, at best, a neutral element. For the most part, local practices and attitudes, plus factors not tested in the study appear to account for the variations in plan completion rates. Braucher concludes that a combination of trustee strategies, individual debtor characteristics, societal attitudes in different regions, and the effects of different types of debt should be studied further as they appear to be more determinative than debtor education. Other studies have analyzed such data as well with regard to debtor education (Clements et al. 1999).

This paper presents information that is useful in further analyzing the effect of debtor education, particularly with regard to individual debtor characteristics. It also provides additional data supporting Stokes' 1995 study, which indicates that debtor education is not only effective, but is influential for a long time after the date of the class.

## THE DFW STUDY

All of the survey questions used in the first (1995) study were used in the survey for the current project, although the wording regarding topic areas (question 8) was adapted to more accurately reflect minor differences in the class materials. In addition, this study collected data regarding household income, age, and educational levels of the debtors. It also added a place for debtors to write in up to three major reasons for their financial problems. A question related to economic locus of control was included. Finally, two additional questions relating to savings accounts and acquisition of new debt since filing for bankruptcy were incorporated (see Appendix A for copy of survey). All survey respondents attended classes in the Dallas-Ft. Worth area.

The survey respondents were divided into two broad groups. The first group was comprised of individuals who were required to attend a mandatory debtor education class and second group consisted of people who voluntarily attended a second, follow-up class. They were further divided based on the length of time since they had taken the classes. The survey was mailed during the summer of 2001 to over 900 individuals: 253 participants who attended class in late 1998 and early 1999 (200 mandatory, 53 voluntary); 249 who attended in late 1999 and early 2000 (200 mandatory, 49 voluntary); and 410 who attended in late 2000 and early 2001 (337 mandatory, 73 voluntary). Included in this latter group were 137 individuals (the Westbrook group) who attended mandatory classes under a separate, but similar, program.

## RESULTS OF THE DFW STUDY

Of the 87 respondents to the debtor education class survey, 27 attended the class voluntarily while the remaining 60 (including 15 from the Westbrook group) were mandatory class attendees. Beyond assessing the effectiveness of the class on the entire group of participants, the main focus of this study is to establish the extent to which statistically significant differences on the impact of the class exist between those whose attendance was mandated versus those who participated voluntarily. This analysis also includes commentary on the profiles of those who took the class. It should be noted that the overall sample size (87) and the samples of voluntary versus mandatory attendees (27 and 60 respectively) are random and sufficiently large to lead to statistically valid inferences about the entire populations of mandatory and voluntary participants.

The analysis of the overall group suggests that the typical class participant has some college education and is in the $20,000 to $29,999 income bracket. However, the level of income of the typical voluntary attendee ($30,000 to 39,999) is statistically higher, at the 10 percent level of significance, than that of the typical mandatory attendee ($20,000 to $29,999). Additionally, the proportion of voluntary class attendees who have earned a college degree (forty two percent) is

higher, at the ten percent level of statistical significance, than the proportion of college graduates in the mandatory group (fifteen percent). See Tables 1 and 2 below for a statistical summary.

The rest of this section addresses the overall impact of the class and highlights those areas where the differences between voluntary versus mandatory attendees are statistically significant. The responses to question number 5 suggest that almost half of all participants (forty eight percent) have used the ideas presented in the class "many times" and seventy nine percent have used them at least a few times. However, the proportion of voluntary attendees who have used the ideas presented in the class "many times" (fifty nine percent) is higher, at the ten percent level of statistical significance, than that among mandatory attendees (forty three percent).

Regarding question number 6, thirty eight percent of all debtor education class participants stated that the ideas presented in the class had improved their money management skills. The effect of the class, with regards to improving money management skills, was greater, at the ten percent level of statistical significance for the voluntary attendees (forty eight percent of them responded affirmatively) than it was for those whose attendance was mandatory (thirty three percent of them believed that the class improved their money management skills).

For thirty one percent of all participants, the most useful concepts were "personal planning, values, goals and priorities." There was no statistically significant difference between the proportions of voluntary attendees (thirty five percent) versus that of mandatory participants (twenty seven percent) on this point. For another one third of all participants the class was most useful in the area of "budgeting, savings and spending of money." Again no statistically significant difference existed between the two groups on this response.

Regarding the locus of control issue, twenty five percent of all participants responded that they believed that their financial situation was the result of actions and events "primarily within their control" twenty eight percent believed that it was due to actions and events "partially within their control," fourteen percent thought that it was caused by actions and events "only slightly within their control" while thirty three percent responded that it was the result of actions and events "primarily outside their control."

There is no statistically significant difference between the proportion of voluntary attendees who claimed their financial situation resulted from actions and events "primarily within their control" (twenty three percent) versus that of mandatory attendees who felt that way (twenty five percent). The same conclusion applies to the proportion of both groups who stated that actions and events "slightly within their control" determine their financial situation (eighteen percent for voluntary and twelve percent for mandatory). However, there are statistically significant differences (at the ten percent level of significance) between the proportions of the two groups who maintain that actions and events "partially within their control" dictate their financial circumstances. Among the voluntary group, thirty seven percent believe they have"partial control" over their financial condition as opposed to only twenty three percent of the mandatory class attendees. Moreover, the percentage of the mandatory group who claim that actions and events "primarily outside their

control" determine their financial state (thirty eight percent) is statistically higher, at the ten percent level of significance, than the percentage of voluntary attendees who blame their financial circumstances primarily on outside factors (twenty two percent).

The data also suggests unequivocally that filing for bankruptcy did have an effect on the opening of a savings account. Before filing, only seventeen percent of all participants had a savings account compared to fifty four percent who had one at the time of the survey. This difference is statistically significant at both the five and ten percent levels of significance. Among the mandatory group: pre-filing thirteen percent versus forty seven percent post-class yields a statistically significant difference (at the five and ten percent levels) that suggests that the class (or at least the filing for bankruptcy) does impact the opening of a savings account. The same conclusion applies to the voluntary attendees: twenty seven percent had a savings account at the time of filing and seventy one percent had one following the class. It should be noted that many trustees and judges in Texas encourage the establishment of savings account for debtors in contrast to other regions of the country.

Finally, filing for bankruptcy appears to have had an impact on these debtors not taking on new debt. Only ten percent of all respondents had taken on new debt since filing, and such percent is the same for the voluntary as well as the mandatory attendees.

No other statistically significant differences emerged between the mandatory and voluntary groups. Other data gathered by the survey, such as reasons for filing, responses to the open-ended questions, and complete profiling will be analyzed at a later date.

In summary, as a group, voluntary class attendees tend to have a higher level of income, a higher level of educational attainment, a greater belief that control over their financial situation is more internal, more willingness to use the ideas presented in class and a greater appreciation for how the class has improved their money management skills than their mandatory class participants counterparts.

## CONCLUSIONS AND IMPLICATIONS

The results of this study replicate those of the 1995 study in many respects. First and foremost, approximately eighty percent of respondents in both studies reported using the ideas presented in the class, and almost identical numbers in both surveys (eighty three and eighty two percent) reported the session significantly improved their money management skills. The most useful ideas were essentially the same in both studies, with minor variances being attributed to the somewhat different wording of the topic categories. The DFW study also evidences a change in debtor behavior, most clearly regarding savings accounts.

A vigorous debate exists among those involved in bankruptcy education regarding whether debtor education classes should be mandatory or voluntary (Gross, 1997; Stowers, 1998). Results

of this study indicate that while voluntary attendees benefit more from the classes than do those who were mandated to attend, both groups used the ideas and techniques presented, and both groups reported an improvement in financial skills. As Braucher indicates, even mandatory attendees appreciate the class, so there is no real downside to compulsory attendance other than additional cost and administrative aspects.

Individual personal characteristics of debtors, particularly level of education and income, do seem to be important factors in determining the effectiveness of debtor education. Those who perceive education as being important in general, as evidenced by efforts to obtain additional schooling, are more likely to voluntarily attend a debtor education course. Obviously, voluntarily attendees would be expected to use and appreciate the information more than those who were forced to attend, and the results validate this hypothesis. The study reflects national statistics tying higher educational levels to increased income.

The locus of control question is inextricably tied to the individual characteristics just discussed, as well as others tested in this survey. Consistent with locus of control theory, those who chose to attend a class of their own volition exhibited more of an internal locus of control than those who attended solely by mandate of the trustee. Also in line with this concept, voluntarily attendees had already taken steps to protect their economic security by establishing savings accounts and were more successful in doing so even after the filing. Arguably, the totality of these factors would also improve the chances for these individuals to complete their plans.

Regional trustee and judicial practices are definitely influential, as theorized by Braucher, and this is apparent from the question on savings. Texas judges and trustees often encourage savings accounts for Chapter 13 debtors, but in other parts of the country debtors are prohibited from having "extra" money in savings. As class material would mirror the prevailing viewpoint in the area, it is difficult to tell if it is the class, the system, or a combination of the two that produced this behavioral change. Negative responses to the "new debt" question are not surprising, as any new extensions of credit are supposed to be approved by the court, thus discouraging such activity.

Admittedly, this study is biased toward positive findings due to the self-reporting methodology. The individuals responding to the survey are those who are more likely to have positive feelings about the classes. Furthermore, the people who make the effort to return the surveys are, in general, more highly motivated, and are therefore the ones most likely to succeed. Also, a natural bias exists due to a desire to please the trustee or the educator, particularly if they are liked as individuals. As a whole, then, respondents probably comprise a higher percentage of "successful" versus "unsuccessful" debtors.

Education, especially mandatory education, will never "fix" everything for everyone. A small number of persons will succeed whether or not a particular class or instructor is "good;" and others will fail no matter how good the course or instructor. The majority, however, will benefit from education, although the degree of benefit will vary among individuals and may not become apparent for many years. A small number even experience a significant, life-changing

transformation as a result of a class. If the majority of participants in a debtor education class learn even one idea that improves their lives, then the class is arguably a success. To abandon debtor education efforts without further study would be a grave mistake.

The answer may in fact be more education, with longer courses or a series of classes. Debtor education is aimed, at least in part, at behavior modification. Behavior modification is a slow and deliberate process that takes commitment and self-awareness. To think that a short class will significantly change long-established habits and attitudes is unrealistic. However, to begin the change process, individuals need basic skills, knowledge, and motivation. Ideally, they then need periodic reinforcement, additional information, and incentives at regular intervals.

## AREAS FOR FURTHER RESEARCH

The recent studies point to several areas deserving of further exploration:

| | |
|---|---|
| 1. | As Braucher attributes success in completion rates to a number of factors that differ regionally a study should be done within one area comparing completion rates of those who attended debtor education with those who did not. |
| 2. | Additional exploration of locus of control might also provide useful information regarding which individuals would most benefit from debtor education or which topics should be emphasized. |
| 3. | A series of classes rather than just one would provide more probability of successful plan completions so this pedagogy should be studied. |
| 4. | The Braucher paper points out that unrealistic repayment plans may account for the high failure rate of most Chapter 13 debtors and if that is the case debtor education comes too late to be of much help. Therefore pre-filing education may be more practical and effective than post-filing classes. |
| 5. | Braucher did not include demographics income level or debt ratio information and these factors should be explored. Survey information collected in a recent project by these authors and others does contain some of this data. The information is not yet analyzed but will be in the next few months. |

## SUMMARY

As one of the stated purposes of the American bankruptcy system is the rehabilitation of the debtor, it is logical to use the process to increase debtors' knowledge and skills regarding money management techniques. Contrary to Braucher's conclusions, this study and the 1995 study both confirm the hypothesis that debtor education classes improve the short-term as well as long-term financial management skills and behaviors of participants. Both mandatory and voluntary attendees benefited from the classes, although voluntary attendees reported higher success rates across the

board. These studies should therefore offer encouragement to those who advocate education - either voluntary or mandatory - as a solution to the rising numbers of bankruptcy filings in the United States. This study also contributes further insights regarding personal motivation, economic locus of control issues, course topic selection, and debtor profiles, all of which should enhance educational programs aimed at financially troubled individuals.

**Table 1Statistical Summary of Applicable Differences Between Voluntary Versus Mandatory Class Attendees**

| Item/Question | Percent Voluntary | Percent Mandatory | Z statistic *** | Difference * |
|---|---|---|---|---|
| Income: $20-29.9 thousand | 15% | 32% | 1.59 | Significant |
| Income: $30-30.9 thousand | 26% | 12% | 1.58 | Significant |
| Education: College Degree | 42% | 15% | 2.64 | Significant** |
| Q #5: Used Class Ideas Many Times | 59% | 43% | 1.37 | Significant |
| Q # 6: Class Improved Money Manag ement Skills | 48% | 33% | 1.33 | Significant |
| Q #9, Answer B: Factors Partially Within Control | 37% | 23% | 1.32 | Significant |
| Q #9, Answer D: Factors Partially Outside Control | 37% | 23% | 1.32 | Significant |

* Statistical difference tested at 10 percent level of significance (Critical Z value = 1.282).
** Also significant at 5 percent (Critical Z value = 1.645).
*** For methodology used in computing Z values for testing the significance of differences between two population proportions see W. Daniel & J. Terrell, 349 - 351.

**Table 2.Effect of Bankruptcy Filing on Establishment of a Savings Account.**

| Class Group | Pre-Filing Savings Account | Post-Filing Savings Account | Z Statistic | Difference * |
|---|---|---|---|---|
| All Class Attendees | 17% | 54% | 5.0 | Significant |
| Mandatory Attendees | 13% | 47% | 4.04 | Significant |
| Voluntary Attendees | 27% | 71% | 3.14 | Significant |

* Statistical difference tested at 5 percent level of significance (Critical Z value = 1.645).

## REFERENCES

American Bankruptcy Institute (ABI) (2001). U.S. Bankruptcy Filing Statistics. Retrieved October 10, 2001, from http://www.abiworld.org/stats/stats.htm.

Barr, B., FCDH Press Release, August 1, 2001. "Speaker appoints Barr to bankruptcy reform conference." Office of U.S. Representative Bob Barr, Washington, D.C.

Braucher, J. (2001). Report on a study of debtor education in bankruptcy. Report submitted to The American Bankruptcy Institute.

Clements, J., D. Johnston, K. Michelich & C. Olinsky, (1999). Implications for education of personal bankruptcy clients evidenced by a survey in southwest Ohio. *Journal of Family & Consumer Sciences, 91*(4), 48-55.

Daniel, W. & J. Terrell (1992). *Business statistics for management and economics* (Sixth Edition). Boston, MA: Houghton Mifflin Co., 349-351.

Furnham, A. (1986). Economic locus of control. *Human Relations, 39*(1), 29-49.

Gross, K. (1997). Introducing a debtor education program into the U.S. bankruptcy system: A roadmap for change. Report submitted to the National Bankruptcy Review Commission.

Koretz, G. (2001, May). Reform that could backfire. *BusinessWeek, 3733*(5), 32.

Stokes, P. (1995). Moving from bankruptcy to solvency: An educational experience that works. *Business Credit, 97*(6), 20-25.

Stokes, P. & S. Polansky (1999 ). Shifting the economic locus of control: Improving financial decision-making in high-risk populations. *Academy of Accounting and Financial Studies Journal, 3*(1), 95-101.

Stowers, A. (1998). Teaching bankruptcy avoidance. *Mortgage Banking, 58*(9), 50-54.

Sullivan, T., Warren, E. & Westbrook, J. (1989). *As We Forgive our Debtors*. New York, NY: Oxford University Press.

United States Bankruptcy Code, Title 11 U.S.C.A. as amended.

**APPENDIX A**

Dear Participant:

Within the last year or so, you participated in a class on money management through the offices of the Chapter 13 bankruptcy trustee. We are trying to find out how effective the course was and would appreciate it if you would take a few minutes to fill out this brief questionnaire and return it in the envelope provided. You do not have to tell us your name or any other identifying information. THANK YOU!

Please answer the following as honestly as possible regarding the class you attended:

1. Household Income:
   - ___Below $10,000
   - ___$10,000-19,999
   - ___$20,000-29,999
   - ___$30,000-39,999
   - ___$40,000-49,999
   - ___$50,000-59,999
   - ___$60,000-69,999
   - ___Over $70,000

2. Age: ___Debtor 1 ___Debtor 2 (if married)

3. Education:

| Debtor 1 | Debtor 2 |
|---|---|
| ___Some HS | ___Some HS |
| ___HS Diploma | ___HS Diploma |
| ___Some College | ___Some College |
| ___College Degree | ___College Degree |

4. Major events/reason(s) for the financial problems?
   1._____
   2._____
   3._____

5. Since the class, I have used the ideas presented:
   a. many times
   b. a lot at first, but not much recently
   c. a few times
   d. once or twice
   e. not at all

6. The ideas presented in the class improved my money management skills:
   a. very much
   b. somewhat
   c. only a small amount
   d. not at all, even though I used them
   e. not at all, as I did not use them

7. If you DID NOT use any of the ideas presented in the class, please tell us why:
(If you DID use any of the ideas, please skip to question 4):
   a. I did not feel they were practical
   b. I did not feel the need to use them
   c. I did want to use them, but did not get around to it
   d. Other people I live with did not want to use them, so neither did I
   e. Other (please explain)_____

8. If you DID use any of the ideas presented in the class, which one did you find most useful?
(Please skip this question if you DID NOT use any of the idea)
   a. Personal planning, values, goals & priorities
   b. Budgeting, savings and spending of money
   c. Improving communication
   d. Use of credit
   e. Reestablishing credit after bankruptcy
   f. Other (please explain)_____

9. I believe my financial situation is a result of:
   a. actions and events primarily within my control
   b. actions and events partially within my control
   c. actions and events only slightly within my control
   d. actions and events primarily outside of my control

10. With regard to a savings account:
   a. Did you have money in a savings account at the time of filing? ___Yes ___No
   b. Do you have money in a savings account now? ___Yes ___No
   c. If so, do you make regular contributions? ___Yes ___No

11. Since filing, have you taken on any new debt? ___Yes ___No
   a. If so, how much? $_____
   b. And for what purpose? _____

Please tell us about the following (be as specific as possible - use additional pages if needed).

12. Give us any example(s) of how the class helped you in any area of your life.

_____

13. Are there any ways the class could be improved in the future?

_____

14. Other information relating to the effectiveness of the class.

_____

Thank you for filling out this survey. Please put in the enclosed, stamped envelope and mail it to us by August 15th, 2001.

# END OF VOLUME 7, NUMBER 1

# LEGAL ISSUES
# for Volume 7, Number 2

# LEGAL ISSUES
# for Volume 7, Number 2

# UNINTENDED EFFECTS OF AFFIRMATIVE DISCLOSURES IN PRINT ADVERTISEMENTS

**Douglas Amyx, Louisiana Tech University**
**Dennis Bristow, St. Cloud State University**
**Jeffrey Robb, Texas Woman's University**

## ABSTRACT

*This study examined the positive and negative effects of mandated affirmative disclosures on consumers' assessment of source credibility in attorney print ads. The certification credential of the attorney (i.e., board certified or not board certified) served as the independent variable in the study and attorney source credibility served as the dependent variable. Subjects read one of two mock attorney print advertisements. One ad stated the attorney was "Board Certified," while the other ad indicated that the attorney was "Not Certified." Results showed that the manipulation of attorney certification credentials in an advertisement significantly influenced subjects' perceptions of source credibility. The board certified attorney was perceived to possess significantly greater expertise and trustworthiness than the attorney advertised as not certified. Managerial implications and avenues for future research are discussed.*

## INTRODUCTION

"*SURGEON GENERAL'S WARNING: Smoking by Pregnant Women May Result in Fetal Injury, Premature Birth, and Low Birth Weight*" (warning label on cigarettes).

"*Warning. This product has not been pasteurized and therefore may contain harmful bacteria that can cause serious illness in children, the elderly and persons with weakened immune systems*" (warning label on fresh-squeezed juice).

"*Not Certified by the Texas Board of Legal Specialization*" (mandated statement for inclusion in advertisements by Texas attorneys who are not board certified).

Since the growth of consumerism in the 1960's, the federal government has expanded its role to protect consumers. Affirmative disclosure messages are one means by which the federal government seeks to accomplish that goal. As defined by Wilkie (1982), an affirmative disclosure is a statement which informs consumers or potential consumers about a condition or situation where they may be misled by product claims. Each statement above is an example of an affirmative disclosure statement designed to protect consumers, yet each message has ultimately yielded unintended consequences. The Surgeon General's warning sought to provide health related information about the possible ill effects of smoking for pregnant women. However, this warning backfired and created a completely unintended reaction. "Some women kept smoking - because they thought it would keep them from gaining too much weight during pregnancy" (Parker-Pope, 1997, p. B1).

The fresh-juice warning had the unintended consequence of causing serious problems for the fledgling fresh-juice industry. This label targeted health conscious consumers who wanted the natural vitamins and minerals found in non-pasteurized juice and informed them that there was a health risk with non-pasteurized juice. As one juice producer said, "The interim label doesn't make juice safer, it just makes people less likely to buy it" (Smith, 1998, p. 17).

The attorney certification disclosure, which is the focal point of this study, represents an affirmative disclosure mandated by twelve states in the U.S. for attorney advertisements. While the disclosure is not a warning label per se, an affirmative disclosure statement may create unintended effects, just as the cigarette and fresh-juice warning labels created unintended consequences. The purpose of this study is to determine whether the affirmative disclosure statements used in attorney advertising inadvertently impact the ad's effectiveness.

To promote public access to legal services and improve attorney competence, numerous states have adopted state-wide certification programs (Kilpatrick, 1997). For example, in the state of Texas, to become 'Board Certified' within a legal specialization (e.g., family law, personal injury, etc.), an attorney must meet a variety of requirements including a minimum level of experience, continuing education, peer reviews, and passing a written examination (Texas Board of Legal Specialization, 2000). In turn, the board certification credentials have influenced how attorneys advertise. In Texas, if an ad for an attorney mentions any legal specialization, the ad must then disclose that the attorney is either "Not certified by the Texas Board of Legal Specialization" or "Certified by the Texas Board of Legal Specializations," depending on whether or not the attorney is board certified (Wallace & McKelvery, 1987). The intent here was to fully inform individuals who may be seeking legal assistance.

While the mandated attorney disclosure statements were intended as affirmative disclosures, such advertising claims may be interpreted by consumers as either a negative disclaimer for those attorneys who advertise that they are "Not Board Certified" or as a positive bias for those attorneys who are able to advertise as "Board Certified" (Jacoby, Nelson, & Hoyer, 1982; Kilbourne, 1990). To consumers searching for legal services, these advertising claims may also be very confusing.

Critics of the mandated attorney disclosure statements maintain that the use of the term "Board Certified" is not a guarantee of quality, and requiring attorneys to state they are "Not Board Certified" could mislead the public into believing such attorneys are un-licensed or inexperienced (Texas Bar Journal, 1998).

Given the past history of consumers misinterpreting the affirmative disclosures in advertising, a major concern is how the advertisement is perceived by its audience. A meaningful way to examine audience perception is by measuring source credibility. This research seeks to answer the question: do attorney affirmative disclosure statements significantly influence source credibility and if so, how?

## AFFIRMATIVE DISCLOSURE STUDIES

Affirmative disclosures in advertising have important implications for both consumers and marketers. Further, the effectiveness of those disclosures are contingent upon a diverse set of variables including size, placement, distinctiveness, timing and more (e.g., Gerla 2002; Johar & Simmons 2000; Muehling & Kolbe 1998; Hoy & Stankey 1993; Wilkie 1987; 1986; 1985) and the outcomes of such message components are not always the intended outcome. For example, research has shown that affirmative disclosures create new beliefs instead of correcting existing, inaccurate beliefs (Miller, 1977; Jacoby, Nelson, & Hoyer, 1982). Because affirmative disclosures in advertising create new information, it is critical that the information be unbiased. If the disclosure biases the reader (negatively or positively), the message will not have its intended impact (Funkhouser, 1984). In light of the importance of a message having its intended effect, Funkhouser (1984) tested consumers' understanding of an affirmative disclosure statement. Specifically, health food store patrons received one of three versions of a protein supplement package containing a health hazard warning label. Results indicated that consumers differed significantly in their understanding of what illnesses could occur when minor descriptive changes were made to the warning label.

Kilbourne (1990) examined the effects of positive and negative affirmative disclosures on the evaluation of the attorneys in a legal service print ad. Specifically, Kilbourne measured consumer perceptions of an attorney's ability and ethical standards in a legal service print ad. He found that the inclusion of the positively framed statement "Certified by the Texas Board of Legal Specializations" positively biased consumers' perceptions of the attorney's ability and ethical standards. Conversely, Kilbourne reported that ads containing the negatively framed statement "Not certified by the Texas Board of Legal Specialization" negatively biased the perceived ability and ethical standards of the advertising attorney.

Similar to Kilbourne, our study used the setting of a legal service print ad to test the impact of affirmative disclosure statements. However, major differences exist between Kilbourne's earlier

work and the current study. First, while Kilbourne examined consumers' perceptions of attorney ethical standards and abilities based on the disclosure statements, where our study focuses on how the communication message influenced consumers' perceptions of source credibility. In particular, Ohanian's (1990) Celebrity Endorser Scale was utilized to measure the source's credibility in terms of expertise and trustworthiness.

Source credibility was selected as the dependent variable because the effectiveness of persuasive communication is heavily dependent upon the credibility of the source. The importance of source credibility goes back as far as Aristotle, who introduced the notion that the credibility of the message source influences persuasion with ethos, comprised of "intelligence, character, and good will" (Cooper, 1932, p. 92). As an important component of message effectiveness, source credibility becomes increasingly important to advertisers as they attempt to overcome advertising clutter.

Further, there is ample opportunity for continued research with the effects of message framing (positive/negative) and source credibility. For example, Buda and Zhang (2000) found that when combined with presentation order, source credibility interacted with how product messages were framed. In light of its relevance and importance as a key construct in the communication and persuasion literature, source credibility was used to measure communication effectiveness of the affirmative disclosure.

The second major difference between Kilbourne's earlier work and the current study is the sample used. Kilbourne used undergraduate students to examine the persuasive effects of the affirmative disclosure. In contrast, the current study used a non-student sample derived from the general populace. Using a non-student sample added realism regarding the type of consumer who might seek out legal services and improved the overall generalizability of the study.

## IMPRESSION FORMATION THEORY

The theoretical development of this study's hypotheses is based on Impression Formation Theory. Heider (1958) noted that when impressions of other people are being formed, one focuses on the "distal environment" which includes dispositional and psychological properties such as actions, motives, affects, and beliefs. While the amount of information in an attorney ad may be somewhat limited or vague, people will continue to form impressions of attorneys given the available information (Kanouse & Hanson, 1972). Impression formation is germane to this study because the attorney-client relationship ensuing from the ad is very personal and involves the perception of another individual. In essence, the consumer will be forming an impression about an attorney who will likely render a highly personal and important service.

An important part of Impression Formation Theory is "positivity" and "negativity" bias. Research has empirically demonstrated a tendency for people to succumb to a positivity bias when forming their evaluations of specific individuals. For example, an individual who is a member of

a reference group that is unfavorably perceived (e.g., lawyers) tends to be evaluated more positively when assessed on an individual basis (Sears, 1983). Because attorney ads tend to promote individuals rather than lawyers in general, a positivity bias may result.

In contrast, research suggests that a negativity bias may occur where either extreme or negative attributes exist (Fiske, 1980; Reeder & Coovert, 1986) and Impression Formation Theory suggests negative attributes tend to be more heavily weighed when impressions are being made. Similarly, the affirmative disclosure that the attorney is not board certified is likely to stand out as both unusual and negative, thus creating a negativity bias against the advertising attorney. Given the contrasting effects of a positivity and negativity bias, the following hypotheses were developed:

| | |
|---|---|
| Ho1: | Subjects exposed to the ad with a positively framed affirmative disclosure will not evaluate the source higher on expertise-credibility than subjects exposed to the ad with a negatively framed affirmative disclosure. |
| Ho2: | Subjects exposed to the ad with a positively framed affirmative disclosure will not evaluate the source higher on trustworthiness-credibility than subjects exposed to the ad with a negatively framed affirmative disclosure. |

## THE EXPERIMENT

The goal of the experiment was to determine if a positivity and negativity bias impression was formed when subjects viewed a legal service advertisement. The bias was operationalized as the measured difference in perceived source credibility of the attorney after subjects independently read one of two affirmative disclosures (i.e., either board certified or not certified).

The experiment used two mock-up attorney print advertisements typical of those found in a yellow pages phone book. The ad manipulated the attorney's certification credentials. The experiment employed a factorial design with two levels for credentials, where a statement declared the attorney to be either "Board Certified in Personal Injury Trial Law by the Texas Board of Legal Specialization" or "Not Certified by the Texas Board of Legal Specialization." The ad copy included the following captions: "Attorney At Law," and specialization in "personal injury" for "auto and motorcycle accidents," "wrongful death," or "insurance claims." Other information in the ad included: "free initial consultation on personal injury claims," "weekend and evening appointments available," an address, and a phone number. A 2 ½ " by 3 ½ " color picture of the attorney was also included. An attorney was depicted wearing a gray business suit and was seated at a table in an office. Refer to Figure 1 for the mock up ads used in the experiment.

**Figure 1: Experimental Advertisements**


## INDEPENDENT VARIABLE

Two versions of the affirmative disclosure were created for the experiment. One version contained the statement, "Not Certified by the Texas Board of Legal Specializations" at the bottom of the advertisement. The second version of the ad contained the disclosure, "Certified by the Texas Board of Legal Specializations."

## DEPENDENT VARIABLE

Using two dimensions of source credibility identified by Ohanian (1990), the dependent variables were attorney expertise and trustworthiness. In the persuasive communications literature, the dimensions of the Celebrity Endorser Scale have been effective in attitude studies. Both dimensions are briefly operationalized as follows. Expertise is the extent to which the communicator is perceived to be a source of valid assertions and includes the source's competence, expertise, and qualifications. Trustworthiness is confidence in the communicator's intent and includes both trust and acceptance of the source's message. The original Celebrity Endorser Scale by Ohanian (1990) showed strong internal consistency (via confirmatory factor analysis) with estimates of .895 and .896 for trustworthiness and .885 and .892 for expertise. Reported correlations among the factors ranged from .319 to .621. Ohanian (1990) reported discriminant, convergent, and nomological validity for the measures (MTMM analysis included).

In the current study, source credibility was assessed using the dimensions of expertise and trustworthiness from Ohanian's (1990) Celebrity Endorser Scale. The items were scored on a

5-point scale using the anchors of "Not At All" = 1 and "Very" = 5, with a range for each dimension of 5-25.

Trustworthiness and expertise were selected as key items for measurement in this study because they appear to be attributes highly valued by consumers. For example, Smith & Meyer (1980) identified key attributes of attorneys sought by consumers, which included integrity and quality of service. Integrity of the lawyer and quality of the service were rated first and second in perceived importance. These two characteristics, integrity and quality, appear quite similar to the dimensions of source credibility in this study, trustworthiness and expertise.

The Cronbach Alpha and item-total correlation ranges for the two dimensions of the Celebrity Endorser Scale included in this experiment were: expertise, alpha =.907 with an item-total correlation range of .662 to .837 and trustworthiness, alpha =.865 with an item-total correlations range of .650 to .785. Items from the Celebrity Endorser Scale are presented below in Table 1.

**Table 1: Expertise and Trustworthiness Source Credibility**

| Trustworthiness (Cronbach Alpha = .865*) | Item-Total Correlation* |
|---|---|
| 1. undependable - dependable | .720 |
| 2. dishonest - honest | .716 |
| 3. unreliable - reliable | .717 |
| 4. insincere - sincere | .650 |
| 5. untrustworthy - trustworthy | .785 |
| Expertise (Cronbach Alpha = .907*) | Item-Total Correlation* |
| 1. not an expert - expert | .774 |
| 2. inexperienced - experienced | .766 |
| 3. unknowledgeable - knowledgeable | .794 |
| 4. unqualified - qualified | .662 |
| 5. unskilled - skilled | .837 |

Scale items used anchors of "Not At All" = 1 and "Very" = 5.
*Note: Scores reported from present study.

## METHOD

The experimental materials were pretested with 60 subjects. In the pretest, subjects provided feedback on: 1) the realism of the ads used; 2) the time allotted to view the ads; and 3) hypothesis guessing. Pretest subjects indicated that: 1) the ads seemed realistic; 2) 15 seconds was sufficient and appropriate time for viewing the ad; and 3) they did not know what was being tested.

The data were collected in individual's homes or places of work. A total of 309 subjects participated in this experiment. The subjects constituted a convenience sample from the general populace of a southwestern U.S. city of approximately 70,000 people. The median age of the subjects was 35 years and two-thirds (67%) were Caucasian. Subjects had a median household income of $25,000 and almost three-quarters (73%) had some college education.

Subjects were told that they would be shown an advertisement for an attorney. Subjects received one of the two mock-up attorney ads and were allowed to examine it for 15 seconds, after which the ads were removed and the survey portion of the study was administered. Based on pre-tests of the mock-up materials, 15 seconds was determined to be sufficient time for an individual viewing a yellow page ad to study the picture of the attorney and carefully read through the detailed information in the ad. Other studies using print advertising materials employed similar times, ranging from 10 seconds (e.g., Barrett, 1985) to 20 seconds (e.g., Forehand & Deshpande, 2001), depending on the amount of information contained in the print ads.

Approximately fifty percent of the subjects indicated that they had previously used an attorney while three-quarters had heard of attorney board certification. Further, forty-seven percent correctly defined the meaning of board certification, and fifty percent rated board certification as 'Very Important' on a five point Likert Scale with 1 = 'Very Unimportant' and 5 = 'Very Important.'

## ANALYSIS

Data were analyzed to assess if a positivity or negativity bias existed when the affirmative disclosure regarding the attorney's certification credential was manipulated. The hypotheses were tested with ANOVA and the results are presented below in Table 2. To test H1 and H2, the source credibility dimensions of expertise and trustworthiness were analyzed separately.

| | |
|---|---|
| Ho1: | Subjects exposed to the ad with a positively framed affirmative disclosure will not evaluate the source higher on expertise-credibility than subjects exposed to the ad with a negatively framed affirmative disclosure. |

Ho1 was rejected. Subjects rated the attorney in the "Board Certified" ad (mean=17.47) as having significantly more expertise ($F=22.62$; $p<.001$) than the "Not Board Certified" attorney

(mean=15.01). As a point of reference, the scores for both expertise and trustworthiness had a possible range of 5 (low) to 25 (high).

**Table 2: Summary of Means and ANOVA**

| Dependent Variable: Expertise | | | | | |
|---|---|---|---|---|---|
| Board Certified | Mean | Std. Dev. | n | | |
| Not Certified | 15.01 | 4.78 | 153 | | |
| Certified | 17.47 | 4.30 | 156 | | |
| Total | 16.25 | 4.70 | 309 | | |
| Dependent Variable: Trustworthiness | | | | | |
| Board Certified | Mean | Std Dev. | n | | |
| Not Certified | 11.53 | 3.52 | 153 | | |
| Certified | 12.65 | 3.68 | 156 | | |
| Total | 12.09 | 3.64 | 309 | | |
| Dependent Variable: Expertise | | | | | |
| Source | Type III Sum Sq. | df | Mean Square | F | Sig |
| Board Certified | 467.97 | 1 | 467.97 | 22.62 | .001 |
| Error | 6315.83 | 308 | 20.69 | - | - |
| Total | 88497.00 | 309 | - | - | - |
| Dependent Variable: Trustworthiness | | | | | |
| Source | Type III Sum Sq. | df | Mean Square | F | Sig. |
| Board Certified | 96.55 | 1 | 96.55 | 7.43 | .007 |
| Error | 3987.73 | 308 | 12.99 | - | - |
| Total | 49279.00 | 309 | - | - | - |

| | |
|---|---|
| Ho2: | Subjects exposed to the ad with a positively framed affirmative disclosure will not evaluate the source higher on trustworthiness-credibility than subjects exposed to the ad with a negatively framed affirmative disclosure. |

Ho2 was rejected. Subjects rated the attorney in the 'Board Certified' ad (mean=12.65) as significantly more trustworthy ($F=7.50$; $p<.007$) than the 'Not Board Certified' attorney (mean=11.53). See Table 2 above for means and results of ANOVA.

Because perceptual difference may have existed between users and non-users of legal services, a post-hoc analysis was conducted based on whether or not the subjects had previously used an attorney. Half of the subjects (49.8%) had previously used an attorney. No significant differences were found between users and non-users of legal services regarding perceived trust or expertise.

## DISCUSSION

### Summary of Results

The study focused on the effects of professional certification claims on the perceived credibility of an attorney in a print advertisement. Based on Impression Formation Theory, it was predicted that board certification statements would significantly bias subjects' perceptions of attorney trust and expertise. Regarding the certification statements, attorney source credibility was influenced by positively and negatively worded affirmative disclosure statements. This finding supports Impression Formation Theory, where a negative and extreme attribute was heavily weighed in forming an impression, while the positively worded affirmative disclosure yielded a positive impression. This result was also similar to that of Kilbourne (1990), who found a positivity bias among subjects who were exposed to a positively stated disclosure (e.g., attorney is board certified) and a negativity bias for those who viewed a negatively stated disclosure (e.g., attorney is not board certified). However, Kilbourne measured the effects on subjects' evaluation of attorney ability and ethical standards rather than source credibility.

One point should be noted regarding the mean scores for expertise and trustworthiness in this study. Overall, the mean score for expertise was considerably higher than those for trustworthiness. Given a midpoint of 15, the sources were rated slightly above the scale midpoint with regard to expertise (overall mean= 16.25) and well below the midpoint for trustworthiness (overall mean= 12.09). Overall, it appears the subjects perceived the attorney to be moderately credible as an expert, but less than credible in terms of trust.

### Managerial Communication Implications

Certainly, the scope of this study reaches beyond the legal field. In addition to the industries represented in the introduction of this paper (e.g., tobacco and fresh-juice industries), other industries have requirements pertaining to objective affirmative disclosures such as the Good

Housekeeping Seal of Approval for consumer goods or the American Dental Association's recommendations for toothpaste and related dental products. In each case, affirmative disclosures have been created to inform and protect consumers. Yet, the framing, omission, or inclusion of information contained in affirmative disclosures is likely to affect how consumers interpret the claims. Those involved in the creation of affirmative disclosures may want to conduct qualitative and quantitative research with its intended audience before communicating them to the public. For example, the misconception among some women that a low infant birth weight translates into gaining less weight for them during pregnancy could have been recognized before hand. Thus, the disclosure could have been reworded so that no perceived benefits could have been inferred (e.g., not gaining unwanted weight) and the disclosure would have been significantly more effective.

Overall, the results of the present study have significant implications for the use of disclosures in advertising. Similar to other affirmative disclosures (e.g., cigarette and non-pasteurized juice labels), it seems that the method of framing information may create consumer biases that are unintended by the advertiser. For example, affirmative disclosures for attorney advertising in this study had a dramatic impact on both perceived trust and expertise. While the positive disclosure statement did not specifically include information about the attorney's training, experience, or reputation, the resulting positive and negative bias effects suggest that the viewers over-generalized about the attorney's expertise and trustworthiness. The intent of public policy makers who mandated attorney disclosures was to provide additional decision-making information to consumers without any explicit intent to disparage non-certified lawyers. Yet, it seems that the current policy fell short of that goal. Public policy makers may want to carefully rethink how to protect consumers by keeping them more fully informed about the service offerings of attorneys without creating the unintended biases of negatively and positively worded disclosures in advertising. Affirmative disclosures become even more problematic when they are mandated, and may thus unintentionally become a form of deceptive advertising. Public policy makers must weigh the benefits of proactively informing consumers with the costs of potentially confusing them. One way to weight costs and benefits would be to require before-after impact studies to determine whether or not the efforts of affirmative actions achieved the objectives that were being sought.

Among legal service providers, the results offer important strategic considerations regarding the development of print advertisement copy. It is interesting that only a small number (roughly 5%) of attorneys in Texas are board certified within a legal specialization (Texas Board of Legal Specialization, 2000). For the remaining majority of non-certified attorneys, they may have to weigh the benefit of listing a specialization with the likely cost of a negatively worded affirmative disclosure (e.g., Not Board Certified) versus the opportunity cost and benefit of not including any information on specialization at all. As Smith & Meyer (1980) noted, consumers rated an attorney's area of specialty fourth in importance, after lawyer integrity (no. 1), service quality (no. 2) and promptness of service (no. 3). Perhaps it would be the lesser of two evils to salvage trust and expertise at the expense of the perceived lesser important criteria, legal specialization.

In sum, this research found empirical evidence of the unintended consequences of a well intended (but mandated) affirmative disclosure. By forcing legal service providers who communicate their specialty to indicate whether or not they are board certified, an unexpectedly strong negativity bias against non-certified attorneys was created. In a sense, the disclosure acted much like a warning label. While fully informing the public is important, particularly if the message is either technical or difficult to understand, public policy makers and advertisers alike must carefully consider the unintended consequences that may arise when additional information is disclosed.

## LIMITATIONS AND FUTURE RESEARCH

Several limitations were identified in this study and could be addressed in future research. The subjects comprised a convenience sample from one state (Texas) that had mandated requirements of affirmative disclosures for attorney advertising. Thus, the results obtained from this study would be more generalizable had a probabilistic sample been obtained from multiple states with similar requirements for attorney ads.

Another limitation was the use of mock-up ads rather than a magazine or packet with other competing ads. That is, having the subjects examine a single attorney ad may have increased their situational involvement.

Finally, advertisements in this study depicted an attorney who specialized in personal injury cases. Because consumer perceptions of attorneys may be influenced by the nature of the specialization, future research could replicate this study with other types of attorney specializations that have a more savory reputation than personal injury cases (e.g., a specialization in tax or estate planning).

## REFERENCES

Barrett, T. (1985). Interactive imagery and recall of advertisements: Interactive imagery, non-interactive imagery, and printed text. *Psychological Reports, 56*, 922.

Buda, R. & Zhang, Y. (2000). Consumer product evaluation: the interactive effect of message framing, presentation order, and source credibility. *The Journal of Product and Brand Management, 9*(4), 229-232.

Cooper, L. (1932). *The rhetoric of Aristotle: An expanded translation with supplementary examples for studies of composition and public speaking.* New York: Appleton-Century-Crofts.

Fiske, S. (1980). Attention and weight in person perception: The impact of negative and extreme behavior. *Journal of Personality and Social Psychology, 38*, 889-906.

Forehand, M., & Deshpande, R. (2001). What we see makes us who we are: Priming ethnic self-awareness and advertising response. *Journal of Marketing Research, 38*(3), 336-348.

Funkhouser, G. (1984). An empirical study of consumers' sensitivity to the wording of affirmative disclosure messages. *Journal of Public Policy and Marketing, 3*, 26-37.

Gerla, H.S. (2002). Issuers raising capital directly from investors: What disclosure does rule 10b-5 require? *Journal of Corporation Law, 28*(1), 111-141.

Heider, F. (1958). *The Psychology of Interpersonal Relations,* New York: John Wiley.

Hoy, M.G. & Stankey, M.J. (1993). Structural characteristics of televised advertising disclosures: A comparison with the FTC clear and conspicuous standard. *Journal of Advertising. June, 22*(2), 47-58.

Jacoby, J., Nelson, M. & Hoyer, W. (1982). Corrective advertising and affirmative disclosure statement: Their potential for confusing and misleading the consumer. *Journal of Marketing, 46*(1), 61-72.

Johar, G. V. & Simmons, C.J. (2000). The use of concurrent disclosures to correct invalid inferences. *Journal of Consumer Research. 26*(4), 307-322.

Kanouse, D. & Hanson, L. (1972). *Negativity in Evaluations*, New York: General Learning Press.

Kilbourne, W. (1990). Perceptual biases in affirmative disclosures in print ads. *Journal of Business Research, 21*, 131-141.

Kilpatrick, J. (1997). Specialist certification for lawyers: What is going on? *University of Miami Law Review, 51*, 273.

Miller, J. (1977). Are mandated disclosures deceptive advertising? *Journal of Advertising, 6*(1), 4-9.

Muehling, D.D. & Kolbe, R.H. (1998). A comparison of children's and prime-time fine-print advertising disclosure practices. *Journal of Advertising. 27*(3), 37-48.

Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising, 19*, 39-52.

Parker-Pope, T. (1997, April 27). Danger: Warning labels may backfire. *The Wall Street Journal*, B.1.

Reeder, G. & Coovert, M. (1986). Revising an impression of morality. *Social Cognition, 4*, 1-17.

Sears, D. (1983). The person-positivity bias. *Journal of Personality and Social Psychology, 44*, 233-249.

Smith, A. (1998). Warning Labels. *Progressive Grocer, 77*(11), 17.

Smith, R., & Meyer, T. (1980). Attorney advertising: A consumer perspective. *Journal of Marketing, 44*(2), 56-64.

*Texas Bar Journal*. (1998, October), Lawyer certification disclaimer comes to a vote. 878.

Texas Board of Legal Specialization. [Available on-line] www.tbls.org., 2000.

Wallace, J. & McKelvery, M. (1987). Regulating attorney advertising. *Texas Tech Review, 18,* 761-780.

Wilkie, W.L. (1987). Affirmative disclosure at the FTC: Communication decisions. *Journal of Public Policy and Marketing. 6*. 33-42.

Wilkie, W. L. (1986). Affirmative disclosure at the FTC: Strategic Dimensions. *Journal of Public Policy and Marketing. 5*. 123-145.

Wilkie, W.L. (1985). Affirmative disclosure at the FTC: Objectives for the remedy and outcomes of past orders. *Journal of Public Policy and Marketing. 4.* 91-111.

Wilkie, W. (1982). Affirmative disclosure: Perspectives on FTC orders. *Journal of Marketing and Public Policy, 1*, 95-110.

# LEGAL AND FINANCIAL ISSUES IN SMALL HOSPITAL FAILURE: A THEORETICAL FRAMEWORK FOR AVOIDING CLOSURE

**Sarah T. Pitts, Christian Brothers University**
**Rob H. Kamery, Nova Southeastern University**

## ABSTRACT

*The impact of the Prospective Payment System and increased enrollment in HMOs and PPOs has placed greater pressures on hospitals for discounts. In a market characterized by increased price competition, the most efficient hospitals will survive and others fail. An increase in the number and frequency of hospitals involved in merger activity suggests that merging is a way to become more efficient rather than closing. This paper presents a theoretical framework investigating the cost structure of merged and closed hospitals prior to mergers and closures and uses a cost differential model to determine all costs relevant in the decision to close or to merge. Pressure from patients and HMOs to lower costs has forced many community hospitals to consider closing. It is recommended that closing hospitals should consider merging in order to continue serving their community.*

## INTRODUCTION

Large HMOs, such as Kaiser Permanente, Etna/U.S. HealthCare, Blue Cross, and PacifiCare, have redefined health care in the U.S. National health care inflation has ranged from twenty to twenty nine percent depending on geography (Omachonu, 1998). A relatively few major procedures account for the rising share of the nation's medical costs. Some of the higher costs are for treatments such as MRI (Magnetic Resonance Imaging), CT scans (Computerized Tomography), nuclear medicine, liver transplants, care for premature newborns, bone marrow transplants, and coronary bypass surgery. Hospital bills for treatments such as these may exceed $100,000. Like other businesses, hospitals must compete for land, labor, capital, and entrepreneurial ability. Many community and regional hospitals lack the above mentioned factors. Therefore, small community hospitals and large acute care medical centers are hoping to enhance quality, reduce costs, eliminate unnecessary duplication and serve more people by working together.

One in 12 American community hospitals either merged, was acquired, or acquired another hospital in 1995, according to the pressure group Public Citizen. Of the 447 hospitals involved in such activities, more than two thirds were in five states: California, Texas, Florida, Wisconsin, and Ohio (Firshein, 1996). Many of these mergers and acquisitions involved Columbia/HCA. According to the American Hospital Association's 1997 hospital statistics, the number of American community hospitals declined from more than 5,700 in 1984 to less than 5,300 in 1996. Approximately twenty percent of all community hospitals have changed ownership since 1995 (AMA, 1998).

A series of Supreme Court decisions beginning in the 1970s has made it clear that the health care industry is not immune from antitrust laws. There are two primary antitrust provisions applicable to hospital mergers: Section I of the Sherman Act, which prohibits contracts, combinations, and conspiracies in restraint of trade, and Section VII of the Clayton Act, which prohibits mergers and acquisitions of stock or assets that "may substantially lessen competition" or "tend to create a monopoly" (Albert & McCarthy, 1984). The Justice Department and the FTC along with many citizens'groups claim that hospital "mega mergers" are eliminating competition in rural communities. However, the Justice Department is on a four- case losing streak with hospital mergers it has tried to stop for antitrust reasons (Hallam, 1998). Health care reform and legislation are not keeping pace with the growing number of mergers and acquisitions. In 1988, the Justice Department challenged two mergers in Roanoke, Virginia and in Rockford, Illinois. Although the hospitals in Roanoke were allowed to complete the merger, Rockford Memorial and Swedish American Hospital were prevented from merging. After the antitrust challenge in 1988, the number of mergers declined, an indication that hospitals feared antitrust challenges (Greene, 1992).

There are a number of different types of hospitals. State and local hospitals are owned and operated by municipalities, counties, or states. In heavily populated or urbanized areas, they tend to serve mainly the indigent and low income patients. The proprietary hospital is a business enterprise, guided primarily by profit considerations in determining prices and service range (Sorkin, 1986). Columbia/HCA operates 194 proprietary hospitals nationwide. Unlike non profit hospitals, proprietary hospitals (for profit) operate under a profit maximization structure. The amount and cost of all services provided at each facility is highly regulated by the company that owns the hospital. Larger and more cost efficient hospital firms have a competitive advantage over smaller community hospitals. Therefore, many rural and smaller hospitals are battling to stay open. Wise (1998) states that mergers should be seen as a "window of opportunity" for less efficient hospitals. Local hospitals, through merging, will better serve the surrounding community with a wider range of services and more physicians. The larger acute care hospitals will gain a larger market share by expanding services away from the metropolitan areas. The desire to consolidate has not been limited to massive, nationwide, for profit hospitals driven by monetary incentives. Smaller community hospitals and larger, non profit teaching and research hospitals, both facing extreme economic

challenges, are seeking to form partnerships with like minded institutions (Methodist Health Care Systems, 1998).

In order to ensure long run survival, hospitals must achieve operational efficiencies. It may be argued that operational efficiencies may be reached through the mergers with "like-minded institutions." The hospitals involved in mergers were located in or around the same metropolitan areas, which is necessary to achieve operational efficiencies at the service level. A cost differential model is used to test the hypothesis proposed above. This model examines all costs that have an effect on the hospital's operational structure as well as costs that may have a societal impact. The model is divided between the costs of closing and the costs of merging. Included in the discussion of cost structure are the closing hospital's large financial losses, poor operating revenue, excessive costs and prices, lack of investment in plant, and lack of patients. Also, this model presents quality and hospital satisfaction as vital elements in marketplace success. Hospitals have traditionally used patient satisfaction studies and community awareness studies to assess consumer needs.

## LITERATURE REVIEW

Previous studies explaining hospital merger activity offered ambiguous findings, and mostly suffered from a lack of support in economic theory and shortcomings in the analytical procedures (Mobley, 1990). Empirical studies focused on hospital wide efficiency (length of stay, occupancy, admissions per bed, and full time equivalent staff per patient day) rather than inter hospital differences in efficiency (Shortell, 1988; Shortell & Hughes, 1988; Becker & Sloan, 1985). A considerable portion of the merger literature is devoted to empirically testing the benefits of multi-hospital system affiliation, and comparing MHS hospitals and independent hospitals on hospital specific economic performance outcomes (Ermann & Gabel, 1984).

Research on the motivation for hospital mergers usually concludes that the underlying reasons why hospitals merge are monetary (Miller, 1996). Although the monetary need may act as a catalyst in starting the merger process, many researchers do not report why there is a monetary need. Improvements in the health of older populations have been accompanied by substantial growth in medical expenditures (McClellan & Noguchi, 1998). Like any other industry, the hospital industry is experiencing a period of technological change. McClellan & Nogochi (1998) define high tech innovations as those with large fixed or marginal costs when they are applied. Far more medical technologies have large fixed development costs. Hospitals with the latest technology and break through treatments will better serve their patients than hospitals lacking this technology. Thus, the ability to serve patients becomes a critical issue in the argument to merge or close a hospital. Studies conducted by McClellan & Noguchi (1998) found that an outcome gap will develop between hospitals that "lead" and those that "trail" in the diffusion of new knowledge about readily available treatments. The leading hospitals are likely to be those that treat high volumes of

patients, thus allowing their medical staff to be more knowledgeable and specialized. The study concludes that patients treated at hospitals slower to adopt new technology will tend to be treated with the technology later, if at all. Results from the study by McClellan & Nogochi (1998) prove that smaller hospitals with lower capital budgets will not compete nor survive against a multi-hospital system.

In addition to rapid technological change, hospitals are also experiencing an increase in the involvement of managed health care providers. HMOs and PPOs have forced hospitals to cut costs. While many support the reduction in costs, it has left some hospitals on the verge of bankruptcy. It is at this point that many hospital administrators would make the decision to close (O'Cleverly, 1993). The hospitals forced to close were relatively small; the median size for each hospital was approximately 60 beds. Closure was not an outcome that resulted from one year of bad performance. It usually took at least three years of deteriorating operations for a hospital to close (O'Cleverly, 1993). Most of the studies supporting closure for near bankrupt hospitals point to years of inefficiency and overall operational ineffectiveness. If these hospitals were to merge, they most likely would be closed anyway.

Contrary to O'Cleverly's findings (1993), some researchers have stated that for profit hospital owners are able to bring in the necessary capital and expertise to troubled hospitals. Many hospitals studied were bankrupt and would most likely have closed had they not been bought by another organization (West, 1998). Other hospitals converted because their boards believed they would not be able to survive in the long run as stand alone facilities. Once integrated into a larger health network, the hospitals studied (rural and community) were given the necessary upgrades in technology and staff to support the surrounding communities. The findings of Gerson & Vernanec (1997) also illustrate the need for community hospitals to merge with more efficient providers of health care rather than closing. A continued increase in outpatient care and further reduction in the nursing staff at many hospitals has resulted in service that is less than desirable. The nursing staff is the backbone of the hospital. Without a proper nursing staff the hospital cannot operate effectively. Multi-hospital systems are able to provide the necessary staff to support the needs of their hospitals, thus supporting the community. The studies by Gerson & Vernanec (1997) and West (1998) illustrate that cost effectiveness is a benefit from merging, but most importantly, the overall quality and service a hospital provides to patients is greatly improved.

Hospital expenditure increases have been the subject of much criticism over the last decade. The majority of current health care literature does not discuss the major components of expenditure increases in health care. Studies either implicate Medicare and Medicaid or the growing number of managed health providers. These studies, however, lack a solid foundation in applied economic theory. Consideration for changes in supply and demand, and for the costs of goods and services, are ignored. Hospital expenditure increases are made up of four basic components. First, there are higher prices for hospital inputs used in the delivery of patient care. These inputs include food, fuel, supplies, labor, and capital goods. Next, the number of hospital admissions and days of hospital care

have been rising. The third component is often called the service intensity of hospital services. This means that hospitals are continually adding services. Slow productivity increases make up the fourth component. Increases in utilization and intensity rather than staff salaries have been responsible for the rapid increase in total outlays for hospital services (Sorkin, 1986). Furthermore, Sorkin (1986) attributes the surplus of physicians to an overall increase in health care costs. A surplus of physicians would mean that the number of patients per doctor would likely decline. Physicians would then increase individual utilization rates in order to maintain income despite a declining patient load. Sorkin (1986) believes this could result in more surgery, a larger number of follow up office visits, and more ancillary tests and procedures.

The effects of mergers on the organizational culture of the hospitals involved can be an important factor in determining the success of the merger. Many researchers fail to consider this "human side" of mergers. This is unfortunate because research on mergers in general--not limited to the medical field--indicates that as a result of uncertainty about what the future will bring, mergers have been associated with decreased organizational satisfaction and productivity and increased absenteeism and stress (Wise, 1998). Columbia/HCA, one of the largest health networks, has appointed task teams to conduct pre merger surveys on organizational fitness. It is for this reason that Columbia/HCA and many other large hospitals are able to merge with smaller rural hospitals. Wise (1998) reported that if an organization is stable, research has demonstrated that attempts to change the culture of that organization are bound to fail.

Structural cost functions have been used extensively since the theory of multi-product firm behavior was developed by Baumol (1977); Panzar & Willig (1977); and Baumol, Panzar & Willig (1982); and employed by Caves, Christensen & Treatheaway (1980); Bailey & Friedlaehnder (1982); Cowing & Holtman (1983); Eakin & Kniescher (1988); and Eakin (1991). Cowing & Holtman (1983) applied the theory to the hospital industry and reported falling marginal costs for various levels of each of the hospital outputs for 340 New York hospitals. Eakin (1991) and Eakin & Kniescher (1988) used a non minimum cost function to estimate allocative inefficiency for 331 U.S. hospitals.

When considering the external factors that influence hospital administrators in their decision to merge or to close, most studies include HMOs and PPOs. The predominant HMO model is organized as a group practice plan in which physicians are salaried (Sorkin, 1986; Hammonds & Jackson, 1998). This model assumes that the HMO would be expected to institute control mechanisms to keep utilization at a minimum. Also, salaried physicians do not gain financially by hospitalizing patients. These aspects of an HMO structure can make hospitals more efficient once merged with a major health management institution. Patients can expect to benefit from mergers with larger health care organizations. Economies of scale allow for a wide variety of diagnostic procedures and treatment services to be provided on an outpatient basis (Sorkin, 1986). Critics of HMOs claim that patient care is actually diminished by reduced hospital stays, and by an increase in the number of procedures performed on an outpatient basis. Merging with a larger health

organization, according to these critics, can only hurt the community atmosphere and patient physician relationships that smaller hospitals offer.

The other group of econometric models consists of behavioral models which have no clear functional form. The behavioral cost function was developed in the 1970s (Lave & Lave, 1970; Lave & Lave, 1978). This method recognizes that hospital production costs are influenced by numerous factors, such as non profit status or teaching status, in addition to input prices and outputs. Past merger studies using behavioral models investigated a comparative analysis of financial performance, costs, and productivity of independent versus system affiliated hospitals. Cohen (1982); Levitz & Brooke (1985); and Mobley (1990) are the selected examples in this group.

Administrators of hospitals and all health care institutions must model their organizations after a set of standards. It is this "model" hospital that gives support to the theory that troubled hospitals should merge rather than close. The rules that have worked for so many years in health care are no longer valid today. Today's health care leaders must master a new set of behaviors if they are to unleash the true potential of their workforce (Omachonu, 1998). Trends among troubled hospitals on the verge of bankruptcy show that a downsizing of the workforce was a common way to temporarily avert closing. According to Omachonu (1998), if a health care organization downsizes its work force, it must also downsize the work (tasks). Attempts such as downsizing only create new problems for the already troubled hospital. Patient care and the quality of that care will decline. This is what so many opponents of hospital mergers fail to realize. Once the troubled hospitals close, there will still be patients and the need for a hospital in that particular community. A larger health network can only improve the quality of care those patients had been receiving. Larger hospitals bring better managers and supervisors. If the smaller hospital had strong leadership, then the question of closing would be irrelevant. The mission, vision, and values of a health care organization are meaningless unless management makes a deliberate effort to interpret them and connect staff to their meanings. This interpretation and connection can only be achieved through leadership by example and training (Omachonu, 1998).

As previously noted, patient care and patient satisfaction are extremely important to the success of a hospital. Objective measures of quality can be hard to come by when evaluating the quality of clinical care in a hospital. Few studies have investigated the differences in influences of satisfaction between users, such as hospital patients, and observers, such as hospital visitors (Oswald, Turner & Snipes, 1998). Most patients and visitors measure hospital quality based on the facilities and personal care. Most would agree that the quality of hospital facilities would be greater in larger metropolitan hospitals. Conversely, patients at smaller hospitals feel nurses give them more attention during a typical day than those patients at larger facilities. According to Dollinsky & Caputo (1990), other models of hospital quality focus on four dimensions of service quality: facility related, conformity to standards, timeliness, and human factors and behavioral characteristics. Health care customers typically associate excellence with perceptions of human factors and behavioral characteristics, including friendliness, timeliness, and a staff's perceived

knowledge. Models such as the one described are often dismissed by many in the health care industry because attitudes and behaviors are difficult to quantify, but they greatly influence customer service quality perceptions (Dolinsky & Caputo, 1990; Oswald, Turner & Snipes, 1998). It should be noted that hospital administrators are reluctant to change hospital operations based on quality models and surveys because one patient may have many hospital staff members responsible for providing care. Thus, studies based on quality are not always a reliable tool for hospitals deciding to merge or close.

In May of 1998, United HealthCare Corporation agreed to acquire Humana. This merger provided 10.4 million people with full risk managed care health coverage (Burton & Lipin, 1998). Burton & Lipin (1998) successfully illustrate the theory upon which this study is based. United HealthCare and Humana are compared to each other based on stock performance and net income. It is obvious from the size of United HealthCare that it exceeds Humana in stock price, number of employees, net income, and sales. Burton & Lipin (1998) report that United Health Care's stock was stable over much of 1997 in a range of $45 to $60 per share. The sales figure for 1997 reached $11.79 billion with net income of $460 million. Unlike United HealthCare, Humana stock has barely reached $30 per share. Humana had only $7.88 billion in sales and net income of $173 million (Burton & Lipin, 1998). Administrators hope this mega merger will increase profits, and at the same time lower medical costs for patients. Unlike many articles describing health care mergers, Burton & Lipin (1998) list the overall cost of the merger for United HealthCare. Humana shareholders will receive 0.5 United shares for each of their own shares. Each Humana share is then valued at $31.25. The total transaction fee is estimated at $5.5 billion (Burton & Lipin, 1998). The motive behind this merger is almost identical to other health care mergers. It has become increasingly more difficult for insurers to lower medical costs by limiting patient days in the hospital. Instead of reducing hospital stays, officials have found it more profitable to team up with other providers and cut their duplicate administrative costs (Burton & Lipin, 1998).

Not all mergers benefit the companies involved. Many doubt that huge mergers will increase productivity. Mergers may actually do as much harm as good (Passell, 1998). Conglomerate mergers no longer receive as much scrutiny as horizontal mergers. Horizontal mergers have the potential to unite competitors. Much of the concern raised over horizontal mergers comes with the possibility of restrictions on output and price increases (Passell, 1998). Passell (1998) further states that mergers are more closely linked to fads and egos than they are to cost savings or marketing synergies. Examples of mergers that have not been successful include the Wells Fargo and First Interstate Bancorp acquisition in 1996, Quaker Oats and Snapple in 1994, and the Novell WordPerfect merger in 1994 (Passell, 1998).

Finally, several articles and reports provide evidence that a decision to close a hospital is one of the worst decisions a board could make. The decision to close generally is made too rapidly according to the British Medical Journal (Smith, 1996). Smith (1996) stressed that hospitals have more to gain than lose from a merger if management is set in trying to ensure that the right

conditions exist to successfully merge. Management of failing hospitals usually waits too long to correct crucial operational problems. The majority of hospitals that closed from 1989 to 1995 faced large financial losses. Median return on total asset ratios for hospitals that closed during this period was below American hospital industry medians (O'Cleverly, 1993). Poor operating margins may be attributed to poor operating profitability. It was noted in O'Cleverly's (1993) report that hospitals that closed might have survived if substantial sources of non operating income such as government subsidies, investment income, or gifts had been obtained.

Deteriorating capital resources, lack of patients and excessive price force smaller hospitals to close. However, recent trends suggest that the profile of hospitals that close may change in the future. It appears that hospitals forced to close may be better-managed care facilities (Firschein, 1996; Richards, 1988; and O'Cleverly 1993). An example of a hospital forced to shut down after a halt in Medicaid payments is Mary Thompson Hospital in Chicago. Mary Thompson Hospital was a 203-bed inner city institution with a heavy concentration of public aid patients. When the Medicaid payments stopped, the hospital had no funding. If Mary Thompson Hospital merged with a larger health care network, then it could specialize in inner city care while receiving funding from the newly formed partnership (Richards, 1988).

## THE MODEL

A cost differential model may be used to determine all costs that are relevant in the decision to close or merge a hospital. This model is derived from traditional cost accounting models which separate value added costs from non value-added costs. Merchandising firms that must decide if a particular segment or product line should be discontinued or expanded commonly use this approach. The traditional model intentionally does not account for sunk costs. The purchase of land and equipment would be ignored. The cost differential model, while using the same principles, must be adapted to fit the hospital industry. This means that some sunk costs in health care are relevant in decisions concerning the merging or closing of a hospital. Opportunity costs must also be determined before any decisions are made.

Due to the costs of continued service and specialization, within the last few years hospitals have started to aggressively advertise their particular services. For example, the Memphis, Tennessee metropolitan area has three major hospitals. Each hospital claims to provide specialized care. Saint Francis Hospital advertises its stroke emergency care and assisted living facilities. Methodist Le Bonheur offers a physician referral service. Le Bonheur is known as a leading children's hospital. Baptist Hospital operates one of the largest health care networks in West Tennessee and Northern Mississippi. Health care organizations are spending hundreds of billions of dollars on marketing, advertising, and promotional efforts aimed at attracting new customers (Omachonu, 1998). Media attention is expensive. Smaller community hospitals do not have these

funds. For example, Panola Hospital in Mississippi (located about fifty miles south of Memphis) is a small, rural hospital. It is struggling to retain patients. Unfortunately, Panola Hospital will not survive against the Baptist health network. A merger with Baptist or another large institution would enable Panola to continue serving the community through specialized care. Service is the competitive edge for any business including hospitals (Omachonu, 1998).

Every hospital will have managers and administrators that are ineffective. However, smaller hospitals will experience the effects of poor management before larger hospitals do. In the era of for profit hospitals, many management teams are comprised of physicians that are employed by the hospital. According to U.S. Department of Commerce statistics, physicians determine how more than 75 percent of the total health care dollar is spent by deciding what treatment regimen a patient follows and where care is given. Commerce Department statistics also illustrate that physicians control nearly 40 percent, or $363 billion, of expenditures for hospital care (Scott, 1997). Rural and community hospitals are forced to close because they are not guided by managers who have first hand knowledge of patient treatments and care. This is not to say that physician managed hospitals are operating most efficiently. Hospital managers also resist a host of sensible innovations. When four hospitals link up in a community, for example, they should not need (but often retain) four trauma helicopters or burn units. Also, troubled hospitals do not understand that half the work done by registered nurses can be delegated to lower cost workers (Miller, 1996).

Insurers and HMOs are becoming very aggressive in negotiating with hospitals. The high rate of managed care infiltration in Massachusetts over the last ten years has forced over one third of the hospitals to close. As more people enroll in HMOs, fewer bed-days will be required and premium reductions offered by HMOs will reverberate back through the provider community, eventually forcing the elimination of the least efficient providers of medical service (Franklin, 1998). Many smaller hospitals cannot afford to stay open given the pressures from HMOs.

While patient costs for treatments are important, this model focuses on the costs to the hospital. Most cost models would consider the implementation of laser surgery equipment to be a sunk cost. It is actually a key component of this model. The financial burden on a smaller hospital of purchasing such equipment would be considerable. The smaller hospital must focus on the cost of implementing such equipment until the use per patient breaks even with the purchase price. Most likely this would not happen. A smaller hospital would not be able to afford the latest technologies even though it would increase patient care. Larger health care networks have found ways to implement the latest technologies at reduced costs. For example, a new artificial knee joint has been developed to replace the older artificial model. Five medical suppliers will carry this joint. Progressive hospitals force orthopedic surgeons to agree on one supplier for artificial joints, paving the way for huge purchasing discounts (Miller, 1996).

## QUALITY CONTROL COSTS

The focus on quality performance, a trend bordering on impatience on the health plan front, is sure to determine who leads and who survives among hospitals (Gerson & Vernarec, 1997). Maintaining quality control is costly, but necessary. Many people believe that most rural and community hospitals leave much to be desired with respect to quality. Hospital quality, while related to other service industries, has unique dimensions. Consumers (patients) and observers (visitors) use facilities related quality and human factor quality to gauge the quality of hospital service (Oswald, Turner & Snipes, 1998). Many smaller hospitals do not have the funds or the resources to renovate facilities and patient rooms. They may also lack the staff needed to adequately care for multiple patients. Retaining a large staff is expensive. When hospitals are on the verge of bankruptcy and/or closure, excess staff is the first to be cut.

There is a need for medical care in all communities. When failing hospitals decide to close, an opportunity cost arises. The hospital building may be sold or it may remain empty for years. The community will still be without hospital care in either case. If the hospital decided to merge with a larger hospital network, the building would serve its original purpose and the community would benefit by having a hospital.

In the hospital industry, high costs usually result in high prices. Hospitals that closed generally had higher charges. More of the hospitals that closed were classified as rural and had lower wage and salary costs. Prices increased sharply in the year prior to closure. These hospitals had extremely low levels of investment in net fixed assets, which suggests that they had not kept pace with technological developments. This failure may have driven medical staff and their patients away (O'Cleverly, 1993).

## RESULTS

The cost differential model presented develops the theory that hospitals should merge rather than close. Many smaller community hospitals do not have the necessary resources and funding to continue operating in a highly competitive industry. The results from the cost model document this to be the trend.

As stated in the model, many rural and community hospitals have been forced to close because of ineffective management and overall inefficient operating procedures. Many of the problems surrounding ineffective management would be eliminated through merging. Experienced managers at the larger health care institutions would be able to run the troubled hospital as a business. This would be the first step in rebuilding operational structure at the community hospital level. The management of the partner hospital could then bring in an adequate-size staff. The rural

hospital would no longer responsible for paying the hospital staff. Funding for such expenditures would be allocated to each hospital in the network.

The rising cost of medical procedures is another compelling reason why troubled hospitals must merge rather than close. Community and rural hospitals are not able to raise the capital necessary to finance the latest technologies. It makes sense for the smaller hospital to develop a partnership with a larger hospital in the surrounding area. Both hospitals would benefit. The community hospital would not have to finance expensive equipment, and the larger hospital could increase market share. Technological expenditures are the major expenditures at any hospital, regardless of size (Omachonu, 1998).

In addition to the cost of technological advancement, there are costs of maintaining the facility. The model groups this cost under quality control costs. A hospital cannot properly serve the community if it is using an outdated and deteriorating building. This only intensifies the hospital's failing image. Through a merger with a larger health network, the smaller hospital would not solely bear the burden for facility renovation and upkeep. Many large hospital networks are closing the older facilities only after a new complex has been finished, usually in the same area (Methodist Health Page, 1998). This merger would then benefit the community by increasing hospital services. Spillover effects would include the creation of new jobs, and possibly bring businesses to the area.

Many hospitals rely on advertising and other promotional campaigns to attract new patients. This is not an option for most community and rural hospitals. If a smaller hospital merges with a larger hospital network, the costs of advertising and promotional campaigns would be sponsored by the partner hospital. The partner hospital would have a strong interest in seeing that the smaller hospital is a successful addition to the network, thus the community hospital would receive enough media support to attract new patients.

## CONCLUSION

Merging is a win win situation for most hospitals involved. The smaller hospital no longer must cut costs at the expense of patient care. The capital and resources available from the parent hospital would lead to an overall hospital expansion. Additional physicians and nurses could be retained. Needed technological improvements would be made, greatly increasing the level of care provided to each patient. The option of specialization in specific emergency needs or areas of patient care would attract new patients as well as additional staff. The community hospital would not specialize in acute care. Patients needing this type of care would be transferred to the parent hospital. This is a way that hospitals attempt to maximize overall efficiency. Also, larger hospital networks have been able to follow their acquisitions with deals and discounts with suppliers, giving the entire chain the best prices enjoyed by any of its partners prior to any deals (Kenkel, 1995). In

a sense, the community and rural hospitals do not have to avoid costs when affiliated with a larger provider. Avoiding costs was the downfall of many regional hospitals. A hospital cannot provide the best care for its patients if necessary expenditures are not permitted. Closing a hospital leaves a deserted building, and a community without needed medical care. It is in the best interest of rural communities if hospitals on the verge of closing decide to merge with larger health care networks.

## REFERENCES

Alexander, J. & M. Morrisey (1987). Hospital participation in multi-product systems. *Advances in Health Economics and Health Services Research, 7*, 33-38.

American Hospital Association. Retrieved July 8, 1998, from http://www.aha.org

Alpert, G. & T. McCarthy (1984, April 29). Applying traditional antitrust analysis to changing markets, *The Wall Street Journal*, A-2.

Bailey, E. & A. Fredlaender (1992). Market structure and multi-product industries. *Journal of Economic Literature, 20*, 343-349.

Baumol, W., J. Panzor & R. Willig (1982). *Contestable markets and the theory of industry structure*. New York: Harcourt Brace Jovanovich.

Bays, C. (1996). The determinants of hospital size: A survivor analysis. *Applied Economics, 18*, 46-51.

Becker, E. & F. Sloan (1985). Hospital ownership and performance. *Economic Inquiry, 23*(1), 242-252.

Burton, T. & S. Lipin (1998, May 29). United HealthCare to acquire Humana, *The Wall Street Journal*, A 3.

Caputo, R. & A. Dolinsky (1990). The role of health care attributes marketing and demographic characteristics in the determination of health care satisfaction. *Journal of Health Care, 9*, 89-102.

Caves, D., L. Christensen & M. Tretheway (1982). Flexible cost functions for multi-product firms. *The Review of Economics and Statistics, 63*(2), 478-482.

Cowing, T. & A. Holtman (1983). Multiproduct short run hospital cost functions: Empirical evidence and policy implications from cross section data. *Southern Economic Journal, 49*(3), 74-98.

Eakin, K. (1988). Allocative inefficiency in the production of hospital services. *Southern Economic Journal, 58*(2), 105-115.

Earmann, D. & J. Gabel (1984). Multiproduct systems: Issues and empirical findings. *Health Affairs, 3*(1), 68-83.

Franklin, A. (1998, Winter). Doing it all in the public eye: A comparative analysis of California district hospital affiliations. *Journal of Health Care Finance,* 175-197.

Firshein, J. (1996). Hospital Mergers Booming in USA. *Lancet,* 347, 55-57.

Gerson, V. & E. Vernarec (1997). Are we squeezing the life out of hospitals? *Business and Health*, 65-67.

Greene, J. (1998, March 19). Do mergers work? *Modern Healthcare,* 35-36.

Hallam, K. (1998, April 27). FTC and hospital mergers. *Modern Healthcare*, 106-111.

Hammonds, K. & S. Jackson (1998, January 12). Health care: Prognosis 1998. *BusinessWeek,* 34-38.

Kenkel, P. (1995). The state of healthcare in America 1995: Hospitals, business and health. *Medical Economics* (Special Edition), 126-153.

Lave, J. & Lave, L. (1970). Hospital cost functions. *American Economic Review, 3*, 587-612.

Merger Madness. (n.d.) Retrieved July 10,1998, from http://www.methodisthealth.com

McClellan, M. & H. Noguchi (1998). Technological change in heart disease treatment: Does high tech mean low value? *The American Economic Review, 5*, 212-230.

Miller, M. (1996, December 2). Taking our medicine, *New Republic,* 64.

Mobley, L. (1990). *Multihospital systems in California: Behavior and efficiency*, Unpublished doctoral dissertation, University of California, Santa Barbara.

O'Cleverly, W. (1993, April). More efficient hospitals are closing. *Healthcare Financial Management,* 67-72.

Omachonu, V. (1998). *Total quality productivity in healthcare organizations* (Second Edition). Norcross, Georgia: Institute of Industrial Engineers and the American Society for Quality Control. Unpublished manuscript.

Oswald, S., D. Turner & R. Snipes (1998, Spring). Quality determinants and hospital satisfaction. *Marketing Health Services, 2*, 42-48.

Passell, P. (1998, May 12). When mega mergers are mega busts, *New York Times*, (18), 3.

Richards, B. (1998, May 3). Many hospitals feel financial strain as more of their patients need public aid, *The Wall Street Journal*, A-1.

Scott, J. (1997). When opposites attract: Will Americans accept for profit/not for profit mergers? *Healthcare Financial Management, 9*(3), 23-25.

QShortell, S. (1988). The evolution of hospital systems: Unfulfilled promises and self fulfilling prophesies. *Medical Care Review, 9*(3), 324-341.

Smith, J. (1996). Merging hospitals can benefit everybody. *British Medical Journal, 1*, 55-56.

Sorkin, A. (1986). *Health care and the changing economic environment*. New York: Heath Publishing.

West, K. (1998). Motivation for hospital conversion. (n.d.) Retrieved July 10, 1998, from http://www.projhope.org

Wise, K. (1998). Hospital mergers: Anxiety and opportunity. (n.d.) Retrieved July 10, 1998, from http://www.prsa.com

# ETHICAL ISSUES
# for Volume 7, Number 2

# ETHICAL ISSUES
# for Volume 7, Number 2

# ETHICAL, LEGAL AND SOCIAL ISSUES OF GENOMIC RESEARCH: STRIKING A BALANCE BETWEEN SCIENCE AND LAW

**Le Von E. Wilson, Western Carolina University**


## ABSTRACT

*As the scale and complexity of genomic research have increased, consensus has been more difficult to achieve and the law has lagged behind, thus, providing no clear resolution to the inevitable disputes. This paper explores the legal, ethical, and social issues surrounding genomic research. The paper examines the conduct of researchers against the backdrop of history and law, and attempts to foster a greater awareness of the legal and ethical challenges facing genomic researchers. The paper is designed to educate and inform genomic researchers and scholars about the legal and ethical implications of the decisions they make.*

*A variety of legal, ethical, and social issues relate to privacy and confidentiality of genetic information - who owns and controls genetic information? Societal concerns arising from genetic research focus on fairness in the use of genetic information by insurers, employers, courts, schools, adoption agencies, and the military, among others. Who has access to personal genetic information, and how will it be used?*

*The science of genetic research also raises issues of equal protection and due process under the United States Constitution. To that end, the paper explores and discusses a wide range of legal, ethical, and social issues pertinent to the Human Genome Project that could be used to develop educational programs, policy recommendations, or possible legislative solutions.*


## INTRODUCTION

The author does not presume to be able to provide answers to all of the questions that are posed herein. It is the author's hope, however, to raise issues on which future discussions may focus. The subject matter is so new that there are no great lines of tradition to which we may turn in trying to settle the question of moral rights and wrongs here. We have to start more or less from the beginning (Holland & Kyriacou, 1993). So rapid are the advances and so sophisticated are the details of the science and the explanation of the technology, that even an informed lay person finds it difficult today to comprehend exactly what is occurring.

The scientific issues are well ahead of the ethical, legal, and social issues. Ethical, legal and social issues are difficult in themselves and even more difficult because they involve all communities, not just the scientific ones. There are challenges for congressional and legislative branches, executive branches, the judicial branches, and the administrative branches of government. In fact, the issues are so pervasive that they involve every process - political and otherwise - to address them. The societal concerns arising from the new genetics are, of course, privacy and fair use of genetic information, as well as the psychological effect of having personal genetic knowledge.

## HISTORICAL DEVELOPMENT

*Genomics* is an unusual scientific term because its definition varies from person to person. According to Campbell and Heyer (2003), the root word "genome" is universally defined as the total DNA content of a haploid cell or half the DNA content of a diploid cell. You would think that the discipline genomics would be the study of genomes. But this simple definition, according to Campbell and Heyer, is too simplistic. Campbell and Heyer go on to say that in one sense, all of biology is related to the study of genomes because an organism is shaped by its genome. However, most biologists would agree that disciplines such as anatomy and zoology should not be lumped into the current usage of genomics. So, how should genomics be defined? For most people, genomics involves large data sets (about 3 billion base pairs for the human genome) and high throughput methods (fast methods for collecting the data). Genomics includes sequencing DNA and collecting genome variations within a population as well as transcriptional control of genes. Once the terms *genome* and *genomics* gained popularity, a cascade of new terms was initiated so each new area of research became an "-omic" or the subject under investigation was an "-ome" (Campbell and Heyer).

More than 100,000 people die each year from adverse responses to medications that are beneficial to others. Another 2.2 million experience serious reactions, while others fail to respond at all. DNA variants in genes involved in drug metabolism, particularly the cytochrome P450 multigene family, are the focus of much current research in this area. Enzymes encoded by these genes are responsible for metabolizing most drugs used today, including many for treating psychiatric, neurological, and cardiovascular diseases. Enzyme function affects patients' responses to both the drug and the dose. Future advances will enable rapid testing to determine the patient's genotype and drastically reduce hospitalization resulting from adverse reactions. It is predicted that within the next decade, researchers will begin to correlate DNA variants with individual responses to medical treatments, identify particular subgroups of patients, and develop drugs customized for those populations. The discipline that blends pharmacology with genetic capabilities is called *pharmacogenomics* ("Genomics and its Impact," 2001).

The potential for using genes themselves to treat disease or enhance particular traits has captured the imagination of the public and the biomedical community. The largely experimental field of gene transfer or gene therapy holds potential for treating or even curing such genetic and

acquired diseases as cancers and AIDS by using normal genes to supplement or replace defective genes or bolster a normal function such as immunity ("Genomics and its Impact," 2001).

New technologies that can increase the amount of genetic information possible to determine about an individual are being developed at a brisk pace. "The Human Genome Project has given us the technology to decipher what were once an individual's most personal and intimate 'family secrets' - that is, the information contained in our DNA" (Harman, 2001, p. 174). The instructions encrypted in our genes affect nearly every function the human body performs, from fighting infection to thinking. Research to understand those instructions offers the promise of better health because it gives researchers and clinicians critical information to work out therapies or strategies to prevent or treat a disease. Genetic testing can also alert individuals to a heightened risk of some health problems and the need to screen for them more frequently and thoroughly and to take more preventive measures (Harman). The project will undoubtedly reap significant benefits to humanity. Some of these benefits can be anticipated, while others will surprise us. Information and technologies developed will revolutionize future biological explorations.

DNA-based tests are among the first commercial medical applications of the new genetic discoveries. Gene tests can be used to diagnose disease, confirm a diagnosis, provide prognostic information about the course of disease, confirm the existence of a disease in asymptomatic individuals, and, with varying degrees of accuracy, predict the risk of future disease in healthy individuals or their progeny ("Genomics and its Impact," 2001). Currently, there are several hundred genetic tests in clinical use, with many more under development. And their numbers and varieties are expected to increase significantly over the next decade ("Genomics and its Impact," 2001).

The current legal cases are about privacy issues associated with medical information. Most judges are not prepared for what is to come. Because of the 1993 United States Supreme Court decision in Daubert v. Merrill Dow Pharmaceutical, Inc. (1993), it is up to the trial judge to decide what sort of scientific testimony gets heard and what does not; what is relevant and what is not. The judges become the gatekeeper in a court trial. Especially since the O.J. Simpson trial, many judges see some of these issues headed their way. If the adversary system encourages lawyers to zealously advocate unproven scientific theories on behalf of their clients, the next important question is how will judges and juries view this evidence? By all indications, both judges and juries are not prepared to evaluate the validity of novel scientific assertions, and juries are likely to give too much credence to such arguments (Rothstein, 1999).

Advocates of current research in molecular genetics point to a future with pest resistant crops, new therapies for cancer and other diseases, and nearly infallible methods of identifying criminals, according to Cranor (1994). Cranor indicates that almost weekly, new research is reported linking one or more genes to diseases or even to behavior that we would like to control. Scientists have claimed linkages between various genes and diseases such as cystic fibrosis, Tay-Sachs disease, sickle-cell anemia, Alzheimer's disease, and various forms of cancer. Some reports, according to Cranor, have claimed that genes may predispose people to behavioral traits such as

alcoholism, schizophrenia, depression, and even aggression. Whether these reported connections between genes and diseases or genes and undesirable behavior will be verified depends upon further research. Yet, these or other genetic inquiries hold enormous promise for the future (Cranor, 1994; Grossman & Valtin, 1999).

The Human Genome Project is also politically sensitive on at least three counts: it is perceived as expensive; access to the information is of immense commercial value; and there is widespread public concern about the way that information might ultimately be used. Sulston and Ferry (2002) assert that because of the interest that both Britain and the United States have in this project, there are many in the field who believe that the direction of our science to some extent depends on attitudes on Downing Street and in the White House.

## RELEVANT STATUTORY PROVISIONS

Recent reforms restricting use of genetic information in group health insurance have created increased incentive for employers to use this information to minimize risks that may increase health care costs. Harman (2001) reports that in many states, health insurers, employers, or both are prohibited from requiring genetic testing and or inquiring into the results of tests or obtaining genetic information. The legislatures in these states have recognized that a genetic test is only an aid to be utilized in predicting an individual's future health, not a definitive indicator of an individual's health. Many factors may play a role in whether a genetic predisposition ever manifests in the disease itself. According to Harman, the ability, or inability to perform a job function today cannot be determined by a predictive genetic test because there is no scientific evidence to substantiate a relationship between unexpressed genetic factors and an individual's inability to perform his or her job functions.

A wide variety of individuals and organizations may have a desire to access an individual's genetic test results. Insurers may like genetic information to determine possible risk factors for use in underwriting. Insurers often indicate that their products and premiums should accurately reflect risk so as to be able to keep products available and affordable. Insurers see genetic information as offering the possibility of identifying potential health problems (Harman, 2001). Employers would likely be hesitant to employ those with a genetic predisposition to a debilitating disease such as colorectal cancer or breast cancer. The fear would be that these individuals would spend fewer years in the work force or that they would cause increased health insurance premiums. Therefore, employers may seek genetic information to identify such at-risk employees or potential employees. The United States military uses genetic information to prohibit medical benefits to retirees who have an illness with a known genetic basis (Harman, 2001).

Employers may have access to existing genetic information of an employee or potential employee even without themselves requesting it by virtue of having access to the medical records of their employees and prospective employees where such information may be contained. Once a

job offer is made, the employer may require the individual to undergo a medical clearance, which may include the collection of all the medical records of the individual. If the individual refuses to authorize the release of information necessary for the medical clearance, the employer does not have to proceed with the hiring process (Harman, 2001).

In addition to insurers and employers, courts of law are increasingly getting and using genetic test results in cases ranging from child custody to third-party liability. The outcome of a child custody dispute may hinge on whether one parent has a predisposition to a debilitating condition. The outcome of a third-party liability case may hinge on whether the plaintiff has a predisposition to a life-threatening condition. A defendant in a civil lawsuit may seek to obtain the plaintiff's genetic information in an attempt to reduce a monetary award based on life expectancy or loss of income (Harman, 2001).

Each state has a medical record confidentiality statute designed to offer privacy and confidentiality protection for medical information obtained in the curse of health care delivery. The level of protection afforded to medical information varies widely from state to state, but all state statutes are designed to provide access to medical records only if authorized by the individual or as otherwise provided by law. Also, access to genetic information is specifically addressed in many of the state laws that prohibit genetic discrimination by insurers of employers. These laws generally include privacy protection for genetic information that prohibit insurers and or employers from requesting or requiring genetic information and that prohibit them from obtaining an individual's genetic information, whether that information is contained in a medical record or a research record (Harman, 2001).

Some states, such as North Carolina, have antidiscrimination laws. The North Carolina provision provides:

*(a) No person, firm, corporation, unincorporated association, State agency, unit of local government, or any public or private entity shall deny or refuse employment to any person or discharge any person from employment on account of the person's having requested genetic testing or counseling services, or on the basis of genetic information obtained concerning the person or a member of the person's family. This section shall not be construed to prevent the person from being discharged for cause.*

*(b) As used in this section, the term "genetic test" means a test for determining the presence or absence of genetic characteristics in an individual or a member of the individual's family in order to diagnose a genetic condition or characteristic or ascertain susceptibility to a genetic condition. The term "genetic characteristic" means any scientifically or medically identifiable genes or chromosomes, or alterations or products thereof, which are known individually or in combination with other characteristics to be a cause of a disease or disorder, or determined to be associated with a statistically increased risk of development of a disease or disorder, and which are asymptomatic of any disease or disorder. The term "genetic information" means information about genes, gene products, or inherited characteristics that may derive from an individual or a family member (N.C.G.S. § 95-28.1A).*

With few exceptions, the federal laws do not address the privacy and confidentiality of medical records. The Federal Privacy Act of 1974 (1974) safeguards health records and other records held by federal agencies retrievable by personal identifiers. The stated purpose of the Act is to provide safeguards for an individual against invasions of personal privacy, but the Act specifies many instances where disclosures without the consent of the individual are allowable (Harman, 2001).

Several measures have been introduced in the Congress to protect the confidentiality of individually identifiable health information. These recommendations have addressed the responsibilities of those maintaining heath information, described who can have access to an individual's medical information, and outlined the process for obtaining access. While there is still no major federal privacy legislation, there are Department of Health and Human Services regulations for privacy of individually identifiable health information transmitted or maintained in electronic form by health care providers, health plans, and health care clearinghouses. Also, President Clinton signed Executive Order No. 13145 (2000) that prohibits federal employees from requiring or requesting genetic information as a condition of being hired or receiving benefits. It prohibits federal employees from using protected genetic information to classify employees in a manner that deprives them of advancement opportunities, and provides strong privacy protections to any genetic information used for medical treatment and research (Harman, 2001).

A broad new federal medical privacy regulation took effect on April 14, 2003, culminating a 10-year long drive to overhaul the way doctors, pharmacists, hospitals, health care providers and others handle patient information. The law creates for the first time a national standard for medical privacy. It gives patients greater control over their health records. The most dramatic change in the law will be to significantly strengthen the recourse that patients have when their medical privacy is violated. Until now, a patient who was wronged could only file a civil action seeking financial penalties. Now, patients may file complaints with the Department of Health and Human Services, which can then pursue criminal penalties, including a $250,000 fine and 10 years in prison for the most serious offenses. It could stop doctors from disclosing to patients that they carry a gene that predisposes them for disease, except with the patient's permission to do so.

On December 28, 2000, the Secretary of Health and Human Services (HHS) issued a final regulation to protect the privacy of personally identifiable medical information. Modifications to the privacy rule were published on August 14, 2002. The modified final rule, which covers health care providers, health plans, and clearinghouses, gives patients the right to inspect, copy and, in some cases amend their medical records. Covered entities are permitted to use and disclose health information for routine health care operations and for various specified national priority activities such as law enforcement, public health, and research. They are required to have in place reasonable safeguards to protect the privacy of patient information and limit the information used or disclosed to the minimum amount necessary to accomplish the intended purpose of the use or disclosure. Health plans and providers must obtain a patient's prior written authorization to use or disclose

information for most other purposes. Covered entities that fail to comply with the rule are subject to civil and criminal penalties (Redhead, 2003).

The health privacy rule is one of several new standards mandated by the Administrative Simplification provisions of the Health Insurance Portability and Accountability Act (HIPAA) (1996). Congress enacted those provisions in an attempt to streamline the administration of health information as the health care industry moves toward electronic record keeping and claims processing. The intent of the legislation is to reduce paperwork, lower administrative costs, safeguard the security of health information, and facilitate the networking and coordination of health information and health care activities. As specified under HIPAA, the privacy regulation applies to three groups of entities: 1) individual and group health plans that provide or pay for medical care; 2) health care clearinghouses that facilitate and process the flow of information between health care providers and payers; and 3) health care providers who transmit health information electronically in a standard format in connection with one of the HIPAA-specified transactions, or who rely on third-party billing services to conduct such transactions. The rule does not apply directly to other entities that collect and maintain health information such as life insurers, researchers, employers that are not acting as providers or plans, nor does it apply to public health officials. Business associates with whom covered entities share health information are covered (Redhead, 2003). Hopefully, these new regulations will go a long way toward easing some of the fears that people have about issues of privacy and confidentiality.

## A QUESTION OF ETHICS

"An ethical issue is one that involves the core values of practice" (Harman, 2001, p. 26). You know you have an ethical issue when such core values are at stake. Many peoples may wish to resolve questions of professional ethics according to their own personal morality; their own personal upbringing and beliefs. But, Harman questions whether this type of thinking is really sufficient. Harman believes that where there are two belief systems in conflict (personal morality and professional ethics), resolution depends on the more formal mechanism of ethics. There is a difference between personal morality and ethics. Most of the time people do not make a difference between *morality* and *ethics*; they just use the terms interchangeably. But, when distinction is made, according to Harman, it is often this one. *Morality* refers to your own personal moral choices. *Ethics* refers to the formal process of intentionally and critically analyzing the basis for your moral judgments for clarity and consistency. Because of the potential conflict between personal values and professional values, and because of the potential for conflict among professional values, we need ethics to help resolve those conflicts. "Ethics provide a formal way to step back from the conflict, search for reasons to support one choice over another, and apply this reasoning to future situations" (Harman, p. 26). Patients, other professionals, and the general public have expectations for an individual's professional conduct. Standards often arise from the trust the public places in an

individual. The public expects professional ethics especially when there are difficult ethical issues involved. That trust must be upheld, and at the heart of it, that is why ethics are so important to genomic research (Harman).

A typical first reaction to the Human Genome Project is astonishment, even amazement, at the magnitude of the scientific achievement and technological potential that it represents. For many, however, this amazement quickly turns into concerns, and sometimes fears, about its ethical, legal, and social implications. Initially, for example, individuals may have hope of using human gene therapy to combat cystic fibrosis or even diabetes in their future children, then perhaps to prevent dwarfism, or to augment stature, IQ, or even athletic ability. Think of the races the children could win-or would they? If everyone could run faster with proper gene therapy, what sense of accomplishment would victory offer? Other persons might think first about the advantages of knowing their susceptibility to Huntington's disease or certain types of cancer. On second thought, however, would they really what to know or to have their employer know, or their insurer, or the government? How could this information be used or abused (Larson, 1993)?

These lines of thought reflect two primary ethical concerns raised by the genome project, according to Larson (1993). The first flows from utilizing germ-like gene therapy to treat perceived hereditary defects or enhance supported genetic attributes, all of which relates to eugenics, in the broadest sense of the term. The second follows from simply possessing individual genetic information and involves issues of personal privacy and potential genetic discrimination. A parade of unprecedented horribles-some realistic, some fanciful-march through the mind as one considers the Human Genome Project. But a panoply of unparalleled benefits also comes to mind. These conflicting thoughts underlie the government's current approach of generously funding the project but setting aside part of those funds for examining its ethical, legal, and social implications (Larson).

The planners of the Human Genome Project recognized that the information gained from mapping and sequencing the human genome would have profound implications for individuals, families and society. While this information would have the potential to dramatically improve human health, they also realized that it would raise a number of complex ethical, legal and social issues. How should this new genetic information be interpreted and used? Who should have access to it? How can people be protected from the harm that might result from its improper disclosure or use?

The Ethical, Legal and Social Implications (ELSI) Research Program was established to address these issues and has become an integral part of the Human Genome Project. ELSI provides a new approach to scientific research by identifying, analyzing and addressing the ethical, legal and social implications of human genetics research at the same time that the basic science is being studied. In this way, problem areas can be identified and solutions developed before scientific information is integrated into health care practice (National Human Genome Research Institute, 2002).

The ELSI Research Program is essential to the success of the Human Genome Project in the United States and is supported with federal funds. The National Human Genome Research Institute (NHGRI) commits more than $14 Million annually from its Human Genome Project budget to ELSI research, making it the largest supporter nationwide of research into the ethical, legal and social implications of genetic research. The United States Department of Energy Office of Energy Research, who partners with NHGRI in the Human Genome Project, also reserves a portion of its funding for ELSI research and education (National Human Genome Research Institute, 2002).

In 1989, the Program Advisory Committee on the Human Genome established a working group on ethics to develop a plan for the ELSI component of the human genome program. This working group, later named the National Institute of Health-Department of Energy Joint Working Group on Ethical, Legal and Social Implications of Human Genome Research, issued its first report and defined the function and purpose of the ELSI program as follows:

- To anticipate and address the implications for individuals and society of mapping and sequencing the human genome;
- To examine the ethical, legal and social consequences of mapping and sequencing the human genome;
- To stimulate public discussion of the issues; and
- To develop policy options that would assure that the information be used to benefit individuals and society.

The ELSI Working Group envisioned a program that would anticipate problems and identify possible solutions and suggested a number of means to accomplish these goals. Specifically, it encouraged the research community to explore and gather data on a wide range of issues pertinent to the Human Genome Project that could be used to develop education programs, policy recommendations or possible legislative solutions. A number of focus areas were identified, including: fairness in the use of genetic information; the impact of knowledge of genetic variation on individuals; and privacy and confidentiality of genetic information.

A specific set of goals were developed to guide ELSI research programs. These goals were designed both to emphasize areas of research of ongoing importance and to identify emerging issues requiring additional attention. The NHGRI ELSI Research Program (National Human Genome Research Institute, 2002) is organized around four program areas:

- *Privacy and Fairness in the Use and Interpretation of Genetic Information* (Activities in this area examine the meaning of genetic information and how to prevent its misinterpretation or misuse.)
- *Clinical Integration of New Genetic Technologies* (These activities examine the impact of genetic testing on individuals, families and society, and inform of clinical policies related to genetic testing and counseling.)

| |
|---|
| *Issues Surrounding Genetics Research* (Activities in this area focus on informed consent and other research-ethics review issues related to the design, conduct, participation in and reporting of genetic research.) |
| *Public and Professional Education* (This area includes activities that provide education on genetics and related ELSI activities.) |

## ISSUES OF PRIVACY AND CONFIDENTIALITY

The terms *privacy* and *confidentiality* are often used interchangeably. However, there are important distinctions. *Privacy* is an important social value that means the right "to be let alone" (Harman, 2001, p. 41) and is "the right of individuals to keep information about themselves from being disclosed to others; the claim of individuals to be left alone, from surveillance or interference from other individuals, organizations or the government" (Harman, p. 41). Privacy requires the protection of information - the assurance that the information is accurate and that there is no unauthorized use or disclosure of the information. The right to privacy is the right on the part of the individual to retain control over his or her identifiable information held by health care workers and their institutions. The value of individual authorization is central to privacy and is inherently based on fair and appropriate use of the information (Harman).

"*Confidentiality* is the responsibility to limit disclosure of private matters. In health care, it includes the responsibility to use, disclose, or release information only with the patient's knowledge and consent" (Harman, 2001, p. 200). Confidential information typically results from a clinical relationship between patients and those providing health care. There is an obligation of health care providers, institutions, and health information managers to protect the use of the information that is collected. When a patient reveals information to a physician or other provider of care, there is an assumption that this information is confidential. Personal identity is central to confidentiality. If the identity of the patient cannot be ascertained, the information is not confidential (Harman, 2001).

In an electronic environment, protecting privacy has become increasingly difficult. Patients are becoming more concerned about the loss of privacy and the inability to control the dissemination of the information about them. "It's not that the laws or ethical codes are being repealed - it's that broad technological, scientific and economic forces are overpowering the old rules" (Harman, 2001, p. 43).

It is not unreasonable for an individual to expect that their information will be kept private and that they alone will decide who has access and what information is revealed. Yet, they cannot assume that the information in their medical records is private and their own business. Information that is faxed or emailed from one health care location to another may be left unattended for unauthorized persons to see it. Providers of health care may discuss cases in elevators or eating areas even in a clinical setting. The individuals being discussed could be the friends and families of those within hearing distance of the conversation (Harman, 2001).

Patients are more aware of the possible misuse of information. As such, they are becoming more reluctant to share information with their health care providers. This may result in problems with the health care that is being provided and the information given to researchers, insurers, the government, and the many other stakeholders who legitimately gain access to the information (Harman, 2001). While most individuals trust their health care providers, they are concerned about insurers and employers having access to this information, especially if they think that the information will be used for decisions such as demotion, loss of employment, or denial of insurance coverage (Harman).

Harman (2001) suggests that the patient is least likely to gain access to his or her own information. Although some state laws have allowed patients access to their health information for years, there was no such federal provision until April 2003. Harman argues that patients should be allowed to access their own records to correct or amend inaccurate or incomplete documentation. He further suggests that as patients learn more about the information that is collected, analyzed, and disseminated, they will increasingly want access to that information. This has led some to take a more proactive approach that encourages support for federal legislation that will protect patients in the wake of conflicting state regulations. Any such federal legislation should support patient access, restrict the collection of information, limit using information only for lawful purposes, notify patients of information practices, assure security safeguards, and provide penalties for violations (Harman). The goal is to ensure that the individual's health record is secure, accessible to that individual, released only by appropriate consent, and protected from unauthorized use.

Insurance is intended to provide financial protection against unexpected or untimely events. "In particular, life and health insurance are purchased not in anticipation of imminent death or illness-although it is understood that death is inevitable and serious illness is fairly common" (Murphy & Lappe, 1994, p. 91). Rather, according to Murphy and Lappe, life insurance is obtained to protect dependents or business associates from the financial disadvantages that can occur in the event of unexpected death, and health insurance is meant to provide protection in the event of a significant financial loss associated with an unanticipated illness.

Serious errors in risk classification would occur if the insurance company were unaware of important, unfavorable information that was known to an applicant. Some individuals would receive their insurance coverage at unreasonably low cost. More claims would be filed than were expected. And, if a significant number of these risk classification errors were made, the financial status of the entire insurance pool would be adversely affected (Murphy & Lappe, 1994). Eventually, desired coverage becomes unavailable at any reasonable rate or the insurer becomes financially unsound.

Murphy and Lappe (1994) suggest that mapping of the genome will give us specific new information about individual variation that can be used in good and bad, fair and unfair ways, and it raises, or rather refocus important questions about how we should distribute health care resources. This raises the question: how will new information that some individuals are at higher risk for disease because of their genotype, affect our assumptions about responsibility for health and

disease? Will having more specific information about genotype encourage acceptance of genetic determination, undermining our current emphasis on responsibility for preventive health measures?

Revealing information about risk of future disease can have significant emotional and psychological effects as well. Moreover, the absence of privacy and legal protections can lead to discrimination in employment or insurance or other misuse of personal genetic information. Additionally, because genetic tests reveal information about individuals and their families, test results can affect family dynamics. Results can also pose risks for population groups if they lead to group stigmatization. Other issues related to gene tests include their effective introduction into clinical practice, the regulation of laboratory quality assurance, the availability of testing for rare diseases, and the education of healthcare providers and patients about current interpretation and attendant risks ("Genomics and its Impact," 2001).

Many individuals are reluctant to participate in genetic research and testing, according to Harman (2001), because they feel they cannot be sure of the privacy of the genetic information that will be obtained from them and placed in their medical records or in research records. Harman cited an example of a healthy 38-year old man who is considered at risk to develop colorectal cancer because of his family history: two of his brothers, an aunt, and his grandfather have been diagnosed with a type of colon cancer that is known to have a genetic component. Two of those relatives have undergone genetic testing that showed a genetic predisposition to the disease. This individual has been undergoing biannual colonoscopies as a way of detecting polyps before they turn into cancerous lesions. Testing could be useful to him. If he were to test positive, he would continue the biannual colonoscopies, since he would know that he was at heightened risk for the disease. But, if he were to test negative, he would only have to have less invasive, and less frequent, sigmoidoscopies because he would have the same risk as the general population. Harman goes on to say that the individual declines to be tested, however, opting instead for the frequent colonoscopies, because he knows that any test results will be placed in his medical record and will be subject to release to his health insurer. He is afraid that if he tested positive, he could lose his health insurance coverage, even though testing positive would merely indicate a predisposition to colon cancer, not a guarantee of colon cancer.

Harman (2001) reports that concerns like these are actually common among citizens of the United States. His research indicates that 86 % of those surveyed were concerned that insurers and employers might use genetic information against them. He also indicates that potential study volunteers are concerned that the genetic information obtained from them in research projects will not be kept confidential. He cites one study where one-third of the women invited to participate in a study of women with a breast cancer gene mutation refused to participate because they feared discrimination or a loss of privacy. Harman goes on to cite several publicized incidents that show there is a legitimate basis for such concerns. For instance, in the early 1970s, some insurance companies charged higher rates to African Americans who were carriers of the gene for sickle cell anemia, even though these African Americans themselves were not at risk for developing the

disease. More recently, other studies have demonstrated similar instances of genetic discrimination against healthy people with a genetic alteration that predisposes them or their children to later illness, even though having such a genetic alteration is not an indication that the disease will ever manifest during this individual's lifetime (Harman).

As previously mentioned, some states have legislation prohibiting the discriminatory use of genetic information, but some of these laws do not restrict access to genetic information. People are concerned about access to their information by others, regardless of whether the information will be used for specific economic or social harm. Although medical record privacy and confidentiality laws are in place in each state, many people do not trust their effectiveness in preventing unauthorized access to this information (Harman, 2001). The power and potential of genetic testing, according to Harman, cannot be realized if individuals are afraid to be tested. Also, genetic research, which requires the participation of large numbers of volunteers, cannot fulfill its promise if potential volunteers are dissuaded from participation because of concerns about the confidentially of their genetic information and possible discriminatory uses of that information. The prevention of discrimination and the protection of privacy and confidentiality of genetic information should be considered the absolute prerequisites for an environment in which individuals feel free to participate in genetic testing. Some constitutional, statutory, or common law theories may be applied to limit some overly intrusive inquiries or unnecessarily extensive disclosures. In general, however, a wider range of substantive limitations in each specific area will need to be enacted to safeguard the privacy of this information (Rothstein, 1999).

## MORE QUESTIONS THAN ANSWERS

The questions abound. Societal concerns arising from the new genetics include questions of fairness in the use of genetic information by insurers, employers, courts, schools, adoption agencies, and the military, among others. Who should have access to personal genetic information and how should it be used? Privacy and confidentiality of genetic information is also called into question. There are four main areas in which the question of whether we have a right to privacy must be raised. The first is within the family. The second is within educational establishments. The third is at work, and the fourth is in the area of insurance. There are, of course, other areas, but these are the most obviously important (Holland & Kyriacou, 1993). Who owns and controls genetic information? Also, one must consider the possible psychological impact and stigmatization that may be attributable to an individual's genetic differences. How does personal genetic information affect an individual and society's perception of that individual? How does genomic information affect members of minority communities?

Reproductive issues also arise. This includes questions regarding the adequacy of informed consent for complex and potentially controversial procedures, use of genetic information in reproductive decision-making, and reproductive rights. Imagine fetuses being tested in utero and

those that do not match up to their parents' expectations would be aborted, just as fetuses currently might be aborted if they tested positive for abnormalities or incurable diseases. An alternative to selective abortion would be embryo selection for enhancement, which combines genetic testing with in vitro fertilization so that embryos are tested before they are implanted in the womb, and only embryos with advantageous characteristics are implanted. Some of these actions undoubtedly lie within the realm of constitutionally protected personal autonomy and reproductive freedom. Other activities may not be so clearly protected. Some scholars argue that the state has a legitimate interest in regulating selective abortion and embryo selection when performed for enhancement purposes, even though parents have a constitutional right to abort and perhaps even to select embryos for implantation when they do so for medical reasons (Mehlman, 1999).

Courts will be forced to struggle with whether or not there is a legal limit to the authority of parents to manipulate the genetic characteristics of their children. Even if these practices are not forbidden by law, the possible health risks may subject parents to charges of child endangerment. Similar doubts about parental fitness would arise if parents agreed to let their children participate in experiments to determine the safety and effectiveness of enhancement products. It is doubtful that parents would be able to hide behind the shield of religious freedom as is often done when making questionable treatment decisions for their children. It is doubtful that parents will wait until a child is born in order to attempt to influence its genetic inheritance, including its inheritance of non-disease characteristics. The availability of genetic tests will open the door to several types of genetic enhancements that will take place much earlier. An interesting question is what the state's interest would be in regulating parental access to genetic enhancement for their children. The interest might be the need to prevent harm to the future child, similar to the justification offered by government actions to prohibit illegal drug use by pregnant women that threatens the health of the fetus. Assuming that genetic enhancement techniques are developed that do not physically harm the child, the state would have to rely on less tangible forms of harm (Mehlman, 1999). Mehlman cites some commentators who have suggested that genetic enhancement interferes with the child's right to genetic autonomy - that children deserve a genetic endowment free from parental manipulation.

Do healthcare personnel properly counsel parents about the risks and limitations of genetic technology? How reliable and useful is fetal genetic testing? What are the larger societal issues raised by new reproductive technologies? Questions arise with regard to commercialization of products, including property rights such as patents, copyrights, and trade secrets. Who owns genes and other pieces of DNA? Will patenting DNA sequences limit their accessibility and development into useful products?

Clinical issues include the education of doctors and other health service providers, patients, and the general public in genetics capabilities, scientific limitations, and social risks, as well as the implementation of standards and quality-control measures in testing procedures. How will genetic tests be evaluated and regulated for accuracy, reliability, and utility? How do we prepare healthcare professionals for the new genetics? How do we prepare the public to make informed choices? How

do we as a society balance current scientific limitations and social risk with long-term benefits? Then, there are uncertainties associated with gene tests for susceptibilities and complex conditions linked to multiple genes and gene-environment interactions. Should testing be performed when no treatment is available? Should parents have the right to have their minor children tested for adult-onset diseases? Are genetic tests reliable and interpretable by the medical community? Additionally, there are the conceptual and philosophical implications regarding human responsibility, free will versus genetic determinism, and concepts of health and disease. Do people's genes make them behave in a particular way? Can people always control their behavior? What is considered acceptable diversity? Where is the line between medical treatment and enhancement? Finally, there are health and environmental issues concerning genetically modified foods and microbes. Are genetically modified foods and other products safe to humans and the environment? How will these technologies affect developing nations' dependence on the West (Human Genome Project Information, 2003)?

## SCIENCE ENTERS THE COURTROOM

The impact of the Human Genome Project will be much broader than just making it possible to test people or to screen populations for genetic disorders. Gene therapies will usher in a new era of genetic medicine. Gene therapy is already a reality. The future holds the prospect of daring genetic manipulations. The Human Genome Project will provide scientists with the data and tools to identify and understand the basis of genetic diseases and disorders, as well as other genetically-related traits. This creates the possibility of genetic interventions to enhance non-disease traits, for example, to increase strength, stamina, and perhaps even intelligence. Scientists have begun to use gene transfer technologies to enhance the immune system. These new technologies will create a host of difficult and unprecedented ethical and legal controversies, which will find their way to the courts for resolution (Mehlman, 1999).

New gene therapies will prevent, cure, or more effectively treat many diseases that previously were unavoidable, incurable, or untreatable or that responded to treatment only incompletely or was accompanied by numerous side effects, according to Mehlman (1999). Mehlman suggests that gene therapy will be in great demand. He argues that if it provides a cheaper alternative to existing medical interventions, it will be embraced by patients and readily offered by managed care plans and other third-party payers, including Medicare and Medicaid. Mehlman believes that in many cases a gene therapy will increase rather than decrease health care costs. While it might be more effective, it will most surely be a more expensive treatment than before. Mehlman also indicates that such therapy might target a disease for which there were no previous medical options, and thus no standard treatment cost. He argues that in these cases, third-party payers will resist paying for these new technologies leading to disputes that come before the courts.

In the case of private health insurance plans, the conflict will be over the scope of coverage. This is an issue with which courts are familiar, although not one that they necessarily have resolved consistently or with ease. It requires judges and juries to examine the language of the plan to see if the treatment in question - in this case gene therapy - is explicitly excluded from coverage. In most instances the treatment in not mentioned specifically in the policy because of plan administrators' concerns that when a list includes specific items, items not included are presumed to be excluded and the insurer contends that the therapy is excluded under general policy language because it was not *medically necessary* or because it is *experimental* (Mehlman, 1999). The courts have wrestled with the meaning of these terms in cases involving new medical interventions. The outcomes in these cases are mixed, in part because they depend on the language of specific health insurance plans in question; but also because some judges and juries are more sympathetic to patients and their families, while others are more concerned with the insurers' need to control their costs. The courts will not be able to rely on whether or not the gene therapy has been approved by the Federal Food and Drug Administration (FDA).

Both private health insurance plans and public programs are establishing administrative grievance procedures for resolving coverage controversies. An increasing number of private plans are requiring enrollees to arbitrate these disputes, a practice that has provoked varying judicial responses. As state legislatures move to regulate managed care plans, they are enacting laws that mandate the adoption of grievance procedures for coverage disputes, often requiring that the disputes be resolved by external bodies. The federal government has established administrative procedures for grievances involving Medicate and Medicaid HMOs. Some of these administrative measures by their terms preclude judicial review. Over time, courts may find themselves less involved in disputes over coverage (Mehlman, 1999).

The adoption of a new medical technique typically is preceded by extensive scientific studies to establish its safety and efficacy. In the case of new gene therapies, these studies would be required by the FDA under its authority to regulate drugs and biologic products. Disputes may arise over the ethics of conducting these investigations, particularly on the appropriateness of experimenting on children and fetuses, and in the case of germ-line therapies, on human embryos. Courts may be called on to resolve conflicts between the wishes of researchers, parents, and the subjects. For example, to what extent does a parent have the authority to enroll a child in a gene therapy experiment when there is no direct benefit to the child (Mehlman, 1999)? According to Mehlman, courts will also be called upon to settle disputes over proprietary interests in new therapies. Disputes between inventors and research sponsors may involve the application of traditional intellectual property doctrines to novel genetic technologies. More unusual controversies, involving both novel legal doctrines and novel technologies, are likely to arise between experimenters and their subjects.

New gene therapy technologies raise complex questions concerning the appropriate standard of care for health care professionals. Physicians who fail to recommend a new technology to their patients may run the risk of malpractice liability, even though the technology has not yet become

incorporated into standard practice. The question remains open when awareness of a new technique has sufficiently diffused through the community of health professionals that the technique must be offered to patients as an alternative to more traditional therapies. On the other hand, physicians who recommend a new technique before it becomes standard practice must be careful to disclose to patients that the technique is still experimental, and to obtain the patients' informed consent to employ an experimental approach. These liability risks, according to Mehlman (1999), accompany all medical innovations. What may set gene therapy apart is the unprecedented potential that it may offer. Consequently, patients may demand access to gene therapy when they first hear about it, even though it is still in the early stages of testing, and they may seek to hold health professionals legally responsible for failing to provide them with the emerging treatment. The rapid pace of gene therapy development will impose liability risks particularly on two groups of health professionals, according to Mehlman. He indicates that primary care physicians and genetic counselors are at greatest risk. Primary care physicians are at risk because, compared to physicians who specialize in genetic medicine, they may not be as familiar with new gene therapies. Yet, they will serve as the gateway to those therapies. This is particularly true if managed care continues to require patients to obtain referrals to specialists from their primary care physicians before the plan will pay for specialty care. Patients who are harmed when inadequately informed primary care physicians fail to refer them to genetic counselors or gene therapy specialists may bring malpractice actions. If patients get the impression that the primary care physicians' failure to refer them is motivated in part by the financial pressures exerted on the physicians by the patient's managed care plan, the patient may attempt to sue the physician for breach of fiduciary duty as well as for malpractice. Alternatively, the patient may sue the managed care plan, either under the theory of vicarious liability (if the physician appears to be an employee of the plan) or corporate negligence. Courts are increasingly holding employer-sponsored health plans liable for substandard care (Mehlman, 1999).

Tests capable of identifying criminals by "typing" their DNA are an important technological spin-off of the molecular revolution in human genetics. The development of these tests was greeted with enormous enthusiasm. Heralded as "a prosecutor's dream" and "the greatest advance in crime fighting technology since fingerprints," the new DNA-typing tests were introduced swiftly into the legal system. Recently, however, a very serious scientific controversy has erupted over the accuracy and reliability of the new tests. A number of scientific critics have charged that the new technology was rushed to court before it was ready (Thompson, 1994).

According to Thompson (1994), The scientific and legal issues involved in the use of DNA warrant close examination because they can tell us much about the problems surrounding the introduction of new technology into the legal system. Thompson posits that DNA typing is the first technical spin-off of the molecular revolution in science to reach the courtroom, but it will not be the last. He says that the legal issues surrounding the introduction of forensic DNA testing may be divided into two broad categories: substance and procedure. The substantive issues concern what standards the courts should apply when evaluating the admissibility of novel scientific techniques.

The procedural issues concern how litigation on the substantive issue should be conducted. Thompson raises questions involving access to data, the availability of funds to retain expert consultants and witnesses, and the nature of the proceedings used to determine admissibility as well as the question of how DNA evidence should be presented to juries once it is found to be admissible (Thompson). Today, there is still a great deal of ambiguity in both the substantive and procedural rules under which courts are evaluating the admissibility of DNA evidence. Differences among courts in their rulings on DNA evidence are due as much to differences in how courts interpret the law as to differences in the expert scientific testimony they have heard. The controversy is as much a disagreement over law as over science. The precedents created by the current litigation will shape the way the legal system responds to all subsequent innovations involving the use of genetic tests for criminal identification (Thompson).

A final illustration of the potential impact of genetic enhancement on the courts, according to Mehlman (1999), is its effect on the standard of care to which people are expected to adhere when they create risks of injury to one another. Should an enhanced person be held to the standard of care of an ordinary reasonable person, or to the standard of an enhanced person? One can surmise that if enhanced persons ought to be better in avoiding accidents than un-enhanced persons, then the enhanced persons should be held to an enhanced person's standard of care. In other words, says Mehlman, they should not escape liability by showing that they met a reasonable person's standard of care when, by virtue of their enhancements, they ought to have done better. A good argument can be made, however, that when it comes to reducing the costs of accidents, we ought to hold an enhanced person to the lower standard of an ordinary reasonable person. The reason is that by not penalizing them with an enhanced person's standard, we will encourage more people to enhance themselves, thereby reducing accidents because, as a result of their better vision or reflexes or intelligence, enhanced persons are better at avoiding them (Mehlman).

## RECOMMENDATIONS AND CONCLUSIONS

Privacy, as an important social issue, presents significant ethical concerns when faced with the question of whether or not genetic information should remain confidential; thus, establishing automatic links that must be treated together. According to the 1991-1992 Progress Report of the National Center for Human Genome Research ("Ethical, Legal, and Social Issues," 1994), ELSI aims to develop programs addressed at understanding the project's ethical, legal, and social implications and to define major issues and develop policy to address them. Knowledge gained through the genome project can be used by scientists in many ways. But the effects of getting and using this knowledge create tough choices for nearly everyone. The progress report suggests: (1) that individuals and families must decide whether to participate in testing, with whom to share the results, and how to act on them; (2) health professionals must decide when to offer testing, how to ensure its quality, how to interpret the results, and to whom they disclose information; (3)

employers, insurers, the court, and other social institutions must decide the relative value of genetic information in the decisions they make; (4) governments must decide how to regulate production and use of genetic tests and the resulting information and how to make testing and counseling services available; and (5) society must decide how to improve public understanding of science and its social implications and increase public participation in science policy making.

Knowledge about whether someone has a genetic tendency toward a disease could invite social prejudices. Health insurance companies could use genetic information to reject people who might be inherently risky investments; or employers could reject prospective employees for similar reasons. In November 2002, a committee of the Institute of Medicine of the National Academy of Sciences released a report outlining policy guidelines and legislative recommendations designed to avoid involuntary and ineffective testing and to protect confidentiality. The report identified concerns such as quality control measures, including federal oversight for testing laboratories, and better genetics training for medical practitioners. The report recommended such measures as voluntary screening and genetic counseling for couples in high-risk populations and urges caution in using and interpreting pre-symptomatic or predictive tests. Also needed, according to the report, are increased public education about genetics and a national advisory committee to set genetic testing standards.

There is also a need for training in the medical community. Most of the physicians finished medical school long enough ago that they do not know a whole lot about the genome project or the implications. At some point, deans of medical schools must become more aware of ethical, legal, and social issues so that they can influence the inclusion of discussion of these issues within the medical curriculum.

Human genomics has a problematic history, and sadly, minorities and the poor have not fared well in that history. Genetics, race, and ethnicity have sometimes proven to be an explosive and even fatal mixture, according to Caplan (1994). Caplan refers to Germany where racial and ethnic minorities paid with their lives when developments in genetics were used in the service of a science of racial hygiene whose leaders gave enthusiastic and vocal support to Nazism. Groups such as Jews, Gypsies, and Slavs were targeted for extermination on the grounds that their genes posed a threat to the overall health and reproductive well-being of the German people. For those who summarily dismiss this line of thinking, here is what Caplan had to say:

> Some dismiss Nazi science as merely mad science or bad science, but the involvement with Nazism by many mainstream authorities and leaders in medicine, public health, and science in a technologically and scientifically advanced nation cannot be dismissed as merely 'fringe' or 'peripheral.' The road to Dachau and Auschwitz runs too straight through the eugenic institutes and genetic courts of pre-World War II Germany to be considered nothing more than an inexplicable detour (pp. 30-31).

If we assume that genetic enhancement is effective at improving personal traits that correlate with social success, those who can afford to purchase genetic enhancements will gain significant social advantages. They will also have the ability to genetically enhance their children, particularly using germ-line enhancements that may be passed on to succeeding generations. The potential would be to create an impregnable lock on power and privilege. The threat that this poses, according to Mehlman (1999), is more than just a philosophical objection to social inequality; it is a threat to the fundamental belief in equality of opportunity that sustains our political system in the face of disparities in wealth, privilege, and power. If as a result of wealth-based access to genetic enhancement, society becomes divided into genetic haves (enhanced) and have nots (un-enhanced), Mehlman argues that the possibility of upward social mobility will be seen as illusory. Mehlman suggests that avoiding this fate is a sufficiently compelling state interest to justify a wide range of restrictions on parental enhancement of offspring, as well as substantial limitations on the freedom of adults to purchase enhancements for themselves.

Society must permit, and indeed, encourage the pursuit of knowledge in the field of genetics. The use of this knowledge in medicine should be subject to regulation or at least to guidelines where the principle should be that of attempting to remedy disease to produce an individual healthy person, rather than to produce something quite new - a super person. The use of genetic manipulation ought to be regarded as an extension of the use of other techniques in medicine, and should be guided by exactly the same principle, that of benefit to the individual. The most difficult questions before us are those about sharing of knowledge. On these questions it is urgently necessary that a consensus should be sought and that legislation should be finally introduced, resting as far as possible on that consensus. Only in this way can society's natural fears about our new knowledge be shown to be groundless (Holland & Kyriacou, 2003).

Rothstein (1999), who is director of the Health Law & Policy Institute at the University of Houston Law Center, posits that the law does not operate independently of culture, it follows culture. He indicates that in the 1920s when eugenics dominated American scientific thinking, it also dominated American culture and American law. How will the law respond to new discoveries in genetics, including behavioral genetics? To what level of legal scrutiny will claims of behavioral genetics be subjected? How will proven associations of genetics and behavior affect a range of legal doctrines related to privacy, autonomy, nondiscrimination, and societal opportunities? How will unproven or outright bogus assertions be received by the courts? Legislation and judicial responses to the new genetic discoveries, Rothstein argues, will have a major effect on whether we are about to enter an unprecedented period of behavioral genetic determinism and, with it, social disruption, or the promised enlightened era of genetic marvels. He argues that while history does not preordain the future, it certainly reminds us of the stakes involved.

The Human Genome Project may provide us with information that will erode the distinction we often draw between uses of medical technology for treatment of disease and disability and uses that enhance human appearance or performance (Murphy & Lappe, 1994). How long can we

continue to defend the distinction between medical therapies that treat and those that enhance in the face of new genetic information that allows us to pinpoint the genetic contributions to traits we want to alter?

## REFERENCES


Campbell, A. M. & Heyer, L. J. (2003). *Discovering genomics, proteomics, and bioinformatics*. San Francisco: Benjamin Cummings.

Caplan, A. L. (1994). Handle with care: Race, class, and genetics. In T. F. Murphy, & M. A. Lappe (Eds.), *Justice and the human genome project* (pp. 30-45). Berkeley, CA: University of California Press.

Cranor, C. F. (Ed.). (1994). *Are genes us?: The social consequences of the new genetics*. New Brunswick, NJ: Rutgers University Press.

Daniels, N. (1994). The genome project, individual differences, and just health care. In T. F. Murphy, & M. A. Lappe (Eds.), *Justice and the human genome project* (pp. 110-132). Berkeley, CA: University of California Press.

Daubert v. Merrill Dow Pharmaceutical, Inc., 509 U. S. 579 (1993).

Ethical, legal, and social issues of the human genome project: What to do with what we know. (1994, January). In *Environmental Health Perspectives, 102*(1) [Online]. Available: http://ehpnet1.niehs.nih.gov/docs/1994/102-1/spheres.html.

Exec. Order No. 13145, 65 Fed. Reg. 6877 (2000).

Federal Privacy Act of 1974, P.L. 93-579, 93rd Congress, S. 3418, (1974).

Genetics and its impact on medicine and society: A 2001 primer. In *Medicine and the New Genetics: Gene Testing, Pharmacogenomics, and Gene Therapy* [Online].
Available: http://www.ornl.gov/hgmis/publicat/primer2001/6.html.

Grossman, D. C. & Valtin, H. (Eds.). (1999). *Great issues for medicine in the twenty-first century: Ethical and social issues arising out of advances in the biomedical sciences*. New York: The New York Academy of Sciences.

Harman, L. B. (2001). *Ethical challenges in the management of health information*. Gaithersburg, Maryland: Aspen Publishers, Inc.

Health Insurance Portability and Accountability Act of 1996; 104 P.L. No. 104-191, 701, 42 U. S. C. § 1320d.

Holland, B. & Kyriacou, C. (Eds.). (1993). *Genetics & society.* Reading, Massachusetts: Addison-Wesley.

Human Genome Project Information (2003). *Ethical, Legal, and Social Issues* [Online]. Available: http://www.ornl.gov/TechResources/Human-Genome/elsi/elsi.html.

Larson, E. J. (1993). Half a tithe for ethics. *National Forum, 73*(2), 15-17.

Mehlman, M. J. (1999, November-December). The human genome project and the courts: Gene therapy and beyond. In *Judicature, 83*(3) [Online]. Available: http://www.ornl.gov/hgmis/publicat/judicature/article6.html.

Murphy, T. F., & Lappe, M. A. (Eds.). (1994). *Justice and the human genome project*. Berkeley, CA: University of California Press.

National Human Genome Research Institute. (2002). *ELSI Research Program* [Online]. Available: http://www.genome.gov.

Pokorski, R. J. (1994). Use of genetic information by private insurers. In T. F. Murphy, & M. A. Lappe (Eds.), *Justice and the human genome project* (pp. 91-109). Berkeley, CA: University of California Press.

Redhead, C. S. (2003). Medical records privacy: Questions and answers on the HIPAA final rule. *Congressional Research Service Report for Congress*. Washington, DC: The Library of Congress.

Rothstein, M. A. (1999, November-December). The impact of behavioral genetics on the law and the courts. In *Judicature, 83*(3) [Online]. Available: http://www.ornl.gov/hgmis/publicat/judicature/article5.html.

Sulton, J., & Perry, G. (2002). *The common thread: A story of science, politics, ethics, and the human genome.* New York: Bantam.

Thompson, W. C. (1994). When science enters the courtroom. In C. F. Cranor (Ed.), *Are genes us?: The social consequences of the new genetics* (pp. 180-202). New Brunswick, NJ: Rutgers University Press.

# REGULATORY ISSUES
# for Volume 7, Number 2

# REGULATORY ISSUES
# for Volume 7, Number 2

# HUMAN RESOURCE ASPECTS OF THE SARBANES-OXLEY ACT

**Gregory M. Larson, Oklahoma City University**
**James H. Thompson, Oklahoma City University**
**Bruce Walters, Louisiana Tech University**

## ABSTRACT

*In an attempt to bolster public confidence in the accounting profession, the Sarbanes-Oxley Act of 2002 was signed into law on July 30, 2002, by President George W. Bush. The Act, which many consider the most significant change to securities law since the Securities and Exchange Act of 1934, fundamentally changes the way that public enterprises conduct business and how the accounting profession performs audits.*

*Although this law has attracted significant public attention for its new accounting requirements, a number of provisions of this Act directly affect the employer-employee relationship. Human resource management plays a vital role in aligning individual goals with organizational goals, yet these issues have gone relatively unnoticed. Human resource dimensions of the Sarbanes-Oxley Act include protection for whistleblowers; requirements to develop, clarify, and implement codes of ethics; increased fines and penalties for unethical actions; greater efforts to ensure independence in fact and appearance; restrictions involving compensation programs; increased fiduciary responsibilities; and employment provisions. This paper identifies and discusses these aspects of the Act.*

## INTRODUCTION

The startling and recent scandals in the stock market have generated significant losses to investors and, for a time, they left the American economy in virtual chaos. In today's market, trust does not seem to be prudent. From financial statements and market analysts to politicians and company executives, enough evidence of impropriety has surfaced recently to raise investor skepticism for years to come. At the forefront of this problem are concerns regarding the ethical behavior of business enterprises and the effectiveness of accounting and auditing standards.

In an attempt to bolster public confidence in the accounting profession, the Sarbanes-Oxley Act of 2002 was signed into law on July 30, 2002, by President George W. Bush. The Act, which

many consider the most significant change to securities law since the Securities and Exchange Act of 1934, creates a Public Company Accounting Oversight Board (PCAOB) and fundamentally changes the way that public enterprises conduct business and how the accounting profession performs audits. The increased costs and regulations for public companies have likely contributed to the sharp rise in firms going private since Sarbanes-Oxley was enacted (Freeman & Zambrowiez, 2002).

Although this law has attracted significant public attention for its new accounting requirements, a number of provisions of this Act directly affect the employer-employee relationship. Although human resource management plays a vital role in aligning individual goals with organizational goals, these human resource (HR) issues have gone relatively unnoticed. The purpose of this paper is to identify and discuss the HR aspects of the Sarbanes-Oxley Act.

## THE SARBANES-OXLEY ACT

The accounting profession has lobbied fervently to continue its history of self-regulation. However, cases involving illusive accounting practices and audit failure have led Congress to create legislation that challenges the profession's ability to do so. The Sarbanes-Oxley Act, so named because of its introduction by Senator Paul S. Sarbanes and House Representative Michael G. Oxley, was intended by Congress to address the perceived systemic and structural weaknesses affecting financial reporting practices. Specifically, the Act is intended to improve the accuracy and reliability of corporate disclosures that are made pursuant to the U.S. federal securities laws, hold corporate managers responsible for such disclosures, and provide transparency in financial reporting in independent audits of public companies (107th Congress, 2002). The provisions of this Act apply only to public companies and public accounting firms that prepare or issue audit reports for public companies (Akin, Gump, Strauss, Hauer, & Feld, 2002).

The Sarbanes-Oxley Act is organized into eleven titles (107th Congress, 2002) that are identified in Table 1. According to former SEC Chairman Arthur Levitt, this Act includes provisions that will drastically change the CPA profession's 100-year history of self-governance by forming an independent board, the PCAOB, with disciplinary and standard setting authority (Fox & Mohanco, 2002). This Board is comprised of five members, two CPAs and three non-CPAs. If a CPA is the chairperson, he or she must not have practiced as a CPA for the previous five years.

| Table 1: Sections of the Sarbanes-Oxley Act | |
|---|---|
| Title I | Public Company Accounting Oversight Board |
| | Establishes a five-member Accounting Oversight Board and outlines the Board's responsibilities and limitations regarding accounting oversight accounting firm registration inspections and investigations foreign public accounting firms and accounting standards. |
| Title II | Auditor Independence |
| | Dictates independence standards regarding prohibited activities audit partner rotation auditor reports to audit committees conflicts of interest rotation of audit firms and considerations by appropriate State regulatory authorities. |
| Title III | Corporate Responsibility |
| | Establishes the responsibilities of public company audit committees corporate responsibility for financial reports and officer and director penalties. Prohibits improper influence on conduct of audits and insider trading during pension fund black-out periods. |
| Title IV | Enhanced Financial Disclosures |
| | Intensifies financial disclosure requirements regarding periodic reports conflict of interest provisions disclosures of transactions involving management and principal stockholders and management's assessment of internal controls. |
| Title V | Analyst Conflicts of Interest |
| | Discusses the treatment of securities analysts by registered securities associations. |
| Title VI | Commission Resources and Authority |
| | Outlines the SEC's resources and authority and the appearance and practice regulations. |
| Title VII | Studies and Reports |
| | Discusses information regarding the GAO's study and report regarding consolidation of public accounting firms. |
| Title VIII | Corporate and Criminal Fraud Accountability |
| | Establishes a statute of limitations and auditor work paper requirements makes it a felony to impede a federal securities investigation and outlines penalties and fines for such crime. |
| Title IX | White-Collar Crime Penalty Enhancements |
| | Further discusses increased penalties. |
| Title X | Corporate Tax Returns |
| | Requires corporate tax returns to be signed by the chief executive officer. |
| Title XI | Corporate Fraud and Accountability |
| | Outlines enhanced regulations and penalties with regards to impeding an official proceeding retaliation against informants and general corporate fraud. |

## HUMAN RESOURCE ISSUES OF THE ACT

All publicly traded companies must take steps to comply with the requirements of the Sarbanes-Oxley Act. Although the Act contains rules that are primarily related to accounting and financial reporting, many of these rules relate to human resource management (HRM). "HRM is the effective use of an organization's human resources to improve its performance" (Buhler, 2002). It includes "all the activities that managers engage in to attract and retain employees and to ensure that they perform at a high level and contribute to the accomplishment of organizational goals" (Jones, George, & Hill, 2000). The five major components of a human resource management system typically present in organizations are the following: recruitment and selection, training and development, performance appraisal and feedback, pay and benefits, and labor relations (Jones, George, & Hill, 2002). The Sarbanes-Oxley Act is likely to have profound implications on a variety of human resource management activities.

Formerly, human resource management functions were performed exclusively by HR professionals. Today, more of these functions are performed by managers and supervisors throughout the organization (Buhler, 2002). HR dimensions of the Sarbanes-Oxley Act include protection for whistleblowers; requirements to develop, clarify, and implement codes of ethics; increased fines and penalties for unethical actions; greater efforts to ensure independence in fact and appearance; restrictions involving compensation programs; increased fiduciary responsibilities; and employment provisions.

### Whistleblower Protection

The Sarbanes-Oxley Act consists of three primary provisions designed to protect whistleblowers. The Act prohibits retaliation against whistleblowers, requires HR departments to publicize "hot line" availability, and encourages the hiring of organizational ombudsmen. The Act identifies five features of the complaint process. First, the audit committee is responsible for establishing procedures but is not explicitly required to oversee the process once established. Second, the process oversees matters involving accounting, internal accounting controls, or auditing matters. Third, the process handles complaints from employees, investors, analysts, and stock exchange officials. Fourth, the process provides confidentiality and anonymity to both employees and non-employees. Finally, the process ensures the retention of records and evidence of action taken following complaints. The whistleblower complaint process is intended to strengthen the role of the board of directors as a counterweight to company management. The process should be outside the control of management to circumvent a potentially unresponsive and resistant bureaucracy. A functional and robust complaint process will prevent misconduct and permit audit committee oversight. The company and its audit committee should view the complaint process as

an opportunity to prevent or mitigate the effect of misconduct and the resulting liability, as well as to enhance the company's reputation and boost public trust (Bloch, 2003).

The whistleblower protection provisions have two enforcement dimensions: one civil and one criminal. The civil provision grants whistleblowers the right to reinstatement, back pay, and damages. The criminal provision bars two forms of retaliation against whistleblowers, making such acts a felony (Ebeling, 2003). First, the Act prohibits retaliation against employees who either file or assist in proceedings related to alleged violations of SEC rules or violations of federal laws against shareholders. This protection is absolute and without qualifiers. Second, the Act states that companies subject to the rules of the SEC may not "discharge, demote, suspend, threaten, harass, or in any other manner discriminate against an employee" who provides information or assistance for investigations into corporate conduct that the employee reasonably believes is a violation of SEC rules or federal laws pertaining to fraud against shareholders. Under this provision, employees are protected only when they provide information or assistance to the following groups: a federal regulatory or law enforcement agency, a member of a committee of Congress, or a person who holds the supervisory authority to investigate, discover, or terminate misconduct (Segal, 2002).

To comply with the requirements of the Sarbanes-Oxley Act, public companies' HR departments must provide an appropriate vehicle for receiving and responding to issues regarding the company's financial disclosures. This vehicle is designed to accommodate confidential or anonymous submissions from whistleblowers. Consequently, many HR departments have established "hot lines" to facilitate such submissions (Stafford, 2002).

For many HR professionals, responding to employee grievances can consume a substantial amount of time. Thus, the duty of handling complaints and conflicts is performed by organizational ombuds, who operate independently from management. A central principle of an ombud's role is confidentiality, which safeguards against retaliation by enabling ombuds to alert management to whistleblowers' stories without naming their sources (Hirschman, 2003).

**Code of Ethics Requirements**

The Sarbanes-Oxley Act requires publicly traded companies to disclose whether or not they have adopted a code of ethics for their senior financial officers (Myers, 2003). A code of ethics includes those standards that are reasonably necessary to promote honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interests between personal and business relationships; full, fair, accurate, timely, and understandable disclosure in the periodic reports required to be filed by the company; and compliance with applicable governmental rules and regulations (Akin et. al., 2002). To comply with the Act, employers must establish new policies incorporating these provisions. HR professionals must document that employees were informed of these policies and have attended training to ensure their compliance with the Act. Codes of conduct

should emphasize that violations of the Act and related employer guidelines are grounds for immediate discharge (Segal, 2002).

A number of companies, including Raytheon and Texas Instruments, are widely recognized for the scope and quality of their ethics programs. Raytheon makes ethics training a requirement for every employee, including the CEO. The Texas Instruments' employee handbook dates to 1961, and the company has received three ethics awards for leadership in the field. Texas Instruments also provides employees with a business-card-sized pamphlet that serves as a "quick test" to apply when faced with an ethical dilemma (Myers, 2003).

Although the costs and benefit of drafting and implementing new policies are difficult to estimate, Bruce Pfau, national practice leader for organizational measurements at Watson Wyatt Worldwide, conducted a survey in 2000. Pfau reported that workers who believed that their company operated with honesty and integrity showed higher levels of commitment to their employer, job satisfaction, and company pride than those who perceived their employer as having low ethical values. Pfau also found companies highly rated by their employees for honesty and integrity produced higher return to shareholders (112 percent) over the previous three years than poorly rated companies (76 percent) (Myers, 2003).

**Fines and Penalties for Failure to Comply with the Act**

The Sarbanes-Oxley Act establishes significant fines and penalties for financial reporting wrongdoings. These penalties not only apply to accountants and corporate officers but also to anyone "who corruptly alters, destroys, mutilates, or conceals a record, document, or other object, or attempts to do so, with the intent to impair the object's integrity or availability for use in an official proceeding" or "otherwise obstructs, influences, or impedes any official proceeding, or attempts to do so." The Act also amends Chapter 73 of Title 18 of the U.S. Code dealing with obstruction of justice. These amendments establish significant fines or terms of imprisonment. For example, a fine and/or imprisonment of not more than 20 years applies to "whoever knowingly alters, destroys, mutilates, conceals, covers up, falsifies, or makes a false entry in any record, document, or tangible object with the intent to impede, obstruct, or influence" any investigation by a federal department. In addition, a fine and/or imprisonment of not more than 10 years may be imposed for the failure of any accountant who conducts an audit of a publicly traded company to "maintain all audit and review workpapers for a period of five years from the end of the fiscal period in which the audit or review was concluded." Anyone who commits mail or wire fraud or certifies false financial reports may be punished with up to 20 years in prison and a fine of $5 million (Swartz, 2002). In addition to fines and penalties, the Sarbanes-Oxley Act allows the SEC to freeze payments to corporate executives under investigation (CNN, 2002).

**Independence Issues**

The Sarbanes-Oxley Act establishes three provisions relating to auditor independence. First, the Act prohibits selected non-audit services for firms that audit public enterprises. Second, rotation of auditors is required for large public companies. Finally, the Act prevents conflicts of interest for former client officers (Hill & Booker, 2003).

CPA firms have traditionally provided their audit clients with a wide variety of non-audit services. The AICPA Code of Professional Conduct has sanctioned performance of selected additional services as long as the CPA takes the appropriate steps to safeguard independence. The Sarbanes-Oxley Act, however, expressly prohibits auditors of certain companies from contemporaneously performing the following eight non-audit services: bookkeeping, financial information systems design and implementation, appraisal and valuation, actuarial, internal audit outsourcing, management functions or human resources, investment banking and advising by a broker or dealer, and legal and expert services unrelated to the audit. The Act allows auditors to perform other services such as tax, provided that the client's audit committee approves in advance (Adams, 2003).

Another independence-related issue of the Sarbanes-Oxley Act concerns rotations on audits of public clients. Under the Act, registered public accounting firms are required to rotate their lead partner and review partner on audits so that neither role is performed by the same accountant for the same company for more than five consecutive years. The SEC has proposed even stricter requirements than the Sarbanes-Oxley Act that would prohibit partners on the audit engagement team from providing audit services to the client for more than five consecutive years and from returning to audit services with the same client within five years. This provision would preclude an engagement partner from rotating onto the position of review partner and would likely require the relocation of audit partners, resulting in an increased cost for companies outside major metropolitan areas (Thompson & Lange, 2003).

A third independence-related issue of the Sarbanes-Oxley Act prevents conflicts of interest. Under the Act, a registered firm may not lawfully perform any audit service if a CEO, controller, chief accounting officer, CFO, or equivalent position within the client firm was employed by that accounting firm and participated in any capacity in the audit of that client during the one year period immediately preceding the start of the audit (Chakarun, 2002). This provision has important HR implications. Hiring former audit team members for officer positions could preclude the audit firm from certifying subsequent financial statements. HR professionals should also be aware of another conflict-of-interest provision related to outsourcing HR services. The Act prohibits a registered accounting firm from providing HR services to a public company contemporaneously with an audit (Segal, 2002).

**Officer Compensation Programs**

The Sarbanes-Oxley Act may result in a review and potential modification of an enterprise's executive compensation programs. First, the Act does not allow personal loans or extensions of credit to an executive officer or director. This provision applies to company credit cards used for personal expenses, even if promptly paid or reimbursed. Second, the act provides that if a company is required to modify its financial statements due to material non-compliance resulting from misconduct, the CEO or CFO must reimburse the company for any bonuses, incentive-or equity-based compensation, or profits received from the sale of the company's securities during the twelve-month period preceding the filing. Finally, the Act prohibits directors and executive officers from purchasing or selling stock in connection with individual account retirement plans, including 401(k) and profit-sharing plans during "blackout" periods. A blackout is any period of more than three consecutive days during which the company temporarily stops 50 percent or more of company plan participants or beneficiaries from acquiring, selling, or transferring an interest in any of the plan's equity securities (Segal, 2002).

**Increased Fiduciary Responsibility**

The passage of the Sarbanes-Oxley Act has heightened boards of directors' awareness of their accountability, reliability, and requirements of their work. As boards become more independent and empowered, board members continue to question their roles and responsibilities, how they work together, and how they work with the CEO and company management. Potential threats include the micromanagment of the company, a struggle for power among of the company's top managers, the use of excessive amounts of management time, the lack of CEO credibility outside the company, inappropriate CEO compensation, interference with orderly succession planning, and the termination of the CEO. Potential opportunities include: providing useful value-added advice and counsel, bringing wisdom and perspective to the table, serving as a sounding board for the CEO, acting as a support system, helping to influence critical outside constituencies, creating a solid front in times of crisis, and assisting in affectively managing succession (Stopper, 2003).

With greater empowerment and independence, corporate boards are finding it increasingly difficult to attract CIO's as board members. First, the provisions of the Sarbanes-Oxley Act has significantly increased the time commitment required by board members One board of directors reported spending 20 percent of their time discussing the ramifications of Sarbanes-Oxley and the new requirements of financial reporting in their July 2002 meeting. Second, board members must have a greater knowledge and understanding of their role in representing the shareholders' interests. A CIO of McDonalds who sits on the board of Trustmark Insurance reports that corporate scandals have doubled his understanding of his role. Finally, board members who are willing to accept the risks and responsibilities are forced to make difficult decisions. For example, a former CEO of Tyco

requested a personal loan to avoid financial problems that would potentially distract him from effectively running the company. The executive was denied a company loan by board members because the board recognized that his request was related to a personal problem and that shareholders' money was not an appropriate means of solving the executive's problem (Levinson, 2003).

The Sarbanes-Oxley Act also began a new era of regulated fiduciary responsibility for CFOs and CEOs. In the current business environment, senior executives have an urgent need to upgrade the professional competencies of their organizations to operate effectively. Accenture recently launched an initiative, called FIRM (Financial Integrity/Risk Management), to help CFOs and CEOs address this challenge. FIRM is a training exercise that utilizes performance simulation technology to deliver "hands on" experience with simulated business scenarios to improve the knowledge, decision making skills, and confidence of staffs involved in finance and accounting activities. Such solutions combine policy development with training in the design of processes and practices, along with ongoing training programs to support compliance with evolving regulations (Accenture, 2003).

**Employment Provisions**

Under the Sarbanes-Oxley Act, the PCAOB adopted a registration system for public accounting firms. All public accounting firms in the United States that prepare audit reports for U.S. public companies must register with the PCAOB. As part of this registration process, employees must sign a consent form and a criminal and regulatory disclosure form and disclose any civil or administrative proceedings within the last five years.

Each firm must consent to cooperate and comply with any request for testimony or the production of documents made by the PCAOB in carrying out its responsibilities. In addition, each firm must agree to enforce similar consents from each of its "associated persons" as a condition of their continued employment or other association with the firm. To insure compliance with this requirement, accounting firms are requiring every employee and partner to sign a consent statement (see Table 2) and return them to their human resource representative (Public Company Accounting Oversight Board [PCAOB], 2003).

**Table 2: Public Company Accounting Oversight Board Consent Form**

I _____ consent to cooperate and comply with any request for testimony or the production of documents made by the Public Company Accounting Oversight Board in furtherance of its authority and responsibilities under the Sarbanes-Oxley Act of 2002. I _____understand and agree that this consent is a condition of my continued employment.

_____
EMPLOYEE'S NAME (Please Print)

_____
EMPLOYEE' S SIGNATURE

Date:_____

In addition, the PCAOB requires that anyone associated with a registered public accounting firm disclose any criminal action against them, as well as any convictions within the past five years. A criminal action includes any pending criminal proceeding in which the associated person was a defendant in a proceeding where a judgment was rendered against the applicant, during the previous five years. A Criminal and Regulatory Form is intended to document each firm's compliance with this requirement of the PCAOB registration process. Like the consent statement form, this signed document should be returned to the local human resource representative (PCAOB, 2003).

Finally, the PCAOB requires anyone associated with the firm to make two additional disclosures. First, any pending civil or alternative dispute resolution proceedings instituted by a governmental entity, domestic or foreign, arising from an audit or comparable report, as well as any such proceedings instituted and resolved within the past five years. Second, any pending administrative or disciplinary proceeding instituted by the SEC, state board, or other licensing authority arising from an audit or comparable report, as well as any such proceedings instituted and resolved within the past five years (PCAOB, 2003).

## CONCLUSION

The Sarbanes-Oxley Act was established to counteract the negative effects of the recent scandals in our corporate world. Although the Act establishes a number of new rules that apply to public companies and public accounting firms that issue audit reports for public companies, the human resource issues related to these rules have gone relatively unnoticed.

Human resource management is one of the greatest challenges facing business today. The challenge is not only faced by HR professionals but also accountants, auditors, and others involved in the financial reporting process (Buhler, 2002). This paper identifies seven aspects of the Sarbanes-Oxley Act with HR dimensions. These aspects include whistleblower protection, requirements for codes of ethics, increased fines and penalties, stricter independence measures, restrictions on officer compensation programs, increased fiduciary responsibility for corporate board members, and employment provisions. Even though the Act significantly affects accounting departments of public companies and partners within public accounting firms, the HR departments of public companies must also consider the impact of this Act on employee-employer relationships. The provisions of this Act will not be successful overnight but will take many years to show evidence of their effectiveness. Moreover, the long-term impact on HR departments is still evolving.

## REFERENCES

Accenture (2003). Dealing with the Sarbanes-Oxley Act: An innovative approach. Accenture. Retrieved July 14, 2003, from http://www.accenture.com/xd/xd.asp?it=enweb&xd=services%5Clearn%5Clearn_dealing.xml.

Adams, R. (2003, January 30). Pieces of the puzzle for non-audit services. *The Times.* Retrieved July 14, 2003, from http://search.epnet.com/direct.asp?an=7EH2906373926&db=nfh.

Akin, Gump, Strauss, Hauer & Feld, LLP (2002). Role of the audit committee is significantly enhanced; auditors must adhere to new independence standards. *Corporate Governance Alert*. Retrieved July 14, 2003, from http://www.akingump.com/docs/publication/476.pdf: 1.

Bloch, G.D. (2003). Shaping your whistleblower system. *Corporate Board, 24*(140), 17-21.

Buhler, P. (2002). *Streetwise human resources management: All the information you need to manage your staff and meet your business objectives.* Avon, MA: Adams Media Corporation.

Chakarun, M. (2002). The Sarbanes-Oxley Act of 2002. *National Public Accountant, 47*(7), 6-9.

CNN (July 15, 2002). Accounting Reform Bill Passed. CNN Money. Retrieved July 29, 2003, from http://money.cnn.com/2002/07/15/news/senate_reform.

Ebeling, A. (2003). Business in the beltway blowing the Sarbanes-Oxley whistle. Retrieved July 14, 2003, from http://ragingbull.lycos.com/mboard/boards.cgi?board=KO&read=1535.

Fox, G.N. & M. Mohanco (2002). A crisis in confidence. *Catalyst*, Sep/Oct, 4-20.

Freeman, D.F., Jr. & K.A. Zambrowiez (2002). An investment management industry perspective on the Sarbanes-Oxley Act. *The Investment Lawyer, 9*(11), 1,7-16.

Hill, C.L. & Q. Booker (2003). Independence for non-public entities: Opinions of members of state boards of accountancy. *CPA Journal, 73*(6), 12-14.

Hirschman, C. (2003, January). Someone to listen, *HR Magazine*, 46-51.

Jones, G.R., J.M. George & C.W.L. Hill (2000). *Contemporary Management*. New York, NY: McGraw-Hill.

Levinson, M. (2003). Get on board. *CIO, 16*(7), 84-92.

Myers, R (2003). Ensuring ethical effectiveness. *Journal of Accountancy, 195*(2), 28-33.

One Hundred Seventh (107th) Congress of the United States of America, Second Session. (2002). Sarbanes-Oxley Act of 2002 (H. R. 3763). Retrieved July 14, 2003 from www.findlaw.com.

Public Accounting Oversight Board. (2003). Registration System for Public Accounting Firms (Release No. 2003-007 Item 5.1 of Part V). Retrieved July 31, 2003 from http://www.pcaob-online.com.

Segal, J. (2002, November). The "joy" of uncooking, *HR Magazine,* 52-57.

Stafford, D. (2002, October 3). New federal law shields corporate whistle-blowers. *The Kansas City Star.* Retrieved July 14, 2003, from http://search.epnet.com/direct.asp?an=2W61904501404&db=nfh.

Stopper, W.G. (2003). Current practices. *Human Resource Planning, 26*(1), 6-17.

Swartz, N. (2002). Corporate-Reform act impacts RIM professionals. *Information Management Journal, 36*(5), 6-7.

Thompson, James W. & Gerald Lange (2003). The Sarbanes-Oxley act and the changing responsibilities of auditors. *Review of Business*, Spring, 8-12.

# STUDENT ATTITUDES TOWARD REGULATION, POLITICS, AND FREE ENTERPRISE

**Elynor Davis, Georgia Southern University**
**Darrell F. Parker, Georgia Southern University**

## ABSTRACT

*What determines the attitudes that students have toward governmental agencies, regulatory bodies, and political systems? This paper begins with a review of the historical foundations of today's economic beliefs concerning the role of government. Survey data is then used to explore individual economic beliefs and student attitudes toward government. A factor analysis of these survey instruments reveal underlying attitudes toward government and economic institutions. A regression analysis explores the linkages between these belief systems.*

## INTRODUCTION

The economic literature has a rich history of discussions as to when, why, and how government should intervene. Early economic thinkers such as Mill and Sidgwick posed questions that are still viable for today's college students. Since those beginnings, further research has studied the impact of economic education on beliefs and attitudes. Stigler (1959) defines economic conservatism related to the study of economics as student beliefs and attitudes on the functioning of private ownership and competitive markets to allocate resources in an efficient manner and limit private power. Boulding (1969) recognizes the interdependence of economic and political attitudes and the social process. He advocates considering this as an important topic for economic education research. This paper extends that literature by linking free enterprise attitudes to political attitudes. A factor analysis of survey responses is used to identify alternate attitudes toward the free enterprise system. One set of factors reflects beliefs about the market allocation of resources and the efficiency of the free enterprise system. Another set of factors captures beliefs about private ownership and private power in a capitalist system. A separate factor analysis identifies components of political attitudes. Regression analysis is then employed to investigate the correlation between attitudes as reflected in the free enterprise factors, political factors, and gender.

## HISTORICAL FOUNDATION

Both John Stuart Mill and Henry Sidgwick endeavored to construct a comprehensive theory regarding the intervention of government in instances of recognized market failure: When government should intervene, why should government intervene, and how these interventions should be implemented. (Schwartz 1966, Grampp 1965, and O'Donnell 1976.) A solid answer to this issue is not assured even today. The appropriate scope of government intervention is an ongoing topic of political debate. The alternate philosophies of government intervention have their foundations in the historical arguments concerning government and the economy.

Jeremy Bentham, one of the founders of utilitarianism, believed morals and legislation could be described scientifically (Bentham, 1789). Bentham's main concern was consequences of private acts, not motivations prompting this behavior. The government's role was to reconcile society's goals with individual self-interest. Bentham was very pragmatic in his approach: nothing was, in principle, outside the purview of a legislative solution. He feared government's powers of coercion but admitted to its necessity to prevent greater evils (Stephen 1950).

Sidgwick's brand of utilitarianism was based on precepts intuitively known, what he regarded as "common sense." Under his hand, Bentham's "greatest good" implied one's concern for others as well as himself: an ethical standard. Like Bentham, he focused on consequences of laws to promote this harmony: government action should make individual's actions more conducive to the happiness of others, particularly in cases of imperfectly defined property rights (O'Donnell, 1976).

Mill retained the utilitarian method and approach but included certain non-utilitarian ideas. He was primarily concerned with the happiness of the individual (Mill, JS, 1863). He distinguished between immutable laws, which were not the subject of human choice, and those that were. He rejected Sidgwick's intuitional approach. He broke with Bentham because he emphasized that the cultivation of the inner man was the ultimate fact, not pleasure and pain. This is a critical difference in Mill and Bentham and led Mill into concern about the moral (religious, some would say) sphere (Anschutz, 1953).

Both Mill and Sidgwick rejected government interference with individual actions involving only the person himself (O'Donnell, 1976). However, Sidgwick would prescribe a governmental solution for any wrong. For Mill, failure to perform obligations did not automatically involve compensation if to do so would mean the sacrifice of some greater good. He would endure certain "insecurities" for the sake of not further abridging individual freedom.

The major difference between these two was not in their premise but in their goals. Sidgwick emphasized curing defects. Mill wanted to find the limits to the state's, society's, and individual's rights while simultaneously prescribing cures for market defects, an emphasis that Sidgwick's system lacked (J.S. Mill 1848).

Mill had a philosophy about society, government, morals, and individual differences (Samuels, 1966). Freedom of the individual to act and the absence of the coercion of the individual

were preeminent in his scheme of things. Individual initiative was the chief means of the advancement of civilization. Diversity of life styles was healthy for society and allowed the individual full play of his faculties. Human beings could learn from their mistakes; which were self-educating and character building (Mill 1873b). Social etiquette or law should not prescribe all things; it would be stultifying (Stephen 1950). For the government to intervene in cases where individuals were capable of doing for themselves was paternalistic at best and was counter to Mill's supreme guiding principle, which was the right of the individual to direct his own life (Alchian and Allen, 1969).

Mill designed solutions for specific problems, which largely depended on private negotiation rather than government action. Sidgwick wanted government to insure certain obligations directly, not secondarily, as Mill preferred (O'Donnell, 1976).

Mill's solutions include a laundry list of certain situations. Contracts must be enforced; and this includes cases of externalities where individuals can negotiate a mutually acceptable solution. Problems that arise from imperfect information provide an opening for the government to act as an agency of information (Alchian and Allen, 1969). Mill would also enforce a group contract, thus addressing the "free-rider" problem (O'Donnell 1976). He recognized a legitimate role for government when there were social benefits, such as scientific and educational research, which private actions could not provide (Mill 1848). Mill consistently held to the superiority of the market, as opposed to conscious planning, as a problem solver (Malcup 1976). In addition, he mistrusted centralized decision-making, advocating local decision-making (Schwartz, 1966). He was concerned about the impaired incentive of hired management or government bureaucrats (Mill 1873a). However, he would permit the establishment of governmental hospitals, banks, or the post office without any curtailment of private institutions of like kind (Davis 1978).

In designing an appropriate role for government, Mill disagreed with those whose argument was based on "to intervene or not to intervene." Instead, he argued that guidelines must be stated for defining limits (Mill 1848). This was not a question for which there was a "universal solution." Certain functions of government are undisputed, such as controlling the money supply, setting standards, etc. Other functions were questionable; and he retained a tentative attitude about them and urged caution and constant reevaluation. Human discretion provides the means to the future but is also dangerous in its opportunity for abuse (Ekelund and Price, forthcoming; Mill, 1848).

## METHODOLOGY

A survey instrument was developed to capture perspectives on the free enterprise system, attitudes about control, and personality measures. Thirty questions on free enterprise were taken from Jackstadt, Brennan and Thompson (1985). These questions capture views on the market allocation of resources, efficiency of the free enterprise system, the role of private ownership, and

the ability of competition to limit abuses of private power. The survey was administered to introductory economics classes yielding one hundred and seven usable responses. Demographic information on age, gender, and undergraduate major was also collected and is reported in Table 1. From the survey responses, three sets of factor analysis are conducted. First, two sets of factor analysis are applied to the thirty questions on economic attitudes and free enterprise. The first set of factors is determined for the seventeen questions dealing with market allocation of resources and economic efficiency. The second set of factor analysis is estimated for the remaining thirteen questions on private ownership and power. A Varimax rotation with Kaiser normalization is applied. The five extracted principal components from the first estimation are presented in Table 2. The four principle components from the second estimation are presented in Table 3. The interpretations of this analysis are discussed in the following section. The same procedure is then used to analyze the political items on the instrument. These three components follow in Table 4.

Finally a regression analysis is performed to examine the correlations from the component factors that represent these students' free enterprise attitudes on the components of the political factors extracted. A stepwise regression analysis is used since no a priori expectations are expressed as to which free enterprise factors would be the most significant categorization. The stepwise regression process adds variables into the model sequentially, including only those variables above a stated significance level. The regression results are presented in Table 5.

## ATTITUDES TOWARD FREE ENTERPRISE

Student beliefs on the market allocation of resources provided by the free enterprise system and on its ability to operate efficiently are captured through seventeen of the survey questions. This is the same analytical methodology employed in Parker and Spears (2002). A factor analysis was conducted and five principal components were extracted. A Varimax rotation with Kaiser normalization was performed with the factor scores saved as variables. The rotation converged in eight iterations with the rotated component matrix reported in Table 2.

The categorization suggested in Table 2 identifies five underlying types. Component one captures those attitudes focused on economic freedom. These individuals believe in a free economy and government should keep hands off. This factor is characterized by strong negative loadings associated with statements of government control or regulation.

The component three also supports free enterprise and loads heavily on the Allocative efficiency of the price system. Respondents believe prices should be set by supply and demand. They also endorse the value of enlightened self-interest on the part of market participants.

The remaining three components take a dimmer view of the free enterprise system. Component two captures the view that close government regulation is for the good of all people. Government control of business profits, interest rates, and gasoline prices are all favored.

Component four is loaded heavily on government keeping its hands off private business. Furthermore, this grouping also favors reducing price supports for farmers. However, they also reject the belief that private enterprise is responsible for high living standards. Component five represents the view that government involves a great deal of waste but sees the free enterprise system as responsible for the evils of society. These individuals are critical of both systems.

The remaining thirteen free enterprise questions reflect student views on private ownership and competition's ability to limit abuses of private power. A similar factor analysis was performed, and four principal components were extracted. The rotation converged in eight iterations with the rotated component matrix reported in Table 3.

The components related in Table 3 are divided in their reflection of the free enterprise system. Component one strongly supports private ownership. Competition among businesses is the best form of consumer protection. Government ownership is seen as a negative factor leading to bureaucracy and inefficiency.

Component two has a somewhat mixed messages about economic attitudes. It recognizes private ownership as necessary but also advocates socialization of industries. Consumer protection concerns are very strong for these respondents.

Component three sees the free enterprise system as exploitive of workers. Private enterprise is associated with monopoly and exploitation. Component four advocates a socialist ownership of basic industries and resources. Included are government ownership of railroads and oil and natural resources and the socialization of steel, coal, oil, and transportation.

## POLITICAL ATTITUDES

Attitudes about how students deal with or control events are captured through the short ten-question political attitude survey. The questions are drawn from the libertarian political survey (Marshall, 2002). A factor analysis was conducted and three principal components were extracted. Again a Varimax rotation with Kaiser normalization was performed with the factor scores saved as variables. The rotation converged in five iterations with the rotated component matrix reported in Table 4.

The survey is designed to reflect two dimensions of libertarian political thought. No items are reverse scored, and the questions are framed to reflect the political leanings of libertarians. The first five questions reflect opposition to government control over social issues, and the last five questions reflect opposition to government control over economic matters.

The factor analysis does not line up exactly with the questions, as the libertarians would presume. Six items loaded on the first component as an economic freedom factor. For this sample freedom to cross borders is seen as more of an economic than social item. Three of the social factors aligned on Component two. This grouping is sensitive to government regulations involving drugs,

sex, and the media. A third factor was extracted that loaded heavily on just two items. Component three represents views favoring voluntary military service and free trade. This commitment to free trade characterizes this group as recognizing a world economy.

## REGRESSION ANALYSIS

The previous discussion applied factor analysis to identify a categorization of components for free enterprise attitudes as well as libertarian political attitudes. The factor scores for each factor analysis were saved as variables. This permits the use of regression analysis to analyze the correlation between the categorizations found from the factor analysis of political attitudes with those found for free enterprise attributes. Political attitudes are treated as dependent variables. Three separate regressions are run to reflect the determinants from free enterprise factors on the libertarian attitudes.

The regression results are presented in Table 5. Each of the three political factors had significant relationship with some of the free enterprise attitudinal factors. Furthermore seven of the nine free enterprise factors extracted were significant in the formation of some political attitudes.

The dependent variable in column 1 represents the component extracted from the political questions on economic freedom. The components interpreted as supporting economic efficiency and viewing government as wasteful both were strongly positive and significantly related to valuing economic freedom on the libertarian scale. As one would expect, those who advocated policies that amounted to socialization of commodity markets were negatively predisposed toward economic freedom. The remaining two significant variables provide a somewhat contrary linkage between economic and political attitudes. Those who responded positively toward privatization on the economic survey were not as likely to support the economic freedom questions on the political instrument. Similarly, those who treated free enterprise as "evil" still expressed support for greater economic freedom. These correlations are consistent with the interpretation that those respondents are expressing a fearful approach to economic power whether private or governmental. Thus, they both desire economic freedom and fear the free system. The R square of .531 indicates that overall 53% of the variation in this political component is explained by the economic attitudes.

The second regression analyzing the component of political items associated with social freedom provides a clearer picture. Proponents of social freedom are positively and significantly correlated with four economic attitude components. The respondents who value social freedom see the free enterprise system as efficient and government as wasteful. There is also a positive correlation with social freedom from those who are critical of both systems. In terms of economic ownership and power, proponents of privatization strongly hold social freedom views. Combined with the results from the economic freedom items, this places an interesting perspective on the view of privatization. Among these respondents, the argument for privatization resonates more as a social

freedom issue than a pure economic freedom issue. Thus, privatization is seen as more important for issues of personal choice and freedom rather than as a pure economic efficiency argument. The explanatory power of this regression is still strong with an R squared of .445.

The final regression considers the formation of political opinions we describe as a worldview. The key political items for these individual's were free trade and a voluntary military service. The two factors that are strongly significant are economic efficiency and privatization. Consistent with the interpretation of the prior two regressions, economic efficiency is significantly correlated with the gains from trade. Privatization is correlated with the personal freedoms of volunteer military and no international barriers. This regression explained the lowest portion of the variation with only an R squared of .189.

## CONCLUSION

The attitudes of today's college students reflect a tradition of economic thought and debate that extends to the early economic philosophers such as Mill and Sidgwick. Conflict still exists over applications of the appropriate issues for government intervention into individual's daily lives. These opinions link the students' political leanings to their views on free enterprise topics. Our findings demonstrate the importance of economic educators' recognizing the interdependence of political and economic thought. The economic opinions of entering students are highly correlated with the political leanings that they bring to the classroom. In particular, recognizing economic efficiency and government waste leads to expressions of economic freedom on the libertarian scale. Similarly, support for privatization and free market efficiencies are correlated with support for social freedoms.

## REFERENCES

Alchian, A. A.& W. R. Allen. (1969). *Exchange and Production: Theory in Use*, Belmont, California: Wadsworth Publishing Co.

Anschutz, R. P. (1953). *The Philosophy of John Stuart Mill* Oxford: Clarendon Press.

Bentham, J. (1789). An Introduction to the Principles of Morals, in *The Works of Jeremy Bentham,* John Bowring, (Ed.) London, 1838-1843, Reprinted New York, 1962.

Boulding, K. (1969). Economic education: The stepchild too is the father of the man, *Journal of Economic Education, 1*, 7-11.

Davis, E. (1978). Three essays on unsettled questions in the Economics of John Stuart Mill. (Ph.D. Dissertation, Texas A&M University, 1978.)

Ekelund, R. B., Jr. & E. O. Prince, III. (2004). Sir Edwin Chadwick on Competition and the Social Control of Industry. *History of Political Economy* (forthcoming.)

Grampp, W. (1965). *Economic Liberalism, Vol. II: The Classical View.* New York: Random House.

Jackstadt, S., Brennan, J. & Thompson, L. (1985). The effect of introductory economics courses on students' conservatism, *Journal of Economic Education, 17*, 37-51.

Maclup, F. (1976). F*ritz, Essays on Hayek.* .New York: New York University Press.

Marshall, F. (2002). World's Smallest Political Quiz, http://www.theadvocates.org/quiz.html, October 18, 2002.

Mill, J.S., (1873a) *Autobiography and Other Writings*. Reprinted in Jack Stillinger, (Ed.) Boston: Houghton Mifflin Co.

Mill, J.S., (1873b) Essays on Economics and Society, Vol. IV and V, Reprinted in *Collected Works,* J.M. Robson, (Ed.) Toronto: University of Toronto Press, 1967.

Mill, J.S., (1848) Principles of Political Economy, Vol. II and III, Reprinted in *Collected Works,* J. M Robson, (Ed.) Toronto: University of Toronto Press, 1965.

Mill, J.S., (1863) Utilitarianism, Liberty and Representative Government. Reprinted in *Everyman's Edition.* New York: E. P. Dutton and Co., 1910.

O'Donnell, M. (1976). *Henry Sidgwick: Externalities and the Emergence of the New Concept of Laissez-Faire*. (Ph.D. Dissertation, Texas A&M University, 1976.)

Parker, D. & Spears, M., (2002). Personality and Locus of Control as Determinants of Free Enterprise Attitudes, *Journal of Entrepreneurship Education,* volume 5.

Samuels, W. (1966). *The Classical Theory of Economic Policy*. Cleveland: The World Publishing Co.

Schwartz, P. (1966). John Stuart Mill and Laissez-Fair: London Water. *Economica XXXIII* (February), 71-83.

Stephen, L. (1950). *The English Utilitarians, III, John Stuart Mill*. London: London School of Economics and Political Science.

Stigler, G. (1959). The politics of political economists, *Quarterly Journal of Economics,* 73.

| Table 1: Demographic Data | |
|---|---|
| Age | N |
| <=19 | 27 |
| 20 | 45 |
| 21 | 23 |
| >=22 | 11 |
| Not Reported | 1 |
| Gender | |
| Male | 68 |
| Female | 38 |
| Not Reported | 1 |
| Major | |
| Accounting, Finance, and Economics | 12 |
| Management | 12 |
| Marketing and Logistics | 19 |
| Pre-business and General Business | 33 |
| Other including Undecided | 31 |

| Table 2: Factor Analysis of Market Allocation of Resources and Efficiency | | | | | |
|---|---|---|---|---|---|
| Free Enterprise Attitudes Questions Market Allocation of Resources and Efficiency. | Component | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| The amount of profit made by a business ought to be regulated. | **-.770** | 3.476E-02 | -2.793E-02.605 | .342 | -.137 |
| Prices should be set by supply and demand, in markets free from government control. | .177 | .183 | **.605** | -.161 | -.106 |
| The best means of setting prices is to let buyers and sellers seek their own interests in a market free from government interference and control. | .339 | 3.61 9E-02 | **.671** | -3.487E-02 | 7.826E-02 |
| Most government programs involve a great deal of waste. | .350 | 6.495E-02 | .332 | -.172 | **.668** |
| The government should set a ceiling on interest rates. | .142 | **.657** | .277 | -.145 | -.189 |
| The government should play a larger role in U.S. economic affairs. | **-.547** | .357 | -.214 | .238 | 6.276E-02 |
| Private enterprise is responsible for the high living standards of most Americans. | .345 | .253 | .279 | **-.517** | .128 |
| The government should not attempt to limit profits. | **.706** | .360 | .162 | 7.442E-02 | -6.382E-02 |
| Government should control the price of gasoline. | .187 | **.704** | -4.119E-02 | -.151 | -7.100E-02 |
| Free enterprise has been responsible for most of the evils in our society. | **-.461** | -7.139E-04 | -.251 | 2.349E-02 | **.664** |
| A free enterprise economic system is generally more productive than a centrally planned economic system. | **.705** | 9.462E-02 | -8.273E-02 | .159 | -6.522E-02 |
| Federal price supports for farmers should be eliminated. | -.345 | -.274 | -2.4 64E-02 | **.447** | **.463** |
| This country needs less government regulation of business. | -.9685E-02 | -.143 | **.721** | .186 | 5.383E-02 |

**Table 2: Factor Analysis of Market Allocation of Resources and Efficiency**

| Free Enterprise Attitudes Questions Market Allocation of Resources and Efficiency. | Component | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Our most important industries ought to be closely regulated by government, for the good of all people, rather than by private business seeking profits. | 1.034E-03 | **.739** | -4.917E-02 | 4.783E-02 | .150 |
| Government should keep its hands off private business operations. | .336 | -1.363E-02 | .151 | **.772** | -1.091E-02 |
| When a business gets big, it should be controlled by government. | **-.678** | .196 | -.216 | -2.500E-02 | 4.550E-02 |
| A "free" economy is better than a "planned" economy. | **.662** | .142 | .335 | 5.121E-02 | -.141 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization
Rotation converged in 8 iterations.

| Table 3: Factor Analysis of Private Ownership and Private Power | | | | |
|---|---|---|---|---|
| Free Enterprise Attitudes Questions: Private Ownership and Private Power | Component | | | |
| | 1 | 2 | 3 | 4 |
| Private ownership of property is necessary for economic progress. | **.455** | **.531** | **-.434** | -.147 |
| Competition among businesses is the best form of consumer protection. | **.700** | .367 | 1.388E-02 | -7.818E-03 |
| The government should own the railroads established in the United States . | 7.465E-02 | -.239 | .213 | **.786** |
| Competition keeps corporations from making "too much" profit. | **.429** | **.606** | 5.35E-02 | .128 |
| People would not do their best, if government owned all industry. | **.721** | .268 | -7.124E-02 | .132 |
| Private enterprise usually leads to monopoly and exploitation of the consumer. | -8.426E-03 | -.142 | **.768** | 6.275E-02 |
| More socialization of basic U.S. industries such as steel, coal, oil and transportation is necessary for the economic well being of the nation. | .227 | **.622** | .241 | **.404** |
| The government should own and operate all public utilities. | **-.734** | 9.872E-02 | -.206 | .259 |
| Free enterprise exploits workers by failing to give them full value for their productive labor. | 4.611E-02 | .126 | **.668** | 2.923E-02 |
| The consumer is at the mercy of the producer and needs government protection. | -.378 | **.439** | **.512** | -2.789E-02 |
| Government ownership and management of business leads to bureaucracy and inefficiency. | **.502** | .163 | -.277 | .121 |
| Since consumers can refuse to buy products that are poor quality or are harmful, there is no need to have laws to protect the consumer. | -.158 | **-.773** | 6.179E-02 | 7.092E-02 |
| I favor public ownership of oil and other natural resources. | -9.282E-02 | .283 | -.117 | **.741** |
| Extraction Method: Principal Component Analysis.<br>Rotation Method: Varimax with Kaiser Normalization<br>Rotation converged in 8 iterations. | | | | |

| Table 4: Factor Analysis Libertarian Questions | | | |
|---|---|---|---|
| Libertarian Questions | Component | | |
| | 1 | 2 | 3 |
| Military service should be voluntary. | -.271 | .140 | **.786** |
| Government should not control radio, TV, the press, or the Internet. | -.295 | **.738** | .110 |
| Repeal regulations on sex for consenting adults. | -3.577E-02 | **.697** | .143 |
| Drug laws do more harm than good. Repeal them. | .364 | **.644** | -.188 |
| People should be free to come and go across borders; to live and work where they choose. | **.727** | 1.133E-02 | 6.849E-02 |
| Businesses and farms should operate without subsidies. | **.523** | .312 | -8.828E-02 |
| People are better off with free trade than with tariffs. | **.419** | 2.177E-03 | **.672** |
| Minimum wage laws cause unemployment. Repeal them. | **.783** | -.165 | -.255 |
| End taxes. Pay for services with user fees. | **.786** | -8.566E-02 | 9.684E-02 |
| All foreign aid should be privately funded. | **.402** | .367 | .142 |
| Extraction Method: Principal Component Analysis.<br>Rotation Method: Varimax with Kaiser Normalization<br>Rotation converged in 5 iterations. | | | |

**Table 5: Regression Analysis of Libertarian Factors on Market Allocation of Resources and Efficiency, Private Ownership and Private Power**
(Standard Errors)

| **Market Allocation of Resources and Efficiency, Private Ownership and Private Power** | **Libertarian Fac 1:** Economic Freedom | **Libertarian Fac 2**: Social Freedom | **Libertarian Fac 3:** World Economy |
|---|---|---|---|
| **Constant** | .110<br>(.090) | -4.83E-03<br>(.103) | -6.34E-02<br>(.116) |
| **Market 1:**<br>Efficiency | | .306*<br>(.112) | |
| **Market 3:**<br>Economic Efficiency | .198**<br>(.092) | | .270**<br>(.118) |
| **Market 4:**<br>Government Wasteful | .298*<br>(.090) | .402*<br>(.102) | |
| **Market 5:**<br>Free Ent. Evil and Government Wasteful | | .331*<br>(.106) | |
| **Ownership/Power 1:**<br>Privatization | -.355*<br>(.089) | .256**<br>(.114) | .232**<br>(.114) |
| **Ownership/Power 2:**<br>Socialized Commodities | -.409*<br>(.088) | | |
| **Ownership/Power 3:**<br>Free Ent. Evil | .257*<br>(.089) | | |
| **$R^2$** | .531 | .445 | .189 |

* Significant at .99 level
** Significant at .95 level